



Site Environmental Management Plan (SEMP)

Harusch Walking Track

Thredbo Alpine Resort
Kosciuszko National Park, NSW

September 2023



Department of Planning
and Environment

Issued under the Environmental Planning and Assessment Act 1979

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Signed Z Derbyshire

Sheet No 2 of 9

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1 Introduction

This Site Environmental Management Plan (SEMP) has been prepared for implementation by Kosciuszko Thredbo Pty Ltd (KT) (and its contractors) for the Harusch Walking Track (the Project).

KT requires a SEMP to support the Development Application (DA) for the Project, situated in Thredbo Alpine Resort (Thredbo), approximately 35 kilometres (km) south-west of Jindabyne, New South Wales.

1.1 Purpose

This SEMP has been developed to outline how construction activities for the Project are to be managed in order to maintain and protect the environmental values of the Project site and surrounds.

1.2 Objective

The objectives of this SEMP are to:

- Provide mitigation measures to minimise the potential for environmental harm and/or environmental nuisance.
- Provide guidance for the development of detailed construction environmental management plans.
- Ensure all Project Personnel understand individual roles and responsibilities.
- Provide corrective actions to be implemented in the event of environmental harm and/or environmental nuisance.
- Ensure Project personnel understand incident and emergency response procedures.

2 Reference Documentation

2.1 Applicable Legislation

The Project will be carried out in accordance with the applicable legislative requirements outlined in the following Acts and subordinate legislation:

- *Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)*
- *Biodiversity Conservation Act 2016*
- *Environmental Planning and Assessment Act 1979*
- *Environmentally Hazardous Chemicals Act 1985*
- *Heritage Act 1977*
- *National Parks and Wildlife Act 1974*
- *Protection of the Environment Operations Act 1997*
- *Waste Avoidance and Resource Recovery Act 2001*
- *Water Management Act 2000*
- *Work Health and Safety Act 2011.*

2.2 Approvals

The Project will be carried out in accordance with the Development Consent. No other approvals are required.

2.3 Supporting Documents

Document	Title	Prepared by	Document Reference
Approval	Development Consent	DPE	-
SEE	Statement of Environmental Effects – Harusch Walking Track	KT	Rev 0, 13 July 2023
BDAR	Proposed Harusch Walking Trail, Thredbo Alpine Resort – Biodiversity Development Assessment Report	Eco Logical Australia Pty Ltd	Version 2, 7 July 2023
Geotechnical Assessment	Harusch Walking Track, Thredbo NSW: Proposal for Geotechnical Assessment	AssetGeoEnviro	7227-R1, Rev 1, 13 July 2023
Procedure	Construction Site Incident and Emergency Procedures Thredbo Village	Kosciuszko Thredbo Pty Ltd	2021/22
Procedure	Emergency Response Spill Procedure	Kosciuszko Thredbo Pty Ltd	1
Procedure	Standard Operating Procedure: Use and Maintenance of Wash Down Bay (KT055)	Kosciuszko Thredbo Pty Ltd	March 2019

2.4 Guidelines

- Guideline for the Preparation of Environmental Management Plans (DIPNR 2004).
- Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition (Landcom 2004).
- Managing Urban Stormwater: Soils and Construction, Volume 2A, Installation of services (NSW DECC 2008).

3 Project Description

The walking track is a short loop (approx. 730 m) commencing and terminating at the top of Merritts Gondola. The track generally follows existing access tracks and other disturbed areas. A small section of the alignment will require the clearing of native vegetation. A copy of the Site Plan is provided in **Appendix A**.

4 Construction Management Details

4.1 Construction Timing

The rock removal and construction works proposed may only occur in the 'summer period'. The summer period means the period of time commencing after the October long weekend and ending no later than 31 May the following year in each year.

Construction must not commence or continue when snow is located on the subject site and machinery must not be used to remove snow from areas containing native vegetation.

4.2 Construction Site Access

The Development site is accessible via the Mountain summer access road. Access to the site will be via the existing access track and ski slopes.

4.3 Construction Activities

The proposed construction techniques will include (but not limited to):

- Site establishment, including installation of temporary signage, delineation of the construction corridor with flagging/fencing, as required.
- Marking of vegetation to be removed and no-go areas.
- Vegetation clearing and trimming. Trim overhanging tree limbs where required and brush cut either side of the track to ensure clear pathway.
- Installation of temporary erosion and sediment controls as required.
- Construction of track using techniques outlined in **Table 1**.
- Backfilling of open excavation on Dream Run ski slope using clean fill.
- Construction of stairway, including vegetation removal, pegging/flagging of footings, pouring of concrete footings and installation of pre-fabricated stairway.
- Measures such as signage, planting of vegetation, and/or fencing should be installed to deter walkers from entering the wet area to the west.

Post-construction activities will include:

- Site stabilisation and rehabilitation in accordance with the Rehabilitation Plan.
- Removal of machinery and equipment.
- Removal of temporary erosion and sediment controls once site has been stabilised.
- Site clean-up.

Table 1: Construction Techniques

Technique / Method	Comment
Track surface	<p>The Track alignment predominately follows an existing cleared access track which is grass-covered with some minor shrubs. The last section of the track currently comprises a gravel surface which was constructed as part of the recent Merritts Services upgrade works.</p> <p>Construction of the track surface will include:</p> <ul style="list-style-type: none"> • Mark the alignment with flagging tape or similar, as required. Align the trail to avoid impacts to native vegetation where possible. • Clear the track alignment of ground covers/shrubs/roots with excavator. • Compact the subgrade with decomposed granite or road base, as required. <p>Geotextile material can be installed between the soil and gravel to create a base layer and improve track stability.</p>
Drainage	<p>Appropriate drainage will be incorporated in the track to redirect water away from the track and to reduce erosion of the track surface, such as:</p> <ul style="list-style-type: none"> • Rock drainage crossing / rock steps: Larger rocks to be placed across drainage lines that traverse the track to allow water to drain unimpeded through these areas. Ensure rocks are placed at either end of the drainage line crossing to help avoid erosion. • Water bars: Incorporate water bars at an angle across the track on slopes where required to manage surface run-off and reduce erosion impacts to the track. Water bars may be constructed as an open cross drain or constructed with rocks. Rocks to be set on a stable base of fine crushed rock and/or compacted sub-grade. Ensure water bars extend beyond the edge of the track on the downhill site to help disperse water.

- Outsloping: Where required, outsloping of the track will be used to encourage water to sheet across and off the track.
- Box/Grate Drains: Incorporate ready to install box drains on flatter sections of track to avoid any water pooling in track. Box drain are to be installed at appropriate angles for effective drainage.



