Site Environmental Management Plan

Lower Playground Mountain Bike Trail

Thredbo Alpine Resort
Kosciuszko National Park, NSW

April 2025

Document Control

Revision	Date	Revision Type	Author	Approved by
A	20/11/2024	Draft	J.Best	C.Chalk
0	19/12/2024	Final	C.Chalk	K.Delpit
1	15/04/2025	Updates to address NPWS referral comments 3.3-3.5	C.Chalk	K.Delpit

Project: 24032MO
Kosciuszko Thredbo Pty Ltd

Contents

Tables

1 Introduction

This Site Environmental Management Plan (SEMP) has been prepared for implementation by Kosciuszko Thredbo Pty Ltd (KT) (and its contractors) for the construction of the Lower Playground Mountain Bike Trail in Thredbo Alpine Resort, New South Wales.

The document outlines 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.

1.1 Objectives

The objectives of the 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. and
- Ensure Project personnel understand incident and emergency response procedures.

2 Reference Documentation

2.1 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 Guidelines, Procedures and Policies

- Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition (Landcom 2004)
- Interim Construction Noise Guidelines (DECC 2009)
- NSW EPA Waste Classification Guidelines (NSW EPA 2014)
- Construction Site Incident and Emergency Procedures Thredbo Village, version 1.1
- Emergency Response Spill Procedure, version 1
- Standard Operating Procedure: Use and Maintenance of Wash Down Bay 2019
- Bushfire Danger Period Policy, version 2

3 Project Description

The Project is for the construction of a mountain bike trail within the Cruiser ski area, Thredbo Alpine Resort, NSW.

3.1 Construction Activities

Pre-construction activities will comprise:

- Establishment of site boundary
- Marking significant vegetation to be retained and no-go zones
- Erection of site signage and traffic controls
- Flagging exact trail alignment using pin flags to mark the edges of the trail for construction
- Mobilisation of machinery, equipment and construction materials to site.

Construction activities will comprise:

- Vegetation clearing (50 m increments) within the trail corridor to expose bare earth
    - excess cut vegetation to be spread into the surrounding heath and used for rehabilitation of exposed soil on the trail edges
    - as per NPWS referral comments (DOC 25/105959, 28/03/2025) excess vegetation is not to be spread too deeply, resulting in smothering and impeded regrowth:
        - cleared native vegetation to be dispersed on exposed soil along the trail edge, placed on batters & embankments for erosion control or carefully spread further into bushland to avoid smothering of understory vegetation communities
        - all excess cleared vegetation must be removed from site to be utilised in other rehabilitation projects
    - topsoil and vegetation sods are to be stockpiled close to the trail tread
- Cut into the slope using a mini excavator and excavate the soil to achieve the appropriate depth of bench
- Remove loose rocks, roots and compact the trail
- Back slope the batter, ensuring outslope and appropriate drainage
- Define the trail line using rocks, logs and other obstacles
- Re-instate the verge areas, topsoil and preserved vegetation sods.

Post-construction activities will comprise:

- Rehabilitation in accordance with the Rehabilitation and Monitoring Plan
- Demobilisation of plant and machinery
- Site clean-up.

4 Construction Management Details

4.1 Construction Timing

Construction is anticipated to take approximately 2 weeks during the 2024/2025 year "summer construction period" (generally after the October long weekend and end no later than 30 April the following year), with finishing of rehabilitation and stabilisation works up until 30 May, or as otherwise approved.

4.2 Site Access

During construction, site access will be via the Merritts mountain access road from Friday Drive and secondary access tracks.

4.3 Vehicles, Machinery and Equipment

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

- mini excavator
- motorised wheelbarrows
- quad bikes
- dump trucks (to and from stockpile sites)
- 4 WD vehicles
- side-by-side vehicles
- handtools (i.e. chainsaws and brush-cutters).

4.4 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 Project and Construction 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.

4.5 Stockpile Sites

Temporary stockpiles will 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. Any excess spoil will be transported to the dedicated stockpiles sites, as shown in **Appendix A.**

All stockpiles will be managed in accordance with the environmental controls in **Section 6** and the Erosion and Sediment Control Plan (**Appendix B**).

4.5.1 Construction Materials

Construction materials will likely include:

- Trail signs; and
- Gravel / decomposed granite for the trail surface.

