Department of Planning
Housing and Infrastructure

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No DA 22/12013

Granted on the 29 February 2024

Signed D James

Sheet No 7 of 60

Charlotte Pass
SNOW RESORT

Construction Environment Management Plan

Replacement of Guthries High Speed Poma with Double Chairlift

Charlotte Pass Snow Resort Pty Ltd

ABN 40 001 261 892

Revision	Date	Created by / Reviewed	Review By / Accepted
1	1/9/2023	A. Murdoch	J. Elliott

Function	Position	Name	Date
Endorsed and issued for construction	Project Manager	Ewan Murdoch	1/9/2023

Contents

1 Introduction

1.1 Construction Environment Management Plan Objectives

Charlotte Pass Snow Resort Pty Ltd's (CPSR) environmental objectives for this project are to:

- Encourage best practice environmental management through planning, commitment and continuous improvement.
- Prevent and minimise adverse impacts on the environment.
- Identify the potential for and respond to, environmental hazards, incidents, accidents and emergency situations and take corrective action.
- Define roles and responsibilities for personnel.
- Ensure environmental training and awareness programs are provided to employees and subcontractors.
- Ensure subcontractors implement the CEMP.
- Define how the management of the environment during the execution of the Project is reported and performance evaluated.
- Describe all monitoring procedures required to identify impacts on the environment as a result of the restoration works.
- Implement complaint reporting procedures and maintain records and responses to complaints.
- Comply with the relevant local, state and federal environmental legislations.
- Include any other project specific objectives.

1.2 Related Management Plans

The Project Management Plan has the overall structure and responsibilities for the project. This project will require the development of and implementation of a further number of site-specific plans and procedures to cater for and control construction issues. Other Related Project Plans to be read in conjunction with this CEMP include:

- Traffic Management Plan / Vehicle Management Plan
- Site Environmental Management Plan
- Rehabilitation and Monitoring Plan

1.3 Consultation

Nil for CPSR in the development of this Management plan

1.4 Environmental Policy

See Appendix A CPSR Environmental Policy.

2 CPSR Environmental System

Project specific and Environmental procedures, forms and checklists are referenced in this plan to illustrate processes to follow and associated documentation required as part of the CPSR Management System.

2.1 Applicable Legislative References

State and Federal Work Health and Safety Legislation, Regulations and codes of practice are referenced when developing project specific plans and procedures.

2.2 Approval and Licencing Requirements

Environmental legislation, regulations, licences and approvals (either state, territory and federal specific) are reviewed by CPSR when projects are commencing. The Project Team is responsible for obtaining any approvals and licences and filing them within the Authorities section of the project file.

Legislation	Authority	Description
Biodiversity Conservation Act 2016	New South Wales	To maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future.
Heritage Act 1977	New South Wales	To promote an understanding of the state's heritage
National Park and Wildlife Act 1974	New South Wales	To ensure conservation of nature
Work Health and Safety Act 2011 No 10	New South Wales	An Act to secure the health, safety and welfare of persons at work
Protection of the Environment Operations Act 1997	New South Wales	To achieve the protection, restoration and enhancement of the quality of the NSW environment.
Water Management Act 2000	New South Wales	To ensure conservation of waterways.

2.3 Work Environment

Charlotte Pass Snow Resort is located at an elevation of 1765m in the Kosciusko National Park, Snowy Mountains. The area can experience all types of alpine weather at any time of the year but is mainly of a cold climate most of the year (March – October).

2.3.1 Emergency Contacts and Response

A risk assessment of the types of Environmental emergencies for this project must be conducted and included in the Site Environmental Management Plan.

2.3.2 Location of Safety Data Sheets (SDS)

A file of SDS's pertaining to all chemicals used on the construction site is held in a file by the

Project Manager on site in the site office. Any new chemicals brought on to the site shall be identified and a copy of the corresponding SDS will be filed.

2.3.3 Location of Spill Kits

Spill kits will contain items to deal with both Hydrocarbon Spills and

Concrete. These will be located as per the TMP.

Details can be found in 4.6 for Spill Response.

3 Implementation Controls

3.1 Environmental Control Planning

Works are programmed in such a manner to minimise the impact on the environment, including consideration of working hours and designation of trafficable areas.

3.1.1 Environmental Maps

Hand drawn or marked up copies of site drawings for nominated construction zones will be utilised as communication tools, providing instruction to crews about key environmental aspects relevant to the current work activities.

These will be discussed as part of the daily pre-start meeting and hard copies kept at each site with the Supervisor and displayed on the noticeboard.

Aspects indicated on the drawings may include as applicable:

- Environmentally sensitive areas on and adjacent to the site
- Locations of sensitive noise receivers
- Waterways including drains
- Erosion and sediment control measures
- Construction zone right of way
- Vegetation that requires protection
- Areas approved for removal of vegetation
- No go zones
- Asbestos cement materials
- Material and spoil stockpiles
- Machinery and plant locations

3.2 Environmental Management Activities and Controls

3.2.1 Scheduling Activities

CPSR will ensure there is a systematic approach and processes / documents in place to enable project sites and key personnel the ability to schedule and undertake inspections, audits and communication through the duration of a project.

Specific consideration needs to be given to the number, type and frequency of inspections to be conducted. The contents will include the following sections for compliance:

- Communication Activities (Pre-start & Toolbox meetings);
- HSEQ Inspections and Evacuation Trials;
- Project Management and Reporting

3.3 Communication

All environmental management communications will be directed as follows:

- Regular/scheduled site meetings
- Monthly project reports
- Incident reports
- Verbal communications on site
- Written communications

Informing on-site stakeholders will only occur if required:

- Door knocking (for ongoing communications, notification of significant activities)

3.3.1 Complaints and Enquiries

External complaints are defined as complaints received from parties outside of the normal lines of communication.

All complaints received are reportable incidents and shall be immediately reported to the Project Manager.

Issues raised by the Project Manager at project meetings are to be recorded in the minutes and actioned accordingly.

On receiving a complaint the Project Manager will promptly conduct a review to determine the appropriate response and whether issues relating to the complaint could be avoided or minimised.

Within 3 working days of a complaint about any environmental issue, including pollution, a copy of the completed *Community Enquiry / Complaint form(s)* is to be submitted to the General Manager of CPSR detailing any proposed action.

