



# **Statement of Environmental Effects**

Thredbo Snowmaking Unit 1 and Associated  
Works, Friday Flat

Thredbo Alpine Resort  
Kosciuszko National Park, NSW

November 2024

## Document Control

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Project Number: 24012MO

Kosciuszko Thredbo Pty Ltd

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# 1 Introduction

This Statement of Environmental Effects (SEE) has been prepared to support the Development Application (DA) for the construction of a snowmaking unit and associated works at Friday Flat, Thredbo Alpine Resort, New South Wales (hereinafter referred to as the Development).

## 1.1 Application Details

A summary of the application details is provided in **Table 1**.

*Table 1: Application Details*

Application Details	
Applicant	Kosciuszko Thredbo Pty Ltd (KT)
ABN	95 000 139 015
Applicant Address	1 Friday Drive, Thredbo NSW 2625
Development Address	Friday Flat ski area, Thredbo Alpine Resort, Kosciuszko National Park, 2 Friday Drive, Thredbo NSW 2625
Lot/Plan	876/DP1243112
Local Government Area	Snowy Monaro Regional Council
Zoning	Zone C1 – National Parks and Nature Reserves
Planning Instrument	State Environmental Planning Policy (Precincts – Regional) 2021 (Precincts – Regional SEPP)
Integrated Development	Not applicable
Consent Authority	Department of Planning, House and Infrastructure
Type of Development	Snowmaking infrastructure
Summary of works	<ul style="list-style-type: none"> <li>• Vegetation clearing</li> <li>• Earthworks</li> <li>• Installation of snowmaking unit and associated works</li> <li>• Site rehabilitation.</li> </ul>

## 1.2 Supporting Documentation

This application is supported by the documentation listed in **Table 2**.

*Table 2: Supporting Documents*

Document	Title/ Description	Author	Date	Document Reference
Site Environmental Management Plan	Site Environmental Management Plan - Thredbo Snowmaking Unit 1 and Associated Works, Friday Flat	Kosciuszko Thredbo Pty Ltd	23/09/2024	Rev0
Site Plan	Site Plan, Thredbo Snowmaking Unit 1	Kosciuszko Thredbo Pty Ltd, JB	13/11/2024	Rev G
Plan	10025585	KTI, Stempfle J	21/09/2020	00
Plan	Trench Cross Sections	Kosciuszko Thredbo Pty Ltd, K.O'Sullivan	26/09/2024	Rev 2
Plan	Buried services – trench GA	RMN	27/09/2024	Rev 0
Specification	Product Data Sheet	ACO	-	MAPM / PITLOK Plastic_PDS201603_R6
Specification	Precast concrete pits	Civilcast	-	-

Document	Title/ Description	Author	Date	Document Reference
Geotechnical Assessment	Proposed Installation of Snow Factory Unit, Thredbo Friday Flats Geotechnical Assessment	Assetgeoenviro	13/11/2024	7604-R1-Rev2
Geotechnical Form 4	Form 4 – Minimal Impact Certification	Assetgeoenviro	13/11/2024	-
Correspondence	V18/1021-77#34: CAA Enquiry - CAA exemption query for gravel access road - Chloe Chalk, Kosciuszko Thredbo Pty Ltd	Licensing and Approvals - Water Department of Climate Change, Energy, the Environment and Water.	20/11/2024	Email, Wednesday, 20 November 2024 2:46 PM

## 2 Site Context

### 2.1 Regional Context

The Development is located in Thredbo Alpine Resort, within the southern part of Kosciuszko National Park (KNP), approximately 35 km south-west of Jindabyne in the Snowy Monaro Regional Council LGA (**Figure 1**).

### 2.2 Local Context

The site is located within the Thredbo Head Lease on Lot 876/DP1243112. Within the context of the resort, the Development is located at Friday Flat.

### 2.3 Site Description and Suitability

Friday Flat is serviced by two chairlifts (Easy Does It and Gunbarrel) and four passenger conveyors (Wombats, Freddie's, The Burrow, and Syds) (**Figure 2**). Friday Flat has a snowmaking system comprising of underground pipes and cables and above ground hydrants, fans and lance guns.

The site is considered suitable for the Development given Friday Flat is a key snowsports area within the resort. The site is heavily disturbed because of previous earthworks and related construction. There are no known records of previous site contamination. The snowmaking unit will connect with and complement the existing snowmaking system at Friday Flat.