Example of drainage line that will require rock drainage crossing

4.4 Vehicles, Machinery and Equipment

The Development will require (but not limited to) the following vehicles, machinery and equipment:

- Manitou/forklift;
- 4WD vehicles and utilities;
- Excavator;
- Plate compactor;
- Auger;
- Concrete mixer;
- Chainsaws; and
- Brush cutters.

4.5 Construction Corridor and Disturbance

The walking track alignment generally follows the former Harusch ski run, access tracks and other highly disturbed areas, except for the short section where a stairway is proposed.

The track will be 0.9 m wide on average. The expected average disturbance footprint during construction is 2 m in width. Where stairs are proposed, the disturbance footprint is expected to be up to 3 m wide.

4.6 Site Compound

Due to the nature and size of the Project no site compound is required within the construction corridor.

4.7 Stockpile Sites

Temporary stockpiles may be required within the construction corridor to effectively manage excavated materials, spoil, soil and vegetation during the works. Soil will be separated so that it can be used during rehabilitation works. The main stockpile sites are identified in 0.

All stockpiles will be managed in accordance with the environmental controls in **Section 6.2.2**.

4.8 Material Storage Areas

Materials will be temporarily stored at the flat area outside of Merritts Mountain House (refer **0**) and transported to site as required.

4.9 Work Hours

The working hours for construction will be outlined in the Development Consent.

4.10 Adverse Weather Contingencies

Adverse weather events (e.g. high winds, thunderstorms, heavy rain, hail, snow, bushfire and high temperatures) have the potential to negatively impact upon construction activities. To ensure appropriate consideration of such events, the Construction Manager / Site Project Manager will monitor weather conditions throughout the construction period. The Bureau of Meteorology (BoM) Thredbo AWS station provides daily weather observation data for the resort. The NSW Rural Fire Service website 'Fires Near Me' includes information on current bush fires and other incidents, as well as warnings for fires which may affect your location.

If adverse weather events are anticipated and/or occur during construction, contingencies will be implemented and arrangements will be made to postpone construction activities.

The Construction Manager / Site Project Manager will be responsible for notifying construction staff of any impending adverse weather, and to implement appropriate controls onsite, such as:

- Erecting wind breaks or covering stockpiles to prevent materials being blown away.
- Evaluate temporary sediment and erosion controls to ensure they are adequately installed to withstand adverse weather events.
- Discontinue use of plant and machinery.
- Secure materials and equipment.
- Protect open excavations.

5 Environmental Management

5.1 Roles and Responsibilities

The Project team structure is provided in **Figure 1**.

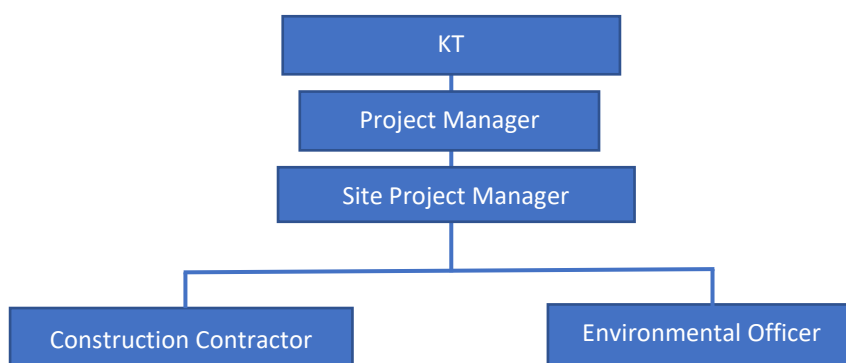


Figure 1: Project Team Structure

The roles and responsibilities are outlined below.

Role	Responsibilities
Project Manager	<ul style="list-style-type: none"> • Ensure the SEMP is made available, communicated, maintained and understood by all Project staff. • Responsible for the overall management of the construction and operation of the Project. • Ensure the SEMP is updated with applicable conditions of approval following the provision of Development Consent from Department of Planning and Environment (DPE). • Ensure that the requirements of the SEMP and sub-plans have been addressed in all contractor environmental management documentation. • Review of incidents, non-conformances and non-compliance. • Ensuring Project personnel and contractors are adequately trained and qualified to fulfil their roles.
Site Project Manager	<ul style="list-style-type: none"> • Implement and maintain the SEMP. • Ensure all Project personnel comply with the requirements of the SEMP. • Report any incidents, non-conformances to the Project Manager.
Environmental Officer	<ul style="list-style-type: none"> • Oversee all works which are part of the Project on behalf of KT. • Ensure compliance with all environmental protection measures detailed in the SEMP, supporting management plans and conditions of approval. • Ensure all environmental controls are in place and adequately functioning during construction. and • Conduct construction inspections and complete reporting requirements e.g. progress reports, environmental incidents, non-compliance, corrective action and auditing.
All Personnel	<ul style="list-style-type: none"> • Comply with requirements of this SEMP. • Report any actual or potential environmental incidents to the Construction Manager immediately. • Identify and report non-conforming or potentially hazardous work practices, equipment, machinery or products. • Only perform tasks for which they are trained and competent. • Assist with environmental incident investigations and applying corrective actions. • Ensure all machinery, plant and equipment are in good working order and condition prior to use.
Construction Contractor	<ul style="list-style-type: none"> • Comply with SEMP and legislative requirements. • Construction contractor to develop and implement management plans in accordance with this SEMP, conditions of approval and contractual obligations.

5.2 Communication and Consultation

5.2.1 Training and Awareness

All Project staff will be made aware of the site-specific environmental controls through a site induction, and pre-start meetings / toolbox talks prior to the commencement of construction.

The site induction will cover the following key aspects:

- Roles and responsibilities.
- Overview of environmental risks and specific locations of environmental and/or cultural heritage significance.
- The scope of legislative requirements and other licences and approvals.
- Communication and notification requirements e.g. procedures for notifying and reporting incidents and complaints.
- Environmental management and controls stipulated in this SEMP.
- Workplace health and safety issues.
- Emergency preparedness and response.
- Procedures for notifying and reporting incidents and complaints.

5.2.2 Key Contacts

Key contacts for the Project are provided in **Table 2**. Prior to commencement of works, contact details (name and contact number) will be provided for Project personnel.