A register of all environmental complaints and action taken is to be maintained in the project records.

4 Hazards and controls

4.1 Heritage

4.1.1 Indigenous Heritage

As per the Aboriginal Cultural Heritage Assessment undertaken for the project, There are no recorded Aboriginal sites within the vicinity of the proposed development works.

The Charlotte Pass Village Environmental Values Report, Prepared by NGH Environmental & Vantage Environmental Management (May 2008) notes that also notes during the Field Inspection undertaken as part of the preparation of the report, '*No sites were observed on the ridge crest located along the north boundary of the area (Mount Guthrie)'*.

4.1.2 Sensitive areas

Based on the sources of information of which CPSR is aware, there is nothing to suggest that the areas within which work is proposed for the purposes of this project would have any more than low potential for Aboriginal objects to be uncovered.

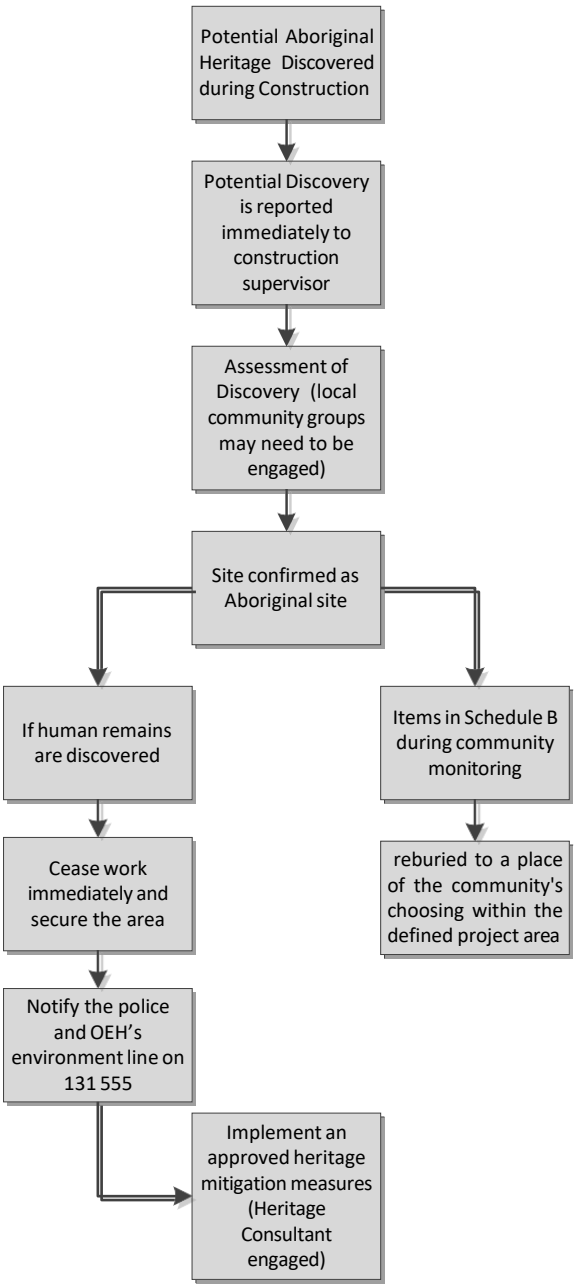
4.1.3 Discovery of Aboriginal Heritage

This Due diligence process indicates low to very low potential for subsurface cultural material. That due diligence has regard to relevant landscape features within the Charlotte Pass Snow Resort and other sources of information of which CPSR is aware. CPSR considers that this generic due diligence assessment shows that an Aboriginal Heritage Impact Permit under the National Parks and Wildlife Act 1974 is not necessary for the works.

The proposed works should be able to proceed with caution and if any objects are found works will be stopped and the finds protocol detailed below will be implemented.

CPSR proposes to implement the following finds protocol in association with the works:

- All CPSR personnel and contractors will be made aware of the potential for subsurface Aboriginal artefacts within the site area for the works proposed.
- If potential Aboriginal artefacts or human remains are found, then all works in the relevant area must cease and the finds must be secured and protected in-situ.
- Notifications will be immediately made to NPWS and Heritage NSW, and the NSW Police in the event of human remains.
- An appropriately qualified archaeologist will be engaged to assess the finds and (in conjunction with direction from relevant agencies) provide recommendations on how to treat the artefacts and (if necessary) modify the works.



4.1.4 Non-Indigenous Heritage

It has been confirmed that the current lift that will be demolished has no heritage value. CPSR contacted NPWS to conduct a search of the NPWS Section 170 Register. NPWS have confirmed the Poma does not appear on HHIMS.

4.2 Erosion and Sediment Control Plan

The Erosion and Sediment Control Plan (ESCP) has been developed to detail the measures to minimise pollution, soil erosion and sedimentation within surface water and groundwater. A copy of this plan can be found in Appendix D below.

The highest potential for impacts to the area within the site would occur during construction works which would result in potential erosion and sedimentation. Soil disturbances during excavations and vegetation may cause silt run off until rock is reached and so appropriate erosion and sedimentation controls will be required until this point.

As work progress the type, location and review periods of the Erosion and Sediment Controls will be developed and installed. The following will be the minimum criteria used for the controls:

- Sediment and erosion control measures shall be installed prior to excavation and construction works and shall be maintained in an effective condition until earthworks have been completed and the sites are rehabilitated.
- Sediment control devices shall be placed at the entry points to any culverts and stormwater channels to prevent sediment entering the stormwater system.
- Sediment and erosion control devices shall be inspected regularly.
- Sediment control devices (e.g. silt fences, straw bales wrapped in geotextile etc.) shall be installed parallel with the contours of the site and immediately downslope of any areas where the natural ground surface has been disturbed.
- No waste or materials shall be stored or placed on or adjacent to sediment fences.
- Rainfall and any encountered groundwater seepage shall be permitted to evaporate or if required, pumped and passed through erosion and sediment controls (sediment filters and traps, barley bales) and across grassed areas prior to discharge. No discharge shall occur directly to waterways.
- Any spoil storage areas or stockpiles shall have appropriate erosion control devices installed to control runoff and prevent sedimentation. Silt barriers/sediment filters/traps around any stockpiles of soil shall be provided to prevent the loss of material.
- All onsite employees (including sub-contractors) will be trained in accordance with the Erosion and Sediment Control Plan.
- Dust suppression techniques shall be employed where required.
- Removed topsoil and vegetation shall be stockpiled so that material will not enter drainage lines or water courses and will maintain existing drainage flow. Appropriate erosion and sedimentation control shall include silt fencing installed around the entire perimeter of any stockpiles, and on the downside of any exposed stripping and borrow excavations.