4.6 Work Hours

All work in connection with the Development must be carried out between the hours of 7.00am and 6.00pm, 7 days a week, or as otherwise approved.

5 Environmental Management

5.1 Roles and Responsibilities

The roles and responsibilities are outlined in **Table 1**.

Table 1: Roles and Responsibilities

Role	Responsibilities
Project Manager	• 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	• 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	• 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	• 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	• 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.

5.2.2 Key Contacts

Key contacts for the Project are provided in **Table 2**.

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 Notification Protocols

A summary of the notification protocols is provided in **Table 3.**

Table 3: 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 Construction site Incident and Emergency Procedures Thredbo**	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.** 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. 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 7.2**. 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 accessible by all construction staff.

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.
- 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).
- On-ground machinery used for the MTB trail construction must adhere to the following:
    - the tread width of on-ground machinery used in trail construction must not exceed 1500 mm
    - disturbance/works must be entirely contained within the trail corridor (average 2.5m with a maximum of 3m).

6.1.3 Imported materials and stabilising agents

NPWS requests that its authorisation is sought where the proponent intends to utilise either of the following in construction or maintenance of the trail:

- Imported gravel or fill material
- soil stabilising or adhesive agents.

The contractor may use imported gravel or fill material from sources already assessed by NPWS as appropriate for use in KNP, being gravel or fill material from:

- the McMahons Earthmoving quarry, located on Alpine Way, Crackenback NSW
- the Kraft Earthmoving / / Snowy Mountains Sand and Gravel quarry located on Kosciuszko Road, Jindabyne NSW; or
- any other source authorised by NPWS under the regulations it administers.

6.2 Soil and Water Quality

Soil and Water Quality		
Objective	No impact of soil erosion from project activities. No impact on receiving waters arising from project activities. No land or water contamination as a result of project activities.	
Mitigation Measures		**Timing**
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.		Construction
Implement Erosion and Sediment Control Plan (**Appendix B**).		Construction
Appropriate sediment control measures should be implemented prior to any construction work for the proposal and retained in place until exposed areas of soil		Construction

Soil and Water Quality	
or vegetation are stabilised and/or revegetated. Only weed-free straw or natural thatch/litter should be used in sediment control activities (ELA 2024).	
Drainage management and sediment control measures are to have particular regard to the prevention of any sedimentation of watercourses or vegetation communities adjoining the study area.	Construction
Only weed-free straw or natural thatch/litter should be used in sediment control activities.	Construction
Performance Criteria	No significant sediment deposition observed leaving the site.
Corrective Actions	If sediment is observed leaving the site, identify the source and amend the ESCs on-site to ensure appropriate controls are in place. If required, additional ESCs to be installed.

6.3 Flora and Fauna

6.3.1 Vegetation and Habitat

Vegetation and Habitat		
Objective	To ensure compliance with legislative requirements and protect existing native vegetation. Minimise impacts to native vegetation. No impact to native vegetation beyond the construction corridor.	
Mitigation Measures		**Timing**
All clearing must only occur within approved development corridor. • Mature trees must be avoided with removal of select saplings only. • 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 to be clearly identified.		Vegetation clearing
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 (ELA 2024).		Vegetation clearing; construction
All machinery to be used during the construction phase should be limited to the existing disturbed areas and access tracks and the proposed trail alignment as far as is possible (ELA 2024).		Vegetation clearing & construction
The proposed trail should be constructed and implemented in accordance with best practice design standards to ensure that there are no adverse modifications to the hydrological environment that may impact on surrounding vegetation and associated habitats (ELA 2024).		Vegetation clearing & construction
Progressive rehabilitation is to be undertaken in accordance with the Rehabilitation and Monitoring Plan. All rehabilitation should be undertaken in accordance with the *Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park* (DECC 2007).		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 wombat burrows need to be impacted by the proposal a wombat management plan should be developed for the proposal in consultation with NPWS (ELA 2024).	Prior to vegetation clearing works & prior to 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 limit the potential for invasive plants or pathogens, chemicals or any other pollutants to enter the environment in association with the proposed development. 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.	Construction
All vehicles and machinery entering Thredbo must adhere to the Standard Operating Procedure: Use and Maintenance of Wash Down Bay. The wash down bay is located at the Thredbo Waste Transfer Station for use by KT staff and contractors.	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.	Construction
All machinery to be regularly maintained and manoeuvred to prevent the spread of weeds and pathogens.	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**
Dust generation will be managed through typical dust suppression that will include covering stockpiled spoil, minimising ground disturbance and covering loads.		Vegetation clearing & construction
Plant and equipment to be maintained and operated in an efficient manner to reduce air pollution.		Construction
Vehicles are to adhere to speed limits to minimise dust general and potential spill of hauled materials.		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.		Construction
Performance Criteria	No complaints received in relation to air pollution.	
Corrective Actions	If complaints are received, the following steps should be taken: • 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.	

