Site Environmental Management Plan

Thredbo Golf Course Subdivision

Thredbo Alpine Resort
Kosciuszko National Park, NSW

November 2025

Document Control

Project: 23011

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A	21.07.2022	Draft	C.Chalk	A.Harrigan, E.Diver
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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 Thredbo Golf Course Subdivision (the Project).

1.1 Purpose

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

1.2 Objectives

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; and
- Ensure Project personnel understand incident and emergency response procedures.

2 Reference Documentation

Relevant legislation and approvals are listed in **Table 1**.

Table 1: Legislation and Approvals

Legislation	Approval
Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)	-
Biodiversity Conservation Act 2016	-
Environmental Planning and Assessment Act 1979	Development Consent
Environmentally Hazardous Chemicals Act 1985	-
Heritage Act 1977	-
National Parks and Wildlife Act 197	Aboriginal Heritage Impact Permit (AHIP) to be obtained.
Protection of the Environment Operations Act 1997	-
Rural Fires Act 1997	Bush Fire Safety Authority to be obtained.
Waste Avoidance and Resource Recovery Act 200	-
Water Management Act 2000	Controlled Activity Approval to be obtained.
Work Health and Safety Act 2011	-

Relevant policies and procedures are listed in **Table 2**.

Table 2: Policies and procedures

Policies / Procedures	Prepared by	Version
Construction Site Incident and Emergency Procedures Thredbo Village	Kosciuszko Thredbo Pty Ltd	1.1
Emergency Response Spill Procedure	Kosciuszko Thredbo Pty Ltd	1
Thredbo Spill Kit Map	Kosciuszko Thredbo Pty Ltd	-
Standard Operating Procedure: Use and Maintenance of Wash Down Bay (KT055)	Kosciuszko Thredbo Pty Ltd	March 2019

Relevant guidelines are listed in **Table 3**.

Table 3: Guidelines

Element	Guideline
Erosion and sediment control; stormwater management	Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition (Landcom 2004) (Blue Book). Managing Urban Stormwater: Soils and Construction, Volume 2A, Installation of services (NSW DECC 2008). Best Practice Erosion and Sediment Control document (IECA 2008)
Soil stockpiling	Soil Stockpile Guidelines for the Resort Areas of Kosciuszko National Park (OEH 2017).
Rehabilitation	Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park (DECC 2007).
Noise management	Interim Construction Noise Guideline (Department of Environment & Climate Change NSW 2009).

3 Project Description

The Development is situated within the Thredbo Golf Course. The Development includes the following works:

- vegetation clearing;
- earthworks;
- establishment, survey and sub-division of 18 lots;
- golf course re-design;
- provision of municipal services, including a new access road, water, electricity, sewer, communications, stormwater drainage and gas infrastructure; and
- rehabilitation and landscaping works.

4 Construction Details

4.1 Construction Timing and Scheduling

The construction activities are proposed to be undertaken in two stages over summer 2026/27 and 2027/28.

4.2 Construction Activities

4.2.1 Pre-construction activities

Pre-construction activities involve site preparation works, which will include (but may not be limited to) the following:

- Establishment of site boundary/fencing and no-go zones;
- Mobilisation of machinery, plant and construction materials to site;
- Establishment of site compound and waste bins;
- Erection of site safety measures, including site signage and pedestrian/traffic controls; and
- Installation of erosion and sediment controls.

4.2.2 Vegetation clearing

Vegetation clearing methods will likely include (but are not limited to) the following:

- Clearly marking trees to be removed with flagging tape or spray paint. Identify with flagging tape the limit of disturbance footprint where it encroaches upon relatively undisturbed native vegetation, prior to construction (ELA 2025).
- Trees must be checked for fauna habitats and fauna by the Environmental Officer immediately prior to felling / removal. Trees with active nests should not be removed until the young have left the nest. If fauna is present, contact NPWS to assist with mitigation actions.
- Trees must be felled in segments and in a manner that minimises any impacts on adjoining vegetation.
- Trees removed may be processed / used for –
    - Rehabilitation
    - Placed in adjoining native vegetation
    - Removed from the site
- To allow for processing of felled trees, a chipper will be utilised onsite. The chipper will be parked suitable disturbed areas within the site.
- Shrubs and long grass to be cleared using brush cutters.

4.2.3 Services Infrastructure

Construction activities associated with the installation of services infrastructure will include (but may not be limited to) the following:

- Strip existing topsoil and temporarily stockpile excavated soil;
- Trenching and installation of services including water supply, sewage, electricity, gas and communications infrastructure;
- Backfilling of trenches and disturbed areas; and
- Landscaping/re-vegetation.

4.2.4 Road Access, Carparking and Street Furniture

Construction activities associated with these works will include (but may not be limited to) the following:

- Strip existing fill and topsoil and temporarily stockpile excavated soil;
- Cut and fill earthworks to form road
    - Excavation to create pavement subgrade
    - Test rolling to confirm suitable subgrade
    - The excavated areas to be backfilled and compacted in preparation for laying road base and seal;
- Demolition/removal of redundant underground pipes where uncovered within the disturbance footprint;
- Drainage and site works, including construction of retaining wall;
- Construction of road and carparks;
- Line marking and installation of street furniture etc; and
- Landscaping/re-vegetation.

4.2.5 Golf course re-design

Construction activities associated with these works will include:

- Vegetation removal for new fairways/holes and adjacent to select fairways;
- Earthworks including shaping, mounding and batters for creation of new tees, greens and bunker;
- Construction of new holes and dressing; and
- Landscaping and rehabilitation.

4.2.6 Post-construction Activities

Post-construction activities will comprise:

- Completion of rehabilitation and landscaping in accordance with the Resort Rehabilitation Guidelines (NGH 2007) and Landscape Concept Plan (DAWSON DESIGN 2025);
- Demobilisation of plant and machinery; and
- Site clean-up.

4.3 Vehicles, Machinery and Equipment

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

- 4wd vehicles and utilities;
- excavators;
- graders;
- roller;
- trucks;
- side-by-side buggies;
- chippers;
- chainsaws;
- brush cutters;

- hand tools;
- rock breaking hammers or other hard ripping equipment;
- mobile crane;
- front end loaders / skid steers; and
- jack hammer.

4.4 Work Hours

All works will be carried out between the hours of 7:00 am and 6:00 pm, seven days a week.

4.5 Site Access

The site is accessible via Crackenback Drive, Thredbo NSW 2625. Construction site access is identified in **Appendix B**.

4.6 Site Compound

The site compound will be located south-west of the Community Centre (**Appendix C**). The site compound will include carparking, office/amenities and small material storage. No soil stockpiling is to occur within the site compound.

4.7 Stockpiles and Material Storage Areas

Temporary stockpiles will also be required within the site to effectively manage materials during the works. All temporary stockpile sites will be located in disturbed areas. Soil will be separated so that it can be used during landscaping and rehabilitation works.

The proposed stockpile and material storage areas are identified in **Table 4** and **Appendix C**.

Table 4: Stockpile and material storage areas

Location	Use
Site compound	Material storage i.e. prefabricated infrastructure/pipes/pits etc.
Village Green carpark	Construction carparking and secondary material storage location
Friday Flat coach carpark	Primary material storage location i.e. pits, pipes etc.
Lower overflow carpark stockpile site	Main stockpile location. Excess spoil and materials such as gravel and road base.

4.7.1 Stockpile Sites and Soil 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.

4.8 Imported 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:

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

5 Environmental Management

5.1 Roles and Responsibilities

Roles and responsibilities are outlined in **Table 5**.

Table 5: 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; and • Ensuring Project personnel and contractors are adequately trained and qualified to fulfil their roles.
Construction Site Manager	• Implement and maintain the SEMP; • Ensure all Project personnel comply with the requirements of the SEMP; and • 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.
Principal Construction Contractor	• Comply with SEMP and legislative requirements; and • Construction contractor to develop and implement management plans in accordance with this SEMP, conditions of approval and contractual obligations.
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;

Role	Responsibilities
	• Assist with environmental incident investigations and applying corrective actions; and • Ensure all machinery, plant and equipment are in good working order and condition prior to use.

5.2 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; and
- Procedures for notifying and reporting incidents and complaints.

A **Site Induction Form** (**Appendix E**) (or Contractor's similar form) must be completed at the Site Induction confirming key aspects of the works have been discussed.

5.3 Communication

5.3.1 Key Contacts

Key contacts for the Project are provided in **Table 6**.

Table 6: Key Contacts

Company / Agency	Role / Reason	Contact
Department of Planning, Housing and Infrastructure (DPHI) (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 Medical Centre	General medical attention	(02) 6457 6254
Fire and Rescue Thredbo, NSW	Incident / emergency	(02) 6457 6144
NSW Police	In case of fire, medical or police emergency	000
NSW Fire and Rescue		
NSW Ambulance		

5.3.2 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**.** Where required, communication with key external stakeholders will be undertaken. A summary of the key consultation activities is provided in **Table 7**.

Table 7: 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

5.3.3 Notification Protocols

A summary of the key notification protocols is provided in **Table 8.** Notification requirements will be updated as required.

Table 8: Regulatory Agency Notification Protocols

Party to Notify	What to Notify	When to Notify	Responsibility to Notify
DPHI	Commencement of construction	DPHI will be notified in writing at least 48 hours prior to the commencement of construction.	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.	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 Village***.	KT Environmental Manager

5.4 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 7.1**. Contact details for key Project personnel and emergency services are provided in **Table 6**.

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.

5.5 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.

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

6 Environmental Controls

6.1 General Construction Management Principles

- Ensure all works are undertaken in accordance with the conditions of consent.
- Ensure works are conducted by suitably qualified and trained personnel.
- Ensure all project staff and contractors are aware of their environmental obligations through site induction process.
- 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.
- All works are to be carried out in accordance with current Australian Standards.

6.1.1 Site Establishment

- Erection of site signage and pedestrian/traffic controls e.g. speed limits, site contact details, construction site identification.
- Implementation of site environmental management measures.
- Marking of “no go” areas.
- Peg / survey site with flagging tape or spray paint.
- Any trees proposed to be removed shall be inspected and approved by the Environmental Officer prior to their removal, or partial removal.
- All site environmental management measures are to be inspected and approved by the Environmental Officer.