4.2.1 After Rainfall

Sediment and erosion control devices shall be inspected regularly and after all rainfall events. The controls will be maintained to ensure effectiveness over the entire duration of the Project, and cleaned out before 80% capacity is reached.

See Appendix B1/B2/B3 for details of sediment controls.

4.3 Construction Noise and Vibration Management Plan

Intrusiveness noise criterion requires that the LAeq,15minutes for the noise source, measured at the most sensitive receiver under worst-case conditions, should not exceed the RBL by more than 5dB, represented as LAeq,15minutes < RBL+ 5dB.

Given the location of the site and its remoteness, construction activities are not considered an issue for these works.

4.3.1 Construction noise mitigation methods:

The following will be communicated to all those workers on site that have the ability to impact on construction noise:

- All employees, contractors and subcontractors are to receive an environmental induction and should instruct all persons at the site with regard to all relevant project specific and standard noise mitigation measures detailed herein including permissible hours of work; limitations on high noise generating activities; location of nearest sensitive receivers; construction employee parking areas; designated loading/unloading areas and procedures; site opening/closing times (including deliveries); and environmental incident procedures.
- Typical Standard Hours for Construction are 06:30 – 17:00.
- Minimise noise on site eg. reduce need for reversing alarms, use tonal reverse alarms outside standard construction hours, limit the noisiest machines operating simultaneously.
- Use less noise intensive equipment where reasonable and feasible. Any use of equipment that will be generating higher noise emission levels will be reviewed.
- High noise and vibration generating construction activities will be planned where possible to reduce impact to local receivers and the local community.
- Once noisy construction commences, it would be completed with minimal delay. All reasonable attempts would be made to complete significant noisy activities within a short period.
- Well maintained and low noise generating machinery would be used and machinery operated at the minimum necessary power setting.
- Where practical, fixed plant shall be positioned as far away as possible from sensitive receivers.
- Temporary site buildings and material stockpiles shall be used as noise barriers where possible.
- Maintain safety distance of at least 15 metres between construction plant and sensitive receivers, where possible.
- Minimise vibration by scheduling the use of vibration causing equipment (i.e. rock hammer, compactor, etc.) at the least sensitive time of day, and locate high vibration sources as far away from sensitive areas as possible.
- A letter will be distributed to lodges in advance of the works to notify them of the nature and estimated timescales for completion of the proposed works.
- A complaints register will be instigated and any complaints recorded.
- A contact point shall be provided for any complaints regarding the construction work.
- A Project representative shall respond to all complaints as soon as possible.

If a noise complaint is received by a resident impacted by the construction work then the following steps will be taken:

- The complaint will be registered on the complaints register.
- An investigation into the noise level will take place (see below)
- The investigation will include the findings and any recommended corrective actions, which may include review and adjustment of work hours/days.
- The outcome of the investigation will be discussed with the complainant

A register of all environmental complaints and action taken is to be maintained in the project records.

4.4 Dust Management

4.4.1 Site Access

As listed on the Civil Plans.

4.4.2 Sources of Dust

Potential dust sources include soil stockpiles, vehicles travelling on unsealed roads and access tracks, cleared areas and other exposed surfaces, concrete cutting or other similar construction activities.

Dust suppression techniques shall be employed where required and will be reviewed on a case by case, day by day requirement. These controls will be captured within the SMWS for the activity.

4.4.3 Mitigation measures

- All construction vehicles will be maintained and covered as needed to prevent any loss of load, whether in the form of dust, liquid, solids, or otherwise.
- The vehicles will also be maintained in such a manner that they will not track mud, dirt or other material onto any street which is opened and accessible to the public.
- Pre-acceptance forms will be completed for vehicles arriving on site which include measures around dirt, mud and weeds.
- Reinstatement of the excavated areas will occur progressively to promote regrowth of grass and minimise length of disturbance.
- Soil stockpiles, access tracks etc. shall be regularly watered when required, particularly on hot, dry and windy days.
- Any construction activities likely to create dust shall utilise containment methods to minimise any impact to nearby sensitive receivers.
- Construction activities likely to generate significant amounts of dust shall be restricted on days of high wind.
- The location and number of dust sources (i.e. bare surfaces including stockpiles) shall be restricted.

4.4.4 Reporting & Verifications

All personnel shall report any dust forming in the construction areas immediately to their Supervisor .

Verification will take place in the form of site monitoring through inspections and audits including the following:

- Road conditions / tracked mud
- Stockpile assessments
- Vehicle maintenance & cleanliness
- Any complaints or concerns raised

4.5 Waste Management

4.5.1 Reuse, Recycle or Disposal

CPSR will implement waste minimisation and management measures, including:

- Recycling and diverting from landfill surplus soil, rock, and other excavated or demolition materials, wherever practical;
- Separately collecting and streaming quantities of waste concrete, bricks, blocks, timber, metals, plasterboard, paper and packaging, glass and plastics, and offering them for recycling where practical.

CPSR will ensure that no waste from the Site is conveyed to or deposited at any place that cannot lawfully be used as a waste facility for that waste.

4.5.2 General

- All wastes, including contaminated wastes, will be identified and disposed of to an appropriately licenced facility.
- Where economically feasible, material with recycled content will be sourced.
- Water will be used for dust suppression measures if required as opposed to chemical alternatives.
- All chemical waste will be disposed of in accordance with Safety Data Sheet (SDS)

4.5.3 Surplus materials

Surplus material and excess spoil must be stockpiled, tested, and disposed of in accordance with the waste classification requirements.

4.5.4 Disposal of Surplus or unsuitable materials

Wherever possible CPSR will use suitable material excavated from the Site for backfilling, filling and grading around the Site. Any material that is reused on Site is to be placed, compacted and tested as per requirements specified for material for required purpose identified within the Specification.