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**
Awareness training and information will be provided to project personnel in relation to minimising noise pollution as much as practicable when in close proximity of sensitive receivers.		Site induction
Selection of the most appropriate plant and equipment to minimise noise generation.		Prior to construction
Construction works will be undertaken during standard work hours.		Construction
Appropriate noise management strategies will be implemented for construction works and operation of plant in accordance with the Australian Standard AS 2436-2010 *Guide to noise and vibration control on construction, demolition and maintenance sites.*		Construction
Regular checks are to be undertaken to ensure all equipment and vehicles are in good working order and are operated correctly.		Construction
All plant will be maintained in accordance with the manufacturer's requirements.		Construction
Performance Criteria	No construction related noise and vibration complaints received. No unreasonable noise or vibration.	
Corrective Actions	If complaints are received, the following steps should be taken: • 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, Chemicals and Hazardous Substances

Fuels, Chemicals and Hazardous Substances		
Objective	Eliminate the potential for release of fuels, chemicals and hazardous substances to the environment.	
Mitigation Measures		**Timing**
Environmental spill kits containing suitable spill response materials shall be kept on site at all times. Spill kit materials shall be used in the event of a spill. Any oil spilt during the oil transfer or at other times shall be immediately contained and cleaned up.		Construction
In the event on an on-site spill, construction staff will follow KT's Construction Site Incident and Emergency Procedures Thredbo Village, version 1.1.		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.		Construction
Fuel and chemicals will be appropriately stored and handled in accordance with relevant Australian Standards and Codes of Practice.		Construction
Appropriate controls will be implemented when refuelling Project vehicles and machinery.		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, 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 impacts on existing road network. Minimise impacts to pedestrians and bike riders.	
Mitigation Measures		**Timing**
Traffic and construction vehicle access will be managed as per regular daily operation in the resort.		Construction
All Project vehicles and machinery to adhere to speed limits and signage and stay within construction corridor.		Construction
Appropriate signage, fencing or demarcation to be installed to manage access to and around the construction corridor.		Construction
Trail network The trail is proposed to be constructed outside of the mountain bike season to minimise disruptions to riders in the locality. In the event, the trail is constructed during the open mountain bike season, temporary closures of trails in the locality will be managed by the KT Mountain Bike Trail Operations Team.		Construction
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

Any construction waste will be disposed at the Thredbo Waste Transfer Facility at Friday Flat. All waste shall be managed and disposed of in accordance with the legislative requirements and the Waste Classification Guidelines (DECCW 2009). Excess spoil will be transported to the dedicated stockpiles sites, as shown in **Appendix A.** All waste transportation vehicles will be covered appropriately to ensure waste cannot spill, leak or escape onto the road or wash into stormwater drains.

6.9 Aboriginal 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.

6.10 Bushfire Protection

The construction contractor would be responsible for determining relevant requirements for the site and ensuring staff are aware of bushfire avoidance, evacuation, and management measures e.g. prior to undertaking works the construction contractor should confirm that there is no current total fire ban or Kosciuszko National Park fire ban as this may place restrictions of activities such as use of plant or machinery in grass/bush settings.

The **Construction Site Incident and Emergency Procedure** outlines procedures for responding to fire and bushfire incidents or emergencies. This procedure is made available to all construction staff. In the event of a bushfire, Kosciuszko Thredbo (the head lessee) would implement the resort-wide Bushfire Evacuation Plan. The plan has been designed to assist management and emergency services to protect life and property in the event of a bush fire or other emergency.