*Figure 1: Regional Location*

*Figure 2: Site Plan*



## 3 Project Description

### 3.1 Project Justification

The Development is for the installation of a snowmaking unit which will allow KT to improve the efficiency of its snowmaking operations, and reliability of snow cover at Friday Flat. The location of snow deposition areas can be controlled using either above ground snowmaking pipes and hoses, or by pumping via underground pipes to designated pits.

In response to variable and shortening snow seasons in the Australian Alps and the relatively low elevation of Friday Flat, artificial snowmaking technologies assist in providing both an early season and more reliable snow cover. The majority of snowmaking technology requires specific weather conditions ( $-2^{\circ}$  to  $-3^{\circ}$  Celsius) to begin the process of artificial snowmaking and with weather variabilities, this is not always guaranteed. The addition of this snowmaking unit will enable KT to make snow at higher temperatures compared to conventional snowmaking. Snowmaking units have been installed around the world, assisting resorts in providing more reliable snow cover regardless of air temperature. The snowmaking unit will complement the existing snowmaking network.

### 3.2 Development Components

#### 3.2.1 Vegetation Clearing

The Development is located within the highly disturbed ski slope. Vegetation removal is identified in **Figure 3** and **Figure 4**.



*Figure 3: Tree removal required for placement of snowmaking unit*



Figure 4: Vegetation for removal to allow trenching for distribution pipes

### 3.2.2 Earthworks

Earthworks will include cut/fill, trenching, excavation, and retaining wall. Temporary environmental controls will be installed in accordance with the Site Environmental Management Plan, Thredbo Snowmaking Unit 1 and Associated Works, Friday Flat (KT 2024) (SEMP) during construction to mitigate potential impacts on the surrounding environment.

### 3.2.3 Snowmaking Unit

A summary of the snowmaking unit specifications is provided in **Table 3**. The final configuration will be confirmed at detailed design at the construction certificate stage, subject to timing, availability and costs. The prefabricated snowmaking unit will be transported to site and placed on footings via crane adjacent to the top of Wombats Passenger Conveyor (refer **Figure 2**).

Table 3: Snowmaking Unit Details

Element	KTU Unit
Material	Steel shipping container
Colour	Suppliers provide snowmaking unit in RAL 7013 colour to blend with the trees both in the foreground and background. Demac Lenko Branding.
Size	Length: 13.95 m; Width: 3.75 m; Height: 8.38 m
External stairs	The external stairs are prefabricated as part of the unit. These will have a gate and signage to prevent public access to the unit. Fencing will be erected around the unit as required.
Drainage	Standard rubble drainage detail around the structure- Agi line and coarse aggregate to direct roof runoff away from foundations.
Footings	Proposed reinforced concrete strip footings supporting the width of the unit. Footing specifications to be confirmed at detailed design by a structural engineer.

An example of the unit is provided in **Figure 5**.



*Figure 5: Example of snowmaking unit*

### **3.2.4 Services Installation**

The snowmaking unit will be connected to the existing snowmaking network through a series of pits, underground pipes and cables. Trench cross sections are provided separately with this application.

#### **3.2.4.1 Water**

The Development will include trenching for water supply. The snowmaking unit will be connected to the existing 50 mm snowmaking water laterals along Wombats moving carpet with a T-Junction and extend underground pipework the snowmaking unit.

#### **3.2.4.2 Electricity**

The Development will include trenching for a low voltage electrical cable from the rear side of Gunbarrel Chairlift Carrier shed to the snowmaking unit site.

#### **3.2.4.3 Dialog**

The Development will include trenching for the installation of a dialog cable connected into a nearby automated snowmaking pit adjacent to the Wombats moving carpet.

#### **3.2.4.4 Snowmaking distribution pipes and pits**

The Development will include trenching and excavation for the installation of an underground snow feeder pipe arrangement. This will distribute snow from the snowmaking unit to a fixed underground pit system where flexible above ground pipes can be attached to the rigid pipe within each pit. This will allow snow to be deposited along the length of Friday Flat.

Independent 100 mm PE pipes will be routed underground from a manifold located at the snowmaking unit to each distribution pit to allow for efficient delivery of snow along Friday Flats with minimal exposed infrastructure routed across the surface.

The snowmaking distribution pits will also be interconnected so that if any underground pipe becomes frozen or choked, an alternative delivery pipe can be used to deliver snow to the same area. The pit disturbance is approximately 3 x 3 m wide x 1.6 m deep.

### 3.3 Site Access

During construction, the Development site is accessible off Friday Drive, via the summer mountain access road. During operation, staff will access the snowmaking unit via oversnow vehicles.