Unsuitable material is defined as material not meeting the requirements for disposal on the WTP site and may include:

- excavated material which does not satisfy the requirements for use in construction of the works;
- disused materials resulting from clearing (such as trees, stumps, brush, fencing and structural debris); and
- rubbish, soil or rock which has been contaminated with organic matter such as sludge, screenings, trees, stumps, leaves or other foreign matter.

Promptly remove and dispose of all unsuitable excavated materials from the Site, which is not required for reuse, to a waste facility which can lawfully accept the waste.

4.5.5 Hazardous Substance

If a Nominated Hazardous Substance has been discovered unexpectedly, the CPSR General Manager must be notified immediately. If CPSR are required to take responsibility for the control of hazardous substances and decontamination of the Site, CPSR will handle, use, isolate, remove and dispose of such substances in accordance with statutory requirements. The local *Environment Protection Authority* or Waste Service may advise suitable disposal sites.

4.6 Spill Management

Spill prevention ideology will always be used by CPSR by using bunds for storage of chemicals and hydrocarbons, attended refuelling (with drip tray and fuel cut off system), plant/equipment pre-start checks.

All spills (any size on land and water) must be reported immediately.

Spill Kits will be made available on site, with two types of spills kits – hydrocarbon and chemical.

- Hydrocarbon spill kits are hydrophobic (water-repelling) absorbent that is ideal for hydrocarbons particularly around water including puddles. These spill kits have absorbents which soak up hydrocarbon-based liquids whilst repelling water. Great for extracting oil sheens off a water surface for e.g. inside a bund or on a puddle or sump.
- A chemical spill kit is suitable for safely cleaning up virtually all chemicals, aggressive acids and bases (alkalis), paint, solvents, oils, fuels, coolants, degreasers, herbicides and pesticides.

4.6.1 Spill response

- The objectives are to prevent the spread of contamination and stop the spill from reaching a drain, waterway or drainage line, any environmentally sensitive areas.
- If safe to do so, control the spill.
- Stop the flow, pick/re-locate the drum, stop the leak, shut down the machine.
- Contain the spill using spill response equipment (use booms) - if on slope put downslope of spill.
- If needed use earthen bunds by pushing up material.
- Call for assistance if needed from nearby personnel/supervisor.
- Once contained and under control, report the incident to the supervisor.
- Clean up the spill use absorbent pads or granules to soak up the spill.
- Depending on how much contaminated soil we're dealing with, it either needs to be placed into a lined Hazardous Waste bin or bulker bags to be disposed of appropriable.
- The contaminated spill kit materials will go into a spill kit plastic bag these will be place into the Hazardous Waste Bin.
- Any stock used for containing spills should be replenished as a matter of urgency.
- Report the spill as soon as possible through the SkyTrust system.
- If the spill is of sufficient quantity or risk the HSEQ manager will informed the appropriate authorities as required.
- All incidents are investigated appropriate to the potential seriousness of an incident outcome.

5 Amendment Register

Revision	Date	Amendments

6 Appendices

6.1 Appendix A CPSR Environmental Policy

Vision for the Environment

Charlotte Pass Snow Resort will be widely recognised for its exemplary environmental management of the natural, cultural, aesthetic and social values of the resort in a national park setting. The resort will meet accepted best practice for sustainable recreation-based activities and development that respect, conserve, enhance and restore these values.

Environmental Policy

Charlotte Pass Snow Resort is a small high-altitude village situated within the Kosciuszko National Park, an area of outstanding natural beauty and environmental diversity. The resort provides all season accommodation for up to 607 guests. In winter, overnight guests and day visitors can enjoy a snow bound village atmosphere and a range of activities either on the resort's slopes or in the surrounding mountains. Summertime provides scenic surroundings and access to bushwalking and other alpine activities.

The resort managers, lodges, operators, natural area managers and service providers recognise the potential for environmental impacts to occur as a result of their activities within and beyond the resort, and so the need for exemplary environmental management to minimise these impacts.

These organisations recognise that openness and transparency is necessary to establish and maintain trust between organisations and with resort users and the community. They also recognise that such actions will enhance the reputations of their organisations individually and of *Charlotte Pass Snow Resort*.

Communication and education is an integral part of their operational philosophy, helping to increase the environmental awareness of organisations' staff, the community and all Park visitors.

Environmental Commitment and Policy

We commit to managing all aspects of our operations in *Charlotte Pass Snow Resort* in an environmentally responsible manner at all times. We aim to be recognised as a leader in ecologically sustainable tourism in Australia. We address significant environmental issues and set ourselves ambitious goals for improvement.

We aim to increase the environmental awareness of our staff, our suppliers, members and guests of the resort, the community and all visitors to the Resort and the Park while actively seeking their ideas for enhancing our environmental performance.

We specifically commit to:

- Conserve, enhance, repair and restore the natural, cultural, aesthetic and social values of the resort area whilst recognising viable economic ventures that will provide appropriate high-quality recreation.
- Implement best practice standards for ecologically sustainable tourism, natural area and threatened species management.
- Meet or exceed the requirements of all applicable environmental legislation and regulations.
- Prevent or at least minimise any adverse environmental effects by:
    - Establishing a framework for setting and reviewing environmental objectives consistent with this policy;
    - Implementing clear, effective and scientific planning, management and monitoring processes;
    - Establishing, implementing and maintaining an effective Environmental Management
    - System based on current Australian Standards and specific to the Resort;
    - Efficiently using natural resources, including water and energy, and avoiding waste;
    - Using technologies, materials and systems in the design, construction, operation, maintenance and decommissioning of resort structures, which meet or exceed best practice environmental benchmarks; and
    - Measuring and verifying our environmental performance

- Follow open and cooperative processes and participate in consultation programs and joint environmental initiatives.
- Promote responsible development and sustainable use of the resort for recreation including protecting the area's ecosystems, waterways and species.
- Continually improve our overall environmental performance.

We look forward to working in collaboration to meet these commitments and through our actions influence the activities of others to enhance the economic, social and environmental sustainability of our organisations and the region to which we contribute.

6.2 Appendix B – Aspects and Impacts Register

While a number of minor and short-term impacts are anticipated during the works, they are not likely to be significant and would be adequately managed through the implementation of the mitigation measures identified below.