6.1.2 Machinery and Storage

- All equipment, machinery and vehicles used during vegetation clearing must be cleared prior to entry into KNP and prior to the subject 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 and vehicles is to be restricted to existing disturbed areas 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).
- Storage of plant and machinery is to be restricted to the designated disturbed areas within the construction corridor.

6.2 Soil and Water Quality Management

Table 9: Soil and water quality management

Soil and Water Quality Management		
Objectives	To minimise potential impacts from construction works to receiving waters. To reduce the potential for erosion and sediment moving offsite.	
Mitigation Measures		**Timing**
	The construction corridor is to be clearly identified with flagging tape to mark no-go/no clearing zones.	Prior to works
	Prepare and implement **Erosion and Sediment Control Plan** (ESCP) (**Appendix D**).	Prior to works Construction
	Site access points will be appropriately managed to minimise the risk of sediment being tracked onto sealed, public roadways.	Construction
	Access routes for vehicles and machinery are to be clearly defined to minimise the extent of impacts from the works.	Construction
	Storage of machinery and material is to be restricted to the designated disturbed areas (e.g. existing lift disturbance areas or existing disturbed ski slopes).	Construction
	Site stabilisation and rehabilitation works should commence, as soon as possible, following the completion	Construction
Performance Criteria	No significant sediment deposition observed leaving the site. No ground disturbance outside of approved corridor.	
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 Vegetation and Habitat Management

Table 10: Vegetation and habitat management

Vegetation and Habitat Management		
Objective	To ensure compliance with legislative requirements and protect existing native vegetation.	
Mitigation Measures		**Timing**
	Brief all workers as to limit of disturbance footprint and other environmental safeguards (ELA 2025)	Prior to works; Construction
	All clearing must only occur within approved development corridor. Mature trees and rocks required to be removed are to be clearly identified.	Prior to works
	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
	Exposed rock removal • Exposed rocks for removal to be marked prior to removal. • Rocks removed from the site to be reused within the resort. • Where rocks are unable to be used in the resort, they shall be stockpiled and used for other projects.	Vegetation clearing; Construction
	Machinery, equipment and materials All machinery, materials and equipment must be stored on existing disturbed areas (i.e. at the identified stockpile and staging areas) and must not be stored on native vegetation.	Vegetation clearing; Construction
	Landscaping and rehabilitation All landscaping and rehabilitation should be undertaken in accordance with the Landscape Plan and *Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park* (NGH 2007).	Construction; immediately 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.	

6.4 Fauna Management

Table 11: Fauna management

Fauna Management		
Objective	To minimise potential impacts to native fauna, their breeding places and habitat.	
Mitigation Measures		**Timing**
	A **Wombat Management Plan** should be developed to manage impacts on any active wombat burrows in close proximity to proposed works (ELA 2025). The plan should be developed for the proposal in consultation with NPWS.	Prior to works
	Restrict works to daylight hours to mitigate potential noise and light impacts (ELA 2025).	Construction
	If excavations are to be left open overnight then temporary fauna egress measures must be installed.	Construction
	Reasonable and practicable native fauna management measures are to be implemented during construction to avoid environmental harm and nuisance to native fauna, known habitats and breeding places	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.	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.	

6.5 Exotic Species Management

Table 12: Exotic species management

Exotic Species Management		
Objective	To reduce the risk of introducing weeds and pest species.	
Mitigation Measures		**Timing**
	All relevant weed species that occur within the site 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. Routine assessment of the site must be conducted prior to, and following completion of, construction with relevant weeds identified to be treated or removed.	Prior to works Construction Post-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 works
	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 Thredbo Alpine Resort or broader KNP that contains weeds and is to be redeployed to the development site or associated stockpile and staging areas.	Vegetation clearing; 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	Vegetation clearing; Construction

Exotic Species Management		
	the Thredbo Waste Transfer Station for use by KT staff and contractors.	
	All machinery and equipment must be stored on existing disturbed areas (i.e. at the stockpile and staging areas) and should not be stored on native vegetation.	Vegetation clearing; Construction
	All machinery to be regularly maintained and manoeuvred to prevent the spread of weeds and pathogens.	Vegetation clearing; Construction
	Appropriate safeguards should be in place during the proposed works to limit the potential for invasive plants or pathogens, chemicals or any other pollutants to enter the environment in association with the proposed development.	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.	

6.6 Air Quality Management

Table 13: Air quality management

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. Clearing to occur progressively and only where necessary for works.	Vegetation clearing Construction
	Disturbed areas to be progressively rehabilitated to prevent soil loss and erosion.	Construction Post-construction
	Plant and equipment to be maintained and operated in an efficient manner to reduce air pollution.	Construction
	Ensure stockpiles are protected to minimise loss of soil.	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
	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.	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.	

6.7 Noise and Vibration Management

Table 14: Noise and vibration management

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**
	Prepare and implement **Construction Noise and Vibration Management Plan** (Vipac 2025).	Prior to construction
	Awareness training and information will be provided to project personnel in relation to minimising noise pollution as much as practicable when conducting works.	Site induction
	Construction works are to be managed in accordance with *Australian Standard 2436-2010 Guide to noise and vibration control on construction, demolition and maintenance sites*.	Construction
	Construction works are to be restricted to the hours stipulated in this SEMP.	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.	

6.8 Traffic and Access Management

Table 15: Traffic and access management

Traffic and Access Management		
Objective	Minimise potential impacts on existing road network	
Mitigation Measures		**Timing**
	All construction vehicles to enter/exit site via dedicated access.	Construction
	All Project vehicles and machinery to adhere to speed limits and signage and stay within construction corridor.	Construction
	All vehicle and plant operators will be licensed and trained.	Construction
	Road users, bike riders and pedestrians will be managed through the use of signage, barriers, exclusion fencing and temporary closures during the construction period.	Prior to works / site establishment; Construction
	Partial road closures may be required at times during construction of the road intersection. All closures will be negotiated with KT prior to commencement. Sublessees, visitors and staff will be notified of any road closures.	Construction of road intersection
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).	

6.9 Waste Avoidance and Management

Table 16: Waste avoidance and management

Waste Avoidance and Management		
Objective	Minimise construction waste as much as practicable. Reduce the impact of waste on-site and beyond the site boundary.	
Mitigation Measures		**Timing**
	All receptacles will be in good condition and cleaned regularly.	Construction
	Building waste must be contained in receptacles and covered daily, or removed from the construction site each day to ensure waste cannot escape by wind, water or scavenging fauna.	Construction
	Receptacles must only be located on previously disturbed areas and not beneath the canopy or over roots of trees.	Construction
	All waste will be managed and disposed of in accordance with either KT's or contractors waste management procedures.	Construction
	Where possible, construction materials will be salvaged for reuse to divert waste from landfill.	Construction
	All waste will be separated into waste streams and contained within appropriate receptacles and/or disposed of in accordance with the EPA guidelines.	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.	Construction
	The site will be left in a tidy and rubbish free station upon completion of works.	Post-construction
Performance Criteria	No litter or waste material to be released from site in an uncontrolled manner. No dumped rubbish within the construction corridor.	
Corrective Actions	• Investigate cause of inappropriate waste disposal/management. • Waste to be removed by appointed contractor. • 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	

6.9.1 Waste streams

The proposed construction waste streams are identified in **Table 17**.

Table 17: Construction Waste Streams

Waste Class	Waste Type	Source of Waste	Reuse, recycle or disposal	Storage	Collection Method	Disposal Location
General solid waste (putrescible)	Food waste	Food waste from construction site personnel	Recycle (on-site composting)	Food organics bins	Construction contractor	Thredbo Waste Transfer Facility
General solid waste (non-putrescible)	Municipal waste that does not contain food waste	Packaging waste e.g. plastic bags, food wrapping (Low density polyethylene)	Disposal	General waste bins	Construction contractor	Thredbo Waste Transfer Facility
	Paper and cardboard	Mixed paper and cardboard from site offices,	Recycle	Recycling bins	Construction contractor	External waste facility

Waste Class	Waste Type	Source of Waste	Reuse, recycle or disposal	Storage	Collection Method	Disposal Location
		product packaging etc.				
	Plastics	Silt fencing, flagging etc.	Disposal	Industrial skip bin	Construction contractor	External waste facility
		Electricity supply materials and underground pipes (e.g. PVC cables and pipe)	Disposal	Scrap metal recycling skip bins (metals), industrial skip bins (other material)	Construction contractor	External waste facility
	Building and demolition waste	Concrete	Disposal	Industrial skip bin	Construction contractor	External waste facility
		Underground pipes	Disposal	Industrial skip bin	Construction contractor	External waste facility
	Virgin excavated natural material	Excess materials from excavation works	Reuse, or disposal	Temporary stockpile; Thredbo Main Stockpile Area	Construction contractor	Thredbo Main Stockpile Area within Thredbo Waste Transfer Facility, or External waste facility.

6.9.2 Waste Disposal Locations

6.9.2.1 Thredbo Waste Transfer Facility

Materials being kept for re-use elsewhere in the resort will be either loaded directly onto a truck or placed on pallets for transport to the Thredbo Waste Transfer Facility where they will be stored or taken to the workshop for preservation works prior to storage.

6.9.2.2 Landfill

Any waste that cannot be re-used within the resort will be transported off-site by a licenced contractor and disposed of at either of the following locations:

- Jindabyne Regional Waste Management Facility – 6013 Kosciuszko Road, Jindabyne NSW 2627; or
- Cooma Landfill – 8448 Monaro Highway, Cooma NSW 2630.

6.10 Fuels and Chemicals Management

Fuels and chemicals for construction will likely include diesel, unleaded petrol and paint.

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 during inductions/ pre-start meetings.	Prior to works Construction
	In the event on an on-site spill, construction staff are to follow the **Construction Site Incident and Emergency Procedures Thredbo Village**.	Construction

Fuels and Chemicals Management		
	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 are to be appropriately stored and handled in accordance with relevant Australian Standards.	Construction
	Appropriate controls shall be implemented when refuelling project vehicles and machinery to ensure no spillage when refuelling.	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.	