### 3.4 Construction Management Details

Construction is proposed in January/February 2025 and estimated to take approximately 1.5 months.

Construction management details are provided in the SEMP.

### 3.5 Operational Details

The snowmaking unit will operate in conjunction with existing snowmaking infrastructure as required during the winter season. Operation is proposed to commence prior to the start of the 2025 winter season.

## 4 Legislation & Statutory Framework

### 4.1 Commonwealth Legislation

#### 4.1.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act provides a legal framework to protect and manage nationally and internationally important aspects of the Australian environment. The EPBC Act is administered by the Department of Climate Change, Energy, the Environment and Water (DCCEEW). Under Part 3 of the EPBC Act, a person must not undertake an action (e.g. a development) that will have, or is likely to have, a significant impact on a protected matter (MNES), without approval from the Australian Government Minister for the Environment.

MNES that may occur, or relate to the search area (within a 5 km buffer) are provided in the EPBC Act Protected Matters Report (**Appendix A**). A summary of the PMR and potential impacts is provided below.

*Table 4: EPBC Act Considerations*

<b>Matters of National Environmental Significance</b>	<b>Comment</b>
MNES – World Heritage Properties	Not applicable.
MNES – National Heritage Places	No impacts proposed.
MNES – Wetlands of International Importance	No impacts proposed.
MNES – Great Barrier Reef Marine Park	Not applicable.
MNES – Commonwealth Marine Area	Not applicable.
MNES – Listed Threatened Ecological Communities	No impacts proposed.
MNES – Listed Threatened Species	No impacts proposed.
MNES – Listed Migratory Species	No impacts proposed.
Commonwealth Land	No impacts proposed.

An EPBC Act referral to the Commonwealth Environment Minister is not recommended as the Development is unlikely to have a significant impact on any MNES or Commonwealth land.

## 4.2 State Legislation

### 4.2.1 Environmental Planning and Assessment Act 1979

A review of the Development against the relevant provisions of the State Environmental Planning Policy (Precincts – Regional) 2021 (Precincts – Regional SEPP) is provided below.

Table 5: EP&A Act Matters for consideration

Environmental Planning and Assessment Act 1979	
Section 4.15 – matters for consideration	
(i) any environmental planning instrument	The Precincts – Regional SEPP is the only environmental planning instrument which applies to the site for this proposal. Refer to assessment in the next section.
(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved)	Not applicable. There are no draft Environmental Planning Instruments that are applicable to the Development.
(iii) any development control plan	Not applicable. There are currently no development control plans applicable to the site.
(iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4	Not applicable. There are no planning agreements applicable to Thredbo under the Precincts – Regional SEPP.
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph)	The DA and supporting information has been prepared in accordance with the relevant requirements of the EP&A Regulation.
(a) the likely impacts of that 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 on the natural and built environment, and social and economic impacts in the locality have been assessed in this document.
(b) the suitability of the site for the development	The site suitability has been addressed in this document.
(c) any submissions made in accordance with this Act or the regulations	Consideration will be given to submissions made.
(d) the public interest.	The Development is considered within the public interest as it will improve the reliability of snow cover within Friday Flat during the winter season.

### 4.2.2 Biodiversity Conservation Act 2016

The purpose of the BC Act is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ESD.

The *Biodiversity Conservation Regulation 2017* (BC Regulation) sets out threshold levels for when the Biodiversity Offset Scheme (BOS) will be triggered, see below.



Table 6: BC Regulation BOS Triggers

BOS Trigger	Comment
Whether the amount of native vegetation being cleared exceeds the area threshold	Given the site is zoned C1 – National Park under the Snowy River Local Environmental Plan 2013, there is no minimum lot size. Therefore, the lot size allows for clearing up to 1 ha.  The proposed clearing is below 1 ha, therefore area clearing threshold is not triggered.
Whether the impacts occur on an area mapped on the Biodiversity Values Map (BVM) published by the Minister for Environment	The Development will not impact on an area mapped on the BVM, refer <b>Section 5.3</b> .
The ‘test of significance’ in section 7.3 of the BC Act identifies that the development or activity is likely to significantly effect threatened species or ecological communities, or their habitats	The Development is unlikely to significantly impact on threatened species or ecological communities, or their habitats, refer <b>Section 5.3</b> .
The works are carried out on a declared area of outstanding biodiversity value	Not applicable.

