
Appendix K

CEMP

200 Aldington Road Industrial Estate

Lot J SSD 61212208 Construction Environmental Management Plan

Prepared for Stockland Fife Kemps Creek Pty Limited

July 2024

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Stockland Fife Kemps Creek Pty Limited

E231060 RP1

July 2024

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Abbreviations

Acronym	Description
ACHMP	Aboriginal and Cultural Heritage Management Plan
ASS	Acid Sulphate Soils
BC Act	<i>Biodiversity Conservation Act 2016</i>
CAQMP	Construction Air Quality Management Plan
CEMP	Construction Environmental Management Plan
CCCHS	Community Consultation and Complaints Handling Strategy
CNVMP	Construction Noise and Vibration Management Plan
CoC	Condition of Consent
CTMP	Construction Traffic Management Plan
CPESC	Chartered Professional Erosion and Sediment Control
DPHI	NSW Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
ESCP	Erosion and Sediment Control Plan
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPA	Environmental Protection Agency
ER	Environmental Representative
FFMP	Flora and Fauna Management Plan
GFA	Gross Floor Area
ha	hectare
km	kilometre
LGA	Local Government Area
NSW	New South Wales
NRAR	Natural Resources Access Regulator
PCC	Penrith City Council
POEO Act	<i>Protection of the Environment Operations Act 1997</i>

Acronym	Description
SFKC	Stockland Fife Kemps Creek Pty Ltd (a joint venture between Fife Capital and Stockland Managed entities)
UFP	Unexpected Finds Protocol
WM Act	<i>Water Management Act 2000</i>
WHS Act	<i>Work Health and Safety Act 2011</i>
WSA	Western Sydney International (Nancy-Bird Walton) Airport

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1 Introduction

This Construction Environmental Management Plan (CEMP) has been prepared for Stockland Fife Kemps Creek Pty Ltd (SFKC) as part of a State Significant Development Application (SSDA) 61212208 for Lot J of the 200 Aldington Road Industrial Estate (the Project). The Project is located in Kemps Creek, New South Wales 2178, within the Penrith Local Government Area (LGA).

The following documents have been reviewed and applicable information incorporated into this CEMP:

- Environmental Impact Statement (EIS) (including technical reports), prepared by Ethos Urban, dated 11 November 2020
- SSD-10479 approval dated 5 May 2023
- Mamre Road Precinct Development Control Plan 2021 (the DCP).
- 200 Aldington Road Kemps Creek Stage 1 Development CEMP (EMM, 2023)
- Lot J – 200 Aldington Road Industrial Estate Draft Transport Impact Assessment (Ason Group, 2023)
- Lot J - 200 Aldington Road Industrial Estate, Kemps Creek – Erosion and Sediment Control Plan (at&I 2023)

1.1 Project Background

SFKC has obtained a development consent from the Department of Planning and Environment (DPE) for an industrial estate known as 200 Aldington Road, Kemps Creek (SSD-10479). Approval was made under Part 4 of the NSW Environmental Planning and Assessment Act 1979 (*EP&A Act*), relating to the concept approval (in accordance with Section 4.22 of the *EP&A Act*) of Stage 1 works for the proposed industrial hub of land at 106–228 Aldington Road, Kemps Creek (200 Aldington Road).

A State Significant Development Application (SSD - 61212208) has been lodged for the development of warehouses and associated facilities within Lot J of 200 Aldington Road. In accordance with Condition B31 of SSD-10479, any future development application must be accompanied by a CEMP.

The project will include construction of 3 warehouses, comprised of 3 buildings with hardstand, a loading and unloading area, salvage racking areas and a crushed gravel yard within the Lot J footprint. Landscaping will also occur along the perimeter of the lot. The Lot J development infrastructure is shown in Table 1.1.

Table 1.1 Lot J infrastructure

• Warehouse facilities	• Office facilities	• Landscaping
• Services, including drainage	• Container hardstands	• Carparking and internal access roads

The 200 Aldington Road Industrial Estate location is shown in Figure 1-1 and the estates layout is shown in Figure 1-2; noting that Lot H will be a consolidation of Lot E, Lot F and Lot H as per the Concept Estate Master Plan, subject to a modification proposal to SSD-10479. The layout of the proposed Lot J infrastructure is included within Figure 1-3.

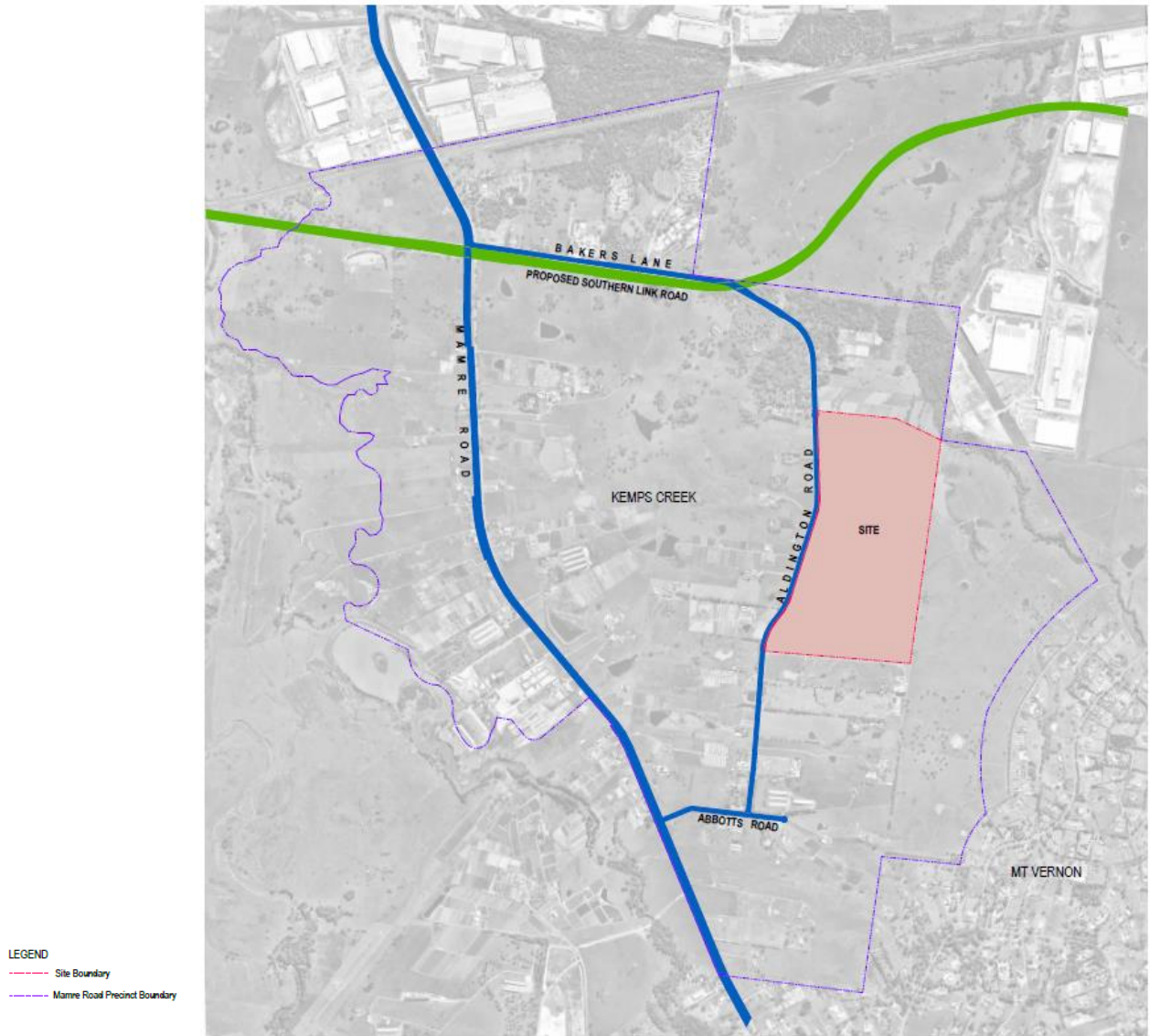


Figure 1-1 200 Aldington Road Kemps Creek Industrial Estate site location

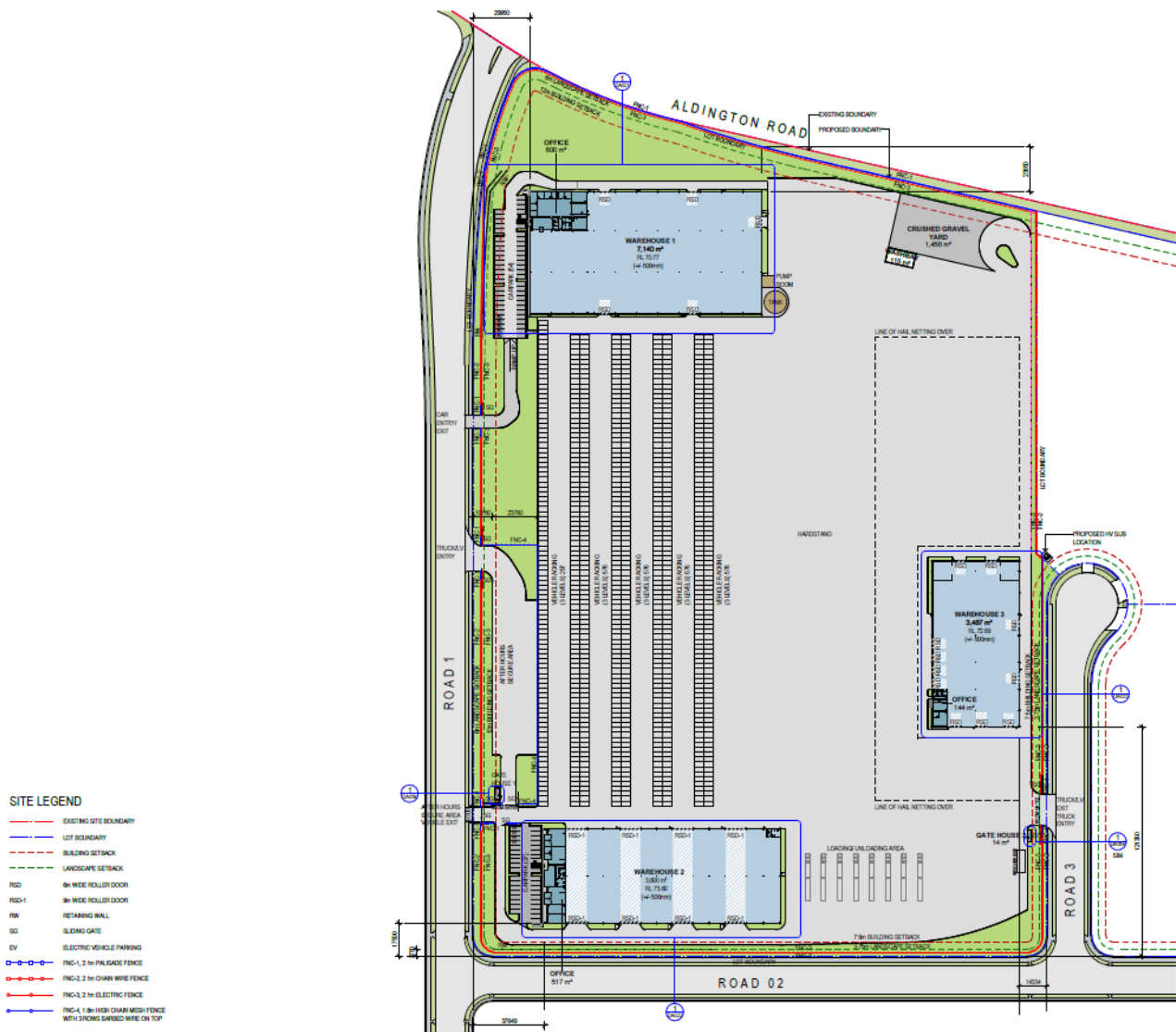


Figure 1-3 Lot J Proposed Layout (source: SBA Architects, 2023; Project number:22213, Drawing Number: DA001, Revision, P62023)

1.2 Purpose

This CEMP has been developed to support the SSD Application for Lot J. It will provide the approach for environmental management during the construction of the Lot J infrastructure.

This CEMP has been developed to take a consistent management approach with the 200 Aldington Road Kemps Creek Stage 1 Development CEMP (EMM, 2023). This CEMP has been developed to reflect the conditions within the SSD-10479 instrument of approval, noting that different conditions may be applicable to Lot J construction works when SSD 61212208 is determined. This CEMP would be updated to reflect any new conditions, as required, when issued including the development of any specific CEMP sub-plans.

The Project site is within the Mamre Road Precinct, and therefore the relevant controls of the DCP have been considered in this CEMP and applied to the construction phase of the Project. Applicable controls outlined in the DCP have been incorporated into this CEMP.

Condition B31 of SSD-10479 sets out the requirements for any future SSD Application CEMP for the 200 Aldington Road Industrial Estate (i.e., this CEMP).

1.2.1 Compliance with Relevant Conditions

Table 1.2 Compliance with Relevant Conditions (SSD-10479)

Condition SSD-10479	Description	Document Reference
B31	Future DAs must be accompanied by a Construction Environmental Management Plan (CEMP). The CEMP must:	This Plan
	(a) be prepared by a suitably qualified and experienced environmental consultant, or the Environmental Representative appointed for the Stage 1 development	Section 1.2.1 Appendix C
	(b) be prepared in consultation with relevant Government agencies, infrastructure and utility providers, including but not limited to, TransGrid, Endeavour Energy, Sydney Water and TfNSW, where relevant;	Section 7
	(c) detail the construction activities to be carried out in the relevant stage;	Section 2.2
	(d) include detailed procedures for managing the environmental impacts of construction, including stormwater, erosion and sediment controls, dust, noise and traffic management	Section 4
	(e) detail the roles and responsibilities for environmental management on the site	Section 3.1

This CEMP has been developed by EMM Consulting Pty Ltd (EMM). EMM is an environmental consultancy providing services in a wide range of environmental disciplines across a variety of markets. Expertise includes Acoustics, air quality, communication and engagement, construction environmental management, contamination, ecology, groundwater, surface water, hydrology, heritage and traffic.

This CEMP has been developed by team members with previous experience in construction environmental management across a wide range of projects and including the preparation of CEMPs and CEMP sub-plans. This CEMP has been approved by David Bone, a Certified Environmental Practitioner (CENvP #137) with more than 30 years' experience in construction environment management practice. David was heavily involved in the preparation of the 200 Aldington Road Estate Management CEMP and sub plans approved earlier in 2023 and is a DPHI approved Independent Environmental Representative and Lead Environmental Auditor across a number of CSSI, SSI and SSD projects.

Curriculum Vitae for team members that have been involved in the development of this CEMP are included in Appendix C for reference.

1.3 Objectives

The objectives of this CEMP are to:

- establish procedures to minimise the potential for environmental harm and/or environmental nuisance
- assign responsibility for the implementation, management and review process and to ensure all Project personnel understand individual roles and responsibilities
- ensure Project personnel understand incident and emergency response procedures
- provide a monitoring program to monitor the effective nature of controls as they are implemented during construction

- demonstrate that all statutory requirements and conditions of approval have been met.

Implementing the CEMP and sub-plans will minimise impacts to the environment whilst meeting the requirements of the Planning Approval, relevant legislation, guidelines and standards.

This CEMP is the overarching document in the environmental management system for the Project. It is applicable to all staff contractors and sub-contractors associated with the construction of the Project.

2 Project Overview

2.1 Location

The Project site is located at 200 Aldington Road, Kemps Creek, NSW. The Project is located approximately 5 kilometres (km) north-west of the future Western Sydney (Nancy-Bird Walton) Airport, 13 km south-east of the Penrith CBD and 40 km west of the Sydney CBD (refer to Figure 1-1). The Project is located within the Mamre Road Precinct (MRP) as identified by the State Environmental Planning Policy (Industry and Employment) 2021.

2.2 Construction Staging and Activities

Prior to the commencement of construction works for Lot J infrastructure, works will occur under the Stage 1 Development approval. The project will be fully cleared of vegetation and bulk earthworks will have occurred.

Construction will be staged as follows:

- **Site establishment** - install temporary offices and facilities (including temp service connections), environmental and safety controls, temp boundary fencing, access points, signage
- **Stage 1** - Service works - relocation and/or protection of existing services as necessary, installation of new services associated with Lot J including any drainage
- **Stage 2** - Detailed site earthworks - minor adjustments to ground surface levels
- **Stage 3** - Preparation of foundations and retaining walls
- **Stage 4** - Construct warehouse and office buildings
- **Stage 5** - Civil finishing works and landscaping
- **Stage 6** - Building fit-out, service connections and commissioning

Some stages may occur concurrently.

2.3 Plant and Equipment

Typical plant and equipment to be used is shown in Table 2.1.

Table 2.1 Typical plant and equipment

• Backhoes	• Boring machines	• Compressors
• Concrete pump	• Concrete trucks	• Concrete saws
• Cranes	• Elevated work platforms (EWP)	• Excavators
• Forklifts	• Generators	• Jackhammers
• Light vehicles (LV)	• Line marking machines	• Loaders
• Paving machines	• Piling rigs (impact or auger)	• Plate compactor
• Power tools / hand tools	• Pumps	• Rollers
• Trucks	• Vacuum Trucks	• Water carts

The above is subject to construction methodology development.

2.4 Construction Hours

It is expected that work hours would align with the requirements of the SSD-10479 approval. In accordance with Condition D48, working hours for earthworks and construction must be undertaken between

- Monday to Friday: 7:00 am to 6:00 pm
- Saturday: 8:00 am to 1:00 pm.