6.11 Aboriginal Heritage Management

The Aboriginal Cultural Heritage Assessment (Past Traces 2025) identified one heritage surface site within the Project area. Therefore, no works shall commence onsite prior to obtaining an Aboriginal Heritage Impact Permit (AHIP).

6.11.1 Aboriginal Heritage Impact Permit (AHIP)

All works are to be undertaken in accordance with the AHIP. Project personnel are to be made aware of their obligations under the AHIP prior to commencement of works onsite. It is an offence to disturb an Aboriginal site without an AHIP as all Aboriginal objects are protected under the NSW *National Parks and Wildlife Act 1974*.

6.11.2 Unexpected Aboriginal Heritage Finds Procedure

Should any Aboriginal objects be encountered during works outside of the AHIP area, then works must cease and a heritage professional contacted to assess the find. Works may not recommence until cleared by NSW Heritage.

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, Inspections and Reporting Process

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 routine inspections utilising the **Site Environmental Management Measures Report** (or similar contractor's form).

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); and
- 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 SEMP 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; and
- 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; and
- At the end of a Project to allow for improvements in subsequent Projects.

The Environmental Officer will be responsible for reviewing the SEMP and the Project Manager is responsible for approving these changes.

9 Appendices

Appendix A Site Plan

KEY

LOT BOUNDARY

CASCADE CLOSE

CRACKENBACK DRIVE

NEW FIRST TEE

SHEET A1.004

SHEET A1.003

SHEET A1.002

LOT 500 DP1118419

MGA94
N 5959000.853
E 616681.437

MGA94
N 5958801.008
E 616381.437

100m
150m
200m
250m
300m
350m
400m
425m
50m

Lot	Lot Area
1	750 m²
2	792 m²
3	669 m²
4	819 m²
5	879 m²
6	593 m²
7	626 m²
8	645 m²
9	627 m²
10	815 m²
11	822 m²
12	592 m²
13	779 m²
14	717 m²
15	532 m²
16	885 m²
17	600 m²
18	646 m²

12789 m²

This drawing should be read in conjunction with all relevant contracts, specifications and drawings. Dimensions are in millimetres. Levels are metres. Do not scale off drawings. Use figured dimensions only. Check dimensions on Site. Report discrepancies immediately.

NOTES

D	01/09/25	LINEWORK ADJUSTMENT	SM
C	29/08/25	LOT AMENDMENTS	SM
B	21/08/25	LOT AMENDMENTS	SM
A	10/02/25	CLIENT COMMENT AMENDMENTS	SM

ISSUE DATE SUBJECT VALID'N.

CLIENT

THREDBO

CONCEPT DESIGN

PROJECT
THREDBO GOLF COURSE
RESIDENTIAL STUDY
CASADE CLOSE
THREDBO VILLAGE

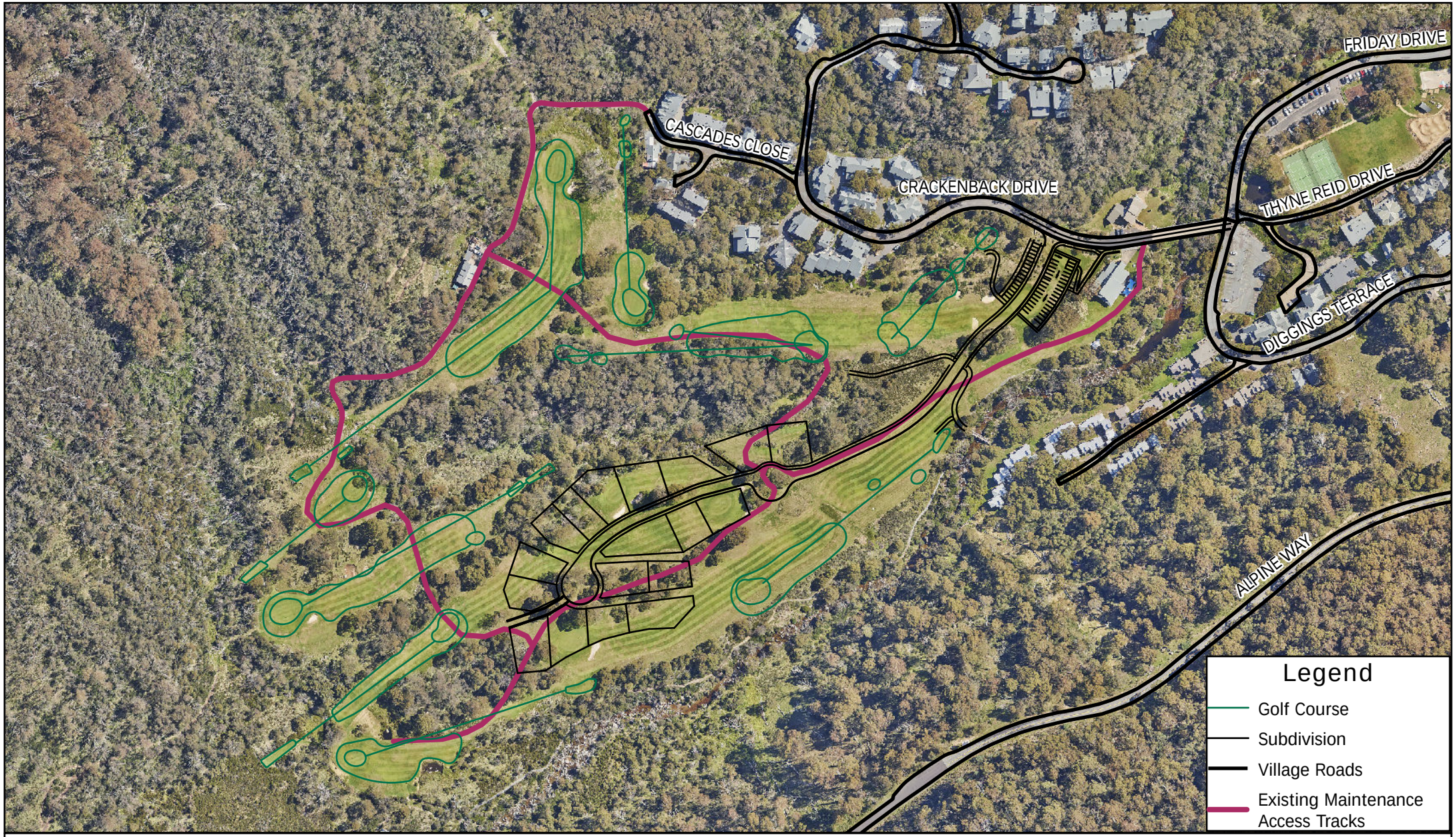
ARCHITECT
djrd architects
T +612 9319 2955
ABN: 48 942 921 969
Nominated Architects:
Andrew Hipwell 6562
Daniel Beekwilder 6192
63 Myrtle Street
Chippendale NSW 2008
Sydney Australia
djrd.com.au

DRAWN: Author
SCALE AT A3: 1 : 2000

DESCRIPTION
SITE PLAN A

PROJECT No	DRAWING No	REVISION
19 413	A1.000	D

Appendix B Site Access Plan



Scale: 1:3,375

40 20 0 40 80 120 160

Meters

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

N

THREDBO

FIGURE 3: SITE ACCESS

Project: Thredbo Golf Course Subdivision

Revision: D

Date: 09/10/2025

Produced By: CC

Appendix C Site Compound, Stockpile and Material Storage Areas

Scale: 1:3,359

30 15 0 30 60 90 120

Meters

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

N

THREDBO

FIGURE 12: SITE COMPOUND AND MATERIAL STORAGE AREA

Project: Thredbo Golf Course Subdivision

Revision: C

Date: 09/10/2025

Produced By: CC

Scale: 1:3,359

30 15 0 30 60 90 120

Meters

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

N

THREDBO

FIGURE 13: SECONDARY MATERIAL STORAGE AND STOCKPILE AREAS

Project: Thredbo Golf Course Subdivision

Revision: A

Date: 09/10/2025

Produced By: CC

Appendix D Erosion and Sediment Control Plan

Erosion and Sediment Control Plan

Thredbo Golf Course Subdivision

Document version: 1

Date: 19 November 2025

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.

SITE ESTABLISHMENT

- Implement sediment control measures prior to any construction work and retain in place until exposed areas of soil or vegetation are stabilised/rehabilitated.

STOCKPILES AND STORAGE OF MATERIALS

- Soil stockpiles to be managed in accordance with the Soil Stockpile Guidelines.

- Refer **Attachment A** for recommended controls, including installation notes and examples.

TRENCHING

- Installation of services into common trench.
- Schedule trenching works for periods when rainfall is low.
- Minimise the area of soil disturbed and exposed to erosion. Ensure trench widths and depths are the minimum necessary, including installation notes and examples.
- Divert up-slope clean water away from trenches.
- Conserve topsoil for backfilling and rehabilitation works.
- Progressively rehabilitate disturbed land immediately post construction.
- Maintain ESCs during works until the site has been stabilised
- When excavating, place excavation soil on upslope of trench to divert water from away from the trench line.
- Excavation soil is not to be placed on roads, in areas of concentrated runoff.
- Limit the time trenches are left open and avoid trenching when the risk of adverse weather is high.
- Refer **Attachment A** for recommended controls, including installation notes and examples.

EXCAVATION AND BACKFILLING

- Ensure excavation depths and widths are the minimum necessary.
- Leave excavations open for the minimum practical time.
- Divert surface water away from excavation openings.
- Where excavations are to be left open overnight, provision shall be made so that any fauna entering the excavations can escape.
- Clean excavated material may be temporarily stockpiled on-site for reuse for backfilling, landscaping and rehabilitation works. Any unused material must be removed off-site and disposed of at an authorised site.
- Excavations are to be properly guarded and protected to prevent them from being dangerous.
- Imported fill material shall only be obtained from authorised locations.
- Refer **Attachment A** for recommended controls, including installation notes and examples.