#### 4.2.3 State Environmental Planning Policy (Precincts – Regional) 2021

Development in the NSW alpine resort areas are subject to the provisions in Chapter 4 of the *Statement Environmental Planning Policy (Precincts -Regional) 2021* (Precincts – Regional SEPP). Consideration of the relevant provisions to the Development is provided below.

Table 7: SEPP (Precincts – Regional) Considerations

Section	Comment
Section 4.2 Land to which Chapter applies	Thredbo Alpine Resort is listed as one of the Alpine Subregions on the <i>State Environmental Planning Policy (Precincts – Regional 2021 Thredbo Alpine Resort Map</i> referenced in Section 4.2.
Section 4.7 Land Use Table	‘Snowmaking Infrastructure’ is permissible development with consent within the Thredbo Alpine Resort.
Section 4.21 Heritage Conservation	The Development will not impact upon any heritage items or Aboriginal heritage items or places.
Section 4.24 Flood Planning	The Development site is not located within a flood planning area.
Section 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,	Appropriate controls will be incorporated during construction to mitigate impacts. The Development will be carried out in accordance with the geotechnical recommendations (Assetgeoenviro 2024).
(b) the effect of the development on the likely future use or redevelopment of the land,	The Development is unlikely to impact on the future use or redevelopment of the land.
(c) the quality of the fill or the soil to be excavated, or both,	All excavated material will be re-used onsite where possible, therefore the quality of the material is not expected to change.
(d) the effect of the development on the existing and likely amenity of adjoining properties,	The nearest properties are approximately 105-155 m away, refer <b>Section 5.10</b> .

Section	Comment
(e) the source of any fill material and the destination of any excavated material,	Any fill material will be sourced from NPWS approved stockpile sites. Any excess excavated material will be transported offsite to a NPWS approved site or licenced facility.
(f) the likelihood of disturbing relics	Unlikely, refer <b>Section 5.7</b> .
(g) the proximity to, and potential for adverse impacts on, a waterway, drinking water catchment or environmentally sensitive area,	The Development is not located within waterfront land, refer <b>Section 5.2</b> for impact assessment.
(h) appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.	The snowmaking unit has been specifically designed for operation in alpine resorts. Appropriate measures have been proposed to avoid, minimise or mitigate the impacts of the Development. Refer to <b>Section 5</b> and the SEMP (provided separately as part of this application).
Section 4.28 Consideration of master plans and other documents	-
(a) the aim and objectives of this Chapter set out in section 4.1,	The Development is consistent with the aim and objectives of Chapter 4.
(d) the Geotechnical Policy —Kosciuszko Alpine Resorts published by the Department in November 2003,	Refer Geotechnical Assessment and Form 4 (Assetgeoenviro 2024).
(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, or	The Snowy SAP Master Plan applies to the site.
Section 4.29 Consideration of environmental, geotechnical and other matters	-
(1) (a) measures proposed to address geotechnical issues relating to the development,	Refer Geotechnical Assessment and Form 4 (Assetgeoenviro 2024).
(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 proposed measures in the Geotechnical Assessment will not impact on the conservation of the natural environment. No measures to mitigate bush fires and flooding are proposed.
(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,	Refer <b>Section 5.10</b> .
(d) the cumulative impacts of development and resource use on the environment of the Alpine Subregion in which the development is carried out,	The impacts of the Development have been assessed in <b>Section 5</b> .
(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,	No impact.
(f) the capacity of existing waste or resource management facilities to deal with additional waste generated by the development, including in peak periods.	No impact.

Section	Comment
(2) For development involving earthworks or stormwater draining works, the consent authority must also consider measures to mitigate adverse impacts associated with the works	Earthworks are proposed, refer <b>Section 3.2.2</b> .
(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 Development will not significantly alter the character of the Alpine Subregion.
Section 4.30 Kosciuszko National Park Plan of Management	The Development is considered consistent with the relevant provisions of the Kosciuszko National Park Plan of Management.

#### 4.2.4 Integrated Development

Integrated development requires development consent and one or more of the approvals outlined in Section 4.46 of the EP&A Act. A review of the *Development referrals guideline* (DPIE 2021) has been undertaken to inform this Application. The Development is not integrated development.

### 4.3 Plans

#### 4.3.1 South East and Tablelands Regional Plan 2036

The *South East and Tablelands Regional Plan 2036* (Regional Plan) describes the vision, goals and actions that will deliver greater prosperity for those who live, work and visit the region. The Regional Plan promotes well planned, efficient and sustainable development that complements the area's natural and cultural values. In relation to the NSW Alpine Resorts, the Regional Plan seeks to promote year-round alpine tourism opportunities that will strengthen long-term resilience.