Environmental Impact	Flora and fauna
Objective	To retain vegetation where possible to minimise the impact of the pipeline construction works. Prevent disturbance or harm to the local populations of native birds, mammals and reptiles.
Performance Indicators	▪ Construction boundaries and ecologically sensitive areas are clearly marked out. ▪ Minimal Tree removal/ disturbance. ▪ No storage or parking under the drip line of trees and shrubs. ▪ No trees or hollow logs removed. ▪ Habitat areas remain undisturbed. ▪ No fauna trapped in trenches.
Controls	▪ Clearly marking the construction zone to ensure clearing and other disturbances do not occur outside the construction zone. ▪ Ecologically sensitive features adjacent to the construction zone would be clearly marked with flagging or tape for avoidance during construction activities. ▪ Areas to be cleared, if required, should be clearly marked prior to construction, using high visibility marking tape or similar, to ensure that accidental clearing does not occur. No construction works outside construction easement/corridor. ▪ Lopping of native trees overhanging the construction zone is preferable to removal, where feasible. ▪ Clearing shall be limited to the minimum amount necessary to provide for the safety and security of the existing assets and personnel. ▪ Any trees to be removed would be retained as woody debris within the road reserve. ▪ Minimise disturbing roots or compacting soil in the drip zone of trees and shrubs. No equipment and machinery to be stored beneath the drip line of established trees or on planted or regrowth vegetation. Works to be undertaken outside of the drip line of trees. ▪ Prior to tree lopping / clearing, care should be taken to identify nests and /or roosting sites and / or threatened species. If fauna habitat is present (nests or potential tree hollows) contact the project ecologist for further advice prior to clearing. ▪ Progressive rehabilitation to commence as soon as possible following construction. ▪ Avoid removal or disturbance of hollow logs. ▪ Minimise time period that trenches are left open, particularly in fauna habitat areas. ▪ Cover open end of pipeline at the end of each day. ▪ Conduct an inspection of the excavation at the start of each day to look for signs of trapped fauna. ▪ Any felled timber, including hollow limbs, should be contained within the construction zone or re-located within adjacent vegetated areas to provide ground cover and habitat for fauna. ▪ All significant environmental aspects will be marked on Environmental Control Maps (ECMs) for discussion and instruction at the pre-start meeting.

Environmental Impact	Weeds
Objective	To prevent the risk of spreading weed species
Performance Indicators	▪ No new incursions of declared plants or plant pathogens post construction. ▪ Plant and vehicle hygiene process recorded.
Controls	▪ All equipment wash-down to be undertaken within an identified wash-down area and water contained within that area (no discharge of wash-down water to stormwater or watercourse).
	▪ Machinery to arrive on site in a clean, washed condition, and in good working order. ▪ All plant will be cleaned before being shipped to the site. Any sub-contractor bringing plant onto the site will be advised to clean plant prior to arrival. Machinery is inspected upon arrival to ensure that it has arrived in a clean, washed condition, free of fluid leaks. ▪ Areas of known noxious weed infestation must be clearly marked with flagging or tape to restrict access. ▪ All significant environmental aspects will be marked on Environmental Control Maps (ECMs) for discussion and instruction at the pre-start meeting.

Environmental Impact	Dust
Objective	To minimise dust generated from construction works
Performance Indicators	▪ Safety and Environment Inspections Checklists. ▪ Minimal dust generation.
Controls	▪ When conditions are unfavourable, dust suppression will be implemented. A standby water cart will be kept on site for watering purposes and used to maintain moisture within the soil. ▪ Site monitoring through inspections. ▪ Reinstatement of the excavated areas will occur progressively to promote regrowth of grass and minimise length of disturbance.

Environmental Impact	Noise & vibration
Objective	Reduce the risk of noise impacting on the surrounding community:
Performance Indicators	▪ No noise complaints. ▪ Residents aware of works, construction hours and contact details. ▪ No works conducted outside schedule construction hours.

Controls	▪ Unnecessary noise should be avoided when carrying out manual operations and when operating plant. ▪ Lodges notified of scheduled works occurring within the vicinity, including expected duration of works. Any residents affected will be kept informed of the construction program and provided with a contact number should they require further information or have a complaint. CPSR construction after hours contact sign will be posted at the site compound entrance. ▪ A register of all environmental complaints and actions taken will be maintained in the project records. Each complaint will be investigated and appropriate amelioration measures put in place to mitigate future occurrences. ▪ Construction activities will be restricted to the normal working hours as follows: • Monday to Friday 7.00am to 5.30pm, and Saturday & Sunday 7.00am to 5.00pm. ▪ Any equipment not in use for extended periods during construction work will be switched off, for example during breaks. ▪ Where practical all reasonable steps will be taken to mitigate the effect of noise generated from construction activities. Ensure that plant is well maintained and in good working order. ▪ All access hatches for plant to be kept closed. ▪ Pneumatic tools operated with a silencer fitted to the air exhaust port. ▪ Noise labels on mobile air compressors. ▪ Lowest noise rated units used in noise sensitive areas. ▪ Reference HSE-54 Construction Noise Monitoring and Form 225 Construction noise monitoring data form as required.
Environmental Impact	**Aboriginal and European Cultural Heritage**
Objective	Prevent or minimise disturbance to Aboriginal and European cultural heritage sites. Ensure all statutory requirements are complied with and controls listed below are implemented to minimise potential disturbance to unknown sites.
Performance Indicators	▪ Construction crews follow correct procedure if items of heritage significance have been identified.
Controls	▪ If suspected heritage or cultural artefacts are uncovered during the works all works in that immediate area must stop within a 15m radius. Report the find to the Supervisor immediately, does not re-commence works in the area until all clear has been given. ▪ The Project Manager must report the find to the CPSR General Manager immediately. ▪ Project Emergency Response Plan includes response actions for any unplanned discovery of skeletal remains in excavation.

Environmental Impact	**Soils and contamination**
Objective	Reduce the risk of erosion on site and sediment migration into waters and/or offsite from the proposed works, both during works and after works have been completed.
Performance Indicators	▪ No disturbance of areas outside construction boundaries. ▪ No erosion and sediment migration offsite or entering the storm water system. ▪ No compaction of soils in areas outside the construction zone. ▪ No soils or other materials tracked onto roadways by construction vehicles.