In accordance with Condition D49 works undertaken outside of these hours, be undertaken under the following circumstances:

- works that are inaudible at the nearest sensitive receivers
- works agreed to in writing by the Planning Secretary
- for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons, or
- where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

Note: In accordance with Condition C32 TransGrid easement; TransGrid may request access to the transmission towers, lines than run through the Project site. Access is to be granted 24 hours a day, 7 days a week (works may be undertaken if so required.)

2.5 Construction Site Access

The Project will be accessed via Aldington Road, Kemps Creek. Internal estate roads will be used to access Lot J, includes roads 1, 2 and 3 (see Figure 1-3). A number of access points may be established during construction to facilitate traffic movement through site so that vehicles can enter and exit in a forward direction where possible.

2.6 Key Construction Contact Details

Key contacts for the Project are provided in the Table 2.2.

Table 2.2 Key Construction Contact details

Contact/agency	Reason	Contact Number
Project Manager Stockland Fife Kemps Creek	Complaints, incidents	TBC
Construction Manager	Complaints, incidents	TBC
Community Liaison Officer – Stockland Fife Kemps Creek	Liaison	TBC
Environmental Representative (or approved alternative)	Non-compliance with consent condition (environmental/noise/traffic)	Carl Vincent 0424 203 046
Project Information Number	Complaints/issues/enquiries	TBC
Penrith City Council	Traffic/access (local roads)	(02) 4732 7777
DPHI	Non-compliance, regulatory advice	1300 420 596

Table 2.2 **Key Construction Contact details**

Contact/agency	Reason	Contact Number
DPI Fisheries	Aquatic ecology	1300 550 474
TfNSW	Traffic/access (Mamre Road)	131700
SafeWork NSW	Notifiable incidents	131 050
NSW EPA	Pollution Incident	131 555
NSW Police	In case of fire, medical or police emergency. For pollution incidents that present an immediate threat to human health or property.	000
Fire and Rescue NSW		
NSW Ambulance		
Nepean Hospital	Medical incidents	(02) 4734 2000
Crime stoppers	Incidents such as theft, crime, car crash, non-threatening injuries	1800 033 111
Police Assistance Line		131 444
Poison Information Centre	Toxicology advice	131 126
IXOM (Chemical industry)	Incidents relating to transport, storage, and use of chemical products	1800 033 111
Deerubbin Local Aboriginal Land Council (LALC)	Aboriginal cultural heritage	(02) 4724 5600
Darug Custodian Aboriginal Corporation		0415 770 163
Kamilaroi Yankuntjatjara Working Group		TBC

3 Environmental Management Framework

3.1 Roles and responsibilities

The roles and responsibilities relevant to the Project are summarised in Table 3.1.

Table 3.1 Roles and Responsibilities

Role	Company	Responsibilities
Contractor's Environmental Manager	Contractor	• Implementation of the CEMP on site. • Assist the ER in the implementation of environmental requirements. • Assist with the annual review of the CEMP and subplans.
Community Engagement Representative	Principal (SFKC)	• Receive and respond to enquiries and complaints. • Implement CCCHS • Ensure complaints register is updated. • Respond to community complaints. • Working with SFKC and Contractor to identify the cause and solution to complaints. • Provide monthly reports. • Participate in MRP Working Group where required. • Attend community and stakeholder meetings, as required. •
Project Manager	Principal (SFKC)	• Receive and respond to enquiries and complaints. • Ensure complaints register is updated. • Respond to community complaints. • Working with SFKC and Contractor to identify the cause and solution to complaints. • Provide the ER with documentation requested to perform ER functions. • Provide monthly reports. • Participate in MRP Working Group where required. • Attend community and stakeholder meetings, as required. •
Environmental Representative	ER or approved alternative	• Receive and respond to communication from the Planning Secretary. • Inform the Planning Secretary on matters specified in the terms of this consent. • Consider and recommend (to SFKC) any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community. • Review CEMP required under the Conditions of consent. • Regularly monitor the implementation of the CEMP. • Undertake site visits audits and inspections. • Participate in the MRP Working Group (see SSD 10479 Condition A12). • As requested by the Planning Secretary assist the DPE in the resolution of community complaints. • Responding to the community regarding environmental performance. • be available to the team to assist in the resolution of complaints where required. • Prepare and submit Environmental Representative Quarterly Report.
Construction Manager	Contractor	• Provide support in the response to enquiries and complaints and ensure required actions are implemented. • Provide information for reports, as required.

Table 3.1 **Roles and Responsibilities**

Role	Company	Responsibilities
Site Supervisor	Contractor	• Provide support in the response to enquiries and complaints where required. • Report any community interactions (e.g. local community, media) to the Community Engagement Representative. • Assist with the implementation of the CCCHS.
All Project personnel	Contractor and sub-contractors	• Adhere to requirements of this CCCHS. • Report any community interactions (e.g. local community, media) to the project Community Engagement Representative.

Note: Conditions of Approval (CoA) references are to SSD 10479 and are subject to change with the issue of the Lot J Development Consent.

3.2 Statutory Requirements

The Project must be carried out in accordance with:

- the conditions of consent as per SSD-10479 or any new instrument of approval as granted for SSD 61212208 for Lot J.
- all written directions from the Planning Secretary
- the EIS
- the approved plans completed as part of SSD-10479
- this CEMP and sub-plans.

The Project is required to adhere to the relevant requirements of the Acts and their subordinate legislation identified in Table 3.2.

Table 3.2 **Statutory Requirements**

Act	Statutory instrument	Regulatory authority	Applicability
State			
<i>Biodiversity Conservation Act 2016</i> (BC Act)	Biodiversity Conservation Regulation 2017	NSW EES	Protection of threatened species, populations and communities and their habitats.
<i>Contaminated Land Management Act 1997</i> (CM Act)	Contaminated Land Management Regulation 2013	NSW EPA	Identifies and control contaminated land and investigation requirements.
<i>Environmental Planning and Assessment Act 1979</i> (EP&A Act)	Environmental Planning and Assessment Regulation 2000	DPHI	Modification to the Project scope requiring modification to the Development Approval.
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	Environment Protection and Biodiversity Conservation Regulations 2000	DCCEEW	Protection of biodiversity and conservation matters.

Table 3.2 **Statutory Requirements**

Act	Statutory instrument	Regulatory authority	Applicability
<i>Fisheries Management Act 1994</i> (FM Act)	Fisheries Management (General) Regulation 2019	DPI (Fisheries NSW)	Controls works within waterways.
<i>Heritage Act 1977</i>	Heritage Regulation 2012	Heritage NSW	Protection of cultural heritage items.
<i>National Parks and Wildlife Act 1974</i>	National Parks and Wildlife Regulation 2019	NSW DCCEEW	Protection of Aboriginal objects and sites. Duty to notify in the event that an Aboriginal object is uncovered.
<i>Protection of the Environment and Operations Act 1997</i> (POEO Act)	Protection of the Environment Operations (Waste) Regulation 2014	NSW EPA	Pollution incidents that have caused or give rise to material harm.
<i>Roads Act 1993</i>	Law Reform Commission Act 1975	TfNSW	Financing, maintenance, construction and operation of roads.
<i>Sydney Water Act 1994</i> (NSW)	Sydney Water Regulation 1994	Sydney Water	Relates to the supply of water, the provision of sewerage and stormwater drainage systems and the disposal.
<i>Waste Avoidance and Resource Recovery Act 2001</i>	-Waste exemptions under the POEO administration regulation	NSW EPA	Controls waste management and allows for resource recovery under exemptions.
<i>Water Management Act 2000</i> (WM Act)	Water Management (General) Regulation 2018	–NSW DCCEEW	For the protection, conservation and ecologically sustainable development of the water sources of the State, and for other purposes.
<i>Work Health and Safety Act 2011</i> (WHS Act)	Work Health and Safety Regulation 2017	SafeWork NSW	Controls safety requirements for work sites in NSW.

The development is subject to The Mamre Road Precinct Development Control Plan 2021. The Mamre Road Precinct DCP was prepared in accordance with Part 3, Division 3.6 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *Environmental Planning and Assessment Regulation 2000*. The Mamre Road Precinct DCP applies to land within the Mamre Road Precinct as identified by *State Environmental Planning Policy (Western Sydney Employment Area) 2009*.

3.2.1 Standards, Codes and Guidelines

The following standards, codes and guidelines are applicable to the construction of the Project:

- Australian Standards:
 - Australian Standard AS 2601-2001 *The Demolition of Structures*
 - Australian Standard AS1940-2004 *The storage and handling of flammable and combustible liquids*
 - Australian Standard AS1742.9:2018 *Manual of Uniform Traffic Control Devices – Bicycle Facilities, Cycling Aspects of Austroads Guides*

- Australian Standard AS 1055:2018 Acoustics – *Description and measurement of environmental noise*
- NSW EPA Waste Classification Guidelines Parts 1 - 4 (EPA 2014)
- Interim Construction Noise Guideline (DECC 2009)
- Managing Urban Stormwater: Soils and Construction – Volume 1: Blue Book (Landcom, 2004)
- Controlled activities - Guidelines for vegetation management plans on Waterfront Land (DPE 2022)
- National Airports Safeguarding Framework, Managing the Risk of Wildlife Strikes in the Vicinity of Airports (NASAG, 2012)
- Planning for Bushfire Protection (NSW RFS, 2019).

3.3 Inductions and Environmental Training

All personnel (including contractors and sub-contractors) are required to attend a compulsory site induction that includes an environmental component prior to commencement on-site. This is to ensure all personnel involved in the Project are aware of the requirements of the CEMP. All Project staff will be made aware of the Project-specific environmental controls through a site induction, and pre-start meetings/toolbox talks prior to the commencement of work.

3.3.1 Site Specific Induction

The Project induction will include (but not limited to) key aspects:

- purpose and objectives of the CEMP
- roles and responsibilities, including due diligence and duty of care
- appropriate behaviour when interacting with the local community and stakeholders
- overview of environmental risks and specific locations of environmental and cultural significance
- the scope of legislative requirements and other licences and approvals
- key environmental management requirements and controls stipulated in the CEMP and sub plans
- workplace health and safety issues, including high-risk activities and associated safeguards
- potential environmental emergencies on site and the emergency response, locations and training in the use of emergency spill kits
- approved construction hours
- driver code of conduct and haulage routes
- importance of erosion and sediment controls
- unexpected finds (heritage and contamination)
- procedures for notifying and reporting incidents and complaints.

Site inductions will be recorded, including details of topics discussed, attendees and duration. Copies of the Project inductions will be stored in a register and signed attendance sheets will be filed.

3.3.2 Toolbox Talks

Toolbox talks will be held weekly and tailored to specific environmental issues relevant to the upcoming works. Topics to be discussed will include (but not limited to):

- erosion and sediment control
- traffic management
- weed management and site hygiene protocols
- flora and fauna management
- air and water pollution management
- hours of work.

3.3.3 Pre-Start Meetings

Pre-start meetings will be conducted daily prior to commencement of works. Topics to be discussed will include (but not limited to):

- daily work activities
- safe work practices
- environmental controls
- no-go zones/restricted work areas
- hazards
- any other information which may be relevant to the day's work.

3.4 Incidents and Non-compliance

3.4.1 Incidents

Incidents may comprise (but not limited to) the following:

- serious injuries requiring urgent medical help
- there are threats to property or life
- criminal activity e.g. you have witnessed a serious crime or accident
- sewer or water service breaks which result in offsite pollution
- electricity service faults
- fires and explosions

- release of pollutants e.g. release of sediment into watercourse, chemical spill.
- working outside of standard construction hours
- damage to structures and / or buildings resulting from vibration

i Pollution Incidents

Pollution incidents may comprise (but are not limited to) the following:

- pollution, or potential pollution of waterbodies
- discharges of waters from site not in accordance with approval requirements
- uncontrolled releases of chemicals, paint or fuels
- a spill that causes pollution to land/soils
- excessive noise from vehicles, transport or construction activities near people's residence or workplace, especially outside of standard work hours.
- increased levels of particulates in the air resulting in poor air quality / exceedance of criteria

Where a pollution incident has caused or is threatening to cause 'Material harm to the environment', the regulatory agencies must be notified immediately and without delay (see Section 3.4.4). As defined in Section 147 of the *Protection of the Environment Operations Act 1997* (POEO Act):

(a)...harm to the environment is material if:

(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or

(ii) It results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and

(b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

3.4.2 Incidents and non-compliance handling procedure

In the event of an incident/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.
4. **Report** and notify relevant persons (e.g. project manager, regulatory agencies).

3.4.3 Corrective Actions

Corrective actions may be triggered by an incident or non-compliance and will include immediate steps taken to control the event, as well as development of additional controls to prevent reoccurrence.

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)** – individual protection from risks including dust, noise, sun, contaminated water.

Corrective actions will be documented on the Incident and non-compliance Form and be assigned to the appropriate personnel for close out. The Contractors Environmental Manager will be responsible for managing and overseeing the implementation of corrective actions on-site and ensuring appropriate documentation is completed and filed for record keeping. Records of all incidents and non-compliances and associated corrective actions are to be provided to the project manager.

3.4.4 Regulatory agency notification

i Material harm pollution incident

Incidents that cause or threaten material harm must be notified to the relevant authorities immediately and without delay. This includes the EPA, DPE, Council, Local Department of Health, Worksafe NSW and Fire and Rescue. The contact details are provided in Table 2.2.

A person engaged as an employee in carrying out an activity must, immediately and without delay, after the person becomes aware of the incident (see Section 3.4.1), notify the relevant authorities. The management team must notify the principal contractor and the Environmental Representative as soon as possible verbally and commence action to control the pollution event where safe to do so.

The Project Manager is responsible for notifying the appropriate regulatory authority and other response agencies in accordance with the requirements stipulated in Part 5.7 of the POEO Act.

A written report on the incident (s148 of POEO Act, SSD-10479 Conditions E10, C34) is required to be prepared in accordance with Section 3.4.6.

3.4.5 Non-compliances Notification

A non-compliance refers to the failure to comply with a condition of consent (e.g. exceedance of the impact assessment criteria and performance criteria for noise and vibration). A non-compliance also refer to the failure to meet the requirements of an approved management plans.

Non-compliance may be identified through routine weekly inspections, impromptu site inspections, via the CEMP review and audit process or following an incident or a complaint. The Contractor's Environmental Manager is responsible for investigation and management of corrective and preventive actions in the event of non-compliance. Non compliances must be reported in accordance with the SSD – 10479 CoA and a notification is to be issued to the Planning Secretary by the proponent (SSD-10479 Conditions E11-13).

3.4.6 Notification Requirements

i Incident report requirements

Immediately and without delay after an incident is identified, the project team must supply the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a notification of the incident addressing all requirements listed below (in accordance with SSD-10479 Appendix 5 Condition#4):

- a) a phone call to the relevant agencies with a record kept of the call date and time
- b) an email on the same day including:
 - i) a summary of the incident including its location and nature
 - ii) outcomes of an incident investigation, including identification of the cause of the incident
 - iii) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence
 - iv) details of any communication with other stakeholders regarding the incident
- c) written notification within 7 days of the incident as per Section 3.4.6ii.

ii Written incident notification requirements

The Planning Secretary must be notified immediately after becoming aware of an incident (SSD-10479 Condition E10, Section 3.4.6i). SSD-10479 Appendix 5 of the Condition#2 state that notification must include:

- a) identify the development and application number
- b) provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident)
- c) identify how the incident was detected
- d) identify when the applicant became aware of the incident
- e) identify any actual or potential non-compliance with conditions of consent
- f) describe what immediate steps were taken in relation to the incident
- g) identify further action(s) that will be taken in relation to the incident
- h) identify a project contact for further communication regarding the incident.

The Planning Secretary must be notified in writing within 7 days of the incident occurring.

If notification is not completed within 7 days of the event the notification process is still required to be completed.

3.5 Community Communications and Complaints Handling Strategy

A community communications and complaints handling procedure is included within Appendix D.

4 Environmental Management Measures

The following section outlines the management strategies to be implemented for minimising impacts on the environment which may occur as a direct result of construction activities. Upon approval of the Lot J SSDA, this CEMP may be updated and CEMP sub-plans may be developed.

4.1 Soils, Surface Water and Groundwater

4.1.1 Background

There are no mapped waterways within the Project footprint and it is classed as having 'no known occurrence of acid sulfate soil'.

Groundwater was observed at depths of 2.5m (RL59.1 AHD) and 3m (RL61 AHD) in the north-eastern portion of the Stage 1 Development, adjacent to the Ropes Creek tributaries. A search of the NSW Department of Primary Industries groundwater bore database confirms that no registered groundwater bores are located within 1km of the Project boundary and the nearest groundwater bore is approximately 1.6km northeast of the Project.

No extractive groundwater activities are proposed as part of the proposed development. With regard to the Aquifer Interference Policy, the proposed development is not associated with any high risk activities and the proposed development will not significantly affect any groundwater dependent ecosystems. Any groundwater encountered during works will be minimal.

The EIS has stated that based on the findings of the Preliminary Site Investigation and Supplementary Contamination Investigation, the Project can be made suitable for the proposed development subject to further investigation and / or remediation of any identified areas of environmental concern. Areas of environmental concern within the Lot J site include surface soils in the vicinity of the current and former structures as well as soils at the base of power poles. If unexpected contaminants are identified, all associated activities are to be ceased and the Unexpected Finds Procedure – Contamination in Appendix B will be followed.

A Lot J specific Erosion and Sediment Control Plan has been developed by AT&L (refer to Appendix D). The ESCP will be implemented to minimise potential impacts associated with the construction of Lot J to existing soils and waterways. Erosion and Sediment Control Plans for the Lot J construction works are progressive documents. As such, the document in Appendix D will be updated, or supplemented with additional plans, as the construction works progress. For clarity, the ESCP in Appendix D has been included for information. Any updates to the ESCP in Appendix D, or the development of supplementary Progressive Erosion and Sediment Control Plans (PESCPs) as works progress would be implemented and kept on file. This CEMP would not be updated for each update of the ESCP or supplementary PESCP.