The Development is consistent with the Regional Plan as it will increase the efficiency and reliability of snowmaking within Friday Flat. Achieving good snow cover on Friday Flat in May / early June will greatly enhances early season visitation, as well as KT's ability to still be skiing and snowboarding in late September / early October.

#### 4.3.2 Snowy Mountains Special Activation Precinct Master Plan 2022

The Snowy Mountains Special Activation Precinct Master Plan 2022 (Master Plan) applies to the NSW Alpine Resort Areas, including Thredbo. The Development is for the installation of a snowmaking unit which will allow KT to improve the efficiency of its snowmaking operation, as well as the quality and reliability of snow cover within Friday Flat.

In response to the challenges posed by the sustainability of natural snow fall within a changing climate, artificial snowmaking improves seasonal length and viability, which may allow the winter visitation period to be maintained or potentially extended. It is anticipated improved snow cover in the area will contribute to a greater guest experience.



## 5 Impact Assessment

The assessment for the development consisted of a desktop review of publicly available data sources. A preliminary site assessment was undertaken by KT Project personnel and various technical consultants to validate the desktop assessment results, inform the design process and ensure appropriate environmental controls are implemented to avoid, mitigate and/or management potential impacts on environmental and cultural values.

### 5.1 Geotechnical Considerations

A review of the Geotechnical Policy Kosciuszko Alpine Resorts (DIPNR 2003) (Geotechnical Policy) was undertaken to inform the planning of this Development. The Development is partially located within the designated 'G' area of the accompanying maps (**Figure 6**). In accordance with Section 3.0 of the Geotechnical Policy, the Development is for minor construction works which present minimal or no geotechnical impact, therefore a geotechnical report is not required. A copy of the Geotechnical Assessment and Form 4 is provided in **Appendix B**.



*Figure 6: Geotechnical Policy Overlay (NSW Government 2024a)*

### 5.2 Soil and Water

The Water Management (General) Regulation Hydro Line spatial data (**Figure 7**) shows a mapped watercourse that traverses the Development site. The mapped watercourse does not exhibit the features of a defined channel with bed and banks. This drainage line was diverted in the 1980s when Friday Flat was first developed. The diversion resulted in the drainage line being diverted around the ski slope area (approximately halfway down the slope), below the Easy Does It Quad lift (to the north-north-east) into a network of underground pipes, including several inlets/drains (**Figure 8**). As such, it is determined the mapped drainage line is not waterfront land for the purposes of the WM Act. Therefore, no further assessment of this watercourse is required.



Figure 7: WM Regulation Hydro Line spatial data 1.0 (NSW Government 2024d)