7 Monitoring and Reporting

7.1 Environmental Monitoring

The Environmental Officer will conduct environmental monitoring and reporting utilising the **Site Environmental Management Measures Report.** All records will be stored within KT's files and distributed to relevant persons / regulatory authorities as required.

7.2 Environmental Incident Reporting

All incidents and near misses will be managed in accordance with KT's **Construction site Incident and Emergency Procedures Thredbo Village**. The document provides procedures for responding to incidents and emergences, 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.

7.3 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.

7.4 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.

7.5 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 no-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.

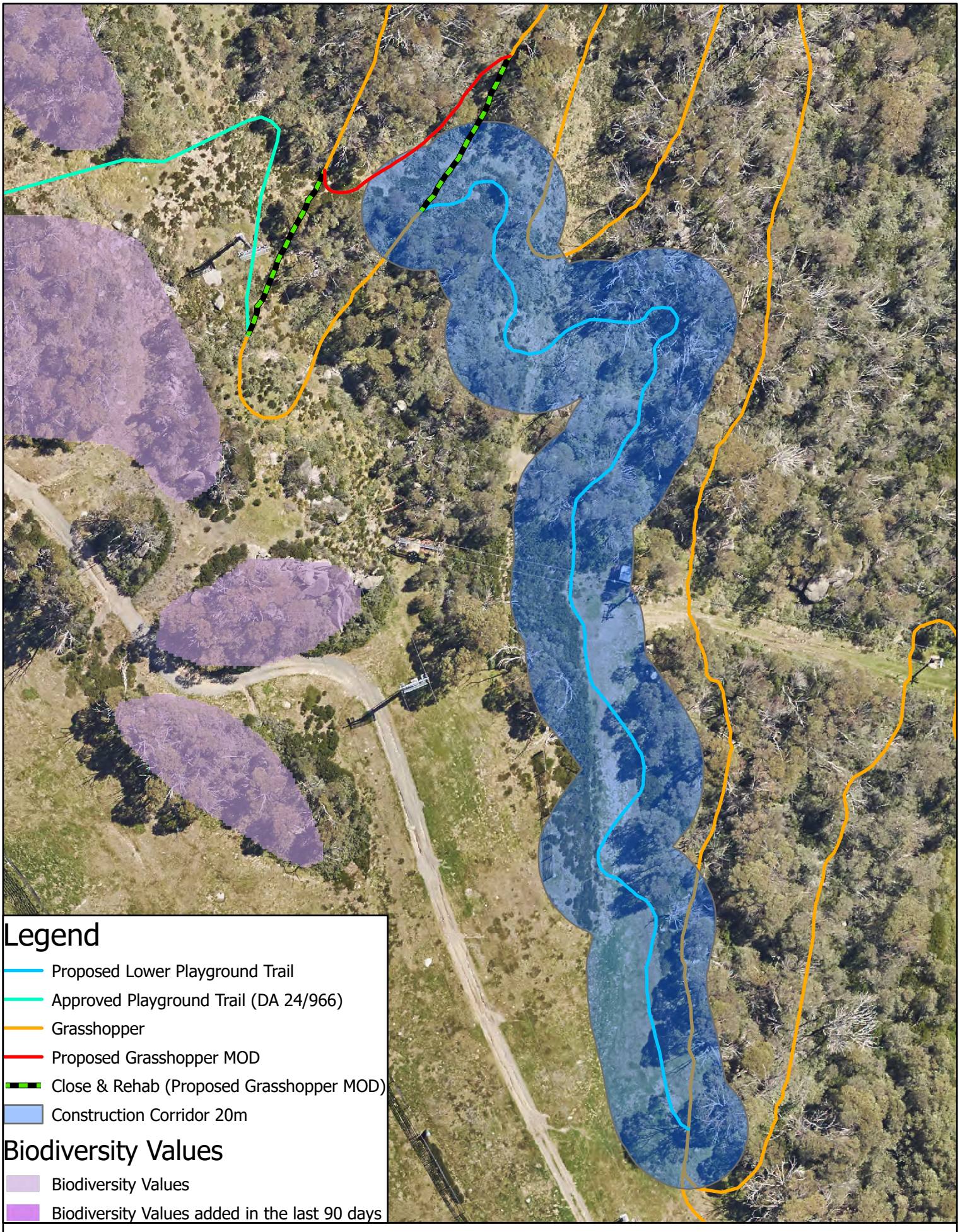
9 References

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

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: 1:800

5.5 2.750 5.5 11 16.5 22

Meters

Map Projection: Universal Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

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THREDBO

SITE PLAN

Project: Proposed Lower Playground MTB Trail

Revision: B

Date: 25/11/2024

Produced By: BB

0 4.5 9 18 27 36 Meters

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

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THREDBO

STOCKPILE AND MATERIAL STORAGE LOCATION WASTE TRASFER FACILITY

Revision: A

Date: 14/09/2023

Produced By: KOS

Appendix B Erosion and Sediment Control Plan

Erosion and Sediment Control Plan

Lower Playground Mountain Bike Trail

PURPOSE