Controls	▪ Sediment controls will be implemented immediately and progressively as each stage of the project works is completed or when soils are exposed. ▪ As required; construction drawings will be marked up by hand and provided to the Site Supervisor for instructing the crew about construction zones, identification of significant factors in the area and placement locations for erosion and sediment controls. ▪ Mobile plant and vehicles must use only designated tracks. ▪ Construction works will cease during periods of heavy rainfall and flooding. The site Supervisor will monitor the prevailing weather conditions daily and include appropriate instruction and controls as part of the discussion during the daily pre-start meetings each day. ▪ Site environmental inspections which include monitoring of installed silt fencing will be completed on a weekly basis. In the event that maintenance is required to erosion controls, it will be completed immediately. ▪ Grading of areas or construction of drains to lead run-off of water away from the construction area. ▪ Construction of settlement and / or retarding basins to reduce rates of discharge and volumes of sediment discharging from the site and / or reaching streams. ▪ Excavated topsoil, subsoil and weathered rock will be stored separately and replaced in a manner that approximates the original profile as closely as possible. All sites which undergo temporary soil disturbance will be rehabilitated with topsoil that has been stripped prior to construction. ▪ In accordance with Stockpile Management in the "Blue Book" (Landcom) (Appendix C-1) stockpiles will be: • Constructed on the contour as low, flat, elongated mounds. • Where possible, stockpiles will be less than 2 metres in height. • Covered if in place for more than 10 days. • Constructed at more than 2 metres from existing vegetation, concentrated water flows, roads and hazard areas.

Environmental Impact	Soils and contamination
	▪ In areas of high run off earth banks will be constructed on the upslope side to divert water around the stockpiles (Appendix B-2) and sediment fences fences (non-woven fabric) will be installed 1 – 2 metres down-slope of stockpiles containing clayey material to prevent soil runoff from entering the stormwater system. (Appendix B-3) ▪ Erosion controls should only be removed once the area has been progressively restabilised. ▪ Machinery will leave the site in a clean condition to avoid tracking of sediment onto public roads, which may cause risks to other road users through reduced road stability. ▪ Refuelling, storage and handling of chemicals to be conducted at least 50m away from water courses or drainage channels. ▪ Spill kits available on site. ▪ All plant and equipment shall be inspected daily for leakage of fuel, oil or hydraulic fluids. Machinery found to be leaking shall be immediately repaired or replaced.

Environmental Impact	Traffic and Transport
Objective	To minimise the impact to the public associated with the construction of this project
Performance Indicators	▪ Prevent unauthorised persons accessing the work site. ▪ No injuries and or collisions. ▪ Minimal negative impact to the local community. ▪ Traffic disruptions are planned with effective controls implemented. ▪ Temporary traffic changes and controls are effectively communicated.
Controls	Traffic management controls implemented as per traffic management plan will include: ▪ Signage for speed limits, timing, restrictions and communication protocols related to the use of access tracks. ▪ Protocols to be observed when approaching, entering and leaving the site. ▪ Any special traffic controls required for large, oversize or over mass vehicles. ▪ Reporting procedures in relation to accidents, traffic safety or road maintenance issues. ▪ Specific controls required when construction activity is conducted in close proximity residential or noise sensitive areas. ▪ Changed property access for residences and farm properties. Key aspects of the Traffic Management Plan will be included in the Project Induction and the Traffic Management Plan controls included in the relevant SWMS. Traffic Management Plan will be kept in the site office for easy access by all crew members.

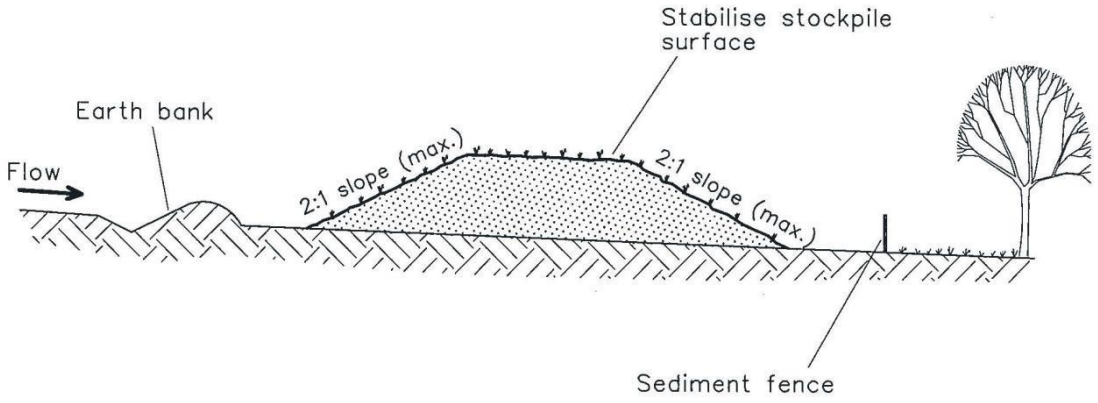
Environmental Impact	Waste Management
Objective	Reduce the risk of waste associated with the proposed works impacting upon the local community.
Performance Indicators	▪ Minimal impact on the community as a result of waste generated from construction.

Controls	▪ All wastes, including contaminated wastes, will be identified and disposed of to an appropriately licenced facility. ▪ Where economically feasible, material with recycled content will be sourced. ▪ Water will be used for dust suppression measures if required as opposed to chemical alternatives. ▪ Provision of toilets for construction workers, for the duration of the works. ▪ All chemical waste will be disposed of in accordance with Safety Data Sheet (SDS).

Environmental Impact	**Fire Management**
Objective	To ensure that construction activities do not cause and emergency incident such as starting a fire.
Performance Indicators	▪ No emergency incidents as a result of construction activities.
Controls	▪ Develop and implement Emergency Response Plan including conditions of permit where applicable. ▪ Fire extinguishers to be available on site and in work vehicles, major plant and equipment and ensure workers trained in their use ▪ Hot work permits required for hot works on total fire ban days, no works on catastrophic fire rating days unless approved. ▪ Maintain all machinery and vehicles in good condition to minimise risk of fires. ▪ Fit plant with spark arrestors. ▪ No burning off or burning of wastes. ▪ Flammable materials and ignition sources brought onto the site should be handled and stored as per manufacturer's instructions. ▪ The work sites should be left in a tidy manner at the end of each work day. ▪ Where applicable tall dry grass to be mown before construction commences.