4.1.2 Objectives and Targets

Table 4.1 Soil and water objectives and targets

Objectives	Targets
Prevent erosion and soil loss	Erosion and sediment controls to be used to ensure erosion and soil loss is minimised to the greatest extent practicable.
Prevent clay, silt or sand from entering stormwater drains and waterways.	All disturbed stormwater to pass through primary erosion and sediment controls.
To manage contamination in accordance with regulatory requirements.	No spread of contaminants onsite

Table 4.1 **Soil and water objectives and targets**

Objectives	Targets
Ensure that groundwater quality or height is not significantly affected by the construction.	No significant change in groundwater levels and quality during dewatering activities (if applicable).

4.1.3 Management Measures

Table 4.2 **Soil and water management measures**

Item	Management Measure	Timing	Responsibility
SW01	Erosion and Sediment Control Plan is to be prepared by a Certified Practitioner in erosion and sediment control.	Pre-construction	Contractor
SW02	Erosion will be minimised by employing a variety of management measures as per the overarching erosion and sediment control plan (ESCP) and the progressive erosion and sediment control plans (PESCP). These include: • earthworks and major land disturbing activities will be scheduled to avoid high rainfall erosivity periods • progressive stabilisation and rehabilitation of disturbed areas • minimising the extent and duration of soil disturbance; • covering and binding exposed soils with soil stabilising polymers and gravel • minimising disturbance to steeply grading areas where possible; • using retaining walls to minimise the creation of long, steep earthen slopes • early installation and connection of permanent stormwater drainage systems • utilising existing access tracks and driveways	Construction	Contractor
SW03	Clean and dirty water catchments will be segregated to the maximum practical extent to minimise erosion potential and the volume of turbid water that needs to be contained and treated on site.	Construction	Contractor
SW04	Wind erosion will be controlled by minimising disturbance and utilising soil stabilising polymers and wetting agents. During excessively dry and/or windy periods, speeds of machinery and vehicles will be reduced and/or operations will be suspended	Construction	Contractor
SW05	Inspections of control measures will be undertaken prior to predicted rainfall and following rainfall that causes run-off or weekly during dry conditions.	Construction	Contractor
SW06	All water, debris and sediment removed from control measures shall be disposed of in a manner that will not create an erosion or pollution hazard.	Construction	Contractor
SW07	All foreman, engineers, project managers working on site will undergo site training relating to soil and water management issues and mitigation measures	Construction	Contractor

4.1.4 Monitoring and Inspection Approach

Table 4.3 Soil and water monitoring and inspections

Type of monitoring	Timing	Responsibility	Record
Pre-construction inspection	Prior to commencement of bulk earthworks	Environmental Representative (supported by Contractors Environmental Manager)	Written statement to the Planning Secretary from the ER confirming the ESCs are operational, prior to commencement of bulk earthworks as required by condition D24
Weekly inspections	Weekly during normal construction hours	Contractor's Environmental Manager	Inspection report
Rainfall inspections	- Daily during periods of rainfall - Within 24 hours of the cessation of a rainfall event (≥ 10 mm)	Contractor's Environmental Manager	Inspection report
Dewatering of sediment basins	As required in accordance with the Stage 1 Development CEMP Appendix B Erosion and Sediment Control Plan – Table 8.1	Contractor's Environmental Manager	Monitoring data Dewatering Permit

4.2 Salinity

4.2.1 Background

The Map of Salinity Potential for Western Sydney which indicates a moderate salinity potential specifically for the Lot J site, and areas of known salinity and high salinity potential in the northeastern area of the greater Stage 1 site.

Areas of salinity potential are where soil, geology, topography, and groundwater conditions predispose a site to salinity. These areas are most commonly drainage systems or low lying/flat grounds where there is a high potential for the ground to become waterlogged.

Investigations conducted by Douglas Partners for the preparation of the Preliminary Salinity Management Plan (PSMP) found that salinity samples from the Lot J area were moderately saline. The PSMP recommends further site-specific salinity investigations to further identify specific saline soils risks.

Mitigation measures outlined in the PSMP have been adopted for the Project and are outlined in Table 4.5 below. An overarching Salinity Management Plan, in accordance with SSD 10479 CoC D38, has been developed for the Stage 1 Development and will be implemented to minimise potential salinity impacts.

4.2.2 Objectives and Targets

Table 4.4 Salinity objectives and targets

Objectives	Targets
Prevent degradation of the existing soil and groundwater environment	Erosion and sediment controls to be used to ensure erosion and soil loss is minimised to the greatest extent practicable.
Ensure infrastructure is appropriate for the saline conditions of the Project.	Design infrastructure in accordance with recommendations from the Preliminary Salinity Management Plan.

4.2.3 Management Measures

Table 4.5 Salinity management measures

Item	Management Measure	Timing	Responsibility
S01	Avoid water collecting in low lying areas, in depressions, or behind filling embankments.	Construction	Contractor
S02	Further identification of saline groundwaters and soils will be undertaken during site-specific salinity investigations as required by the overarching Salinity Management Plan developed for the Stage 1 Development.	Pre-construction - Construction	Contractor
S03	Surface drains should generally be provided along the top of batter slopes to reduce the potential for concentrated flows of water down slopes possibly causing scour.	Construction	Contractor
S04	Salt tolerant grasses and trees should be considered for landscaping, to reduce soil erosion and to maintain the existing evapo-transpiration and groundwater levels.	Pre-construction - Construction	Contractor

4.2.4 Monitoring and Inspection Approach

Table 4.6 Salinity monitoring and inspections

Type of monitoring	Timing	Responsibility	Record
Monitoring of visual cues of salinity in soils, water or vegetation.	Daily	Site Supervisor	Site diary
	Weekly	Contractor’s Environmental Manager	Inspection report

4.3 Flooding and Hydrology

The Lot J site topography comprises of high points in the west (86 m AHD) decreasing to the south-east (60 m AHD). While, the north-eastern portion of the 200 Aldington Road development is partially located within Council's Flood Planning Area map and is considered flood prone lands, the Lot J site is in the central west of the Stage 1 Development and therefore, negligible flood impacts are expected in this area.

The riparian assessment undertaken for the EIS identified no watercourses within the Lot J area.

Surface and groundwater, flooding and hydrology impacts will be managed with the overarching Primary Erosion and Sediment Control Plan and with the management measures outlined in Section 4.1 of this plan.

4.4 Noise and Vibration

4.4.1 Background

The Project is located on the eastern side of Aldington Road which carries traffic accessing the former local residential areas. The surrounding area includes the following:

- Existing properties located within the Rural area including residential properties to the south west of the Project. The surrounding land has been rezoned as IN1 and is progressively being redeveloped.
- The land use to the south of the Project includes an approved place of worship (under construction).

Aldington Road now experiences minimal amounts of localised traffic. The Project is located within an area which is classified as a currently Rural area as defined in EPA's *Noise Policy for Industry* (NPfI) and includes the following (it is noted that the land and surrounds has now been rezoned to IN1 compared with existing rural residential).

A construction noise and vibration assessment was undertaken by SLR Consulting (dated 28/03/2024) and can be found within Appendix N of the Lot J Environmental Impact Statement.

i Construction Noise Criteria

The construction noise management levels for works undertaken onsite are provided in Table 4.7 below. These are adopted from the Noise and Vibration Impact Assessment (NVIA - White Noise Acoustics 2020) developed as part of the overall development EIS.

Table 4.7 Construction noise management levels

Receiver type	Time period	Construction noise management levels	High noise affected level
Residential	Recommended standard hours: • Monday to Friday 7am to 6pm; • Saturday 8am to 1pm; and No work on Sundays or public holidays.	63 dB(A) LAeq (15min)	75 dB(A) LAeq (15min)
Place of Worship	When in use	45 dB(A) LAeq (15min) internal noise level	75 dB(A) LAeq (15min)
Industrial	When in use	75 dB(A) Leq (15 min)	-

Notes: Construction noise management levels are based on the Interim Construction Noise Guideline (DECCW 2009)

ii Construction Vibration Criteria

The assessment of construction related vibration was based on the following guidelines:

- Assessing Vibration – A Technical Guideline;
- British Standard BS 7385: Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration" (BSI 1993); and
- German DIN 4150: Part 3 – 1999 "Effects of Vibration on Structure" (DIN 1999).

White Noise Acoustics (2020) have confirmed the proposed works are not expected to generate adverse vibration that would exceed the relevant criteria, therefore, nearest receivers are not likely to experience adverse vibration impacts.

iii Predicted Noise Levels

A quantitative assessment of the construction noise levels resulting from construction of the project was undertaken by SLR Consulting for the overarching CEMP for the Stage 1 Development. The assessment has been based on the expected noise levels to be generated on the Project. Calculations of the resulting construction noise levels of the residential receivers within proximity to the Project are detailed in Table 4.8.

Table 4.8 Quantitative assessment of construction noise to neighbouring residence

Noise source	Equipment	Sound power levels dB(A) L ₁₀	Aggregate sound power level dB(A) L ₁₀	Calculated construction noise levels
Site demolition works	Jack hammer mounted on skid steer	118	122	Up to 55 dB(A) when items used externally
	Hand held jack hammer	11		
	Concrete saw	119		
	Skid steer	110		
	Power hand tools	109		
	Excavators	115		
	Trucks	110		
	Earth rollers	112		
Construction works	Piling	115	120	Up to 50 dB(A) when items used externally
	Welder	101		
	Saw cutter	109		
	Dump truck	109		
	Concrete saw	119		
	Power hand tools	109		
	Cranes	110		

4.4.2 Objectives and Targets

Table 4.9 Noise and vibration objectives and targets

Objectives	Targets
To ensure any works causing noise or vibration do not effect nearby structures or residents.	No complaints from the community regarding noise or vibration.

Table 4.9 Noise and vibration objectives and targets

Objectives	Targets
Compliance with State and Local requirements as required.	No complaints from the community regarding noise or vibration.

4.4.3 Management Measures

Table 4.10 Noise and vibration management measures

Item	Management Measure	Timing	Responsibility
NV01	Development shall comply with the relevant Australian Standards for noise and vibration.	Construction	Contractor
NV02	Any machinery or activity considered to produce noise emissions from a premise shall be adequately sound-proofed so that noise emissions are in accordance with the provisions of the <i>Protection of the Environment Operations Act 1997</i> .	Construction	Contractor
NV03	The use of high noise generating equipment including hydraulic hammers, rock and demolition saws or the like should be minimised prior to 8 am Monday to Friday or 8.30 am Saturdays.	Construction	Contractor
NV04	The loading of trucks should be conducted such that there is not a requirement to stack truck on the roadways adjacent to the residential receivers.	Construction	Contractor
NV05	All plant and equipment are to be maintained such that they are in good working order	Construction	Contractor
NV06	Details of the proposed construction (including demolition) works to be conducted on the site, including type of activities to be conducted as well as the expected duration of activities should be provided to the neighbouring receivers.	Pre-construction	Contractor
NV07	If required a noise level measurement of the offending plant item generating complaints is to be conducted and noise mitigations undertaken to reduce noise levels to within noise management levels in the event magnitude of noise levels is found to be above suitable levels.	Construction	Contractor
NV08	A register of complaints is to be recorded in the event of complaints being received, including location, time of complaint, nature of the complaint and actions resulting from the complaint.	Construction	Contractor

4.4.4 Monitoring Approach

Table 4.11 Noise and vibration monitoring

Type of monitoring	Timing	Responsibility	Record
Attended noise monitoring	In response to a noise complaint	Contractor's Environmental Manager	Noise and vibration monitoring record sheet
Attended vibration monitoring	In response to a vibration complaint	Contractor's Environmental Manager	Noise and vibration monitoring record sheet

4.5 Air Quality

4.5.1 Background

The Lot J Site is currently surrounded by rural lands, some with residential dwellings to the north, south and west (across Aldington Road); however, the area has been approved for industrial development. Immediately to the east is vacant rural land and further east the suburb of Mt Vernon is located. This suburb includes residences on large parcels of land and is zoned RU4 Primary Production. Further north Oakdale West Industrial Estate (currently under construction) is located and to the north-east Oakdale South Industrial Estate (recently completed). From an air quality aspect, the most impacted receivers are the surrounding rural residences.

During construction, the main activities that could result in the generation of dust and particulate matter (PM) include:

- General earthworks and excavation, particularly during site establishment
- Vegetation clearing and grubbing.
- Demolition of existing structures and pavements
- Topsoil/material handling, including stockpiling, material loading and material haulage.
- Wind erosion of exposed areas and temporary stockpiles
- Vehicle movements over unpaved surfaces (including unsealed access roads)
- Tracking of dirt from construction vehicles onto public roads.

Other sources of air pollutants during construction include diesel exhaust from construction vehicles and equipment, and the handling and/or storage of fuel and other chemicals.

Project construction activities that could result in odour emissions (or gases more generally) include:

- Excavations of organic or contaminated materials
- Dam dewatering
- Sealing works / asphalt
- Road line marking

Emissions to the atmosphere during construction will be temporary and relatively short-lived.

An Air Quality Impact Assessment (AQIA) was produced as part of the overarching CEMP for the Stage 1 Development. RWDI, an air quality consultant, has reviewed the findings of the AQIA against the Lot J construction and operational activities and has confirmed that impacts from the proposed Lot J development will be consistent with both the construction and operation impacts identified in the AQIA. RWDI's air quality and odour review letter is included in Appendix F of this document.

4.5.2 Objectives and Targets

Table 4.12 Air quality objectives and targets

Objectives	Targets
Ensure that dust or odour emissions do not adversely affect the health or visual amenity of surrounding communities.	No complaints from adjoining owners in relation to air quality from the works.
Compliance with State and Local regulatory requirements in relation to air quality management.	No visual evidence of deposited dust or suspended particulate matter. Compliance with National Environment Protection Measures (NEPM) standards (where required) and DEC standards during construction.

4.5.3 Management Measures

Table 4.13 Air quality management measures

Item	Management Measure	Timing	Responsibility
AQ01	Plan site layout so that machining and dust generating activities are minimised and located away from receptors, as far as possible.	Pre-construction	Contractor
AQ02	Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If being re-used, keep materials covered.	Construction	Contractor
AQ03	Cover, seed, or fence stockpiles to prevent wind erosion.	Construction	Contractor
AQ04	Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible.	Construction	Contractor
AQ05	Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.	Construction	Contractor
AQ06	Ensure all vehicles switch off engines when stationary (no idling vehicles).	Construction	Contractor
AQ07	Impose and signpost a maximum-speed-limit of 25km/h on surfaced and 15km/h on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided).	Construction	Contractor
AQ08	Use water-assisted dust sweeper(s) on the access and local roads, as necessary.	Construction	Contractor
AQ09	Avoid dry sweeping of large areas.	Construction	Contractor
AQ10	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	Construction	Contractor
AQ11	Ensure haul roads remain in good condition and instigate necessary repairs to the surface as soon as reasonably practicable.	Construction	Contractor
AQ12	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable), and ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit	Construction	Contractor

4.5.4 Monitoring Approach

Table 4.14 Air quality monitoring

Type of monitoring	Timing	Responsibility	Record
Daily visual dust monitoring	Daily during works	Site Supervisor	Site diary
Monthly dust deposition monitoring	Monthly in accordance with the Stage 1 Development CEMP Appendix D Construction Air Quality Management Plan (CAQMP)	Contractor's Environmental Manager	Monthly Dust Deposition rates
Meteorological data including daily rainfall, hourly temperature, relative humidity, wind (direction and speed) and barometric pressure	Daily	Contractor's Environmental Manager	Daily records from closest BoM station
Weekly site inspections to ascertain the effectiveness of implemented controls	Weekly	Contractor's Environmental Manager	Weekly inspection record

4.6 Aboriginal Heritage and Non-Aboriginal Heritage

4.6.1 Background

As part of the EIS for the Stage 1 Development site, an Aboriginal Cultural Heritage Assessment (ACHA), Archaeological Report and Historical Heritage Assessment (HHA) were prepared by Biosis (2020).

The ACHA was conducted in accordance with Part 6 of the NSW *National Parks and Wildlife Act 1974* and *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a) (the Code). A search of the Aboriginal Heritage Information Management System (AHIMS) register conducted on 27 May 2020, identified 102 Aboriginal sites within 4 by 4 km search area centred over the study area. None of these registered sites were located within the study area.

An archaeological survey was conducted on 11 July 2020 for the whole Stage 1 Development. The overall effectiveness of the survey for examining the ground for Aboriginal sites was deemed low. This was attributed to vegetation cover restricting ground surface visibility (GSV) combined with a low amount of exposures. No previously unrecorded Aboriginal cultural heritage sites were identified during the archaeological survey. Three areas of moderate archaeological potential (including Area 1, Area 2 and Area 3) were recorded, however none of these are within the Lot J site covered by this CEMP.

A desktop assessment and field investigation were conducted as part of the HHA to provide an assessment of impacts to historical heritage values within the study area. The potential archaeological remains in the study area are associated with agriculture and domestic themes. There are no recorded items of heritage significance in or adjacent to the study area.

Clearing and preliminary earthworks will be completed as part of the Stage 1 Development works in accordance with SSD 10479 CoC- D69, the Stage 1 Development CEMP and the ACHA approved under SSD-10479. Therefore, there is very low risk of encountering Aboriginal and non-Aboriginal heritage during Lot J works. An unexpected finds protocol has been developed included as Appendix A.