Table 2: Key Project Personnel Contact Details

Company / Agency	Role / Reason	Contact
Government Agency Contacts		
Department of Planning and Environment (DPE) (Alpine Resorts Team)	Development approval and compliance	(02) 6456 1733
National Parks and Wildlife Service (NPWS)	Flora, fauna, archaeology	(02) 6450 5600
Environment Protection Agency (EPA)	Water, noise, air pollution and regulation	131 555
NSW Soil Conservation Service	Soil erosion and sediment control	02 9842 8300
Thredbo Village Services		
Thredbo Medical Centre	General medical attention	(02) 6457 6254
Fire and Rescue Thredbo, NSW	Incident / emergency	(02) 6457 6144
Emergency Contacts		
NSW Police	In case of fire, medical or police emergency	000
NSW Fire and Rescue		
NSW Ambulance		

5.2.3 Consultation

KT is committed to ensuring effective communication and consultation is undertaken to inform the development of this SEMP and ensure it is implemented on-site as per the Project roles and responsibilities in **Section 5.1**. Where required, communication with key external stakeholders such as DPE and NPWS will be undertaken. A summary of the key consultation activities is provided in **Table 3**.

Table 3: Summary of Consultation Activities

Consultation Activity	Communication Method	Frequency
Internal	Site inductions	Prior to commencement of works
	Pre-start meetings and toolbox talks	Daily
	Reports to Project Manager identifying project progress, any environmental incidents, and review of any complaints or enquiries	Weekly

External	Face-to-face meetings, phone and email correspondence with relevant Government Departments / Agencies	As required
	In-writing notifications to Government Departments / Agencies and relevant parties	As required

5.2.4 Notification Protocols

A summary of the key notification protocols is provided in **Table 4**. Notification requirements will be updated as required.

Table 4: Regulatory Agency Notification Protocols

Party to Notify	What to Notify	When to Notify	Responsibility to Notify Regulatory Agency
DPE	Commencement of construction	DPE will be notified in writing at least 48 hours prior to the commencement of construction.	Site Project Manager
NPWS	Details of any material suspected of being a European or Aboriginal culturally significant site, relic or artefact.	Immediately upon discovery of any archaeological/culturally significant site or relic that are encountered. NSW Police to also be notified immediately upon discovery of human remains.	Site Project Manager
NSW Environmental Protection Agency	Details of pollution incident – who, what, when, where, how, any other supporting information and evidence (e.g. photos)	Immediately upon identification of pollution incident causing or threatening material harm to the environment, in accordance with KT's <i>Construction site Incident and Emergency Procedures Thredbo Village 2021/2022</i> .	KT Environmental Manager

5.3 Environmental Incident and Emergency Response

All Project personnel are required to follow KT's *Construction site Incident and Emergency Procedures Thredbo Village 2021/2022*. The procedure will be available on-site and all Project staff will be trained on their implementation through the site induction. The procedure classifies examples of emergencies and incidents and provides specific procedures for response to such events, such as:

- Serious injuries requirement urgent medical help.
- There are threats to property or life.
- Criminal activity e.g. you have witnessed a serious crime or accident.
- Sewer or water service breaks.
- Bushfire, building fire, spot fire on-site.
- Electricity service faults.
- Leaking gas.
- Fires and explosions.
- Release of pollution e.g. release of sediment into watercourse, chemical spill.

The procedure also outlines general site management principles, incident reporting and notification requirements and provides an emergency contacts list.

In the event of an environmental incident, emergency or near-miss, the following steps should be taken:

- 1) **STOP** works in the area and if safe to do so ensure the safety of personnel within the vicinity.
- 2) **NOTIFY** relevant persons e.g. emergency services or Construction Manager.
- 3) **ISOLATE** the risk or hazard e.g. turn off machinery/plant, implement immediate site controls, set up exclusion zone. and
- 4) **REPORT** and notify relevant persons (e.g. Project Manager, regulatory agencies).

Environmental incident and near-miss reporting requirements are detailed in **Section 7.3**. Contact details for key Project personnel and emergency services are provided in **Table 2**.

External contractors are required to prepare and implement an emergency and incident response procedure. The contractor will be responsible for responding to any environmental emergency caused by any action (or inaction) of the contractor's staff, including notification requirements to external parties such as EPA and Fire, Fire and Rescue NSW.

6 Environmental Controls

6.1 General

- Ensure works are conducted by suitably qualified and trained personnel.
- Ensure all site environmental management controls relevant to that stage of work are implemented in accordance with the approved plans and conditions of consent.
- Provide approved plans and relevant documentation in the site office or other suitable location so that they are easily assessable by all construction staff.
- Brief all workers as to limit of disturbance footprint and other environmental safeguards (ELA 2023).

6.1.1 Site Establishment

- Establishment of site boundary with temporary fencing, rope or flagging to clearly delineate the construction corridor and "no-go" areas.
- Erection of site signage and pedestrian/traffic controls.
- Installation of erosion and sediment controls.

6.1.2 Machinery and Storage

- All equipment, machinery and vehicles used during construction of the Project must be cleaned prior to entry into the Park and prior to site mobilisation to ensure they are free of mud and vegetative propagules (ELA 2023).
- Equipment, machinery, and vehicles must be regularly maintained and manoeuvred to prevent the spread of exotic vegetation.
- Storage of equipment, machinery, vehicles and material is to be restricted to existing disturbed areas (i.e. at the stockpile, formed roads and within the construction corridors) and avoid undisturbed areas.
- All vehicles and machinery entering Thredbo must adhere to the *Standard Operating Procedure: Use and Maintenance of Wash Down Bay, March 2019 (KT055)*.