Environmental Impact	**Visual Amenity and infrastructure**
Objective	Reduce the risk of proposed works impacting the visual amenity of site and surrounds:
Performance Indicators	▪ No community complaints regarding visual amenity during the construction period or post project associated with site condition (e.g. demobilisation). ▪ Visible dust formation is reported immediately. ▪ No dust complaints.
Controls	▪ Designate machinery and equipment storage areas so that nothing is stored beneath the drip line of established trees or on planted or regrowth vegetation. ▪ Disturbed areas will be progressively rehabilitated and revegetated in a timely manner to reduce the visual impacts of exposed soils. ▪ All rubbish to be put in appropriate bins for removal from site. ▪ Wet down exposed soils during hot and windy weather conditions. ▪ Report any dust forming in the construction areas to the Supervisor immediately. ▪ Construction plant and equipment is maintained in a good working condition in order to limit impacts on air quality. ▪ Fuel operated plant and equipment should not be left idle when not in use for example during breaks.

B-1 Stockpiles

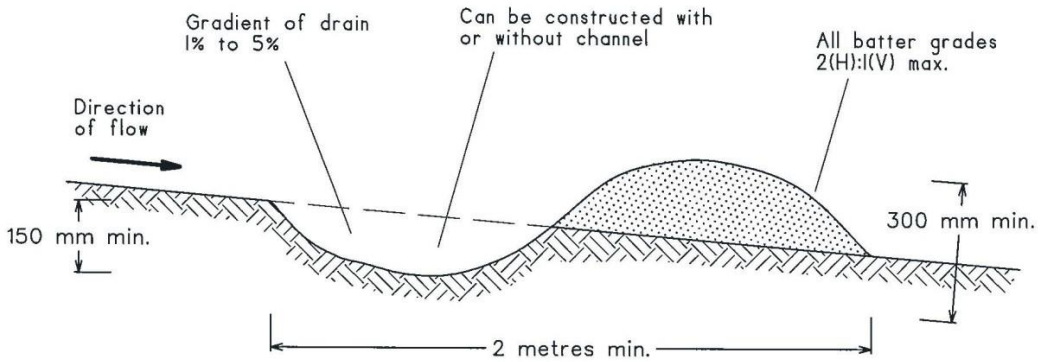


Construction Notes

1. Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
2. Construct on the contour as low, flat, elongated mounds.
3. Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
4. Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the C-factor to less than 0.10.
5. Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

STOCKPILES **SD 4-1**

B-2 Earth bank low flow



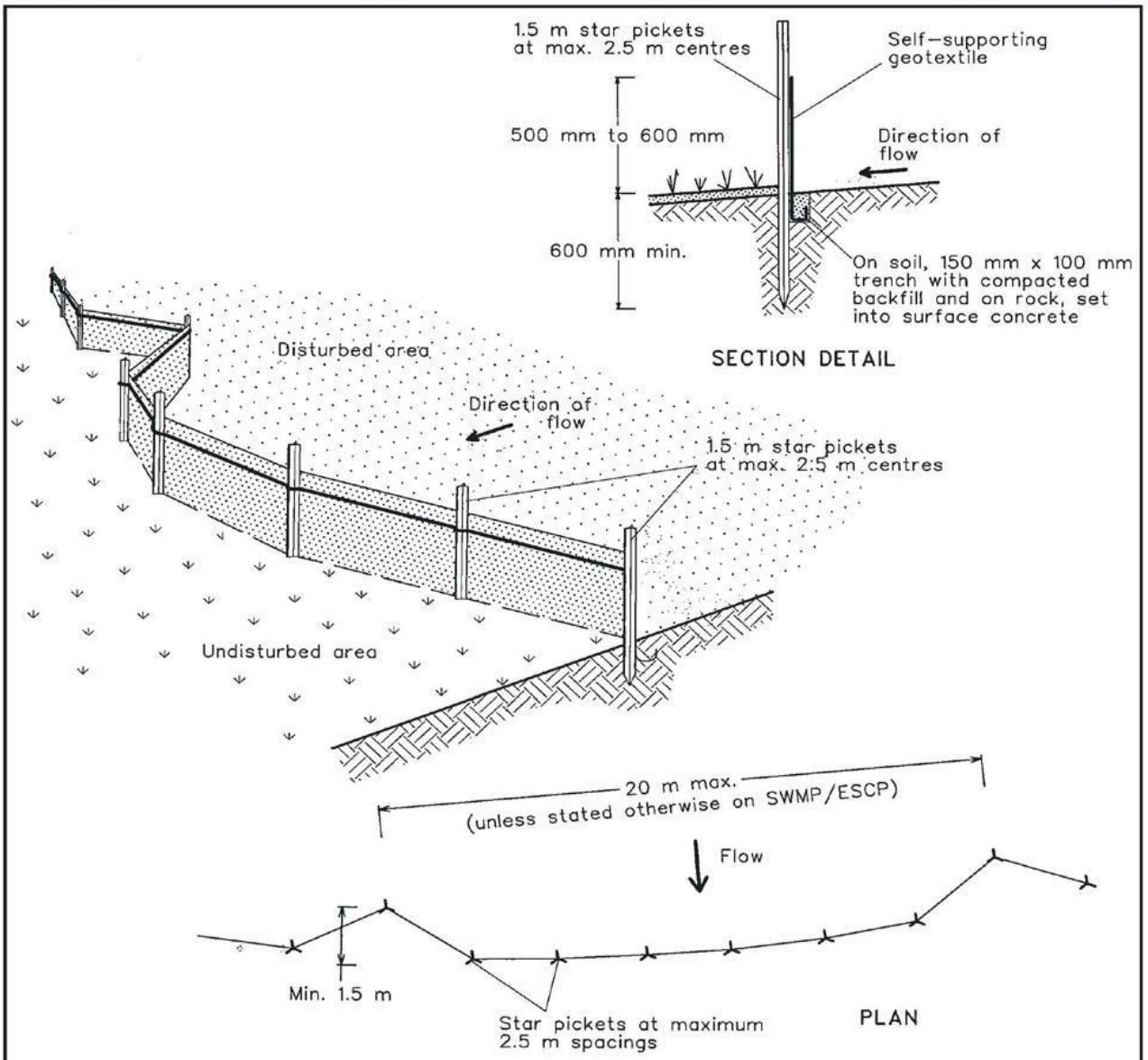
NOTE: Only to be used as temporary bank where maximum upslope length is 80 metres.