4.6.2 Objectives and Targets

Table 4.15 Aboriginal and non-aboriginal heritage objectives and targets

Objectives	Targets
Comply with the requirements of the Heritage Act 1977, Environmental Planning and Assessment Act 1979, and the National Parks and Wildlife Act 1974	Protection of all sites of Aboriginal Heritage significance, both known and as yet unknown.
Minimise impacts on unknown Cultural and Aboriginal Heritage sites.	Protection of all sites of Aboriginal Heritage significance, both known and as yet unknown.

4.6.3 Management Measures

Table 4.16 Aboriginal and non-aboriginal heritage management measures

Item	Management Measure	Timing	Responsibility
AH01	In order to ensure that a person undertaking any development or activities on land does not harm Aboriginal objects, development applications must identify any areas of Aboriginal heritage value that are within or adjoining the area of the proposed development, including any areas within the development site that are to be retained and protected (and identify the management protocols for these).	Pre-construction and construction	Contractor

Table 4.16 **Aboriginal and non-aboriginal heritage management measures**

Item	Management Measure	Timing	Responsibility
AH02	All staff and contractors must undergo induction training which outlines the obligations of staff and contractors under the NPW Act, consent of approval, this CEMP and the Stage 1 Development CEMP Appendix F Aboriginal Cultural Heritage Management Plan (ACHMP).	Pre-construction and construction	Contractor
AH03	All Aboriginal objects and Places are protected under the NPW Act. It is an offence to disturb an Aboriginal object or site without a consent permit issued by Heritage NSW or DPIE. Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying the Heritage NSW and Aboriginal stakeholders.	Construction	Contractor
AH04	Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity, the following steps must occur: • immediately cease all work at that location and not further move or disturb the remains; – notify the NSW Police and Heritage NSW’s Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location; and • not recommence work at that location unless authorised in writing by Heritage NSW.	Construction	Contractor

There is no monitoring required for aboriginal cultural heritage for Lot J. Any unexpected aboriginal heritage finds will be managed in accordance with the Unexpected Finds Procedure – Heritage included in Appendix A of this CEMP.

4.7 Flora and Fauna

4.7.1 Background

A Biodiversity Development Assessment Report (BDAR) was prepared by Eco Logical (2020a), as part of the EIS submission. An additional BDAR report was prepared by Eco Logical Australia (dated 22 September 2021) in response to submissions following public exhibition of the project. The reports provide assessment of the Project's impact upon biodiversity values within the Project, including any impacts to plant community types (PCTs) and threatened species habitat.

A Bio-certification letter was required by the Secretary's Environmental Assessment Requirements (SEARs). Narla Environmental was commissioned by SFKC to prepare a Biodiversity Certification (Bio-certification) letter to accompany the Development Application for the Stage 1 Development at 200 Aldington Road, Kemps Creek. No further impact assessment under the BC Act of threatened species, populations or ecological communities is required for the development.

As part of works occurring under the Stage 1 Development approval, the Lot J site will be fully cleared of vegetation.

An overarching Vegetation Management Plan (VMP) (Appendix A of the Flora and Fauna Management Plan (FFMP)) and Weed Management Plan (WMP (Appendix C of the FFMP) has been developed for the Stage 1 Development CEMP. This VMP covers ongoing maintenance activities such as weed and pest control, and progressive establishment and monitoring of vegetation and landscaping. These activities are also applicable to the Lot J development. Any specific vegetation management conditions of consent within the Lot J SSD Planning Approval would be captured in a lot specific Flora and Fauna Management Plan at the relevant time. The WMP covers ongoing weed management, control measures and disposal. Activities related to weed management and progressive revegetation at the proposed Lot J site will be undertaken in accordance with the overarching VMP and WMP.

4.7.2 Objectives and Targets

Table 4.17 Flora and fauna objectives and targets

Objectives	Targets
To reduce the impact of construction on native flora and fauna.	No damage / injury to preserved flora and fauna.
Control and prevent spread of weeds and pests.	No increase in weed or pest population and distribution from Lot J pre-construction levels.

4.7.3 Management Measures

Table 4.18 Flora and fauna management measures

Item	Management Measure	Timing	Responsibility
FF01	A weed eradication management plan is to be implemented prior to and during construction. Refer to Appendix C of the Stage 1 Development Flora and Fauna Management Plan (FFMP). Monitoring of weed and/or pathogen infestations will occur as part of the routine weekly environmental inspections to determine the effectiveness of management controls. The identified presence of any weeds and/or pathogens and the necessary management actions will be noted on the Environmental Inspection Checklist. Dedicated inspections will be carried out on a monthly basis during clearing and earthworks phases and then at least every six months for the remainder of construction.	Pre-construction Construction	Contractor
FF02	A weekly inspection of project area to assess if there is a potential for any nuisance animals (i.e. flocking birds) on site. Where identified work with management team to ensure that all steps are taken to deter flocking birds (more than 6 of one species) from congregating on site (including the correct disposal of food scraps and rubbish from site). Adoption of wildlife deterrent technologies to reduce bird populations may be considered where issues are identified and will be targeted according to the specific species present.	Construction	Contractor
FF03	Hygiene protocols to prevent the spread of weeds or pathogens between infected areas and uninfected areas in accordance with overarching Stage 1 Development Weed Management Plan (Appendix C of the Stage 1 Development Flora and Fauna Management Plan (FFMP)). Prior to plant arriving on site a weed and seed declaration is required as part of the plant pre-start process when arriving on site. Any plant or equipment arriving on site which contains soil material or has not been cleaned will require cleaning offsite, prior to being accepted. Prior to leaving site plant will be cleaned onsite of soil and plant material to avoid transfer of pathogens and seeds to other sites. The cleaning of plant will be captured on the initial pre-start when plant is onboarded to the work site. Once on site cleaning is not required for weed and seed protocols until the equipment leaves the site.	Construction	Contractor
FF04	Where native fauna is unexpectedly encountered, the animal should be kept from harm by traffic, construction equipment etc and a wildlife handler should be contacted.	Construction	Contractor
FF05	All staff working on the project will undertake an environmental induction as part of their site induction. Site briefings should be updated based on phase of the work. This environmental induction will include items such as: • site environmental procedures (vegetation management, sediment and erosion control, exclusion fencing) • what to do in case of environmental emergency (chemical spills, fire, injured fauna) • key contacts in case of environmental emergency • what to do in the case of finding a threatened species • what to do in the case of finding fauna on the site.	Construction	Contractor

4.7.4 Monitoring Approach

Table 4.19 **Flora and fauna monitoring**

Type of monitoring	Timing	Responsibility	Record
Bird surveys	As required in accordance with the Stage 1 Development CEMP Appendix G Flora and Fauna Management Plan Appendix F – Table F.2	Contractor's Environmental Manager	Monitoring report
Nocturnal megabat surveys	As required in accordance with the Stage 1 Development CEMP Appendix G Flora and Fauna Management Plan Appendix F – Table F.2	Contractor's Environmental Manager	Monitoring report

4.8 Traffic and access

4.8.1 Background

i Existing conditions

a Road hierarchy

The Project is located on Aldington Road, approximately 1 km north of Abbotts Road. Figure 4.1 presents the road hierarchy in vicinity of the Project. A brief discussion of each road is provided below:

- **Aldington Road:** A council controlled Local Road connecting Abbotts Road (south) and Bakers Lane (north). It is one lane each way approximately 6 m wide sealed road.
- **Abbotts Road:** A council controlled Local Road connecting Mamre Road (west) and cul-de-sac (east). It is one lane each way approximately 6.5 m wide sealed road.
- **Mamre Road:** A Transport for NSW (TfNSW) controlled State Road connecting Elizabeth Drive (south) and Great Western Highway (north). It is one lane each way sealed road with approximately 1 m shoulder on each side of the road.
- **Elizabeth Drive:** A TfNSW controlled State Road connecting Hume Highway (east) and The Northern Road (east). It is predominantly a one lane each way sealed road with additional capacity at key intersections.

The construction haulage route will primarily use the above roads to/from the Project.

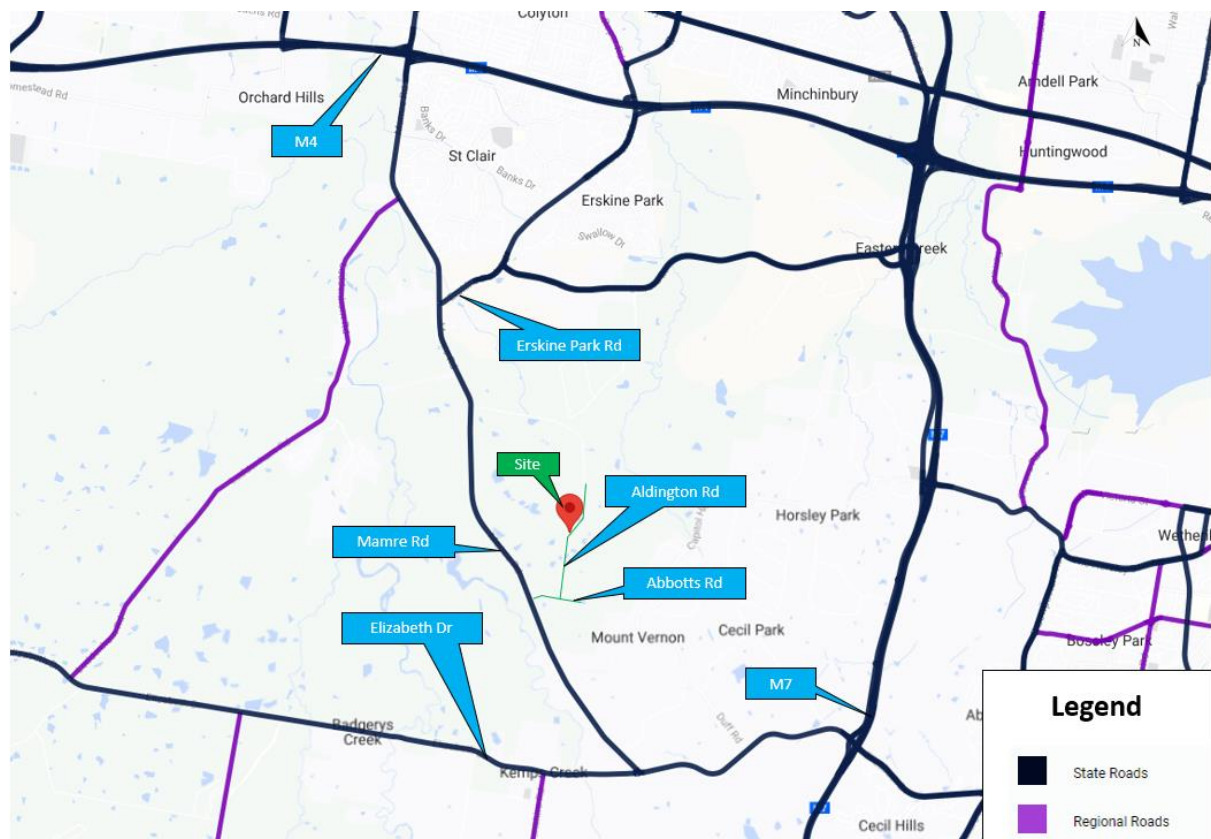


Figure 4.1 TfNSW road hierarchy

Source: TfNSW

b Public transport

Access to public transport is limited at the vicinity of the Project as the area is still undeveloped. There is no existing bus stop in the vicinity of the Project.

c Active transport

There is no existing active transport infrastructure in the vicinity of the Project.

ii Construction traffic

To support the SDD application for the Lot J development, Ason Group was engaged to prepare a Draft Construction Traffic Management Plan (CTMP). The Draft CTMP details the proposed construction management strategies which would provide for the safe and efficient completion of the proposed works while minimising construction traffic impacts on the surrounding road network and public road network users.

All subcontractors must be inducted by the lead contractor to ensure that the related traffic management procedures are met for all vehicles entering and exiting the construction site. The lead contractor will monitor the roads leading to and from the Project for dirt/debris and take all necessary steps to rectify any road deposits caused by site vehicles.

Due to the poor public transport accessibility in the area, most workers are expected to use their personal vehicles to travel to/from the Project. Construction workers will be encouraged to car pool when travelling to/from the Project where this is feasible. All construction staff and contractors will be required to park wholly within the Project, noting that there will be significant area available (at all times) to meet the peak parking demand.

a Site access and haulage route

All construction vehicles will enter and depart the Project from / to Aldington Road and access Mamre Road by way of Abbotts Road to the south of the Project; to avoid conflict with peak traffic periods associated with Schools to the north of the Project on Bakers Lane, including Mamre Anglican School, Trinity Catholic Primary School and Emmaus Catholic College. The existing site access will be modified to accommodate the longest size of vehicles travelling to/from the Project (30 m A-double truck). All vehicles will enter and exit the Project in a forward direction. Mamre Road is a TfNSW controlled State Road which provides connections to other arterial road and motorways in the locality.

b Construction vehicle movements

Construction materials will predominantly be transported by semi-trailers and truck and dog trailers. There will also be some smaller deliveries to be undertaken by smaller trucks and utes. It is anticipated that the Lot J development would generate less traffic volumes than the overall Stage 1 Development.

While the specific construction requirements are not fully understood, it is anticipated that peak traffic volumes will be during the bulk earthworks phase, which could see up to 150 trucks movements per day (or approximately 15 movements per hour).

c Road occupancy licences

The potential exists for future road occupancy requirements to facilitate the construction of any further upgrades to Aldington Road and the intersection of Mamre Road and Abbotts Road.

Road occupancy permits will necessarily be procured prior to starting intersection construction works, while a detailed intersection specific CTMP would be prepared in consultation with Council and TfNSW to ensure traffic along Aldington Road would continue to operate adequately during any such occupancy period.

4.8.2 Objectives and Targets

Table 4.20 Traffic and access objectives and targets

Objectives	Targets
The public way (outside of any approved construction works zone) must not be obstructed by any materials, vehicles, refuse, skips, or the like, under any circumstances.	No complaints or incidents from/ with the public or Local Council.
Ensure that works do not impact negatively on the local road network and surrounding businesses and residences, including pedestrians and cyclists.	No complaints from the public or Local Council.
Compliance with State and Local regulatory requirements in relation to traffic management.	No injuries or crashes relating to the traffic management of the construction site.

4.8.3 Management Measures

Table 4.21 Traffic and access management measures

Item	Management Measure	Timing	Responsibility
TA01	Traffic control would be required to manage and regulate construction vehicle traffic movements to and from the Site during construction.	Construction	Contractor
TA02	All vehicles transporting loose materials to and from the site will have the entire load covered and/or secured to prevent any large items, excess dust or dirt particles depositing onto the roadway during travel to and from the site.	Construction	Contractor
TA03	Vehicles operating to, from and within the site shall do so in a manner which does not create unreasonable or unnecessary noise or vibration.	Construction	Contractor
TA04	No tracked vehicles will be permitted to travel on any paved public roads.	Construction	Contractor
TA05	The adjacent public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.	Construction	Contractor
TA06	To provide appropriate segregation and protection for pedestrians within and adjacent to the site, temporary fencing will be established to define the extent of the site works areas. All pedestrian access gates are to be securely locked when construction activities are not in progress	Construction	Contractor
TA07	All construction worker parking will be accommodated within the site. No construction workers' vehicles will be allowed to park in Aldington Road or any other adjacent public road.	Construction	Contractor
TA08	In order to ensure security to the construction site and protection to the general public, secure barriers and fences will be used to secure the site boundaries. All site access points will be securely locked when construction activities are not in progress.	Construction	Contractor

Table 4.21 Traffic and access management measures

Item	Management Measure	Timing	Responsibility
TA09	All site staff and subcontractors will be required to undergo a site induction briefing on commencing work. The induction briefing will include permitted access routes to and from the construction site for all vehicles, as well as standard environmental, occupation health and safety, driver protocols and emergency procedures.	Construction	Contractor
TA10	Any personnel required to undertake works or traffic control within the public domain shall be suitably trained and covered by appropriate insurances. If any traffic controllers are used, they must be TfNSW accredited.	Construction	Contractor
TA11	All vehicles are to enter and depart the site in a forward direction, with reverse movements to occur only within the site boundary.	Construction	Contractor

4.8.4 Monitoring and Inspection Approach

As per the overarching Stage 1 Development Construction Traffic Management Plan, the specific requirements for safety inspection and audits will be in accordance with the requirements of the Traffic Control at Worksite Manual V6.1. Reporting will be in a format provided in the Traffic Control at Worksite Manual.

Table 4.22 Traffic and access monitoring and inspections

Type of monitoring	Timing	Responsibility	Record
Daily site checks of signs and devices to be undertaken prior to work commencing.	Construction	Site supervisor	Site diary/traffic control record
Inspection of traffic control devices for short term traffic management will be completed on weekly basis by a site supervisor	Construction	Site supervisor	Site diary/traffic control record
A review of traffic controls will be undertaken after every major traffic change for the estate development..	Construction	Contractor's Environmental Manager / Site supervisor	Site diary/traffic control record

4.9 Waste and Resources

4.9.1 Background

Waste disposal and management will be in accordance with the recommendations of the overarching Construction and Operational Waste Management Plan (WMP) prepared by Land & Groundwater Consulting and dated April 2022 for the Stage 1 Development.

The construction phase waste will be managed through implementation of the CEMP.

The *Waste Avoidance and Resource Recovery Act 2001* (will guide waste management on site) ensuring that resource management options are considered against a hierarchy of:

- avoidance of unnecessary resource consumption
- resource recovery (including reuse, recycling, reprocessing, and energy recovery)
- disposal.