6.2 Soil and Water Quality

6.2.1 Erosion and Sediment Controls

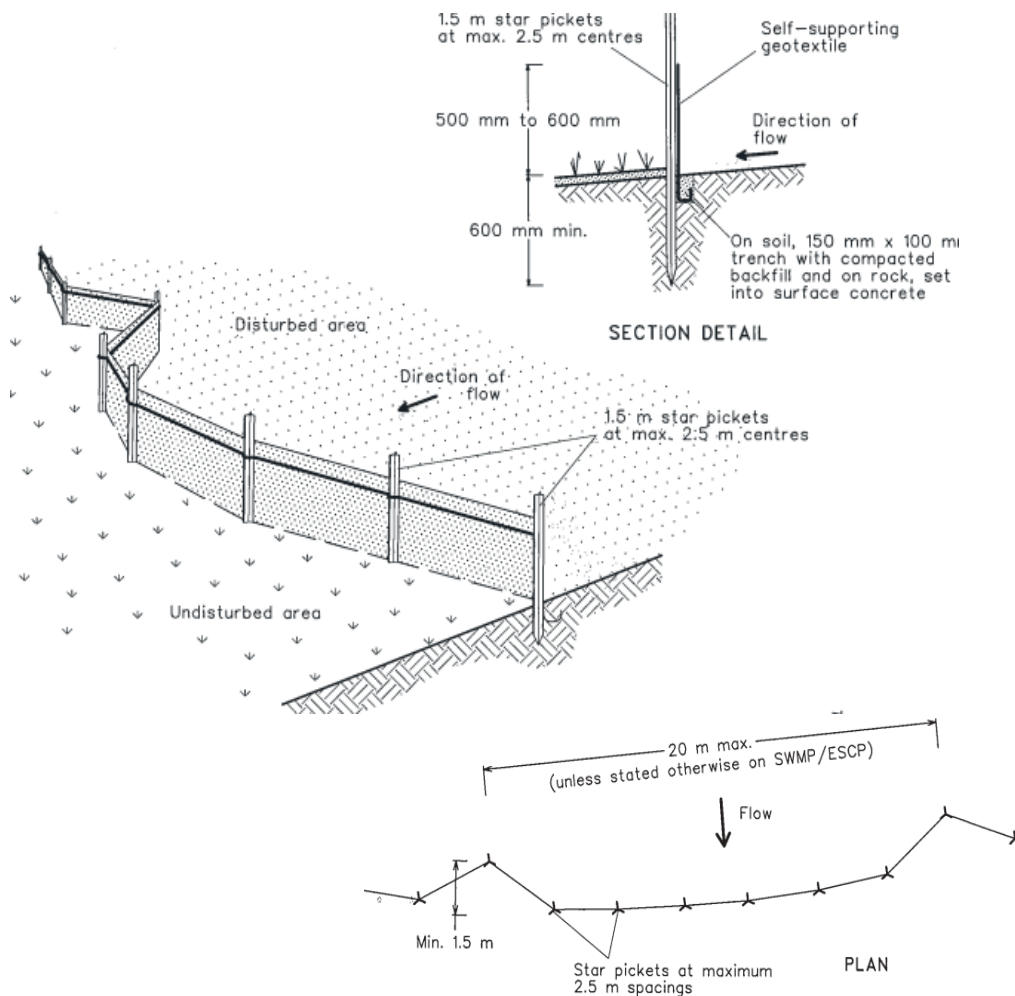
The following erosion and sediment controls are to be utilised during excavation works (down-slope and cross-slope) and stockpiling, as required. Controls are to be installed prior to works and retained in place until exposed areas of soil are stabilised.

6.2.1.1 Sediment Fences and Straw Bales

Sediment fences are to be installed to prevent sediment run-off from active work areas and stockpiling locations.

Construction notes:

- 1) Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns to limit the catchment area of any one section. **The catchment area should be small enough to limit water flow if concentrated at one point to 50 L/s in the design storm event, usually the 10-year event.*
- 2) Dig a 150 mm deep trench along upslope line of fence for the bottom of the fabric to be entrenched.
- 3) Install 1.5 m long star pickets into ground at 2.5 m intervals (max) on the downslope edge of the trench. **Fit star pickets with safety caps.*
- 4) Fix geotextile to the upslope side of the posts ensuring it goes to the base of the trench.



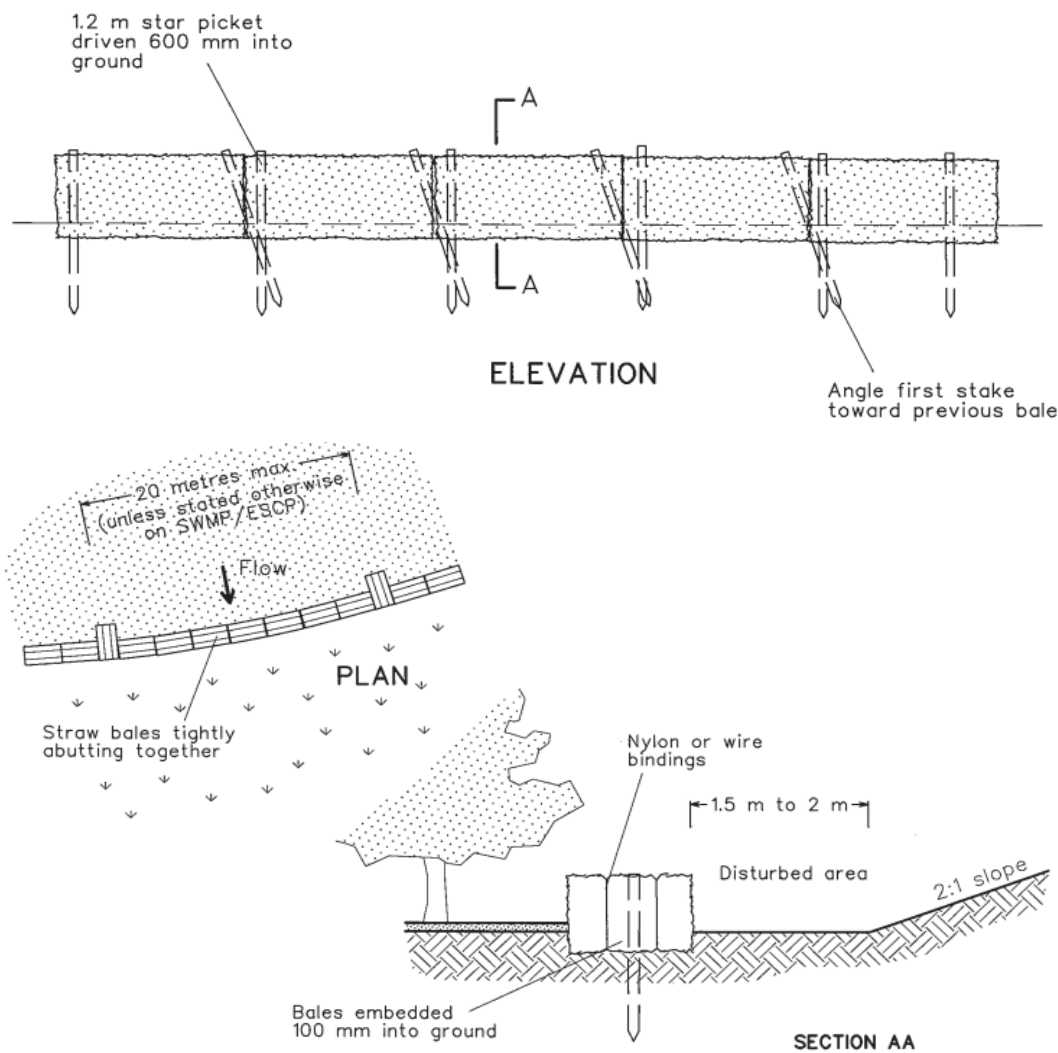
Standard Sediment Fence Installation (Source: Landcom 2004)

6.2.1.2 Straw Bales

Straw bales may be used to divert water around and away from disturbance areas during down-slope and cross-slope excavations.