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**

B-3 Sediment fence



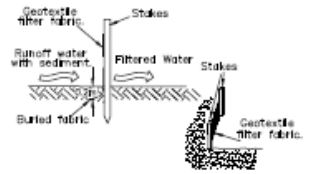
Construction Notes

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.

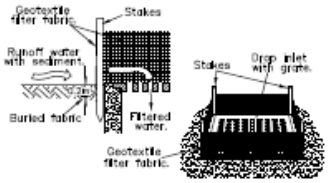
SEDIMENT FENCE **SD 6-8**

6.3 Appendix C – Site Environmental Management Plan *(See Separate Document)*

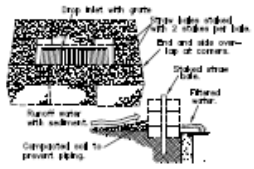
6.4 Appendix D – Erosion Sediment Control Plan



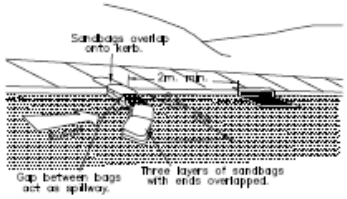
Geotextile Fabric Barrier



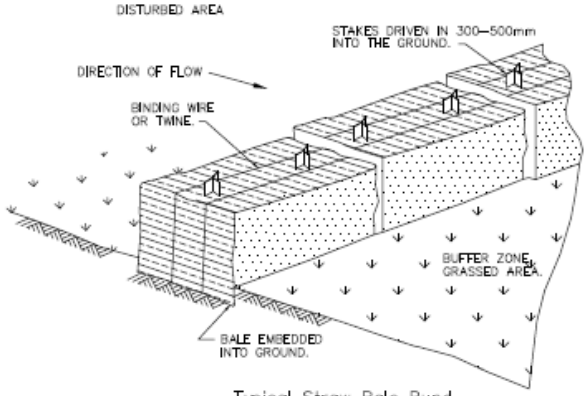
Geotextile Filter Fabric Drop Inlet Sediment Trap Option 1



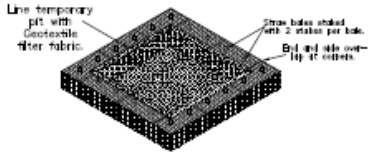
Straw Bale Drop Inlet Sediment Trap Option 2



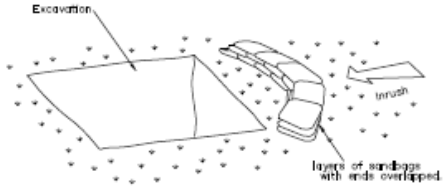
Sandbag Sediment Trap.



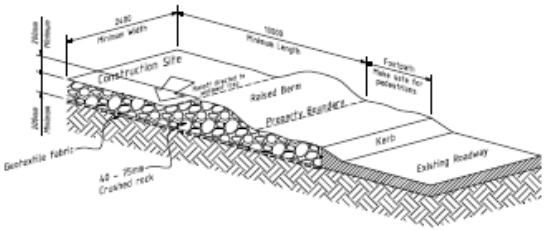
Typical Straw Bale Bund
N.T.S.



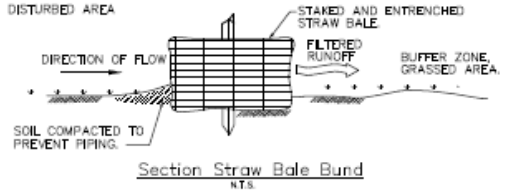
Temporary Pump–Out Pit
NOT FOR CONCRETE WASH OUT



Temporary Sediment Sandbag Barrier



Temporary Construction Exit



Section Straw Bale Bund
N.T.S.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL INSTRUCTIONS

E1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, AND ANY OTHER PLANS OR WRITTEN INSTRUCTIONS THAT MAY BE MADE AND RELATING TO DEVELOPMENT AT THE SUBJECT SITE.

E2. THE SITE SUPERINTENDENT WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS INSTRUCTED IN THIS SPECIFICATION.

E3. ALL BUILDERS AND SUB–CONTRACTORS WILL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS.

CONSTRUCTION SEQUENCE

E4. THE SOIL EROSION POTENTIAL ON THIS SITE SHALL BE MINIMISED, HENCE WORKS SHALL BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:

(a) INSTALL SEDIMENT FENCES

(b) UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF MANAGEABLE SIZE.

EROSION CONTROL

E5. DURING WINDY CONDITIONS, LARGE UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.

E6. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

E7. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHALL BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.

FENCING

E8. ANY SAND USED IN THE CONCRETE CURING PROCESS IS SPREAD OVER THE SURFACES WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.

E9. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY FREE OF SEDIMENT, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.

E10. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

OTHER MATTERS

E11. ADEQUATE RECEPTIONS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT–WEIGHT WASTE MATERIALS AND LITTER.

OTHER MATTERS

E11. RECEPTIONS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT–WEIGHT WASTE MATERIALS AND LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT.

SITE INSPECTION & MAINTENANCE

E12. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER RAINFALL EVENTS TO ENSURE THAT THEY OPERATE EFFECTIVELY. REPAIR AND/OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED.

CONCRETE WASHOUT

E13. CONCRETE WASHOUT IS TO BE COMPLETED INTO DESIGNATED WASHOUT BINS. CONCRETE WASHOUT BINS ARE TO BE MAINTAINED TO ENSURE NO LEACHING OF WASHOUT WATER OR WASTE CONCRETE INTO THE SURROUNDING ENVIRONMENT. WASHOUT WATER IS TO BE PUMPED OUT AND RETURNED TO THE CONCRETE SUPPLY CONTRACTOR.

Rev	Revision Description	By	Date
A	FIRST ISSUE	A. WILSON	28.10.2021

ENVIRONMENTAL CONTROL GENERAL DETAILS & NOTES

CHARLOTTE PASS | GUTHRIES CHAIR | 2020-15-C-019 | A

DOPPELMAYR

A1