Drain 1



Drain 3

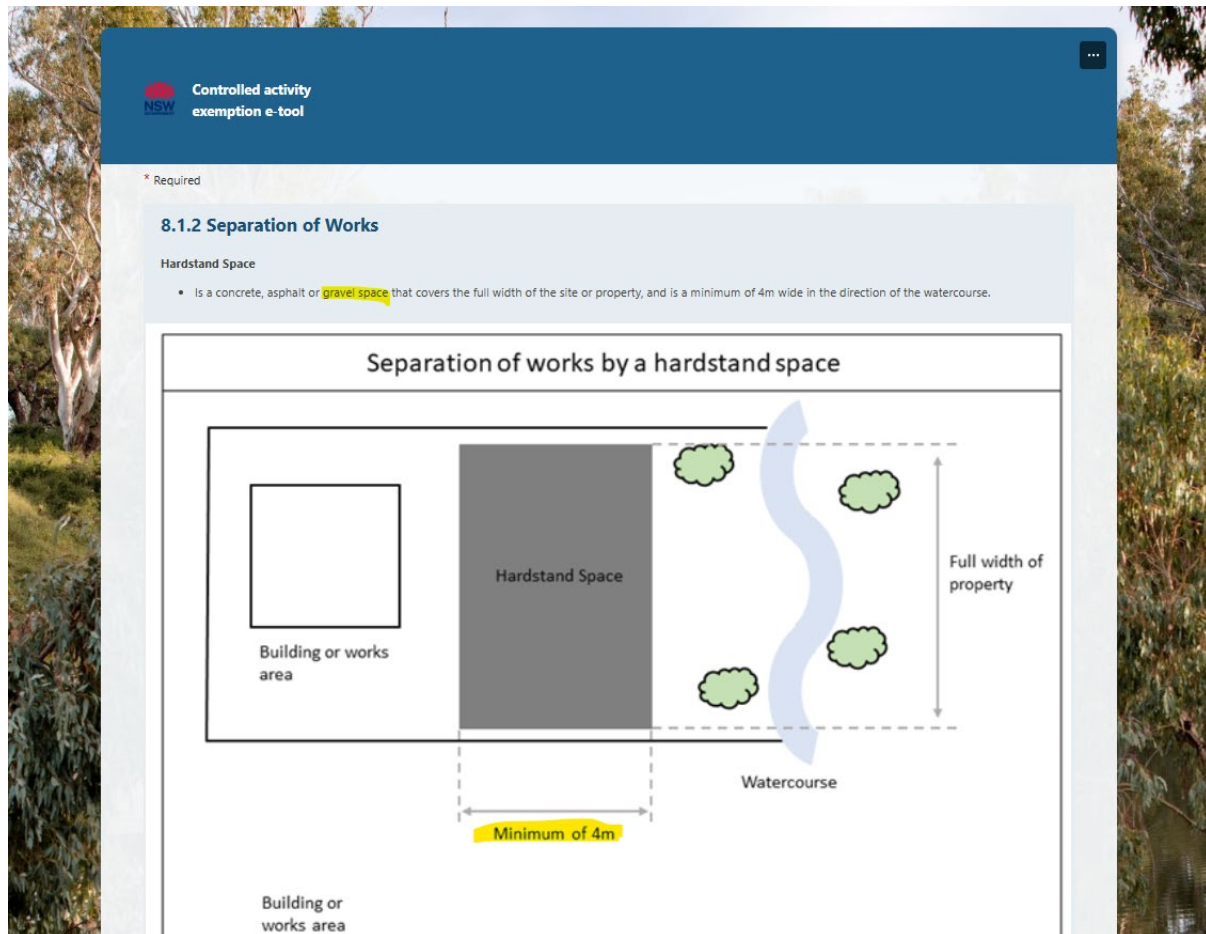


Drain 2

Figure 8: Inlets within diverted drainage line below Easy Does It Quad Lift

Merritts Creek is located within 40 m of the proposed combined trench from the snowmaking unit to the bottom of Gunbarrel bottom station (refer **Figure 2** for Site Plan). Merritts Creek is classified as a second order watercourse under the Strahler System.

An assessment of the Development against the Controlled activity exemption e-tool determined the Development is exempt from requiring a Controlled Activity Approval. The site is separated from Merritts Creek via the Mountain access road which is a compacted road (gravel space / hardstand) with a minimum 4 m width suitable for heavy vehicle traffic. Correspondence from the Department of Climate Change, Energy, the Environment and Water (Licensing and Approvals – Water) supporting this assessment is provided separately with this application.





### 8.3 Result – Separation of Works

Based on your answers, the result is:

#### **EXEMPT – Controlled Activity Approval not required**

Exemption under Schedule 4 Clause 31 of the Water Management (General) Regulation 2018  
<https://legislation.nsw.gov.au/view/html/inforce/current/s1-2018-0480#sch.4-sec.31>

#### **Statements**

- You are proposing to construct or demolish a building or structure.

page.aspx?id=IYjvljkqHEe4mmewgz3TuaJ8VvZiyYZKIR3x1NniFCZUQ0WTUZRUVPWMFhHTIBEM05aNFVOVIFSOC4u

#### Controlled activity exemption e-tool

- Your proposed works are separated from the watercourse by one or more of the following:
  - (a) a public road,
  - (b) a hard stand space (such as a car park or building),
  - (c) a levee bank,
- The works are located near a 1st, 2nd or 3rd order watercourse.

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The site has been subject to significant disturbance from previous earthworks associated with the development of Friday Flat ski area and the Mountain access road. Adverse impacts to Merritts Creek and its associated riparian vegetation are considered unlikely given the following:

- No clearing of native trees or shrubs is required within waterfront land (only minor grass clearing is required).
- The Development requires minimal ground disturbance within waterfront land which has already been subject to significant disturbance.
- The Development will not impact on fauna habitat connectivity.
- The Mountain access road is a minimum 4 m wide compacted road with gravel surface, providing a buffer between the riparian vegetation and the Development site. The road contains several drainage berms which divert upslope runoff in a non-erosive manner.
- Appropriate environmental controls will be implemented during construction in accordance with the SEMP to manage soil and surface water runoff around the construction site.
- All disturbed areas will be progressively rehabilitated.