Where waste cannot be avoided, reused or recycled it will be classified and appropriately disposed of. The classification of waste will be undertaken in accordance with the *NSW Waste Classification Guidelines Part 1: Classifying Waste* (EPA, 2014). This document identifies six classes of waste: Special, Liquid, Hazardous, Restricted Solid, General Solid (putrescible) and General Solid (non-putrescible) and describes a six-step process to classifying waste.

Where imported fill material is required, SFKC and subcontractors must ensure that only engineered fill materials or Virgin Excavated Natural Material (VENM) are used. All other materials, including RRO/RRE materials such as Excavated Natural Material (ENM) must be assessed and approved in writing before being brought onto site. Accurate records will be kept of the type of imported fill and the volumes imported, these records will be made available to the Planning Secretary or other statutory agency upon request.

4.9.2 Objectives and Targets

Table 4.23 Waste and resources objectives and targets

Objectives	Targets
Solid and liquid waste to be disposed of as per Regulatory requirements.	All waste to be disposed of by a licensed waste contractor to an appropriately licensed facility.
Aim to maximise recycling and landfill diversion	Recycle demolition and construction waste as much as practicable.
No waste to affect nearby premises.	No complaints related to construction waste affecting nearby premises during construction.

4.9.3 Management Measures

Table 4.24 Waste and resources management measures

Item	Management Measure	Timing	Responsibility
WR01	Reducing or avoiding the generation of waste is of primary importance to the Project. The following approach will be adopted: - consider construction options that have a higher waste reduction capacity than alternatives - order material/goods with minimal packaging or request suppliers to remove packaging from site - accurately estimate materials required to minimise wastage of product.	Construction	Contractor
WR02	Waste separation and segregation will be promoted on-site to facilitate reuse and recycling.	Construction	Contractor
WR03	Spoil, topsoil and mulch will be stockpiled onsite in allocated areas, where appropriate, and mitigation measures for dust control and surface water management will be implemented in accordance with the overarching Stage 1 Development ESCP and Sections 4.1 and 0 of this CEMP.	Construction	Contractor
WR04	Liquid wastes will be stored in appropriate containers in bunded areas until transported offsite. Bunded areas will have the capacity to hold 110% of the liquid waste volume for bulk storage or 120% of the volume of the largest container for smaller packaged storage.	Construction	Contractor
WR05	Hazardous waste will be managed by the appropriately qualified and licensed contractors, in accordance with the <i>Environmentally Hazardous Chemicals Act 1985</i> and the EPA waste disposal guidelines. Any unexpected, contaminated materials will be addressed using the Unexpected Finds Procedure - Contamination in Appendix B.	Construction	Contractor
WR06	All other recyclable or non-recyclable wastes will be stored in appropriate covered receptacles (e.g. bins or skips) in appropriate locations onsite and subcontractors commissioned to regularly remove/empty the bins to approved disposal or recycling facilities.	Construction	Contractor
WR07	Waste storage locations will be accessible and allow sufficient space for storage and servicing requirements. The positions of the designated waste holding areas on site will change according to building works and the progression of the development, but must consider visual amenity, OH&S and accessibility in their location selection.	Construction	Contractor
WR08	Where waste cannot be avoided, reused or recycled it will be classified and appropriately disposed of. The classification of waste will be undertaken in accordance with the <i>NSW Waste Classification Guidelines Part 1: Classifying Waste</i> (EPA, 2014)	Construction	Contractor

4.9.4 Monitoring Approach

Table 4.25 Waste and resources monitoring

Type of monitoring	Timing	Responsibility	Record
Percentage of diversion from landfill	Monthly	Contractor's Environmental Manager	Monthly waste and resources report
Waste tracking to ensure waste and recycling is going to an appropriately licensed facility.	Monthly	Contractor's Environmental Manager	Monthly waste and resources report

Table 4.25 **Waste and resources monitoring**

Type of monitoring	Timing	Responsibility	Record
Volumes and types of fill imported to site	Monthly	Contractor's Environmental Manager	Monthly waste and resources report
Waste storage and management	Weekly	Contractor's Environmental Manager	Weekly inspection checklist

5 Monitoring, Inspections and Auditing

5.1 Environmental Monitoring

Monitoring will be undertaken to evaluate the effectiveness of environmental controls and implementation of this CEMP, and to address approval requirements. The monitoring requirements for required aspects are included in the relevant environmental management sub plans. The Environmental Representative will be advised of any construction phase non-compliance from monitoring and details reported in accordance with the environmental incident reporting process.

Where a non-compliance is detected or monitoring results are outside of the expected range and are directly attributable to the Project (influenced by factors under the direct control of the Project, e.g. noise from construction equipment), the process described in Section 3.4 will be implemented.

The timing for any improvement will be agreed between Environmental Representative and the Management team based on the level of risk (e.g. a significant risk will require immediate action).

All environmental monitoring equipment shall be maintained and calibrated according to manufacturer's specifications and appropriate records kept.

5.2 Environmental Inspections

Regular site inspections will be undertaken to assess the ongoing effectiveness and suitability of the Project's environmental controls. The Project environmental inspections will cover the following:

- high risk activities and processes
- work in environmentally sensitive areas
- site preparedness for adverse weather conditions, including adequacy of environmental controls and availability of emergency equipment. Copies of the inspection reports will be kept with project records.

Copies of site inspections completed by the project staff will be kept with the Project records, any actions identified during the inspections shall be closed out within the agreed timeframes. These timeframes will be dependent on the nature of the required corrective action and the environmental risk associated with the outstanding action as determined by the Contractor's Environmental Manager and the ER.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they should be raised with the site supervisor for corrective action. Inspections records will include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority and how they were closed out.

Wet weather inspections: to ensure that the Project is prepared for wet weather events (rainfall greater than 25 mm rain within a 24 hour period), all erosion sediment controls should be inspected pre and post wet weather events, to determine the effectiveness of the environmental controls.

The Environmental Representative should be included in the inspection on a regular basis to maintain a standard.

5.3 Records

All Project related documentation will be maintained in a professional management system, all records must be filed and easily obtained and provided if requested by the Planning Secretary. Documents stored within the system will 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
- volumes and types of fill imported to the Project
- records of inspections and reviews by the CPESC
- records of any environmental incidents, complaints and non-compliances.

5.4 Reporting

It is proposed that the reports listed in Table 5.1 will be prepared during the delivery of the Project.

Table 5.1 Reporting requirements

Report/form/checklist	Prepared by	Timing	Distributed to
Environmental monitoring and inspection checklists	Contractor's Environmental Manager	Weekly	Environmental Representative and Project Manager
Environmental monthly report	Contractor's Environmental Manager	Monthly	Records kept and made available upon request
CPESC inspections and reviews of erosion and sediment control	CPESC	Monthly	Kept on record for the duration of construction (and for 12 months)
Environmental reports	Contractor's Environmental Manager	Quarterly	Environmental Representative and Project Manager
Incident/non-compliance			
Incident reports	Contractor's Environmental Manager	Notification immediately and without delay. Refer Section 3.4.6.	Environmental Representative and Project Manager
Non-compliance report	Contractor's Environmental Manager	Report prepared within seven days of the noncompliance. Refer Section 3.4.6.	Environmental Representative and Project Manager

6 Review and Improvement

Strategies, plans and programs required under this CEMP will be reviewed at least annually or as required under the conditions of approval. .

This CEMP is a live document and will undergo reviews and amendments as necessary. Reviews will generally be undertaken in the following circumstances:

- 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.

The Contractor's Environmental Manager will be responsible for reviewing the CEMP and the Project Manager is responsible for approving these changes.

7 Consultation

The Applicant, as part of the SSD Application CEMP, will prepare the CEMP in consultation with relevant Government agencies, infrastructure and utility providers, including but not limited to, TransGrid, Endeavour Energy, Sydney Water and TfNSW, where relevant.

SFKC has consulted with relevant agencies for the Stage 1 Development CEMP and sub-plans as required under Conditions within Part D of the SSD10479 approval.

Consultation for the overarching CEMP and sub-plans under the SSD 10479 approval has occurred with;

- CTMP: D1 (b) "Council and TfNSW" – see Section 7
- CAQMP: D64(b) "nearby residential properties" – see Attachment B
- CNVMP; D51(e) - "community" – see section 1.3

No known impacts to services, such as scheduled outages, will occur during the construction of the Lot J infrastructure. Construction methodologies would be developed to mitigate the risk of impacts to services or the requirement for outages. SFKC and their construction contractor would liaise with utility providers as required under project communication protocols during construction. Works will comply with the requirements of Condition C32 within SSD-10479 in respect to management of the Transgrid easement. SFKC will comply with any clearance limits for operating cranes and piling rigs adjacent to the Transgrid easement, unless alternative arrangements are made in consultation with Transgrid once construction methodologies are determined.

Appendix A

Unexpected Finds Procedure - Heritage

A.1 Unexpected Finds Procedure Heritage

This section outlines the unexpected finds protocol to be applied during the construction phase of the Project. The unexpected finds protocol should be applied to the discovery of previously unidentified items or objects of Aboriginal or archaeological significance found within the project area, in addition to human remains.

A.1.1 Non-Aboriginal, Aboriginal or Archaeological Finds

If any item or object of Non-Aboriginal, Aboriginal or archaeological significance are found, the following steps must be undertaken:

1. STOP WORKS – immediately cease all works and do not move or disturb the find.
2. NOTIFY – notify the Project Manager and Heritage NSW immediately to arrange for representatives to inspect the Project. If human remains are found, the NSW Police must also be notified.
3. MANAGE – management may involve securing the find by erecting a no-go zone e.g a 10 m buffer area around the suspected item or object.
4. ASSESS – finds must not be moved until they are assessed by a qualified archaeologist.
5. REPORT – the Environmental Representative or Project Manager will be responsible for completing any reporting requirements including those required by Heritage NSW.

A.1.2 Human Remains

In the event human remains are found, the following steps must be undertaken:

1. STOP WORKS – immediately cease all works and do not move or disturb the remains.
2. NOTIFY - notify the NSW Police on 000 as soon as practicable and provide details of the remains and the location. The NSW Heritage Environmental Line on 131 555 should also be notified in the event the remains are Aboriginal Ancestral.
3. RECOMMENCEMENT – works are not to recommence unless authorised in writing by Heritage NSW.

Appendix B

Unexpected Finds Procedure - Contamination

B.1 Unexpected Finds Procedure - Contamination

The Unexpected Finds Procedure for Contamination must be followed should unexpected contamination or asbestos (or suspected contamination) be excavated or otherwise discovered. In accordance with Environmental Management Measures, this unexpected finds procedure has been prepared with consideration of the *Guideline for the Contamination of Management – Factsheet 12* (TfNSW, 2013) and Management of road construction and maintenance wastes Issue 1 (June 2016).

B.1.1 Likelihood of contamination

The following indicates the presence of potentially contaminated material; where material is uncovered which displays some or all of these characteristics, stop works and notify the Site Supervisor:

- Unusual odour from soils that are not detected in other similar areas
- Discolouration or staining of soil or rock
- Seepage of unusual liquids from soil or rock
- Unusual odours, sheen or colour on groundwater and/or surface water
- Unexpected underground storage tanks, buried drums or machinery etc.
- Potential asbestos containing materials

Where these factors are identified, the material is considered to be possibly contaminated and the flowchart is to be followed.

B.1.2 Asbestos

An unexpected asbestos find occurs when asbestos containing materials (ACM) are found on site. In the event of an unexpected asbestos find, the below steps are to be followed along with the flowchart:

1. The area is to be demarcated, works in the area to cease and workers warned
2. Notify the Safety and Contractor's Environmental Manager
3. Ensure the soil and potential asbestos remain damp with dust suppression or covered where water cannot be accessed.
4. Arrange for testing of the suspected ACM and monitoring of the area by approved subcontractors (if required)
5. An asbestos removalist is to be engaged to provide recommendations to treat the area, as required
6. A clearance certificate is required from the asbestos removalist to confirm that the area is to be made safe.

The Environment Representative will be consulted prior to any material being removed off-site to ensure it is classified in accordance with the NSW EPA Waste Classification requirements. Refer to flow chart for clear steps to follow.

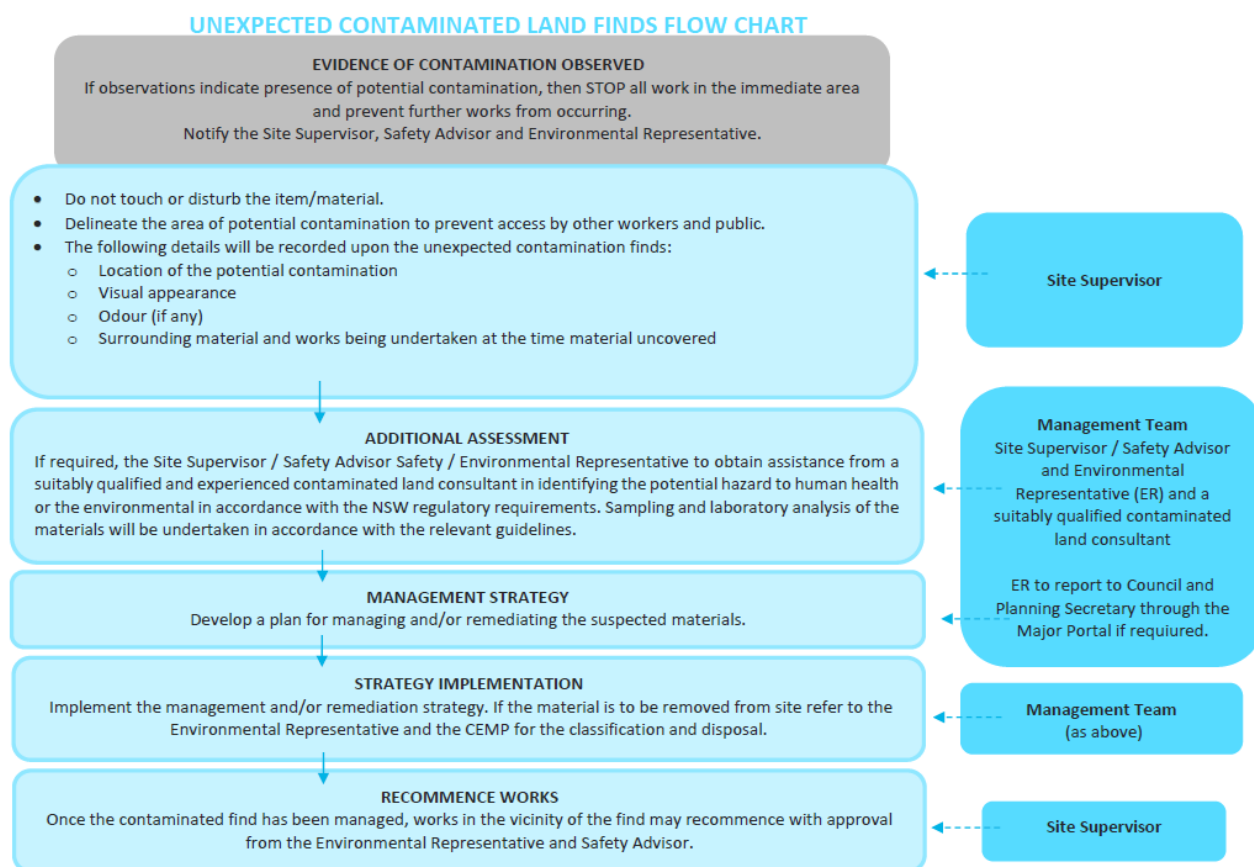


Figure 7-1 Unexpected Contaminated Land Finds Flow Chart

B.1.3 Assessment of unexpected finds

The sampling strategy for the characterisation and validation of an ‘unexpected find’ must be prepared by a suitably qualified specialist and in accordance with requirements of the consent and regulatory guidelines (e.g. *Sampling Design Guidelines Contaminated Sites* (EPA 1995)). The intent of the sampling is to determine the nature of the substance/material found and whether is it hazardous. It should then be determined if the substance/material exists in concentrations which could cause an unacceptable risk to human health and or the environment.

B.1.4 Validation sampling of unexpected finds

Validation inspection and possible sampling/analysis is required to be undertaken to demonstrate that unexpected finds have been managed to a standard suitable for the proposed land use. In the event unexpected, contaminated material is found the following sampling schedule is outlined in Table B.1 below.

Table B.1 Validation sampling and analytical schedule

Validation area	Sampling frequency	Analytes
Excavations formed by the removal of unexpected finds	Minimum of 1 validation sample per 10 m linear of wall and 1 m depth, minimum of 1 validation sample per 100 m2 area for the base (10 m grid).	As appropriate, based on the characteristics of the find

Table B.1 **Validation sampling and analytical schedule**

Validation area	Sampling frequency	Analytes
Contaminated material requiring disposal offsite	TBD based on circumstances	TPH/BTEX, PAHs, heavy metals, OCP/PCBs, asbestos and TCLP (if required), or as appropriate based on the characteristics of the find
Residual soils underneath stockpiles where contaminated material has been stored	Minimum of 1 sample per 10 m grid	As appropriate, based on the characteristics of the find

Note: All samples analysed for asbestos validation / re-use purposes (including ENM) will be 500 mL samples in accordance with WA DOH (2009) guidelines and analysed in accordance with AS 4964-2004. Asbestos samples for waste disposal purposes will be 50 g samples.

B.1.5 Remediation or removal from site

Contaminated material must be documented, and the quantities determined, a suitably qualified specialist must advise on the appropriate action to be taken. Any material identified as contaminated must be disposed of in accordance with the POEO Act and its associated regulations. Details of the final disposal location and the results of any associated testing must be submitted to the Planning Secretary prior to removal of the contaminated material from the Project.