Construction notes:

- 1) Construct the straw bale filter as close as possible to being parallel to the contours of the site.
- 2) Place bales lengthwise in a row with ends tightly abutting (1 bale = max height of filter). Fill gaps between bales with straw and wrap with geofabric where necessary.
- 3) Embed each bale in the ground 75-100 mm and anchor with two 1.2 m stakes/star picket. Angle the first stake in each bale towards the previously laid bale. Stakes should be driven 600 mm into ground, sitting flush with top of bale (if possible). **If using star pickets which protrude above bales, fit with safety caps.*
- 4) Where a straw bale filter is constructed downslope from a disturbed batter, ensure the bales are placed 1-2 m downslope from the toe.



Standard Straw Bale Filter Installation (Source: Landcom 2004)

6.2.1.3 Cross Drainage and Sediment Barriers

The recommended spacing for cross drainage and sediment barriers is provided below:

Slope Grade (%)	Cross Drain / Sediment Barrier (m)
5-10	15-20
10-15	10-15
15-25	8-10
>25	5-8

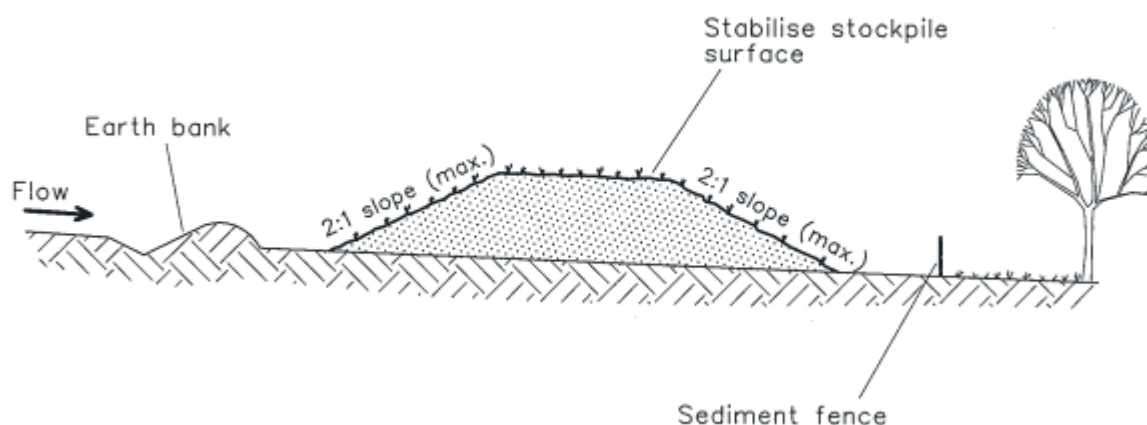
Source: NPWS 2007; Parr-Smith and Polley (1998)

Note: To calculate the grade of a slope: (rise/run) x 100 = slope grade

6.2.2 Soil and Stockpile Management

- All stockpiles will be constructed and managed in accordance with *Soil Stockpile Guidelines for the Resort Areas of Kosciuszko National Park* (OEH 2017).

- Temporary stockpile sites within the construction corridor should adhere to the following criteria (Landcom 2004; OEH 2007):
 - not exceed 2 m in height, have a slope <50% (26°)
 - be at least 2 m from vegetation, concentrated water flows, roads, publicly accessible areas or hazardous areas
 - avoid impacts to native vegetation and be located on disturbed areas
 - located directly adjacent to the works
 - located on relatively flat ground, where possible
 - in areas with sufficient room to accommodate the volume of material being stockpiled
 - be contained by appropriate erosion and sediment controls.
- Any excess excavated material will be removed from site and transported to the designated soil stockpiles sites in 0.



Stockpile Management (Source: Landcom 2004)

6.2.3 Material Sourcing

Authorisation from NPWS is to be sought where imported gravel or fill material is required, unless the material is sourced from the following NPWS approved locations:

- McMahons Earthmoving quarry, located on Alpine Way, Crackenback NSW; or
- Kraft Earthmoving / Snowy Mountains Sand and Gravel quarry located on Kosciuszko Road, Jindabyne NSW.

6.3 Flora and Fauna

6.3.1 Vegetation and Habitat

Vegetation and Habitat Management		
Objective	To ensure compliance with legislative requirements and protect existing native vegetation. Minimise impacts to native vegetation.	
Mitigation Measures	All clearing must only occur within approved development corridor. The construction corridor is to be clearly identified with flagging tape to mark no-go/no clearing zones prior to construction. Mature trees and rocks required to be removed are	Timing Prior to construction, during construction

	to be clearly identified. The trail alignment will be delineated with flagging tape where it encroaches upon relatively undisturbed native vegetation (ELA 2023).	
	Identify with flagging tape the alignment of the stairs, where the trail encroaches upon relatively undisturbed native vegetation, prior to construction (ELA 2023).	Prior to construction of stairs
	All vegetation must be checked for fauna habitats and fauna by the Environmental Officer immediately prior to felling/removal. Vegetation with active nests must not be removed until the young have left the nest. If fauna is present, then the NPWS must be contacted to assist with mitigation actions.	Vegetation clearing
	Clearing should remove habitats in stages to allow movement of fauna away from disturbed areas.	Vegetation clearing
	All disturbance should be kept to the minimum required to achieve the proposal.	Vegetation clearing, during construction
	All machinery to be used during the construction phase should be limited to the existing disturbed areas and access tracks.	Vegetation clearing, during construction
	Progressive rehabilitation is to be undertaken in accordance with the Rehabilitation and Monitoring Plan. All rehabilitation should be undertaken in accordance with the <i>Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park</i> (DECC 2007).	During construction, post-construction
Performance Criteria	No damage to site fencing. No damage to native vegetation (including vehicle tracks) associated with unauthorised access.	
Corrective Actions	Fencing to be repaired / reinstated by appointed contractor. Entry points for unauthorised access to be identified and access restricted through fencing or other appropriate barriers.	

6.3.2 Native Fauna

Native Fauna Management		
Objective	To minimise potential impacts to native fauna, their breeding places and habitat.	
Mitigation Measures		Timing
	If any active wombat burrows are detected in close proximity to the trail alignment during the construction phase, then the trail should be realigned to avoid the burrow (ELA 2023).	During construction
	Restrict work to daylight hours (ELA 2023)	During construction
	Reasonable and practicable native fauna management measures will be implemented to avoid environmental harm and nuisance to native fauna.	Vegetation clearing, during construction
	Maintain a clean and tidy work area to ensure animals are not attracted to the site, including provision of covered bins during proposed works.	During construction
Performance Criteria	No death or injury to fauna as a result of on-site activities. No disturbance outside the approval disturbance area.	
Corrective Actions	Review and implement suitable strategies to dissuade fauna from coming to site. Contact NPWS / LAOKO if injured fauna is identified as a result of site activities.	