## 5.3 Biodiversity

### 5.3.1 Biodiversity Values Map

The Development site does not contain any land mapped on the Biodiversity Values Map (**Figure 9**).



Figure 9: Biodiversity Values Map (NSW Government 2024b)

### 5.3.2 Impacts

A desktop review of the NSW BioNet and Commonwealth Protected Matters Search Tool identified various State and Commonwealth conservation significant flora species, Endangered Ecological Communities and fauna species records occur within a 10 km search area around the Development.

The Development is located within the highly disturbed ski slopes at Friday Flat. The following species were confirmed present, onsite by Ryan Smithers (Eco Logical Australia 2024) on Wednesday 23 October 2024:

- *Eucalyptus stellulata*
- *Cassinia sp.*
- *Olearia phlogopappa subsp. flavescens*
- *Leptospermum grandifolium*
- *Oxylobium ellipticum*

Five (5) *Eucalyptus stellulata* will be removed for the Development, two of which are already dead (refer **Figure 3** and **Figure 4**). Some of the species listed above are located nearby the base of trees to be removed, and may either be directly or indirectly impacted by the Development.

#### 5.3.2.1 Test of Significance

The test of significance outlined in Section 7.3 of the BC Act is used to determine whether proposed development or an activity is likely to significantly affect threatened species or ecological communities, or their habitats. An assessment of the Development against the 'test of significance' is provided in **Table 8**.

Table 8: Test of Significance

Test of Significance	Comment
(1) The following is to be taken into account for the purposes of determining whether a proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats—	
(a) in the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,	<p>The disturbance footprint is relatively minor, within a highly modified environment, providing limited suitable habitat for native fauna species (refer to site photos). Clearing protocols will be implemented in accordance with the SEMP to mitigate potential impacts to fauna.</p> <p>Significant impacts to Commonwealth and State listed threatened flora and fauna, ecological communities or their habitats is considered unlikely.</p> <p>The Development is unlikely to adversely affect the life cycle of listed threatened species, such that a viable local population of the species is likely to be placed at risk of extinction.</p>
(b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity— (i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or (ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,	There are no endangered ecological communities or critically endangered ecological communities within the site or immediate surrounds.
(c) in relation to the habitat of a threatened species or ecological community— (i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,	<p>Refer comment against (a).</p> <p>The Development is unlikely to cause an area of habitat to become fragmented or isolated from other areas of habitat in the locality.</p> <p>The removal of native vegetation proposed is unlikely to impact on the long-term survival of conservation significant species.</p>
(d) whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),	Not applicable. The site and immediate surrounds do not comprise any land declared an area of outstanding biodiversity value.
(e) whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.	The Development is not part of a key threatening process outlined in Schedule 4 of the BC Act, nor is it likely to increase the impact of a key threatening process.

The assessment concludes the Development is unlikely to result in a significant impact on any Commonwealth or State listed communities, threatened flora and fauna, or migratory species identified in the desktop and site assessment.

## 5.4 Waste Management

The Development is expected to generate minimal waste. Storage and disposal of construction waste will be managed in accordance with the SEMP.

## 5.5 Socio-economic

The Development will enable the reliable production of artificial snow, ensuring KT can open Friday Flat at the start of the winter season, regardless of air temperatures.

The economic impacts generated by the Development will be positive in terms of direct investment into the resort and the generation of short-term construction jobs, however these are anticipated to be nominal given the scale of the Development and construction timing. The Development is considered critical infrastructure for the operation of the resort.

## 5.6 Heritage

The Development will not impact any listed heritage items or places in the Precincts – Regional SEPP.

## 5.7 Aboriginal Cultural Heritage

To establish due diligence for the Development, an assessment against the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010) is provided in **Table 9**.

Table 9: Aboriginal Cultural Heritage Due Diligence Process

Due Diligence Process	Comment
1. Will the activity disturb the ground surface or any culturally modified trees?	The Development will result in ground disturbance within a highly disturbed area. A single tree will be removed. The remainder of disturbance is within the highly modified ski slopes. There are no culturally modified trees within the site.
2. Are there any: a) relevant confirmed site records or other associated landscape feature information on AHIMS? And/or	There are no confirmed records of Aboriginal objects within the immediate vicinity of the Development site. Refer to <b>Appendix A</b> for reference.
b) any other sources of information of which a person is already aware? And/or	Several historical independent assessments have been undertaken within the resort (Dabyne 2020; NGH Environmental 2017; Past Traces Heritage Consultants 2017; Iron Bark Heritage 2013; URS Australia 2004, 2005). All studies provide an indication that the ski slope areas have low archaeological potential due to the level of disturbance associated with the previous ski slope work. The studies also concluded that given the steepness and exposed aspect/lack of sheltering tors, the ski slopes are unlikely to have been favourable campsite locations.
c) landscape features that are likely to indicate presence of Aboriginal objects?	The Development site is located in a highly disturbed environment, which has been subject to previous