Appendix C

Curriculum vitae of authors



David Bone

Technical Leader – Construction
Environmental Management | Sector Leader – Construction
EMM Consulting Pty Limited

Professional Overview

David is an environmental manager and lead environmental auditor with over 30 years' experience. David delivers site based environmental management, regulatory advice, environmental monitoring, and construction environmental advice to clients across a range of sectors. David is an expert in environmental compliance auditing for construction, mining and extractive and commercial development projects. He has completed over 300 environmental due diligence audits of mining, commercial, industrial and manufacturing sites in Australia, New Zealand, Indonesia, Japan and Korea.

David is highly skilled in the design and implementation of environmental compliance documentation and monitoring programs for infrastructure projects and is an extensively experienced Environmental Management Representative (ER/EMR) approved by NSW Dept. of Planning across all infrastructure sectors over the last 20 years.

Qualifications and licences

Associate Diploma in Applied Science (Resource Management),
Northern Rivers CAE, 1986

Lead Environmental Auditor, University of NSW, 2002

Soils and Construction, Morse McVey and Associates, 2005

Member NSW Environment Institute, Chair of Post Approvals
Committee

Certified Environmental Practitioner CENvP #137

Specialisation

Construction environmental management

Design and implementation of environmental compliance
documentation and monitoring

Environmental Management Representative

Environmental compliance auditing

Representative experience

NSW Department of Planning independent audits

- Newcastle Grammar Park Campus (2023-2024)
- Crookwell 3 Wind Farm (2023-2026)
- One Sydney Harbour Audit program 2022-2024 (Lendlease)
- John Hunter Health Innovation Precinct Audit Program 2022-2026 (Multiplex)
- M8 Motorway Operational Audit 2021 (FHEOM)
- Grafton Bridge Operational Audit 2021 (TfNSW)
- Tomago Aluminium Smelter Independent Environmental Audit 2020 (TAC)
- Newcastle Inner City Bypass Stage 2 IEA 2020 (TfNSW)
- Bango Wind Farm IEA 2019, (CWP Renewables)
- Karuah Quarry IEA, 2019 (Hunter Quarries)
- M4 West Motorway Operational Audit, 2018 (Sydney Motorways Corporation)
- Nundah Bank Rail Upgrade 2006, (UHVA Alliance)

VIC Planning independent audits

- Mortlake South Wind Farm, 2018 (Acciona Energy Australia)
- Mt Gellibrand Wind Farm, 2019 (Acciona Energy Australia)

Independent Environmental Representative

- Inland Rail Narromine to Narrabri (N2N)
- Belmont Desalination Project
- NSW Pacific Highway Upgrade projects – Warrell Creek to Nambucca Heads, Nambucca Heads to Urunga, Karuah to Bulahdelah, Bulahdelah Bypass, Coopernook to Herons Creek, Glenugie, Devils Pulpit, Woolgoolga to Ballina Alternate ER, NSW, (Roads and Maritime)
- Rail transport upgrades for Sydney and Hunter Networks projects – Newcastle Light Rail, NSW, (Transport for NSW); New Intercity Fleet Maintenance Facility, NSW, (Transport for NSW); Minimbah Bank Coal Main Upgrades, NSW, (ARTC); Maitland to Minimbah 3rd Coal Main, NSW, (ARTC); Greta Train Support Facility, NSW (Pacific National); Hexham Coal Main Relief Roads, NSW, (ARTC); Kingsgrove to Revesby Rail Quadrification, NSW, (Transport for NSW)
- Water and Wastewater Infrastructure major projects – Chichester Trunk Gravity Main Tarro to Duckenfield and Seaham to Osterly, NSW, (Hunter Water), Central Coast Inter Regional Transfer main, NSW, (Hunter Water), Maitland 14 Gravity Sewer, NSW, (Hunter Water)
- Renewable Energy – Crookwell II Wind Farm (Global Power Generation)

Infrastructure construction environmental management

- Environmental Specialist coordinating preparation of Construction Environmental Management Plans and sub plans for construction of the Sydney Gateway Project (John Holland/Seymour Whyte JV)
- Environmental Specialist coordinating preparation of Construction Environmental Management Plan and sub plans for construction of the Northern Road Stage 5 and 6 (CPB Contractors)
- Environmental Specialist coordinating preparation of Construction Environmental Management Plan, sub plans and specialist approvals (Ecology, Traffic, Noise and Vibration) to be fed into the REF under preparation by TfNSW, in preparation for construction of the New Intercity Fleet Blue Mountains Route Clearance and Overhead Wire Renewal Project. (Continuum Alliance)
- Environmental Specialist coordinating tender documentation, costings, and project design reviews for Sydney Gateway Stage 1 and 3. (CPB Contractors)

- Environmental Specialist providing pre-construction services and advice on ancillary facility approvals, licensing and management plan development for upgrade of Moorebank Avenue as part of the Moorebank Intermodal Facility Development (BMD Constructions)
- Soil Conservationist providing independent review of the site plans and controls, site inspections and reporting, M1 Freeway Upgrade Karingong to Somersby, NSW, (Fulton Hogan)
- Environmental Specialist providing services and advice on pre-construction assessments, noise, contaminated areas, soil testing and classification, Inland Rail Project – Parkes to Narromine, NSW, (Inlink JV)
- Environmental Specialist providing services and advice on ancillary facility approvals, licensing, management plan development, ecology, weed mapping, air, noise and vibration monitoring and assessment, Bringelly Road Upgrade Stage 1, NSW, (BMD Constructions)
- Environmental Manager responsible for all management plans and licenses for the project, daily management of environmental aspects of the project, client and NSW government agency liaison, community consultation, site rehabilitation, reporting and monitoring, Tourle Street Bridge and Cormorant Road Duplication, Kooragang Island NSW, (WBHO/McIlwain JV)
- Environmental Specialist providing services and advice on ancillary facility approvals, licensing, management plan development, ecology, weed mapping, air, monitoring and assessment, Camden Valley Way Stages 1,2 3, NSW, (BMD Constructions)
- Environmental Manager responsible for development and approval of all management plans and licenses for the project, daily management of environmental aspects of the project, client and NSW government agency liaison, reporting and monitoring, Cronulla Rail Duplication, NSW, (John Holland); Sandgate Rail Grade Separation, NSW, (John Holland)
- Environmental Manager responsible for development and approval of all management plans and licenses for the project, daily management of environmental aspects of the project, client and NSW government agency liaison, reporting and monitoring, Gosford Rail Passing Loops, NSW, (Downer Group)
- Environmental Manager responsible for all management plans and licenses for the project, daily management of environmental aspects of the project, client and NSW government agency liaison, reporting and monitoring Scone Rail Upgrade, NSW, (Downer Group)
- Environmental Manager responsible for all management plans and licenses for the project, daily management of environmental aspects of the project including Newcastle Harbour dredging, wharf construction, rail construction and coal stockpile construction, client and NSW government agency liaison, community consultation, reporting and monitoring, Newcastle Coal Infrastructure Group Coal Loader Stage 1, Kooragang Island NSW, (Aurecon-Hatch)
- Environmental Manager responsible for all management plans and licenses for the project, daily management of environmental aspects of the project, client and NSW government agency liaison, community consultation, site rehabilitation, reporting and monitoring, North West Growth Centre water services packages 1 and 2, NW Sydney NSW, (John Holland and Reed Constructions)
- Environmental Management Representative responsible for development and approval of all management plans and licenses for the project, daily management of environmental aspects of the project, reporting and monitoring, Transgrid 330kV transmission line upgrade, Tuggerah to Sterland, NSW, (Transgrid)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, Tomago to Tomaree 132kV powerline upgrade, NSW, (Ausgrid)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, liaison with NSW Department of Planning, Bruxner Highway Alstonville Bypass, NSW, (Reed Group)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, assessment and approval of works outside of standard hours, Newcastle Transport Interchange, NSW, (Transport for NSW)
- Environmental Specialist Advisor providing services and advice on ancillary facility approvals, licensing, erosion and sediment controls, ecology, weed mapping, air, noise and vibration monitoring and assessment, Lisarow to Ourimbah Pacific Highway Upgrade Stage 2, (Construction Mining Civil Pty Ltd)
- Environmental Specialist providing services and advice on ancillary facility approvals, licensing, erosion and sediment controls, ecology, weed mapping, air, noise and vibration monitoring and assessment, Wyong Rd upgrade, Tumby Umbi
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Anna Bay R4 Sewerage Emergency Storage Tank Upgrade, NSW, (Hunter Water)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Tomago High Voltage Upgrade Project, NSW, (Hunter Water)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Waratah West Waste Water Pumping Station Upgrade Project, NSW, (Hunter Water)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Swansea Channel Watermain Tunnel Crossing, NSW, (Hunter Water)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Boulder Bay Waste Water Pumping Station and Emergency Storage Tank Upgrades, Port Stephens NSW, (Hunter Water)
- Environmental Monitoring Specialist providing air quality and noise monitoring for the project, Bulahdelah to Coolongolook Pacific Highway Upgrade, NSW, (Thiess Contractors)

Daniel Keegan

Associate Environmental Engineer
EMM Consulting Pty Limited

Professional Overview

Daniel has more than 15 years of experience as an environmental engineer and has worked on a range of projects in both the environmental management and water engineering fields. The roles that Daniel has undertaken include environment and sustainability advisory for rail and coal handling facilities during construction, and large-scale stormwater and sewer system planning, modelling and design as a water engineer.

Daniel is experienced in engaging with a variety of stakeholders, including government agencies and approval authorities.

Daniel has a keen interest in sustainability. In particular, Daniel is interested in developing effective methods to incorporate sustainability measures that achieve positive financial, environmental and social outcomes.

Qualifications and licences

Bachelor of Environmental Engineering (Hons), University of Newcastle, 2006

SAI Global Environmental Auditor

Infrastructure Sustainability Accredited Professional (ISAP)

Specialisation

Construction environmental management

Asset delivery

Infrastructure sector

Representative experience

M1 Pacific Motorway Extension to Raymond Terrace, Environmental Consultant (Client – TfNSW)

- Developing post approval environmental documentation
- Coordinating technical teams to deliver post approval documentation relating to aspects that require specialist advice (i.e. ecology, water engineering, heritage).
- Programming of deliverables and budget management.

Sydenham Station and Junction, Environmental Manager (Client - Sydney Metro)

- Providing environmental management advice for the project and supporting the project team to ensure works are delivered in an environmentally sound and sustainable manner
- Obtaining approvals from and liaising with government agencies
- Ensuring compliance with the Environmental Protection Licence, Planning Approvals and environmental legislation
- Collaborating with the Sustainability Manager to achieve sustainability targets under the IS rating scheme
- Undertaking regular environmental audits on other Laing O'Rourke projects, and reporting outcomes to the Australian Hub Environmental Leader
- Coaching and mentoring graduates on technical matters and career development

Wickham Transport Interchange Project, Senior Environmental and Sustainability Advisor (Client - TfNSW)

- Providing environmental management advice for the project and supporting the project team to ensure works are

delivered in an environmentally sound and sustainable manner

- Implementing the TfNSW Sustainable Design Guidelines (SDGs) and the Infrastructure Sustainability Council of Australia (ISCA) IS Rating Scheme to achieve sustainable outcomes for the project
- Ensuring compliance with Environmental Protection Licence, Conditions of Approval and environmental legislation
- Developing environmental training material for both staff and the general workforce

Wickham Transport Interchange Enabling Works Project, Environmental Coordinator (Client - TfNSW)

- Providing environmental management advice for the project and supporting the project team to ensure works were delivered in an environmentally sound and sustainable manner
- Implementing the TfNSW Sustainable Design Guidelines (SDGs)
- Ensuring compliance with Environmental Protection Licence, Conditions of Approval and environmental legislation
- Developing environmental training material for both management and the general workforce

NCIG Coal Export Terminal 3, Environmental Officer (Client - NCIG)

- Advising on environmental management aspects such as subcontractor audits for environmental compliance
- Undertaking site inspections
- Reviewing contractor Environmental Management Plans
- Writing management plans
- Environmental monitoring and reporting
- Fauna management, erosion and sediment control, pollution incident responses



Abdullah Uddin

Associate Traffic Engineer | National Technical Leader – Transport
EMM Consulting Pty Limited

Professional Overview

Abdullah has worked as a traffic engineer for over 19 years and has significant knowledge and experience in managing traffic engineering and planning projects. He has in depth knowledge of relevant traffic engineering codes and guidelines including development and planning.

Abdullah has managed multidisciplinary transport and civil engineering teams. He has considerable experience in traffic impact assessments, car park design, strategic transport planning and road safety reviews with a view to sustainability.

Abdullah has a strong understanding on the traffic engineering software including SIDRA, Auto CAD and GIS.

Qualifications and licences

Bachelor of Civil Engineering, Khulna University of Engineering and Technology, Bangladesh, 1998

Post Graduate Diploma in Information Technology, University of Southern Queensland, 2001

Master of Engineering Studies, University of Technology Sydney, 2011

Chartered Professional Member of Engineers Australia (CPEng)

Registered Professional Engineer of Queensland (RPEQ)

TfNSW Traffic Management Plan Designer (PWZ) certificate

Department of Fair Trading Registered Engineer for Class 2 buildings in NSW

Specialisation

Planning approvals

Traffic impact assessments

Strategic transport planning and road safety reviews

Representative experience

Mining, quarry and renewable energy projects

- Cobar, Queen Bee, Lake Cowal, Balranald, Euston mines
- Dubbo, Luddenham, Dunmore Lakes, Wyndham, Seaham, Peppertree, Gunlake, Sandy Point, Menangle quarry
- Sundown, Sandy Creek, Birriwa Solar farms, Boorolong, Guyra wind farms, Oven Mountain, Muswellbrook Pumped Hydro
- Penrith, Girraween, Kurri Kurri, Cardiff, Muswellbrook recycling facilities

Transport planning projects

- Victoria Park, Zetland Masterplan, NSW (TSA Project Management)
- Mascot Transport management and accessibility plan (TMAP), NSW (DPIE)
- Harold Park Paceway, Glebe Land Use and transport accessibility study, NSW (City of Sydney)
- St Leonards and Lane Cove microsimulation modelling projects, NSW (Lane Cove Council)
- Sutherland transport interchange development, NSW (RailCorp)
- Sydney light rail feasibility analysis (TfNSW)

Traffic engineering projects

- Peakhurst, Penhurst & Punchbowl, James Sheahan school developments (SINSW)
- Campbelltown, Bankstown, Mudgee, Wagga Wagga, Nepean, Katoomba, Liverpool, Griffith, Tumut hospital developments NSW (Health Infrastructure NSW, CPB Contractors, CBRE)
- World Square car park and loading dock development (JLL)
- Schofields commuter car park development (TfNSW)
- B-Double route assessment, Matraville NSW (Randwick Council)

Parking study projects

- Georges River Council parking strategies, NSW (Georges River Council)
- Marrickville resident and business parking strategy (Inner West Council)
- Ku-ring-gai town centre parking strategy (Ku-ring-gai Council)

Active transport projects

- Moore Park Road Cycleway REF (City of Sydney)
- Bike plans (Lane Cove and City of Canada Bay Councils)
- Pedestrian And Mobility Plans (PAMP), (Lane Cove & Willoughby City Councils)
- Powells Creek bicycle option development (Strathfield Council)

Appendix D

Community Consultation and Complaints Handling Strategy

Lot 200 Aldington Road Kemps Creek Industrial Estate

Appendix D - Community Consultation and Complaints Handling Strategy - Lot J

Prepared for Stockland Fife Kemps Creek Pty Ltd

December 2023

Lot 200 Aldington Road Kemps Creek Industrial Estate

Appendix D - Community Consultation and Complaints Handling Strategy - Lot J

Stockland Fife Kemps Creek Pty Ltd

E231060 RP#2

December 2023

Version	Date	Prepared by	Approved by	Comments
V0.1	11/12/2023	Dan Keegan Nadia Eisenlohr	Dave Bone	Draft for Client review
V1.0	31/5/2024	Dan Keegan	David Bone	Draft for submission

Approved by



David Bone

National Technical Lead – Construction Environmental Management, CENvP #137

11 December 2023

Level 3 175 Scott Street

Newcastle NSW 2300

This report has been prepared in accordance with the brief provided by Stockland Fife Kemps Creek Pty Ltd and has relied upon the information collected at the time and under the conditions specified in the report. All findings, conclusions or recommendations contained in the report are based on the aforementioned circumstances. The report is for the use of Stockland Fife Kemps Creek Pty Ltd and no responsibility will be taken for its use by other parties. Stockland Fife Kemps Creek Pty Ltd may, at its discretion, use the report to inform regulators and the public.

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Abbreviations

Acronym	Definition
CCCHS	Community Consultation and Complaints Handling Strategy
CEMP	Construction Environmental Management Plan
DPE	Department of Primary and Environment
EHG	Environment and Heritage Group of DPE
EIS	Environmental Impact Statement
EPA	Environmental Protection Authority (NSW)
SSFKC	Stockland Fife Kemps Creek Pty Ltd L (a joint venture between Fife Capital and Stockland Managed entities)
ha	hectare
GFA	Gross floor area
LALC	Local Aboriginal Land Council
km	Kilometre
LGA	Local Government Area
MRP	Mamre Road Precinct
NRAR	Natural Resources Access Regulator
PCC	Penrith City Council
TfNSW	Transport for NSW (formerly RMS)
SSD	State Significant Development
sqm	Square metre
WSA	Western Sydney International (Nancy-Bird Walton) Airport

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1 Introduction

1.1 Background

This Community Consultation and Complaints Handling Strategy (CCCHS) has been prepared for the 200 Aldington Road Industrial Estate Lot J Construction works (the Project). The Project site is located at 200 Aldington Road, Kemps Creek, New South. The site is located within the Penrith Local Government Area (LGA) and forms part of the Mamre Road Precinct which sits within both the Western Sydney Employment Area to the east of the Western Sydney Aerotropolis.