The purpose of this Erosion and Sediment Control Plan is to outline the intentions and fundamental principles that will be followed in the planning and implementation of erosion and sediment control (ESC) measures for the project during construction.

OBJECTIVES

To minimise potential impacts from construction works to receiving waters.

To reduce the potential for erosion and sediment moving offsite.

SCOPE OF THIS PLAN

At this stage of the proposal it is not practicable to specifically locate all erosion and sediment controls on a plan. This preliminary plan identifies appropriate controls specific to project activities to prevent sedimentation and pollution of receiving waters, and minimise potential impacts on vegetation communities with and adjacent to the site.

A detailed erosion and sediment control plan is to be prepared in conjunction with detailed design as part of the construction certificate.

GUIDELINES

- Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition (Landcom 2004)
- IECA Best Practice Erosion and Sediment Control
- Erosion and Sediment Control: A field Guide for Construction Site Managers (Catchments & Creeks Pty Ltd, 2012)

EROSION AND SEDIMENT CONTROLS

Implementation of appropriate controls and locations will be the responsibility of the construction contractor. Controls to be installed prior to any construction work (where required) and retain in place until exposed areas of soil or vegetation are stabilised/rehabilitated.

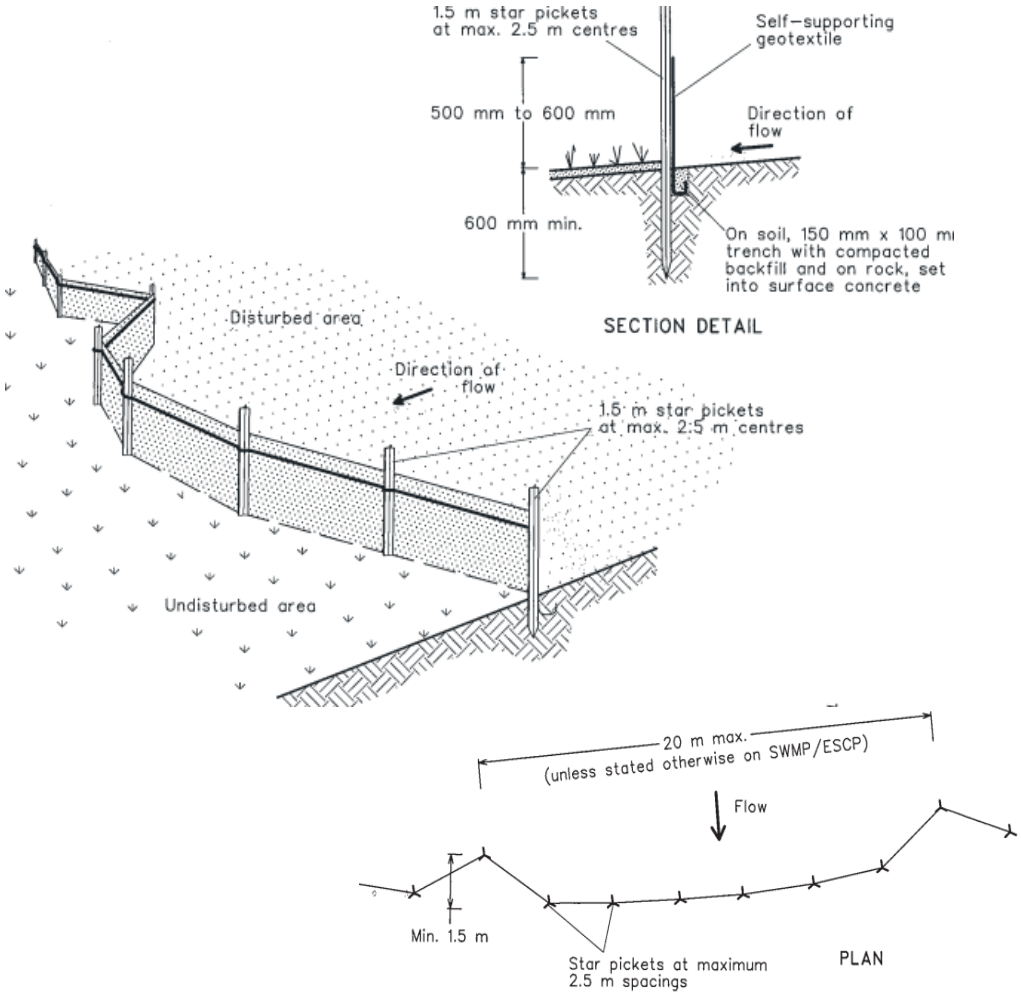
Sediment fencing and straw bale filter fencing is to be utilised during construction of the trail and stockpiling, as required. Controls are to be installed prior to works and retained in place until exposed areas of soil are stabilised.