6.3.3 Exotic Species

Exotic Species Management		
Objective	To reduce the risk of introducing invasive/pest species.	
Mitigation Measures		Timing
	All relevant weed species that occur within the construction corridor and associated staging and stockpile sites must be treated prior to works commencing to ensure these weeds are not spread further at the site or within KNP.	Prior to vegetation clearing, prior to construction
	If an area of vegetation proposed for removal includes any relevant weed species then the vegetation must be removed completely from site, not spread out within the existing vegetation or used in rehabilitation and stabilisation works.	Prior to vegetation clearing, prior to construction
	All machinery and equipment used during construction must be cleaned prior to entry into KNP and prior to site mobilisation to ensure the machinery is free of mud, vegetative propagules, and pathogens. This includes machinery that may have been working in an area of the resort that contains weeds and is preparing to be redeployed in the construction corridor and associated stockpile and staging areas.	During construction
	All vehicles and machinery entering Thredbo must adhere to the Standard Operating Procedure: Use and Maintenance of Wash Down Bay, March 2019 (KT055) . The wash down bay is located at the Thredbo Waste Transfer Station for use by KT staff and contractors.	During construction
	All machinery and equipment must be stored on existing disturbed areas (i.e. at the stockpile and staging areas proposed on the ski slopes) and should not be stored on native vegetation.	During construction
	All machinery to be regularly maintained and manoeuvred to prevent the spread of weeds and pathogens.	During construction
Performance Criteria	No introduction of invasive species as a result of construction activities.	
Corrective Actions	Review existing biosecurity procedures (e.g. clean down procedure) and implement additional controls if required.	

6.4 Air Quality

Air Quality Management		
Objective	To minimise potential impacts on sensitive receivers from dust and other air pollution from construction activities.	
Mitigation Measures		Timing
	Minimise the number and extent of disturbed areas at any given time. When there is a risk of works creating dust nuisance, dust suppression measures are to be implemented i.e. the site is to be watered.	Vegetation clearing; during construction
	Plant and equipment to be maintained and operated in an efficient manner to reduce air pollution.	During construction
	Vehicles are to adhere to speed limits to minimise dust general and potential spill of hauled materials.	During construction
	All vehicles carrying spoil or rubble to/from site should be covered to prevent the escape of dust or other material. Covers are to be adequately secured.	During construction
Performance Criteria	No complaints received in relation to air pollution.	

Corrective Actions	<p>If complaints are received, the following steps should be taken:</p> <ul style="list-style-type: none"> Investigate specific cause of complaint. Review site activities/processes and identify the source of air emissions. Implement immediate corrective actions on-site e.g. water site, replace equipment deemed to be poorly maintained. If required, implement administrative controls e.g. additional staff training, alter construction methods or timing for undertaking dust generating activities.
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6.5 Noise and Vibration

Noise and Vibration Management		
Objective	To ensure that noise and vibration from construction activities does not cause environmental nuisance in the locality.	
Mitigation Measures		Timing
	Selection of the most appropriate plant and equipment to minimise noise generation.	Prior to construction
	Construction works will be undertaken during standard work hours.	During construction
	Appropriate noise management strategies will be implemented for construction works and operation of plant and equipment in accordance with the Australian Standard AS 2436-2010 <i>Guide to noise and vibration control on construction, demolition and maintenance sites</i> .	During construction
	Regular checks are to be undertaken to ensure all equipment and vehicles are in good working order and are operated correctly.	During construction
	All machinery and equipment will be maintained in accordance with the manufacturer's requirements.	During construction
Performance Criteria	<p>No construction related noise and vibration complaints received.</p> <p>No unreasonable noise or vibration.</p>	
Corrective Actions	<p>If complaints are received, the following steps should be taken:</p> <ul style="list-style-type: none"> Investigate specific cause of complaint. Review site activities/processes and identify the source of the noise emissions. Implement immediate corrective actions e.g. swap out noisy equipment. If required, implement administrative controls e.g. additional staff training or change work hours to minimise noise. 	

6.6 Fuels and Chemicals

Fuels and Chemicals Management		
Objective	Eliminate the potential for release of fuels, chemicals and hazardous substances to the environment.	
Mitigation Measures		Timing
	Spill kits will be available onsite and all site personnel will be made aware of their locations in the site induction.	During construction
	In the event on an on-site spill, construction staff will follow KT's Construction Site Incident and Emergency Procedures Thredbo Village, 2021/2022 .	During construction
	Hazardous substances, toxic materials or dangerous goods must not be stored or processed on-site at any time without prior approval from the DPE Secretary or nominee.	During construction
	Fuel and chemicals will be appropriately stored and handled in accordance with relevant Australian Standards.	During construction

	Appropriate controls will be implemented when refuelling Project vehicles and machinery.	During construction
Performance Criteria	No fuel, chemical or hazardous substance spills.	
Corrective Actions	Corrective actions will be taken in accordance with the Construction Site Incident and Emergency Procedures Thredbo Village, 2021/2022 , including: immediate spill response, implementation of any necessary control measures as directed by authorities. Where required, an investigation will be undertaken to determine the root cause.	

6.7 Traffic and Access

Traffic and Access Management		
Objective	Minimise potential impacts on existing road network	
Mitigation Measures		Timing
	Traffic and construction vehicle access will be managed as per regular daily operation in the resort.	During construction
	All Project vehicles and machinery to adhere to speed limits and signage and stay within construction corridor.	During construction
	Pedestrian and bikers within proximity of the site will be managed though the use of signage and fencing/flagging as required.	During construction
	Measures such as signage, planting of vegetation, and/or fencing should be used to deter walkers from entering the wet area to the west.	Install during construction (to be retained for operation)
Performance Criteria	No significant impacts to existing road network or users. No complaints in relation to traffic or vehicle operators.	
Corrective Actions	If complaints are received, traffic management procedures will be reviewed and amended (if necessary).	

6.8 Waste

Incorporate the waste hierarchy to ensure the efficient use of resources (EPA 2017):

- **Avoidance** including action to reduce the amount of waste generated by the Development;
- **Resource recovery** including re-use, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources; and
- **Disposal** including management of all disposal options in the most environmentally responsible manner.

Waste generation from construction is expected to be minimal. The Development will generate the following waste:

- General solid waste (putrescible) – e.g. waste from litter bins, food waste.
- General solid waste (non-putrescible) – e.g. plastic, paper, cardboard, demolition waste from the former operator's hut (e.g. timber frame and cladding, metal roof sheets) and construction waste.