The site is located approximately 5 kilometres (km) north-west of the future Western Sydney International (Nancy-Bird Walton) Airport (WSA), 13 km south-east of the Penrith CBD and 40 km west of the Sydney CBD.

The Project is a staged development, and this CCCHS relates to Stage 1 of the Project, comprising estate-wide earthworks, infrastructure and services, construction, fit-out and operation of the Stage 1 warehouse building.

A separate CCCHS has been developed for Stage 1 Development under as approved under SSD-10479 (refer to Appendix I of the Stage 1 Development Construction Environmental Management Plan (EMM, 2023)). This CCCHS has been developed for the proposed works on Lot J within 200 Aldington Road, Kemps Creek. This CCCHS will be submitted as part of the State Significant Development (SSDA) Application for Lot J.

This CCCHS has been prepared in accordance with the requirements of the Conditions of Approval SSD-10479, assuming the same or similar conditions will apply to the Lot J SSD, as listed in Table 1.1.

Note: This CCCHS has been developed in accordance with the conditions of the SSD-10479 instrument of approval, noting that there may be specific conditions related to Lot J upon SSD approval. Where new or different conditions apply, this CCCHS will be updated to reflect those conditions.

Table 1.1 Conditions of Approval Requirements

Condition Reference	Consent condition	Where addressed
A12	Mamre Road Precinct Working Group - For the duration of construction works for each Stage of the development under the Concept Proposal, and until all components of the development are operational, the Applicant must participate in the Mamre Road Precinct Working Group with relevant consent holders in the MRP to the satisfaction of the Planning Secretary (see Condition C37).	Section 4.4

Table 1.1 **Conditions of Approval Requirements**

Condition Reference	Consent condition	Where addressed
C37	Within three months of the commencement of construction of the Stage 1 Development and until all components of the Stage 1 development are constructed and operational, the Applicant must establish and participate in a working group, or join and participate in an existing working group, with relevant consent holders in the MRP, to the satisfaction of the Planning Secretary. The purpose of the working group is to consult and coordinate construction works within the MRP to assist with managing and mitigating potential cumulative environmental impacts. The working group must: (a) comprise at least one representative of the Applicant, the Applicant's ER, and relevant consent holders in the MRP; (b) meet periodically throughout the year to discuss, formulate, and implement measures or strategies to improve monitoring, coordination of the approved industrial developments in the MRP; (c) regularly inform Council, TfNSW, Sydney Water and the Planning Secretary of the outcomes of these meetings and actions to be undertaken by the working group. (d) review the performance of approved industrial developments in the MRP and identify trends in the data with respect to cumulative construction traffic, erosion and sediment control, noise, stormwater management and waterway health objectives under the MRP DCP. (e) review community concerns or complaints with respect to environmental management. (f) identify interim traffic safety measures to manage construction traffic and how these measures will be coordinated, communicated, funded, and monitored in the MRP; and (g) provide the Planning Secretary with an update and strategies, if a review under subclause (d) and (e) identifies additional measures and processes are required to be implemented by the working group.	Section 4.4
C38	Three (3) months prior to completion of construction of all components of the Stage 1 development, the Applicant is eligible to exit the working group required under condition C37. The Applicant must: (a) consult with the Planning Secretary; (b) provide confirmation that all components of the Stage 1 development are operational; and (c) advise on the date of the proposed exit.	Section 4.4
E3	As part of the CEMP required under condition E2 of this consent, the Applicant must include the following: (l) Community Consultation and Complaints Handling.	This CCCHS

Table 1.1 **Conditions of Approval Requirements**

Condition Reference	Consent condition	Where addressed
E17	Access to Information At least 48 hours before the commencement of construction of the Stage 1 development and for the life of the development, the Applicant must: (a) make the following information and documents (as they are obtained or approved) publicly available on its website: i) the documents referred to in condition A1 of this consent; ii) all current statutory approvals for the development; iii) all approved strategies, plans and programs required under the conditions of this consent; iv) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent; v) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; vi) a summary of the current stage and progress of the development; vii) contact details to enquire about the development or to make a complaint; viii) complaints register, updated monthly; ix) the Compliance Report of the development; x) any other matter required by the Planning Secretary; and (b) keep such information up to date, to the satisfaction of the Planning Secretary.	Section 4.3

1.2 Project overview

Stockland Fife Kemps Creek Pty Ltd (SSFKC) has obtained a development consent from the Department of Planning and Environment (DPE) for an industrial estate known as 200 Aldington Road, Kemps Creek (SSD-10479). Approval was made under Part 4 of the NSW Environmental Planning and Assessment Act 1979 (*EP&A Act*), relating to the concept approval (in accordance with Section 4.22 of the *EP&A Act*) of Stage 1 works for the proposed industrial hub of land at 106–228 Aldington Road, Kemps Creek (200 Aldington Road).

A State Significant Development Application will be made for the development of warehouses and associated facilities within Lot J of 200 Aldington Road. In accordance with Condition B31 of SSD-10479, any future development application must be accompanied by a CEMP.

The project will include construction of 4 warehouses, comprised of 3 buildings with hardstand areas within the Lot J footprint. Warehouse 3 will be used for cold storage. Landscaping will also occur along the perimeter of the lot.

The Lot J development will include;

- Warehouse facilities
- Office facilities
- Services, including drainage.
- Container hardstand
- Carparking and internal access roads

- Landscaping

1.2.1 Construction Activities

Prior to the commencement of construction works for Lot J infrastructure, works will occur under the Stage 1 Development approval. The site will be fully cleared of vegetation and bulk earthworks will have occurred.

Construction will be staged as follows:

- **Site establishment** - install temporary offices and facilities (including temp service connections), environmental and safety controls, temp boundary fencing, access points, signage
- **Stage 1** - Service works - relocation and/or protection of existing services as necessary, installation of new services associated with Lot J including any drainage
- **Stage 2** - Detailed site earthworks - minor adjustments to ground surface levels
- **Stage 3** - Piling and base slab construction
- **Stage 4** - Construct warehouse and office buildings
- **Stage 5** - Civil finishing works and landscaping
- **Stage 6** - Building fit-out, service connections and commissioning

Some stages may occur concurrently.

1.3 Community consultation strategy scope

This CCCHS identifies key stakeholders and describes communication tools used to facilitate communication between SFKC and key stakeholders during construction of the Project. It also provides a program for monitoring, reporting, and evaluating of the effectiveness of community consultation.

This CCCHS has been informed by the following documents:

- Conditions of Consent SSD XXXX; and
- EIS and submissions.
- Stage 1 Development – CEMP – Appendix I – Community Communication and Complaints Handling Strategy

2 Roles and Responsibilities

The roles and responsibilities for implementation of the CCCHS are outlined in Table 2.1.

Table 2.1 Roles and responsibilities

Role	Company	Responsibilities
Community Engagement Representative	Principal (SFKC)	• Receive and respond to enquiries and complaints. • Ensure complaints register is updated. • Respond to community complaints. • Working with SFKC and Contractor to identify the cause and solution to complaints. • Provide the ER with documentation requested to perform ER functions (Condition 34) • Provide monthly reports. • Participate in MRP Working Group where required. • Attend community and stakeholder meetings, as required. • Ensure Project website is current (SSD-10479 Condition E17)
Project Manager	Principal (SFKC)	• Receive and respond to enquiries and complaints. • Ensure complaints register is updated. • Respond to community complaints. • Working with SFKC and Contractor to identify the cause and solution to complaints. • Provide the ER with documentation requested to perform ER functions (Condition 34) • Provide monthly reports. • Participate in MRP Working Group where required. • Attend community and stakeholder meetings, as required. • Ensure Project website is current (SSD-10479 Condition E17)
Construction Manager	Contractor	• Provide support in the response to enquiries and complaints and ensure required actions are implemented; and • Provide information for reports, as required.
Site Supervisor	Contractor	• Provide support in the response to enquiries and complaints where required; and • Report any community interactions (e.g., local community, media) to the Community Engagement Representative; and • Assist with the implementation of the CCCHS.
Environmental Representative	ER or approved alternative	• Receive and respond to communication from the Planning Secretary • Inform the Planning Secretary on matters specified in the terms of this consent. • Participate in the MRP Working Group (SSD-10479 see condition C37) • As requested by the Planning Secretary assist the DPE in the resolution of community complaints. • Responding to the community regarding environmental performance; and • be available to the team to assist in the resolution of complaints where required.
All Project personnel	Contractor and sub-contractors	• Adhere to requirements of this CCCHS; and • Report any community interactions (e.g., local community, media) to the project Community Engagement Representative.

3 Key stakeholders and potential issues

3.1 Key stakeholders

The following categories of stakeholders are relevant to the Project:

- State and local government agencies and representatives – including local representatives and government agencies responsible for the regulation of the Project;
- utility providers – telecommunications, water, and electricity etc;
- surrounding landholders – landholders adjoining the Project site;
- Indigenous stakeholders – traditional owner groups, local land councils and other Indigenous organisations;
- business operators and representatives – business operators and representatives in the local area which may experience indirect impacts on business operations;
- local community – residents and visitors within the Project area which may have an interest in the Project;
- special interest groups – community organisations and groups;
- educational facilities – schools and early learning centres.

The key stakeholders which are affected by the Project or have an interest in the Project are summarised in Table 3.1. Key stakeholders will be consulted throughout the construction phase of the Project, as required.

Table 3.1 Key Stakeholders

Key stakeholders	Issues/potential issues/interests	Aim of engagement
State and local government agencies and representatives		
Department of Planning, and Environment (DPE)	Compliance with conditions of consent Construction timing Environmental management and monitoring, condition monitoring, development staging.	Consult/Inform
Environment Protection Authority (EPA)	Pollution incidents Licence requirements	Inform
Department of Primary Industries (DPI) Fisheries	Impacts to aquatic ecology	Inform
TfNSW	Traffic and access, road closures, road safety	Consult/inform
DPI Agriculture		Inform
Heritage NSW	Impacts to cultural heritage – Aboriginal objects, archaeological finds	Inform
Natural Resources Access Regulator (NRAR)	Impacts to riparian corridors and waterfront land	Inform
Penrith City Council	– traffic management, landscaping, road design and construction, piped stormwater network; staging	Consult /Inform
Sydney Water	Water, Sewer, MRP Stormwater Scheme,	Consult
NSW Police		Inform

Table 3.1 **Key Stakeholders**

Key stakeholders	Issues/potential issues/interests	Aim of engagement
NSW Ambulance Service	Emergency and incident response; crime and safety; provide feedback on relevant management plans	
NSW Rural Fire Service (NSW RFS)		
Utility providers		
Endeavour Energy	Engagement during construction	Inform
Transgrid	Engagement during construction;	Inform
Surrounding landholders		
Landholders along Aldington Road	Traffic/access impacts, noise impacts	Consult/inform
Properties which abut the Project site boundary incl Pazit Pty Ltd (CHE) to east	Traffic/access impacts; noise impacts, landscaping, storm water management	Consult/inform
Indigenous Stakeholders		
Deerubbin Local Aboriginal Land Council (LALC)	Aboriginal archaeological impacts; impacts to Aboriginal cultural heritage	Consult /Inform
Darug Custodian Aboriginal Corporation		
Kamilaroi Yankuntjatjara Working Group		
Business operators		
Goodman Property Services (Aust) Pty	Noise /dust impacts	Inform
Western Sydney Airport (When operational)	Wildlife hazards,	Inform
Oakdale East Industrial Estate	Noise impacts	Consult/inform
Mamre Road Precinct Working Group (MRP Working Group)	Traffic, access, cumulative impacts of development	Collaborate, coordinate, monitor, review and collectively inform stakeholders
Local community		
Road users	Traffic and access impacts, road safety	Inform
Special Interest Groups		
Catholic Healthcare Emmaus Retirement Village	Potential traffic impacts from construction	Inform
Educational facilities		
Little Smarts Early Learning Centre	Potential traffic impacts on surrounding road network, noise, and dust	Inform
Trinity Primary School		
Emmaus Catholic College		

3.2 Potential issues

Potential issues which may be experienced by stakeholders include (but are not limited to) those identified in Table 3.2.

Table 3.2 Potential Issues

Factor/impact	Description of potential issues	Mitigation and management measures
Air quality	- dust generation from construction activities and emissions from plant, equipment, and vehicles - complaints from the community - negative media coverage - damage to Company reputation.	- The Lot J CEMP contains specific measures to manage these impacts. These management plans have been informed by commitments contained within the SSD-10479 consent package, EPA standards and guidelines. - Implementation of monitoring in accordance with the CEMP; and notification to relevant stakeholders, as required.
Noise and vibration	- noise from construction, lack of notification to affected stakeholders - noise impacts resulting from operation of machinery and equipment during earthworks and construction - vibration impacts resulting from construction activities - complaints from neighbouring landholders - negative media coverage - damage to Company reputation.	- The Lot J CEMP contains specific measures to manage these impacts. This management plan has been informed by commitments contained within the SSD-10479 consent package, EPA standards and guidelines. - Sensitive receivers and affected stakeholders will be consulted prior to actions likely to generate high levels of noise or vibration. - Site induction to cover noise mitigation and management measures and obligations - Toolbox talk and pre-start meetings to discuss noise mitigation and management measures where additional training/awareness is required e.g. in response to community complaints.
Traffic and access impacts	- during the EIS exhibition, stakeholders raised concerns regarding the traffic impacts; - traffic and access disruptions to day-to-day operations for schools, road users and the local community; - traffic congestion along Aldington Road and surrounding road network; - disruptions, delays, temporary detours, changes to traffic conditions, and vehicle access to and from the Project site - impacts to landholders and businesses in the locality; - damage to existing pavement; and - increased safety risk on local roads from heavy/oversized vehicles.	- The Lot J CEMP contains specific measures to manage these impacts, including the development and implementation of a Driver Code of Conduct to be adhered to by all vehicle operators undertaking works in relation to the site. - Implement measures outlined in the Construction Traffic Management Plan including left in / left out of Abbots Road and no construction traffic to use Bakers Lane and drivers code of conduct - Management of maintenance on behalf of Penrith City Council (PCC) to ensure adequate road condition maintained during construction. - Ensure that all drivers to and from the site comply with NSW traffic regulations. - MRP Working Group will be used to discuss any accumulative impacts and how they can be managed.
Vegetation removal	- removal of significant vegetation; and - displacement of native and invasive fauna.	The Lot J CEMP contains specific measures to manage these impacts.
Erosion & Sediment Control, Water Quality	construction could result in impacts to local water quality, associated with sediment laden runoff and bulk earth works	The Lot J CEMP contains specific measures to manage these impacts in accordance with the relevant MRP DCP controls and commitments within the SSD-10479 consent package.
Visual	concerns regarding impacts to visual amenity in the locality.	- Construction to occur in accordance with the approved design and conditions of consent - Community engagement and notification, as required for affected landholders and MRP Working Group

Table 3.2 **Potential Issues**

Factor/impact	Description of potential issues	Mitigation and management measures
Business impact	during the EIS exhibition, local businesses raised concern of traffic impacts during construction.	- Construction Environmental Management Plan and - MRP Working Group will be used to discuss any accumulative impacts and how they can be managed.
Cultural heritage	- potential impacts to undiscovered Aboriginal artefacts or relics, or other heritage sites; and - loss of cultural heritage values.	- Site induction to address cultural heritage issues and management measures - Implement Unexpected Finds Protocol - Engagement with relevant Registered Aboriginal Parties and Councils - Implementation of Cultural Heritage Management Plan.
Rehabilitation	potential for site stabilisation and rehabilitation failure.	Landscape Plans.
Construction fatigue	- Potential for stakeholders to suffer from construction fatigue due to large scale of development in the area. - Uncertainty over the source of impacts	This CCCHS and the participation in Mamre Road Precinct Working group, with other developers to coordinate management methods, responses, and consultation.
Cumulative impacts	Potential for impacts to be magnified due to large number of development sites in the area	Participation in Mamre Road Precinct Working group, with other developers to manage and mitigate cumulative environmental impacts.

4 Community engagement

4.1 Objectives

The objectives of community and stakeholder engagement are to:

- ensure clear, timely and accurate information is provided to key stakeholders;
- ensure key stakeholders have access to relevant Project information through a range of communication tools;
- ensure key stakeholders are informed about progress and major works relating to the Project;
- ensure affected stakeholders are informed of potential impacts and timing through advance notification;
- actively engage with the key stakeholders and encourage feedback;
- minimise complaints from stakeholders;
- ensure Project enquiries and complaints are managed and resolved in an efficient manner; and
- comply with the relevant community consultation requirements outlined in the Conditions of Consent.

4.2 Site Induction

All Project personnel will undertake a site-specific induction which will cover general environmental awareness training and responsibilities under the CEMP and sub-plans (refer Section 3.3 of the CEMP).

The site induction will also cover aspects of community and stakeholder management, including:

- protocols for reporting complaints and enquiries; and
- appropriate behaviour when interacting with the local community and stakeholders.

4.3 Communication tools and activities

The communication tools and activities to be applied to the construction phase are outlined in Table 4.1.

Table 4.1 Communication tools and activities

Communication Tools and Activities	Target Audience	Description
Direct contact	Adjoining landholders, surrounding businesses and the MRP Working Group.	Telephone calls, face-to-face meetings, emails, letters.
Project email address	Local community, adjoining landholders, business operators.	A dedicated email address will be established and maintained to keep key stakeholders informed about the Project and enable stakeholders to provide feedback and make enquiries about the Project.
Project website	Local community, adjoining landholders, business operators.	A dedicated website to provide information on the Project, including a general overview of the Project and contact details and information as required by the Conditions of Consent E17.