Due Diligence Process	Comment
	<p>disturbance for the construction of the existing ski slope.</p> <p>Previous disturbance has comprised extensive earthworks, vegetation clearing and removal and disturbance to top soils and soil profiles, thus removing potential for Aboriginal sites to remain within the Development location. There are no landscape features within the Development site that would indicate the presence of Aboriginal objects due to the previous disturbance. As such, it is considered the Development has low potential to impact on unrecorded Aboriginal objects or sites.</p> <p>There is no requirement to move onto Steps 3 and 4.</p>
3. Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?	Not applicable.
4. Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?	

As identified above, all reasonable steps have been undertaken to ensure the Development fulfils the requirements of the Aboriginal Cultural Heritage Due Diligence Process. Potential impacts from the Development on objects or sites of Aboriginal Cultural Heritage significance are considered unlikely. In the unlikely event that Aboriginal objects are discovered, management measures outlined in the SEMP will be implemented.

## 5.8 Air Quality

Construction will be carried out during the general resort summer construction period. There is potential for dust emissions to be generated during earthworks and construction. With the implementation of controls outlined in the SEMP impacts will be negligible.

## 5.9 Noise

The following sensitive land uses have been identified within the locality:

- Tourist accommodation (River Inn and Woodridge lots) – approximately 105-155 m from the snowmaking unit
- Thredboland / offices – approximately 55 m from the trench alignment to Gunbarrel bottom station.

Construction noise impacts (e.g. loading/unloading materials, construction works, movement alarms) are expected to be low given the works will be conducted during standard hours, the duration of works is short-term and appropriate mitigation measures will be implemented in accordance with the SEMP. Furthermore, the riparian vegetation associated with Merritts Creek may act as a buffer between the site and tourist accommodation.



The snowmaking unit will form part of the existing Friday Flat snowmaking network and operate during the winter season as required. The noise is considered acceptable within the context of the alpine resort.

### **5.10 Built Environment and Visual Amenity**

The site and immediate surrounds comprise ski runs, ski lifts and associated buildings, snowmaking infrastructure, access tracks, mountain bike trails and native vegetation. The colours and materials of the snowmaking unit have been chosen to complement the existing built form. The snowmaking unit has been located along the edge of vegetation islands to assist with natural screening of the units as much as possible when viewed from the base of Friday Flat.

### **5.11 Access and Traffic**

All construction vehicles will enter and exit the Development site via the summer mountain access road. The Friday Flat loop mountain bike (MTB) trail traverses parts of the construction corridor. If temporary closure of the trail is required during construction, it will be managed in accordance with the SEMP.

The Development has been designed to integrate with existing and future operations. The snowmaking unit has been strategically located on the edge of the tree island to minimise disruptions to snow grooming operations, and both summer and winter guests. Subject to DA approval, KT are proposing a new MTB (which uses parts of the existing Friday Flat Loop trail) within the locality. The proposals have been designed concurrently to ensure they integrated with one another. Appropriate controls (e.g. fencing and signage) will be installed to mitigate potential public safety risks (e.g. to prevent unauthorised access).

## **6 Conclusion**

This application is seeking development approval for the construction of a snowmaking unit and associated works within Thredbo Alpine Resort. In accordance with the relevant legislative requirements, this SEE has assessed the potential impacts of the Development on the human, built and natural environment of the Development site and surrounds. Appropriate environmental controls have been incorporated into the Development to minimise impacts on the surrounding environment during construction and operation.

The highly disturbed site is considered suitable to accommodate the Development which will form part of the existing snowmaking system at Friday Flat. The Development will improve the efficiency and reliability of artificial snowmaking within the area. Achieving good snow cover on Friday Flat in May / early June will greatly enhance early season visitation, as well as KT's ability to still be skiing and snowboarding in late September / early October. The Development is therefore considered within the public interest.

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## **8 Appendices**

### **Appendix A Desktop Search Results**

## **Appendix B Geotechnical Assessment and Form 4**