The following will be provided for the storage and disposal of waste:

- General litter bins for waste such as food waste and non-recyclable plastic.
- Recycling bins for waste such as cardboard packaging, paper, recyclable plastic.
- Covered ute for removal of demolition waste from operator's hut. Waste will be transported directly offsite.

- KT's waste transfer facility (materials to be segregated for re-use, recycling etc.).

All waste will be managed in accordance with KT's waste management procedures. All materials will be segregated and where possible reused and recycled within the resort. Materials being kept for re-use elsewhere in the resort will be loaded directly onto a truck to the Thredbo Waste Transfer Facility where they will be stored or taken to the workshop for preservation works prior to storage.

Any waste that cannot be re-used within the resort will be transported off-site by a licenced contractor and disposed of at an external waste facility such as Jindabyne Regional Waste Management Facility, or Cooma Landfill.

Waste Management		
Objective	Minimise construction waste as much as practicable. and Reduce the impact of waste on-site and beyond the site boundary.	
Mitigation Measures	All waste will be managed and disposed of in accordance with the KT's waste management procedures.	Timing During construction
	Where possible, construction materials will be salvaged for reuse to divert waste from landfill.	During construction
	All waste will be separated into waste streams and contained within appropriate receptacles and/or disposed of in accordance with the EPA guidelines.	During construction
	All receptacles will be in good condition.	During construction
	All waste transportation vehicles will be covered appropriately to ensure waste cannot spill, leak or escape onto the road or wash into stormwater drains.	During construction
Performance Criteria	No litter or waste material to be released from site in an uncontrolled manner.	
Corrective Actions	<ul style="list-style-type: none"> • Investigate cause of inappropriate waste disposal/management. • Review on-site waste handling facilities and implement corrective actions e.g. change in receptacle size and/or waste management signage. • If required, implement administrative controls e.g. additional waste management training for staff. 	

6.9 Cultural Heritage

6.9.1 Unexpected Finds Procedure

Where unexpected items of potential archaeological, built or Aboriginal cultural heritage significance are discovered, Project personnel will follow the below procedure:

- **STOP:** Stop work and leave the site or item where it is.
- **NOTIFY:** Notify the Project Manager and NPWS to arrange for representatives to inspect the site. If human remains are found, the NSW Police must also be notified.
- **MANAGE:** Management may involve securing the find by erecting a no-go zone.
- **REPORT:** The Project Manager will complete any reporting requirements, as directed by NPWS.

7 Monitoring and Reporting

7.1 Environmental Monitoring

The Environmental Officer will conduct monitoring during all project phases (pre-construction, during construction and post-construction) to ensure compliance with this SEMP, associated management plans and conditions of approval.

The Environmental Officer will undertake weekly inspections utilising the ***Site Environmental Management Measures Report***. The report includes a checklist on the following matters:

- Administration (weekly site inspections, sub-contractor environmental management, environmental monitoring, environment incidents, complaints handling, reporting and record keeping)
- Biosecurity management
- Chemical spills / emergency response
- Vegetation management and rehabilitation
- Waste management
- Native fauna management
- Material storage and sourcing
- Water quality
- Erosion and sediment controls
- Stockpile management
- Air quality and noise and vibration
- Cultural heritage
- Safety.

7.2 Weekly Environmental Reporting

The Environmental Officer will provide copies of the ***Site Environmental Management Measures Report*** to the Project Manager on a weekly basis. All records will be stored within KT's files and distributed to relevant persons / regulatory authorities as required.

7.3 Environmental Incident Reporting

All incidents and near misses will be managed in accordance with KT's ***Construction site Incident and Emergency Procedures Thredbo Village 2021/2022***. The document provides procedures for responding to incidents and emergencies, reporting and notification requirements and emergency contacts.

The following information should be recorded:

- Time and date of the incident / near miss
- A description of the incident / near miss
- A sequence of events that led to the incident / near miss occurring
- Person/s involved in the incident / near miss (including witnesses)
- Written statements from person/s involved (as applicable)
- Details of corrective actions.

The **Environmental Incident Report Form** should be completed for all environmental incidents. All parts of the form must be completed in accordance with KT's incident procedure and following the instructions within the form. The form must be signed by the person making the report and the Project Manager/person in charge of the site/activity.

7.4 Non-conformance

A non-conformance is the failure to comply with the requirements of this SEMP and supporting management plans. Non-conformances identified via site inspection or during day to day activities will be documented on the **Site Environmental Management Measures Report** (or similar contractor's form) and closed out in subsequent inspections. The Environmental Officer is responsible for investigation and managing corrective and preventative actions in the event of non-conformance or a situation likely to cause environmental harm.

7.5 Corrective Actions

Corrective actions should be prioritised on the following hierarchy of controls:

1. **Elimination** – can activities and processes be eliminated to reduce the risk of reoccurrence?
2. **Substitution** – can activities be substituted with another activity of lesser risk?
3. **Isolation** – can you isolate the hazard from any person exposed to it?
4. **Engineering controls** – can you reduce the risk of reoccurrence through engineering changes?
5. **Administrative controls** – can a change in work practices, additional training or additional checks reduce the risk?
6. **Personal Protective Equipment (PPE)** – can PPE be worn to protect personnel from harm?

The Construction Manager will be responsible for managing the implementation of corrective actions on-site.

7.6 Complaints Management

Should complaints be received from the public in relation to the Project they will be recorded using the **Complaints Form** (or similar contractor's form). The Project Manager will be responsible for investigating, recording and closing out any complaints received. All records will be stored within KT's files and distributed to relevant persons / regulatory authorities as required.

8 Record Keeping and Review

8.1 Document Control

All Project related documentation will be maintained within KT's Project file. Documents stored within the file include (but not limited to) the following:

- Copies of relevant planning approvals and documents, licences and permits.
- All completed induction forms and visitor sign-on register.
- Records of routine environmental inspections.
- Records of any environmental incidents, complaints, non-conformances and non-compliances.

8.2 SEMP Review

This SEMP is a live document and will undergo reviews and amendments as necessary. Reviews will generally be undertaken –

- If there is a change in the scope of the Project.
- Prior to commencement of construction to ensure any relevant conditions of consent and/or other approval, licence or permit requirements are incorporated.
- If there is a need to improve environmental controls to protect environmental values.
- If there is an increase or introduction of a new environmental risk or impacts.
- At the end of a Project to allow for improvements in subsequent Projects.

9 References

AssetGeoEnviro (2023), Harusch Walking Track, Thredbo NSW: Proposal for Geotechnical Assessment.

Department of Environment and Climate Change (DECC) 2007, Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park, NSW Government.