NEW ROAD CONSTRUCTION & WORKS WITHIN EXISTING ROAD CORRIDOR

- Minimise soil tracking onto surrounding roads through stabilised site entry and regularly removing any soil from adjacent roads ie Crackenback Drive
- Ensure existing stormwater drainage pits within and adjacent to the site are protected with appropriate controls e.g. inlet filter / filter socks
- Ensure appropriate controls are installed during road construction e.g. earth bank / flow diversion banks, sediment fence, straw bale filter, check dam

PROGRESSIVE REHABILITATION AND STABILISATION

- All exposed areas shall be progressively stabilised/rehabilitated as soon as possible in accordance with the Rehabilitation and Monitoring Plan.

- Only weed-free or natural thatch/litter should be used in sediment control activities.
- All ESCs will remain in place until all exposed areas of soil are stabilised and/or revegetated.
- All landscaping and rehabilitation should be undertaken in accordance with the Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park (DECC 2007) and approved Rehabilitation Plan and Landscape Plan.

MONITORING

During construction, all ESCs are to be checked regularly to ensure they remain in good working order at all times (e.g. prior to forecast rain, daily during extended periods of rainfall and after significant rainfall events). Regular monitoring and maintenance will be the responsibility of the construction contractor. The Environmental Officer will undertake weekly inspections of controls for the duration of construction.

PERFORMANCE INDICATOR

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.

ATTACHMENT A – CONTROL INSTALLATION AND CONSTRUCTION NOTES

Control	Activity	Purpose	Timing	Location	Standard Drawing Reference[1]
Rock pad / stabilised entry	Site establishment	Minimise site run-off and tracking of soil and materials offsite via vehicle movements	Prior to commencement of works	Construction site entry /exit point	Stabilised site access (SD 6-14)
Sediment fence	Excavations; Stockpiling for Services installation, road construction, construction of new golf holes/bunkers	To prevent sediment run-off by filtering medium to coarse-grained sediment from runoff	Install prior to, or in conjunction with earthworks. Retain in place until exposed areas of soil are stabilised.	Downslope side of any excavations; wetter areas; downslope of earth stockpiles; need to be placed following contours where possible	Sediment fence (SD 6-8)
Straw bale filter fencing[2]	Excavations for services installation, road construction, construction of new golf holes/bunkers	To prevent sediment run-off (suitable for low flows of water)	Install prior to, or in conjunction with earthworks. Retain in place until exposed areas of soil are stabilised.	Drier areas of excavation, across or at the toe of slope	Straw bale filter (SD 6-7)
Straw bales[2]	Cross-slope excavations, trenching for services installation, road construction, construction of new golf holes/bunkers	Divert water around and away from excavation works	Install prior to, or in conjunction with earthworks. Retain in place until exposed areas of soil are stabilised.	To be installed on the uphill side of excavations running cross-slope (where required).	Straw bale filter (SD 6-7)
Earth bank/ flow diversion banks	Excavation and trenching for services installation, road construction, running across grade (parallel with surrounding contours)	Prevent polluted stormwater from accumulating by directing water around and away from the excavation.	Install prior to, or in conjunction with excavation works. Excavated topsoil can be stripped and used to form flow diversion banks either upslope and/or downslope of soil disturbance.	Upslope or downslope of the trench or excavation	Earth bank (low flow) (SD 5-5)
Trench stops	Trenching for services installation	Reduce erosion and flow velocity	During trenching	Trench stops, such as sandbags may be used as plugs or trench	-

				stops across the trench invert.	
Inlet filter/filter socks	Works nearby existing stormwater inlets and roadside drains. Construction of access road off Crackenback Drive, installation of services / connection into existing services infrastructure	Sediment trap around or adjacent to stormwater inlets; and can be used to form check dam sediment traps in drains	Prior to excavation works within vicinity of inlets.	Around stormwater inlets. At regular intervals along the roadside drain.	Mesh and gravel inlet filter (SD 6-11) Geotextile inlet filter (SD 6-12)
Coir logs / fibre rolls	Construction of access road, installation of services within road corridor.	Divert water around and away from excavation works	During excavation, around open excavations	Around stormwater inlets, cross-slope excavations – To be installed on the uphill side of excavations running cross-slope, where required.	Fibre Rolls (Catchments & Creeks Pty Ltd 2010).
Check dam	Construction of access road off Crackenback Drive, installation of services/connection into existing services infrastructure	To control flow velocity	Prior to works within road corridor	At regular intervals along the roadside drain.	Rock check dam (SD 5-4)
Temporary filter pond	In the event water needs to be pumped out of an excavation.	To capture sediment and pollutants and prevent them leaving the filter pond	During excavation works, in the event water needs to be pumped out.	Where required, on flat area away from drainage lines/watercourses and native vegetation.	Refer to best practice guidelines such as Blue Book and IECA. Control installation notes provided below.

[1]Landcom 2004; NSW DECC 2008.

[2]All straw bales used for sediment and erosion control or rehabilitation must be weed free.

Erosion and Sediment Control Examples

Rock check dam

Sandbag check dam

Straw bale flow diversion bank unde
construction (yet to be staked)

Stockpile management

Flow diversion bank

Earth-lined catch drain

Filter fence

Sediment fence

Filter fence

Filter sock sediment trap

Sandbag sediment trap

Filter sock drop inlet protection

Sandbag flow control berm

Rock pad

Source: Catchments & Creeks Pty Ltd, 2012

CONTROL INSTALLATION NOTES

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

Coir Logs

Construction notes:

1) Secure logs by driving the stakes between the outer netting and the core material each side of the logs and secured into the ground (not through centre of log).
2) Ensure spacing of stakes does not exceed an interval of 1 m.
3) Once driven into ground, the stakes should sit at least two-thirds below the ground and one-third above.

Trench breakers

Construction notes:

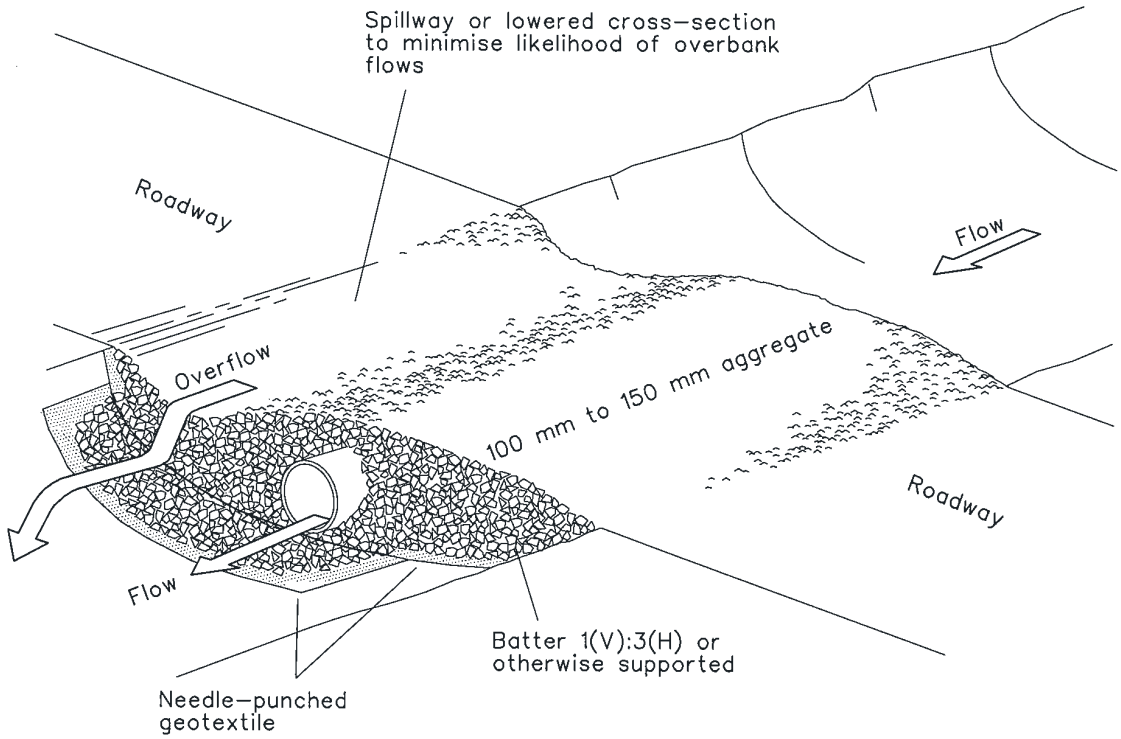
- Trench breakers may comprise soil or straw bales (or a combination).
- The recommended spacing of trench breakers to be determined on-site according to the slope and potential for subsurface flow, refer to table above for recommended spacing.

Temporary geofabric filter pond

Construction notes:

1) Where practicable, locate the filter dam at least 50 m from the edge of a waterbody.
2) Suitably clear and prepare the surface where the filter dam will be installed.
3) Arrange straw bales to form an enclosure and securely anchor each bale with at least one (1) star picket or stake.
4) Securely attach the filter fabric to the straw bales and reinforce with stakes. If more than one sheet of fabric is used, then overlap within a minimum of 600 mm at all joints.