Sediment Fence

The purpose of sediment fencing is to prevent sediment run-off and divert water around and away from disturbed areas. Sediment fencing should be used on the downslope side of works area, wetter areas and surrounding stockpiles.

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)

Straw Bale Filter Fence

Straw bales may be used to divert water around and away from disturbance areas during down-slope and cross-slope excavations. Straw bales are to be used on the uphill side of works area running cross-slope.

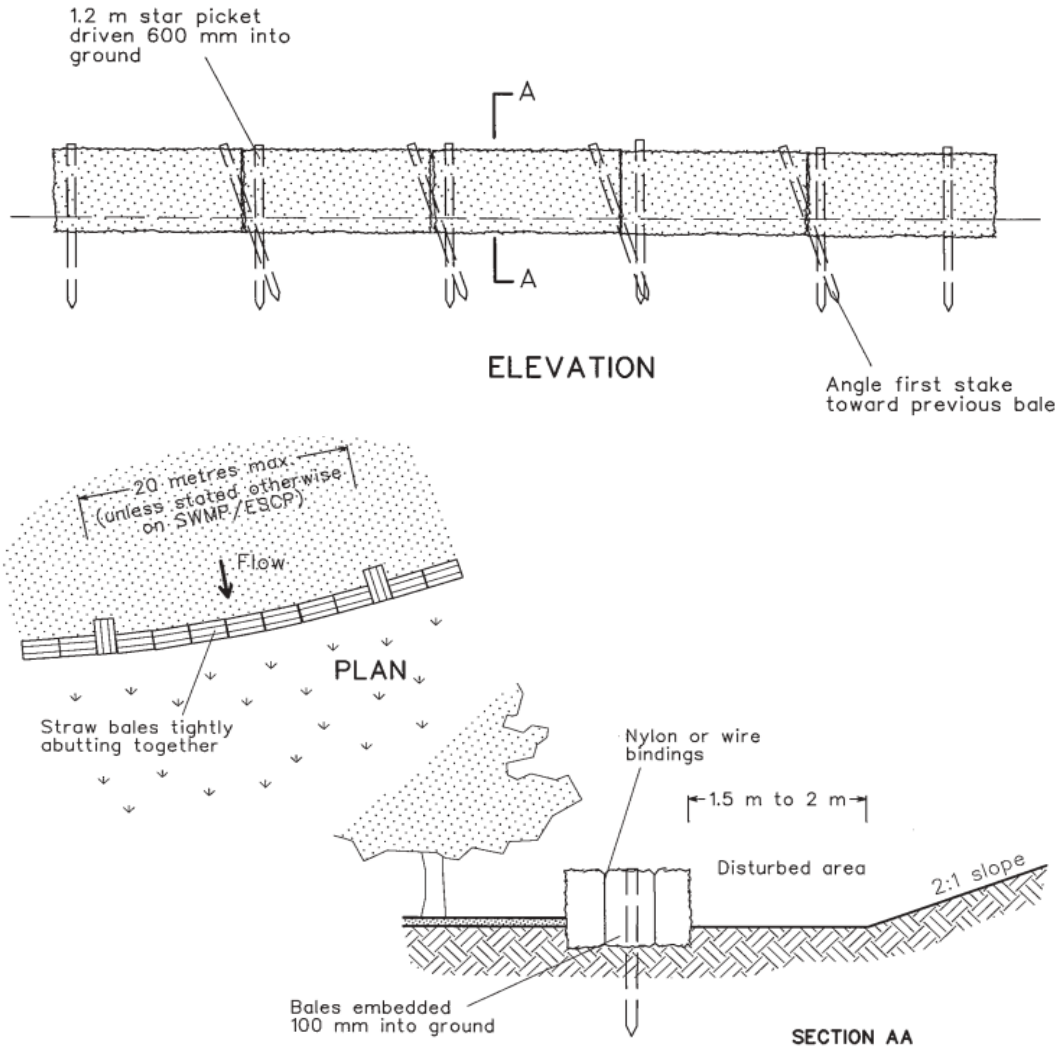
Construction notes:

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)

Cross Drainage and Sediment Barriers

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

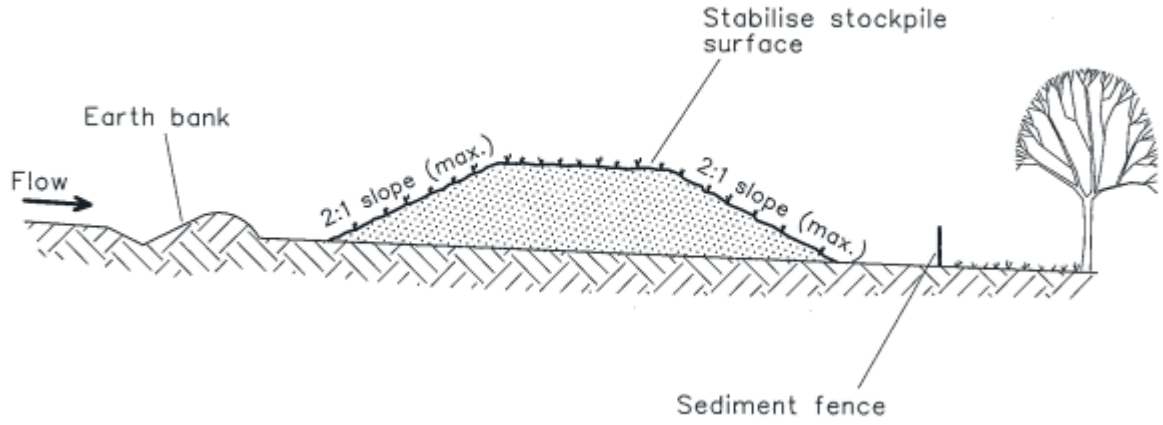
Slope Grade (%)	Cross Drain / Sediment Barrier (m)
5-10	15-20
10-15	10-15

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

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.



Stockpile Management (Source: Landcom 2004)

Appendix C Environmental Schedules

THREDBO ENVIRONMENTAL SERVICES

Record of complaint

Sheet _____of_____

Project: _____ Date / Time: _____

Received by: _____ Reference Number: _____

Complainant details:	Witness details:

Nature of complaint:

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..... Complainant sign:

Action taken:

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Kosciuszko Thredbo Pty Ltd

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.

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 ☐ No ☐
If 'No', provide sketch and attach to the rear of this document.
What was the estimated duration of the incident?

Type of incident

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

Environmental Incident Reporting Form

Level of incident

Level	Example
☐ Minor	eg. No material has escaped the site or caused material harm to the environment – it is easy to clean up without additional assistance.
☐ 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

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

Type of Spill

☐ Spilt onto ground	☐ Spilt into stormwater drain
☐ Spilt into waterway	☐ Poured down sink
☐ Poured down sewer	☐ Released into atmosphere
☐ Caused odour	☐ Caused fire/explosion
☐ Caused infectious contamination	☐ Other (specify)

Immediate Actions

Was spill contained? Yes ☐ No ☐
Detail immediate actions/controls measures taken to rectify or contain the incident …… …… …… …… …… …… …… ……

Environmental Incident Reporting Form

Corrective Actions

Detail corrective clean up action taken

……

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Disposal

Detail disposal method/plans and location

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Recommended follow up and preventative actions