Department of Environment and Climate Change (DECC) 2009, Interim Construction Noise Guideline, July 2009, <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/noise/09265cng.pdf?la=en&hash=EF4576FD79DBB25D5AC22DFA1A883A2BADA1F77B>

Department of Infrastructure, Planning and Natural Resources (DIPNR) 2004, *Guideline for the Preparation of Environmental Management Plans*, <https://www.planning.nsw.gov.au/~media/Files/DPE/Guidelines/guideline-for-the-preparation-of-environmental-management-plans-2004.ashx?la=en>

Department of Planning & Environment (DPE) (2017) *What to include with your development application*, version January 2017, <https://www.planning.nsw.gov.au/Policy-and-Legislation/~media/65E2BA89886F426991525FF25707A9A9.ashx>

Eco Logical Australia Pty Ltd (ELA) 2023, Proposed Harusch Walking Trail, Thredbo Alpine Resort – Biodiversity Development Assessment Report. Prepare for Kosciuszko Thredbo Pty Ltd.

Office of Environment and Heritage (OEH) 2017, *Soil Stockpile Guidelines for the Resort Areas of Kosciuszko National Park*, version 1.0, October 2017, NSW National Parks and Wildlife Service.

10 Appendices

Appendix A Plans



Scale: 1:1,228

0 5 10 20 30 40

 Meters

Map Projection: Universal Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 MGA Zone 55



SITE PLAN

Project: Proposed Harusch Walking Track

Revision: 1

Date: 29/05/2023

Produced By: BB

Stockpile and Material Storage Areas





Temporary material storage area (flat area outside Merritts Mountain House)

Appendix B Environmental Schedules

THREDBO ENVIRONMENTAL SERVICES

Record of complaint

Sheet ____ of ____

Project: _____

Date / Time: _____

Received by: _____

Reference Number: _____

Complainant details:	Witness details:
Nature of complaint: <div style="border: 1px dotted black; height: 150px; margin-top: 5px;"></div> <div style="text-align: right; margin-top: 10px;">Complainant sign: _____</div>	
Action taken: <div style="border: 1px dotted black; height: 150px; margin-top: 5px;"></div>	

Environmental Incident Reporting Form

Confidential document after first entry

The purpose of this form is to report any incident that may have resulted in Environmental harm on Kosciuszko Thredbo Pty Ltd premises. Remember to be succinct, stick to the facts and do not make assumptions. Only record information you know to be correct.

The only persons authorised to contact external agencies eg EPA in relation to environmental incidents are the Kosciuszko Thredbo General Manager and Environmental Services Manager or their approved delegates.

Return completed form to the Environmental Services Manager as soon as practicle, on completion of the Environmental incident. It is important to capture photos at the time of the incident as part of this investigation.

Date of Incident:	Time of incident:
Reported by:	Department:

Location of Incident

EXACT location of the incident (include landmarks and features, nearest cross street etc to make it easier to identify later)		
Site:	Building:	Room:

Description of incident

Provide description and extent of incident:
.....
.....
.....
.....
.....
Have relevant photos been taken and attached? Yes <input type="checkbox"/> No <input type="checkbox"/>
If 'No', provide sketch and attach to the rear of this document.
What was the estimated duration of the incident?

Type of incident

<input type="checkbox"/> Spill (including fuel,oil,waste material or other polluting substance)	<input type="checkbox"/> Erosion and sedimentation incident	<input type="checkbox"/> Contaminated water discharge
<input type="checkbox"/> Noise emission/complaint	<input type="checkbox"/> Unauthorised/accidental damage to heritage item	<input type="checkbox"/> Unauthorised/accidental vegetation removal or harm
<input type="checkbox"/> Air Emission	<input type="checkbox"/> Wildlife habitat/nesting area disturbed	<input type="checkbox"/> Other (specify)

Environmental Incident Reporting Form

Level of incident

Level	Example
<input type="checkbox"/> Minor	eg. No material has escaped the site or caused material harm to the environment – it is easy to clean up without additional assistance.
<input type="checkbox"/> Major	eg. Material has escaped the site causing pollution downhill/downstream areas, which will require clean up involving other agencies and/or additional resources not available to local site management. Damage has occurred or is likely to occur to the environment.

Hazardous Material Spilt

<input type="checkbox"/> Petroleum based products/ Hydrocarbons	<input type="checkbox"/> Chemicals domestic or industrial grade
<input type="checkbox"/> Biological waste / Clinical and related waste	<input type="checkbox"/> PCB insulating liquids
<input type="checkbox"/> CFC containing equipment	<input type="checkbox"/> Paints or paint products
<input type="checkbox"/> Radioactive waste	<input type="checkbox"/> Other (specify)
Detail type/ingredient spilt: (UN, MSDS details)	
Detail concentration of material spilt:	
Detail quantity of material spilt:	

Type of Spill

<input type="checkbox"/> Spilt onto ground	<input type="checkbox"/> Spilt into stormwater drain
<input type="checkbox"/> Spilt into waterway	<input type="checkbox"/> Poured down sink
<input type="checkbox"/> Poured down sewer	<input type="checkbox"/> Released into atmosphere
<input type="checkbox"/> Caused odour	<input type="checkbox"/> Caused fire/explosion
<input type="checkbox"/> Caused infectious contamination	<input type="checkbox"/> Other (specify)

Immediate Actions

Was spill contained? Yes <input type="checkbox"/> No <input type="checkbox"/>
Detail immediate actions/controls measures taken to rectify or contain the incident
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.....

Environmental Incident Reporting Form

Corrective Actions

Detail corrective clean up action taken

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Disposal

Detail disposal method/plans and location

.....

.....

.....

.....

Recommended follow up and preventative actions

Detail recommendations

.....

.....

.....

.....

.....

Persons present at Incident

Were there any witnesses to the accident? Yes ☐ No ☐ If 'Yes', please provide names

.....

.....

.....

.....

Spill Kit stock used – for restock purposes

Name Spill Kit(s) used: e.g. *Waste Transfer Station 80Litre Spill Kit*

.....

.....

Environmental Incident Reporting Form

Spill Kit Product	Quantity used
Enviropeat Oil Absorbent Material – 25L bag	
1.2m Absorbent sock	
3m Absorbent sock	
Absorbent pads	
Chemical resistant disposable gloves	
Disposable face masks	
Roll of plastic bin bags	
Cable ties	

Declaration

The information and answers given above are true in every detail and no information has been withheld.

Departmental Supervisors Name:	
Departmental Supervisors signature:	Date:

Departmental Managers Name:	
Departmental Managers signature:	Date:

Spill Kit Replenished

Staff Members Name and Role:	
Staff Members signature:	Date:

Created By: Paul Corcoran on 24 Mar 2009
Review Date: 16 Jan 2019