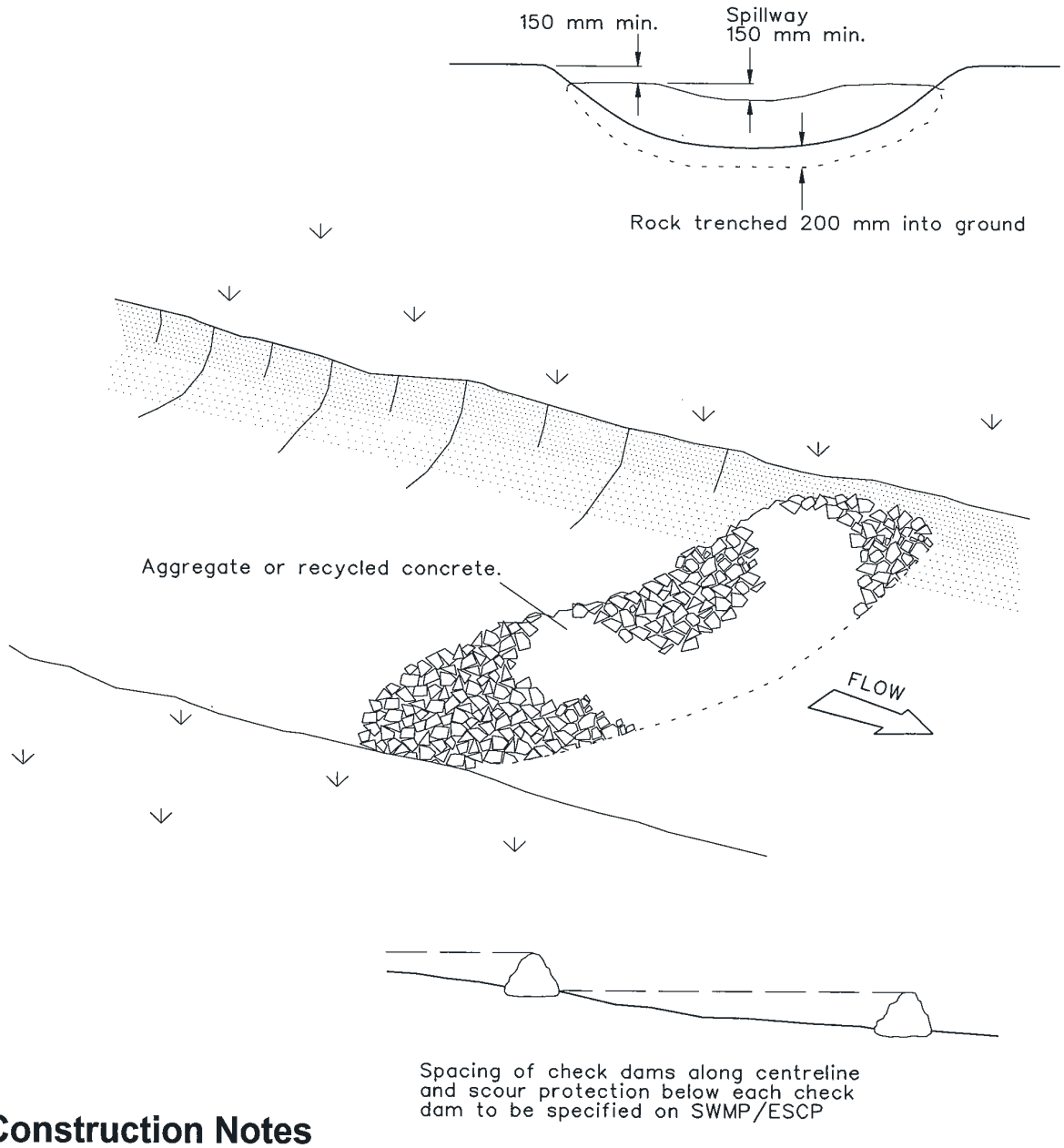
STANDARD DRAWINGS



Construction Notes

1. Prohibit all traffic until the access way is constructed.
2. Strip any topsoil and place a needle-punched textile over the base of the crossing.
3. Place clean, rigid, non polluting aggregate or gravel in the 100 mm to 150 mm size class over the fabric to a minimum depth of 200 mm.
4. Provide a 3-metre wide carriageway with sufficient length of culvert pipe to allow less than a 3(H): 1 (V) slope on side batters.
5. Install a lower section to act as an emergency spillway in greater than design storm events.
6. Ensure that culvert outlets extend beyond the toe of fill embankments.

TEMPORARY WATERWAY CROSSING SD 5-1



Spacing of check dams along centreline and scour protection below each check dam to be specified on SWMP/ESCP

Construction Notes

1. Check dams can be built with various materials, including rocks, logs, sandbags and straw bales. The maintenance program should ensure their integrity is retained, especially where constructed with straw bales. In the case of bales, this might require their replacement each two to four months.

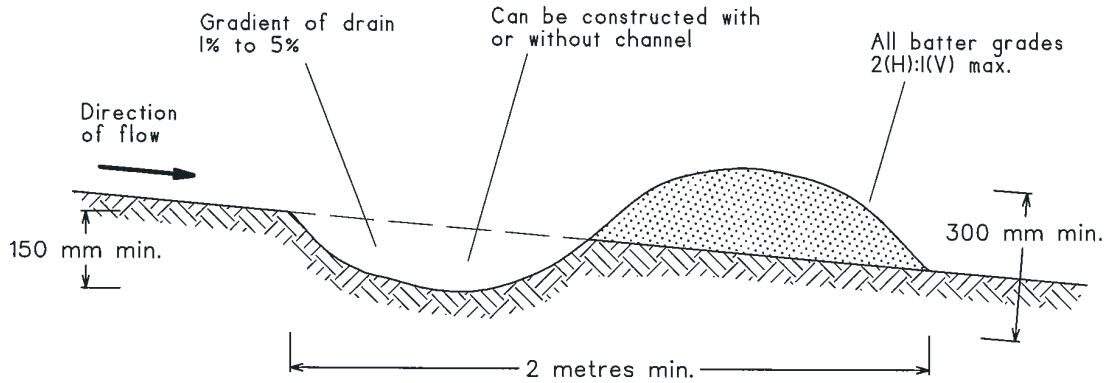
2. Trench the check dam 200 mm into the ground across its whole width. Where rock is used, fill the trenches to at least 100 mm above the ground surface to reduce the risk of undercutting.

3. Normally, their maximum height should not exceed 600 mm above the gully floor. The centre should act as a spillway, being at least 150 mm lower than the outer edges.

4. Space the dams so the toe of the upstream dam is level with the spillway of the next downstream dam.

ROCK CHECK DAM

SD 5-4

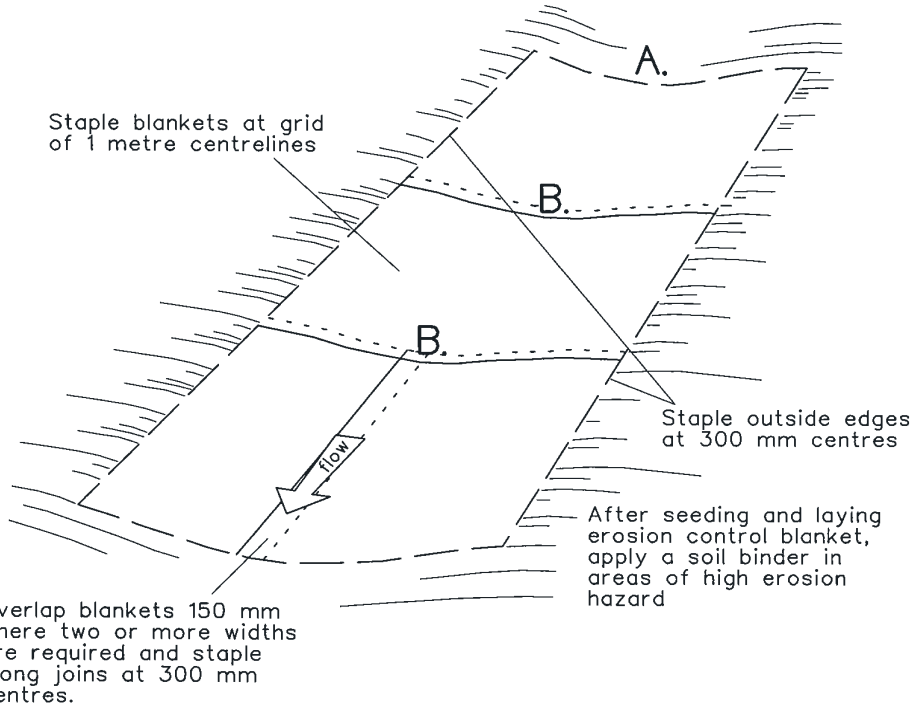


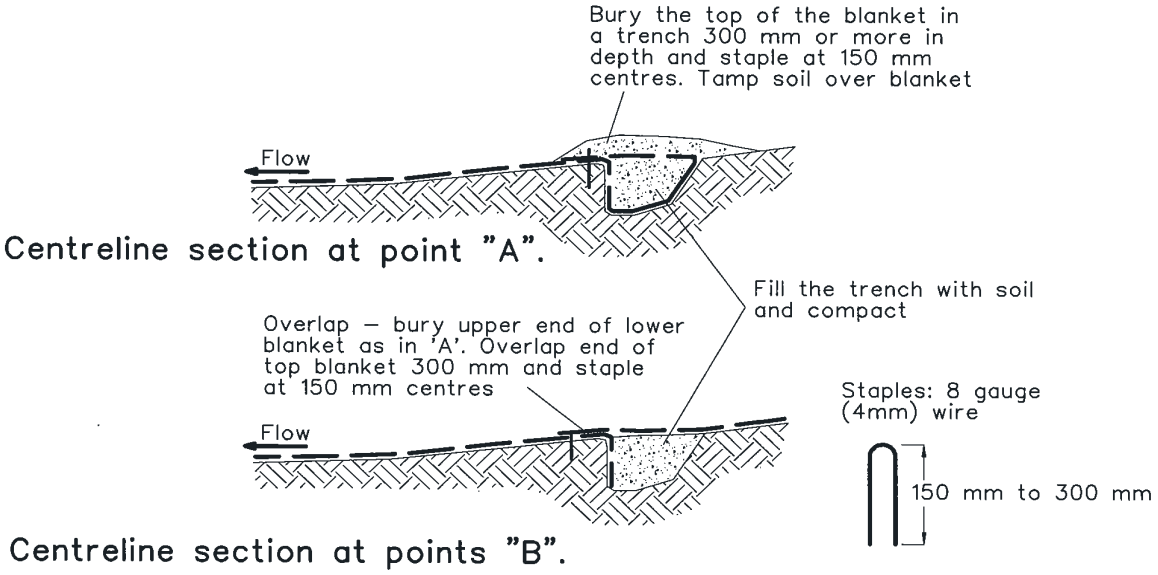
NOTE: Only to be used as temporary bank where maximum upslope length is 80 metres.

Construction Notes

1. Build with gradients between 1 percent and 5 percent.
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V shaped.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction.