Detail recommendations

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……

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Persons present at Incident

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

……

……

Declaration

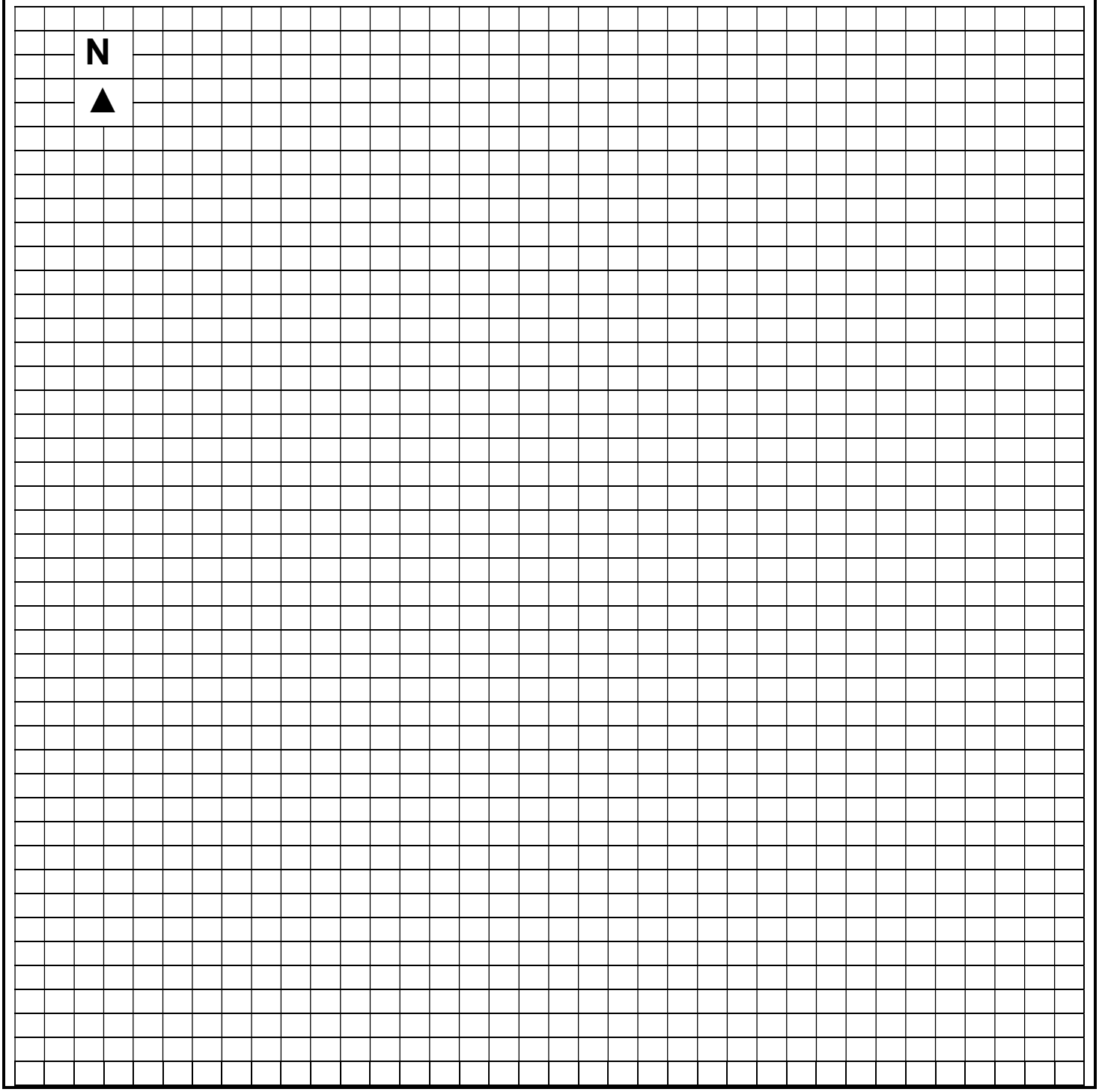
The information and answers given above are true in every detail and no information has been withheld.

Departmental Supervisors Name	
Departmental Supervisors signature	*Date*

Departmental Managers Name	
Departmental Managers signature	*Date*

Environmental Incident Reporting Form

Diagram: (do not scale)



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