EARTH BANK (LOW FLOW) SD 5-5

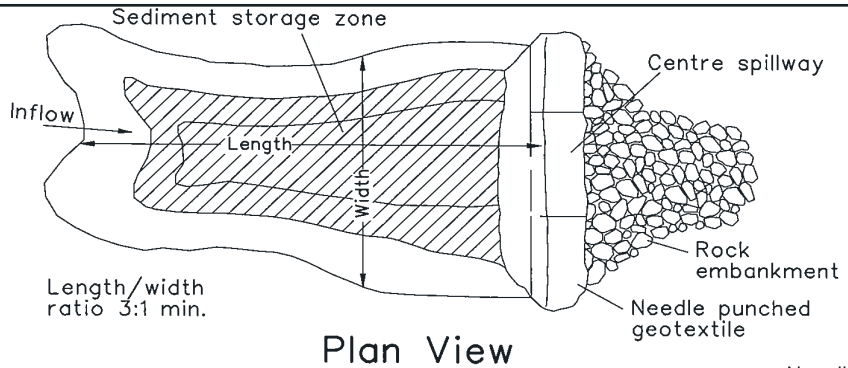




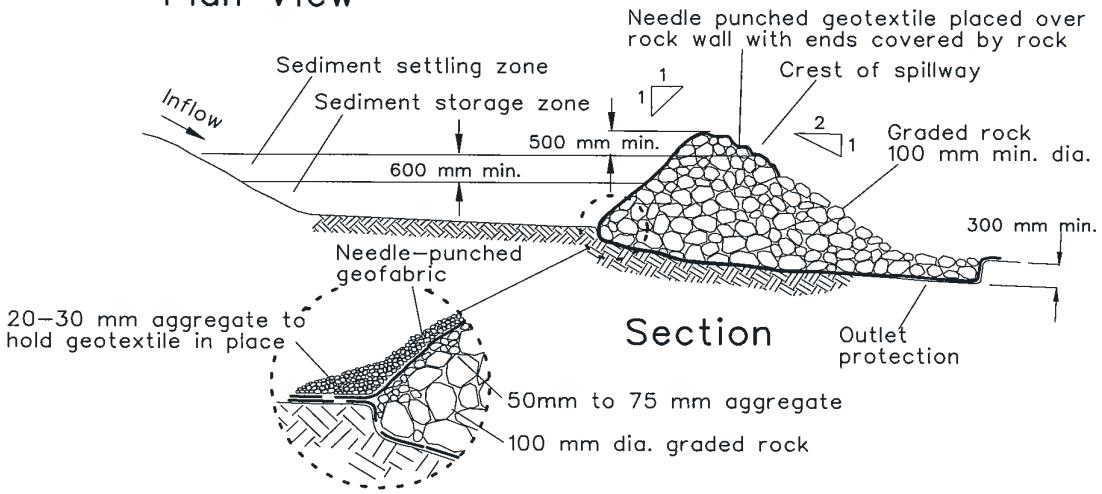
Construction Notes

1. Remove any rocks, clods, sticks or grass from the surface before laying matting
2. Ensure that topsoil is at least 75 mm deep.
3. Complete fertilising and seeding before laying the matting.
4. Ensure fabric will be continuously in contact with the soil by grading the surface carefully first.
5. Lay the fabric in "shingle-fashion", with the end of each upstream roll overlapping those downstream. Ensure each roll is anchored properly at its upslope end (Standard Drawing 5-7b).
6. Ensure that the full width of flow in the channel is covered by the matting up to the design storm event, usually in the 10-year ARI time of concentration storm event.
7. Divert water from the structure until vegetation is stabilised properly.

RECP : CONCENTRATED FLOW — SD 5-7

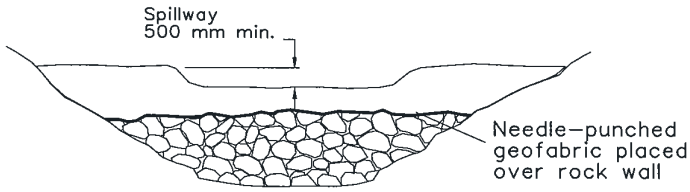


Plan View



Section

NOTE:
Spillway width and depth, wall crest width and downstream outlet protection measures to be specified on SWMP.



Downstream Elevation

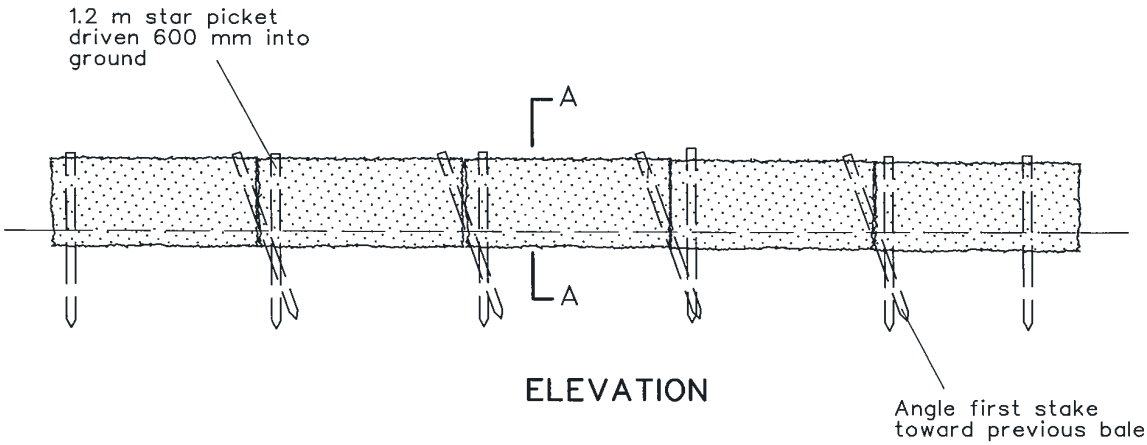
Construction Notes

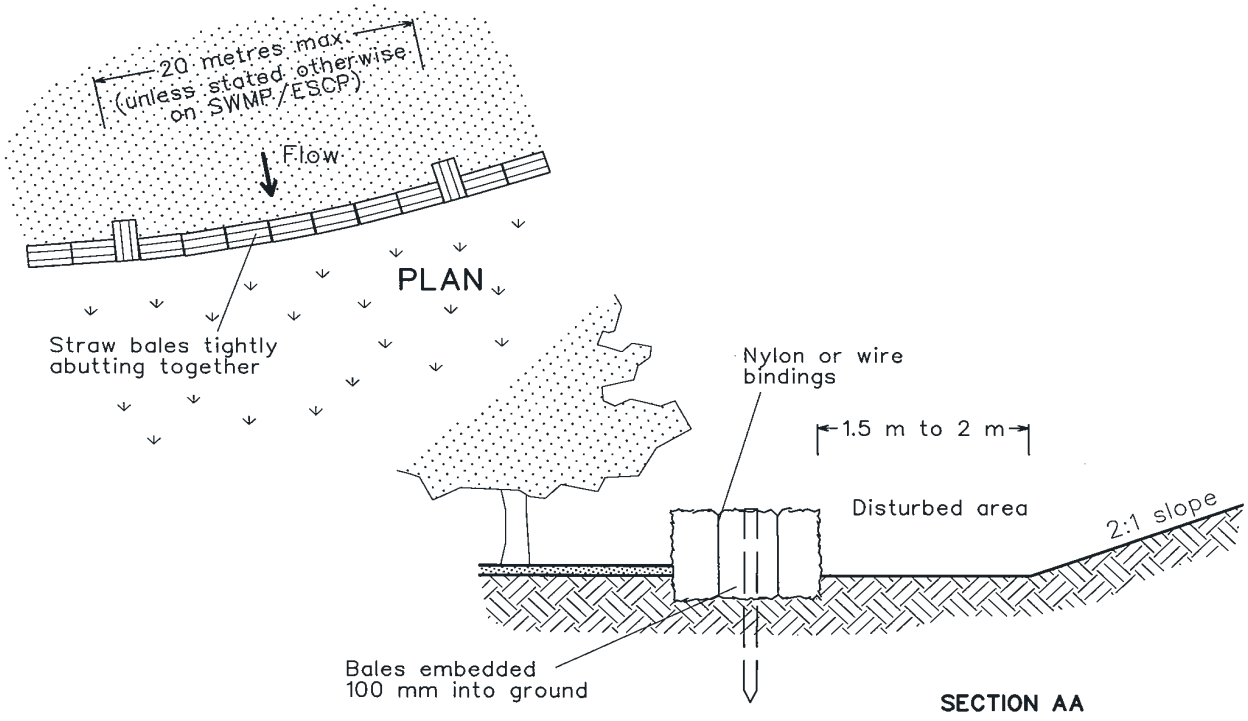
1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Excavate to 300 mm depth for base of the dam wall.
3. Line the excavation with a needle-punched geotextile allowing sufficient to line below the wall, and over the upstream rock and the spillway to 500 mm below the spillway exit on the downstream face.
4. Make up the wall profile and outlet protection with100 mm (min.) diameter graded rock. Spread a layer of 50 mm to 75 mm diameter aggregate over the upstream batter for a more even surface, and add 100 mm to 150 mm of 20 mm to 30 mm gravel over the 50 mm to 75 mm diameter aggregate.
5. Lay geotextile over the upstream batter and through the spillway, fixing in place with 100 mm rock.
6. Place a "Full of Sediment" marker to show when less than design capacity occurs and sediment removal is required.
7. Replace the upstream geotextile layer each time sediment is removed

ROCK SEDIMENT BASIN

(APPLIES TO 'TYPE C' SOILS ONLY)

SD 6-1

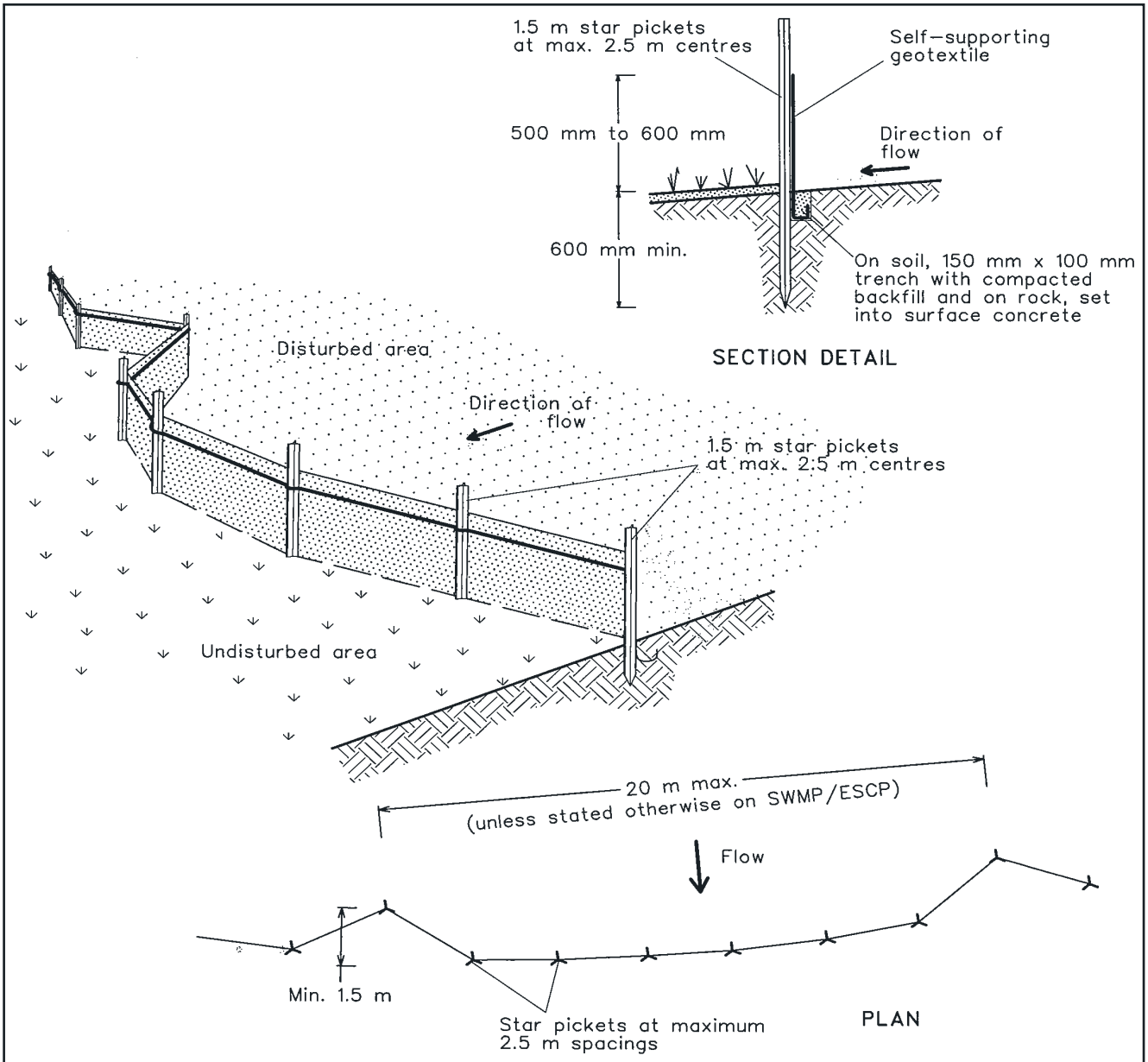




Construction Notes

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. Use straw to fill any gaps between bales. Straws are to be placed parallel to ground.
3. Ensure that the maximum height of the filter is one bale.
4. Embed each bale in the ground 75 mm to 100 mm and anchor with two 1.2 metre star pickets or stakes. Angle the first star picket or stake in each bale towards the previously laid bale. Drive them 600 mm into the ground and, if possible, flush with the top of the bales. Where star pickets are used and they protrude above the bales, ensure they are fitted with safety caps.
5. Where a straw bale filter is constructed downslope from a disturbed batter, ensure the bales are placed 1 to 2 metres downslope from the toe.
6. Establish a maintenance program that ensures the integrity of the bales is retained - they could require replacement each two to four months.

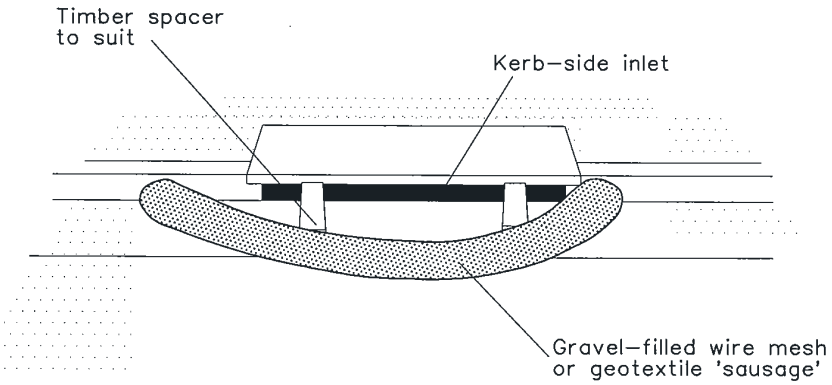
STRAW BALE FILTER SD 6-7

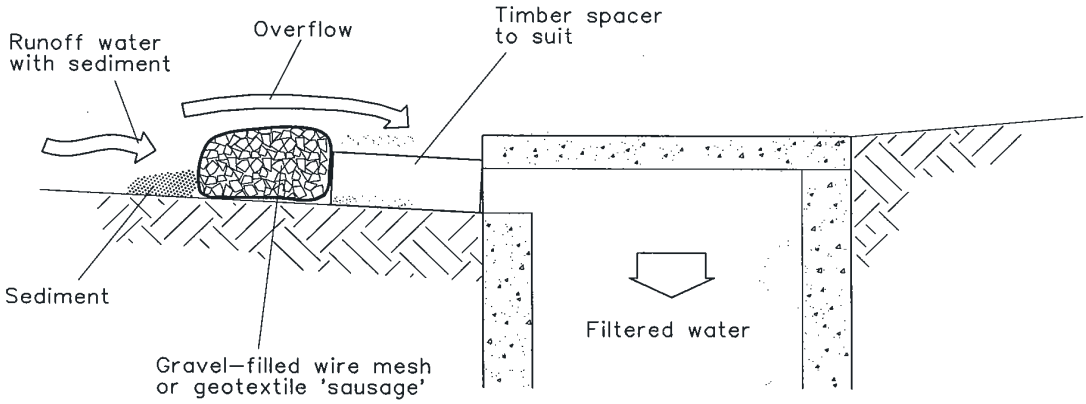


Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing 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 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SEDIMENT FENCE — SD 6-8



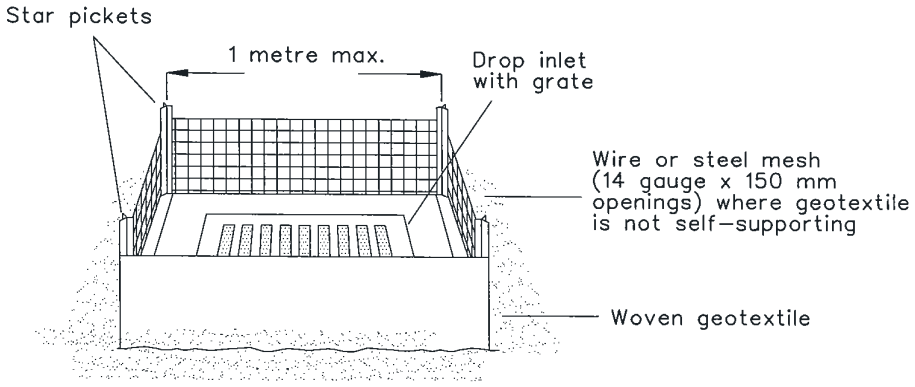


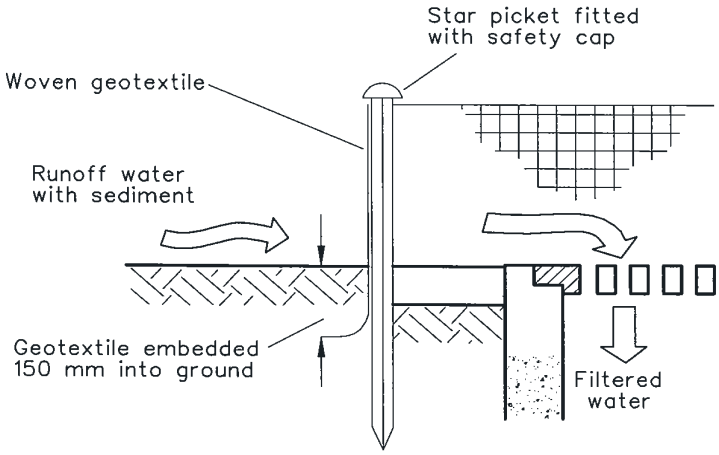
NOTE: This practice only to be used where specified in an approved SWMP/ESCP.

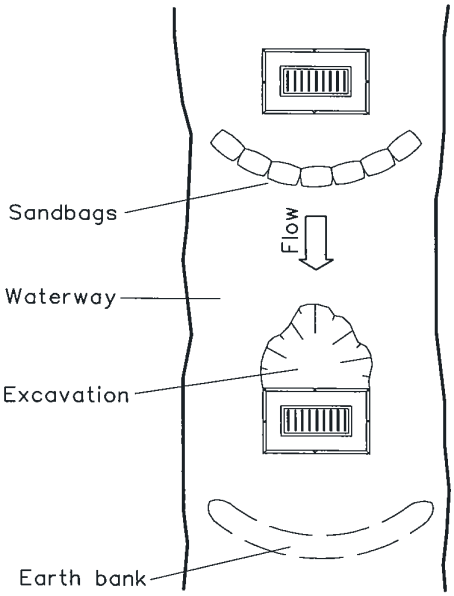
Construction Notes

1. Install filters to kerb inlets only at sag points.
2. Fabricate a sleeve made from geotextile or wire mesh longer than the length of the inlet pit and fill it with 25 mm to 50 mm gravel.
3. Form an elliptical cross-section about 150 mm high x 400 mm wide.
4. Place the filter at the opening leaving at least a 100-mm space between it and the kerb inlet. Maintain the opening with spacer blocks.
5. Form a seal with the kerb to prevent sediment bypassing the filter.
6. Sandbags filled with gravel can substitute for the mesh or geotextile providing they are placed so that they firmly abut each other and sediment-laden waters cannot pass between.

MESH AND GRAVEL INLET FILTER SD 6-11





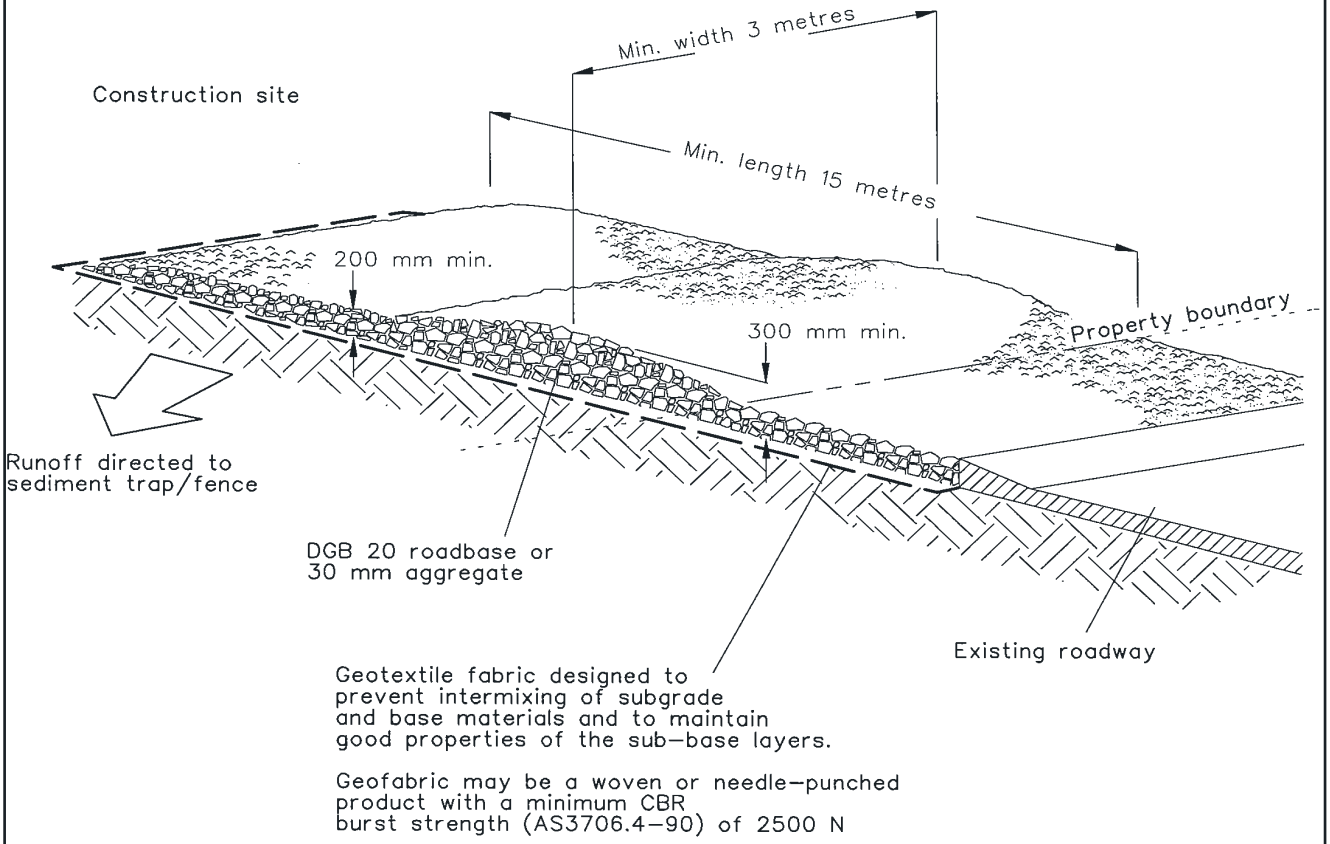


For drop inlets at non–sag points, sandbags, earth bank or excavation used to create artificial sag point

Construction Notes

1. Fabricate a sediment barrier made from geotextile or straw bales.
2. Follow Standard Drawing 6-7 and Standard Drawing 6-8 for installation procedures for the straw bales or geofabric. Reduce the picket spacing to 1 metre centres.
3. In waterways, artificial sag points can be created with sandbags or earth banks as shown in the drawing.
4. Do not cover the inlet with geotextile unless the design is adequate to allow for all waters to bypass it.

GEOTEXTILE INLET FILTER SD 6-12



Construction Notes

1. Strip the topsoil, level the site and compact the subgrade.
2. Cover the area with needle-punched geotextile.
3. Construct a 200-mm thick pad over the geotextile using road base or 30-mm aggregate.
4. Ensure the structure is at least 15 metres long or to building alignment and at least 3 metres wide.
5. Where a sediment fence joins onto the stabilised access, construct a hump in the stabilised access to divert water to the sediment fence

STABILISED SITE ACCESS SD 6-14

Appendix E Environmental Schedules

Construction Site Induction Checklist

Site / Project	
Inductor Details	
Date	

Key Contact Details

Name	Role	Contact Number

Site Safety

☐ Hazard identification and emergency procedures

☐SWMS

☐ PPE requirements

Compliance

☐ Conditions of consent

☐ Environmental approvals e.g. CAA, AHIP, Fisheries Permit

☐ Environmental considerations

- Awareness of environmental site controls and obligations
- Environmentally sensitive areas within the site / “no-go” areas

☐ Inspection requirements

- Environmental Officer inspections
- Other inspection requirements e.g. critical stage inspections, geotechnical, structural

Acknowledgement of understanding

Name	Date	Signature

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

……

……

……

Persons present at Incident

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

……

……

Declaration

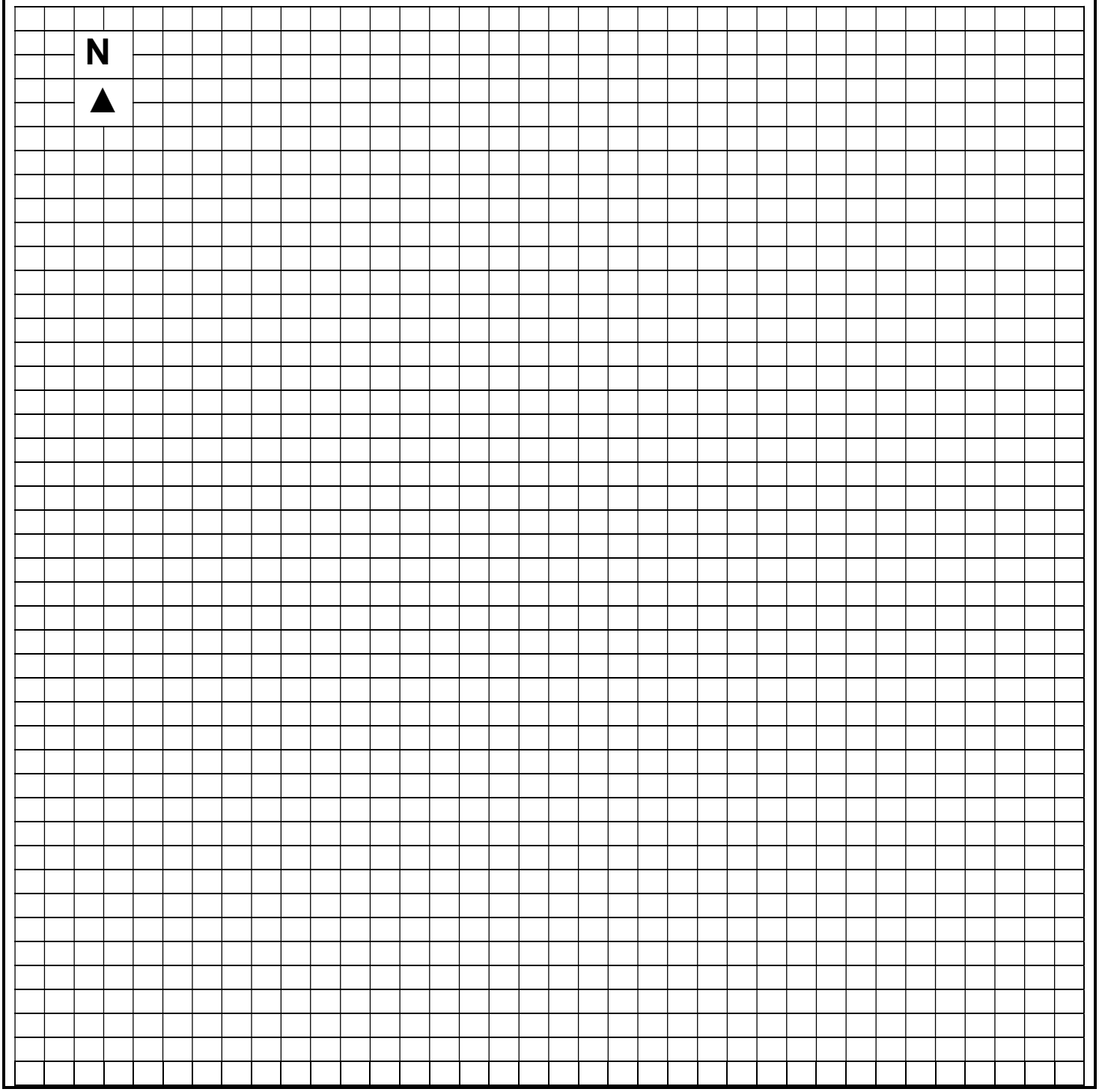
The information and answers given above are true in every detail and no information has been withheld.

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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Review Date: 24 Mar 2017
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