Table 4.1 **Communication tools and activities**

Communication Tools and Activities	Target Audience	Description
Signage	Local community, adjoining landholders, surrounding business operators.	Site signage will be clearly displayed (including site contact details). Signage will be erected on Aldington Road and surrounds for management of any traffic diversions/disruptions.
Notification letters and emails	Adjoining landholders, Government representatives.	Letter drop/email notification to inform directly affected stakeholders of commencement of works; work hours.
Consultation records	Government representatives.	Records of consultation will be documented and be made available to the Planning Secretary upon request.

4.4 Mamre Road Precinct Working Group

SFKC have participated in the Mamre Road Precinct Working Group as required under SSD-10479 Condition C37. Where required by the Lot J SSD approval, SFKC will continue to participate in the working group during the construction of Lot J infrastructure.

The purpose of the working group is to consult and coordinate construction works within the MRP to assist with managing and mitigating potential cumulative environmental impacts.

The working group must:

- comprise at least one representative of the SFKC, the Projects Environmental Representative, and relevant consent holders in the MRP
- meet periodically throughout the year to discuss, formulate, and implement measures or strategies to improve monitoring, coordination of the approved industrial developments in the MRP
- regularly inform Council, TfNSW, Sydney Water and the Planning Secretary of the outcomes of these meetings and actions to be undertaken by the working group
- review the performance of approved industrial developments in the MRP and identify trends in the data with respect to cumulative construction traffic, erosion and sediment control, noise, stormwater management and waterway health objectives under the MRP DCP
- review community concerns or complaints with respect to environmental management
- identify interim traffic safety measures to manage construction traffic and how these measures will be coordinated, communicated, funded, and monitored in the MRP
- provide the Planning Secretary with an update and strategies, if a review under subclause (d) and (e) identifies additional measures and processes are required to be implemented by the working group.

4.5 Notification procedures

4.5.1 Regulatory Notification

A summary of key regulatory notification protocols is provided in Table 4.2. All environment incident notifications will be management in accordance with the CEMP.

Table 4.2 Regulatory Notification

Stakeholder to Notify	What to Notify	When to Notify	Responsibility to Notify
DPE	Commencement of construction	DPE will be notified in writing at least 1 month prior to the commencement of construction.	Project Manager
DPE	Commencement of operation	DPE will be notified in writing at least 1 month prior to the commencement of operation.	Project Manager
DPE	Details of any non-compliance	Notify the Planning Secretary in writing via the Major Projects website, within 7 days after becoming aware of any non-compliance with the development Conditions of Consent.	Project Manager
DPE	Details of any incident	Notify the Planning Secretary in writing via the Major Projects website immediately after becoming aware of an incident .	Project Manager
Public	Project Information on website	At least 48hrs before commencement of construction.	Project Manager
Heritage NSW	Material suspected of being a European or Aboriginal culturally significant (e.g. site, artefact, or relic)	Immediately upon discover of any archaeological/culturally significant site or relic that are encountered. NSW Police also to be notified immediately upon discovery of human remains.	Environmental Representative
NSW EPA	Details of pollution incident – who, what, when, where, how, any other supporting information (e.g. photos)	Immediately upon identified of pollution incident causing or threatening material harm to the environment in accordance with the CEMP.	Environmental Representative

4.5.2 Community Notification

Community notifications will be required throughout the course of the Project, these notifications aim to inform stakeholders of any works that may impact upon the community. Community notification events are listed in Table 4.3. All environment incident notifications will be management in accordance with the CEMP.

Table 4.3 **Community notification**

Notification	Notification Procedure	Responsibility
Community notification	• Commencement/completion of works or any other significant project milestones • Changes to traffic/access i.e. changes or disruptions to local business access • Out of hours work/extended hours of work • Medium – high noise construction activities • High vibration impacts • Changes or disruptions to utility services. The notification must identify types and durations of works which may generated high-impact noise or disrupt traffic flows during works scheduling. The Project contact details must be included on the notification to provide the community with a way to raise any concerns. Project website will provide updated on project development.	Project Manager

4.6 Enquiries procedure

The community can make enquires through the project website, contact details are visible on signage at entry points to the project (and on project boundaries). The enquiries procedure is outlined in **Table 4.4**

Table 4.4 **Enquires procedure**

Action	Responsibility	Timing
Acknowledge the enquirer of receipt of the enquiry (where contact details are provided)	Project Manager	24 hours (or as soon as practicable)
For phone enquiries - provide a verbal response to enquirer within 24 hours (unless the enquirer is notified/agrees otherwise) advising when response can be expected	Project Manager	
Seek advice/information from relevant Project personnel and issue response to enquirer within 24 hours	Project Manager	
Record details in the Complaints and Enquiries Database within 24 hours of receiving the enquiry;	Project Manager	
Ensure all relevant detail are included in the Complaints and Enquiries Database	Project Manager	Monthly
Report to Environmental Representative on any enquiries received and responses/resolution.	Project Manager	

4.7 Complaints procedure

The complaints procedure is outlined in Table 4.5.

Table 4.5 Complaints procedure

Action	Responsibility	Timing
Acknowledge receipt of the complainant within 2 hours (where contact details have been provided)	Project Manager	
Seek advice/information from relevant Project personnel. All urgent matters should be forwarded promptly and dealt with in the most efficient manner to ensure the complaint is addressed as quickly as reasonably practicable	Project Manager	24 hours (or as soon as practicable)
Advise the complainant of the resolution and how it has been closed out	Project Manager	
Document all actions in the Complaints and Enquiries Register within 48 hours	Project Manager	48 hours
Follow up with complainant (if necessary) to ensure that corrective actions are satisfactory.	Project Manager	1 week

Where a complainant indicates they are not satisfied with the response provided, the Community Engagement Representative and SFKC Project Manager shall meet to discuss additional actions. Where the complainant is still not satisfied, refer to the dispute resolution process in Section 4.9.

The Community Engagement Representative will report monthly to the Environmental Representative on any complaints received, responses and resolution.

4.8 Complaints register

A Complaints and Enquiries register will be maintained for the duration of the Project. For each complaint received, the following information will be recorded in the register:

- date and time of the complaint
- details of the complainant, including number of people affected in relation to the complaint
- nature of the complaint
- any actions taken to address the complaint, including responses provided to address the complaint such as written, or transcript of verbal response is provided
- verification of the closeout of the complaint, including whether a resolution was reached, with or without mediation
- details of any follow up with the complainant.

Upon request, the Complaints Register will be provided to the Secretary in accordance with Condition of consent.

4.9 Dispute resolution

In the event a complaint is unable to be resolved between the complainant and the relevant Project personnel, a third-party mediator may be used to assist with the resolution of the dispute.

The dispute resolution process is as follows:

- Third party mediator reviews complaint and responses provided.

- Third party mediator determines that the response is either satisfactory or mediation is required.
- In either case, third-party mediator must contact the complainant to advise if they are closing the complaint or if they will initiate the mediation process.
- Mediation will occur at a time and date agreed between the third-party mediator and the complainant (preferably in-person). The third-party mediator and SFKC Project Manager must attend to meeting. Any other relevant Project personnel required to attend the meeting will be at the discretion of the SFKC Project Manager.
- Following the mediation meeting, the third-party mediator will advise of any additional actions required or whether the Third-party mediator is satisfied that the matter has been resolved.
- Any additional information must be recorded in the Complaints Register and closed out.

5 Monitoring, reporting and evaluation

Monitoring, reporting and evaluation will be carried out to measure the effectiveness of consultation and engagement and responses to complaints and enquiries. Opportunities for improvement will be sought on a continuous basis; and an annual review of the CCCHS will be completed to formally make changes where required.

5.1 Monitoring

Monitoring the performance of this CCCHS will be undertaken based on the following, starting from the date of Construction commencement.

Table 5.1 Monitoring data

Monitoring Parameter	Reason for monitoring	Performance criteria	Frequency
Total number of complaints and theme of these	Indicative of impact of project on community and type of impact	A reduction in number of complaints relative to previous period (once baseline established)	Quarterly (every 3 months)
Complaints relating to lack of consultation	Indicative of effectiveness of communication tools	Reduction in complaints relative to previous period (once baseline established)	Quarterly (every 3 months)
Enquiries relating to information previously made available	Indicative of effectiveness of communication tools	Reduction in complaints relative to previous period (once baseline established)	Quarterly (every 3 months)
Response timeframes	Timely responses and rectification of issues will improve relationship with stakeholders.	Enquiries and complaints acknowledged and responded within agreed timeframes. Acknowledgment within 48hrs. Response to urgent matters within 48 hours of receipt, non -urgent matters responded within 5 days.	Quarterly (every 3 months)

5.2 Reporting

5.2.1 Community Engagement Register

All records of stakeholder engagement will be recorded in the Community Engagement Register. This will include the following details:

- relevant parties involved/engaged, including name and contact details
- time and date of engagement
- communication tool/type of engagement
- summary of engagement, including written evidence or verbal transcript.

5.2.2 Monthly reporting

A monthly report summarising key stakeholder engagement activities will be prepared by the Community Engagement Representative. This report will be provided to the Environmental Representative for inclusion in the monthly environmental reporting. The following information may be provided:

- number of complaints and enquiries received; and

- summary of stakeholder engagement activities (e.g. number of notifications issued).

5.3 Evaluation and review

This CCCHS is a live document and is subject to ongoing review and updates for the duration of the Project.

Evaluation and review will be undertaken in accordance with the CEMP. Continuous improvement will be achieved via the ongoing evaluation of environmental performance and effectiveness of this CCCHS against the Conditions of Consent and legislative requirements.

Revisions to this CCCHS may result from the following:

- design/construction changes
- following an incident or near miss
- environmental audits
- amendments to the Conditions of Consent
- changes to company procedures or systems
- following a community complaint.

6 Emergency and Key Contacts

A summary of emergency and key contacts is provided in Table 6.1 below

Table 6.1 **Emergency and key contacts**

Contact/Agency	Reason	Contact Number
Project Manager Fife Creek	Complaints, incidents-	Richard Harris 0408 865 947
Construction Manager	Complaints, incidents-	TBC
Community Liaison Officer – Fife Capital	Liaison	Richard Harris 0408 865 947
Environmental Representative (or approved alternative)	Non-compliance with consent condition (environmental / noise/ traffic)	Carl Vincent 0424 203 046
Project Information Number	Complaints/issues/enquiries	TBC
Penrith City Council	Traffic / access (local roads)	(02) 4732 7777
DPHI	Non-compliance, change to project, regulatory advice	1300 420 596
DPI Fisheries	Aquatic ecology	1300 550 474
TfNSW	Traffic / access (Mamre Road)	131700
SafeWork NSW	Notifiable incidents	131 050
NSW EPA	Pollution Incident (air, noise, water, waste)	131 555
NSW Police	In case of fire, medical or police emergency. For pollution incidents that present an immediate threat to human health or property.	000
Fire and Rescue NSW		
NSW Ambulance		
Nepean Hospital	Medical incidents	(02) 4734 2000
Crime stoppers	Incidents such as theft, crime, car crash, non-threatening injuries	1800 033 111
Police Assistance Line		131 444
Poison Information Centre	Toxicology advice	131 126
IXOM (Chemical industry)	Incidents relating to transport, storage, and use of chemical products	1800 033 111
Deerubbin Local Aboriginal Land Council (LALC)	Aboriginal cultural heritage	(02) 4724 5600
Darug Custodian Aboriginal Corporation		0415 770 163
Kamilaroi Yankuntjatjara Working Group		TBC

Appendix E

Lot J Erosion and Sediment Control Plan (AT&L, 2023)

**LOT J of 200 Aldington
Road Industrial Estate,
Kemps Creek**

SSD-61212208

**Erosion and Sediment
Control Plan**

Stockland Fife Kemps Creek Limited

11/11/2023

19-609-J

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Document Author	Tim Michel (AT&L) Associate Civil Engineer BE BA DipEngPrac, MIEAust, CPEng NER (Civil / Environmental) CPESC (11555)

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1. Introduction

This Erosion and Sediment Control Plan (ESCP) has been prepared by AT&L on behalf of Stockland Fife Kemps Creek (SKFC) in support of a State Significant Development Application (SSDA) for the proposed Lot J development (SSD-61212208) within the 200 Aldington Road Industrial Estate.

The 200 Aldington Road Industrial Estate (the Estate) is located in the suburb of Kemps Creek, within the Penrith Local Government Area (LGA), and approximately 13 km south-east of the Penrith CBD and 6 km north-east of the under-construction Western Sydney Airport. The site is wholly contained in Lot 200 DP1285691. The extent of the Estate is presented below in **Figure 1**. Concept masterplan approval for the Estate was granted under delegation of the Minister for Planning and Public Spaces in May 2023 (SSD-10479).

Stage 1 development (approved under SSD-10479) comprises clearing and bulk earthworks across the entirety of the Estate (approximately 72 hectares), as well as civil works, construction and fit-out of one warehouse building (Lot F) and subdivision of the Site into 15 lots.

Stage 2 development (subject of this application under SSD-61212208) seeks consent for the development of Lot J (the Site), the extent of which is presented below in **Figure 2**. The Lot J Site is generally bound by Aldington Road to the west and will be bound by future Road 01 to the south, future Road 02 to the east and future Road 03 and future Lot H to the north. The total area of Lot J is approximately 12.9 hectares.



Figure 1: Extent of 200 Aldington Road Industrial Estate (imagery from nearmap dated 22 October 2023)

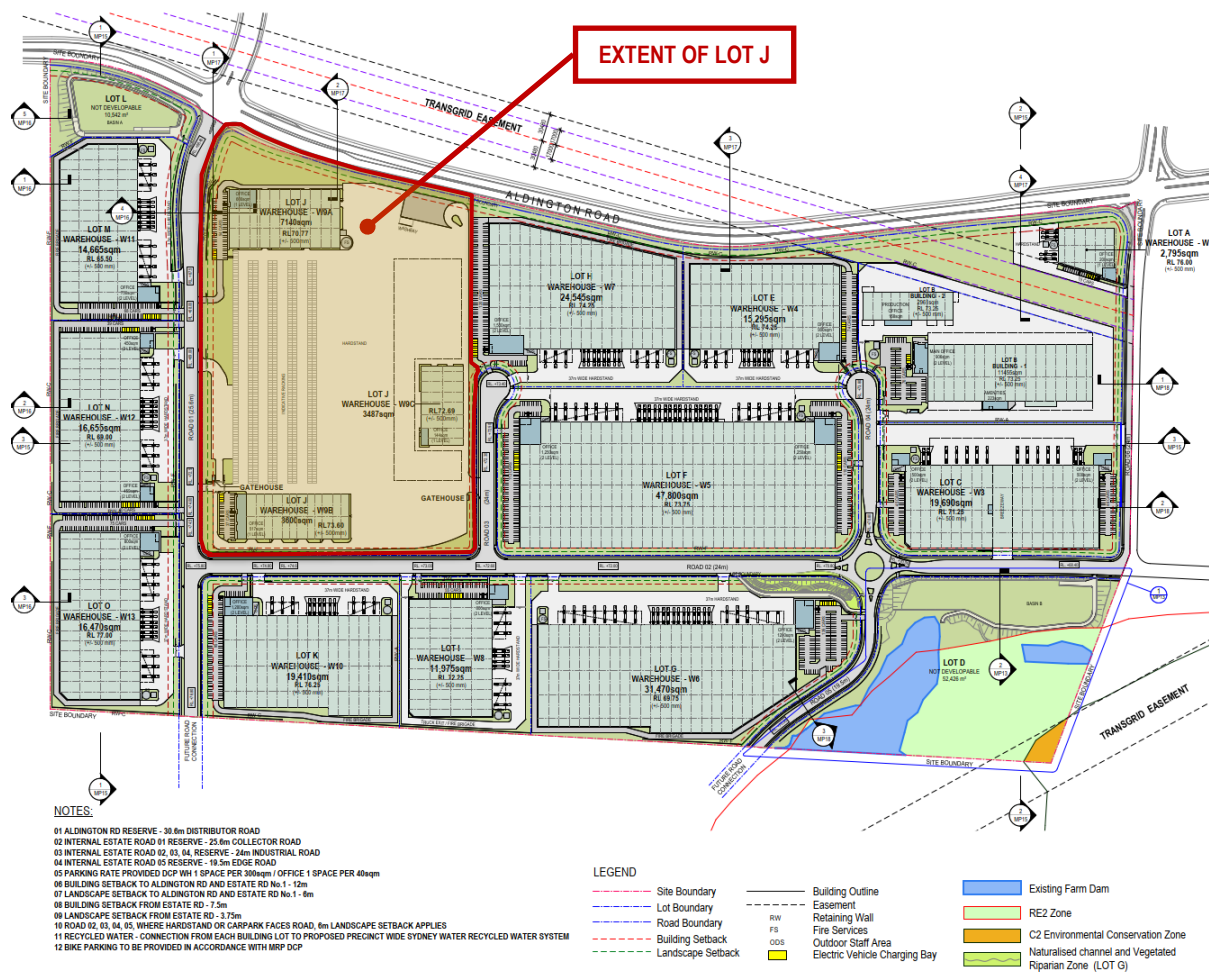


Figure 2: Extent of Lot J

1.1. Scope of SSDA

There are two applications:

1. SSD-61212208 seeks consent for the construction and operation of a warehouse and distribution centre, which will comprise three (3) warehouse buildings, offices, operational hardstand, open air storage, gatehouses, wash bay and ancillary infrastructure such as weighbridges.
2. Modification of the SSD-10479 Concept Master Plan for the Estate to align the Concept Master Plan approved under with the currently proposed development.

1.2. Scope of this ESCP

This ESCP has been prepared to describe the approach to construction phase soil and water management and to summarise the key standards and guidelines that will inform detailed design, implementation and operation of erosion and sediment control measures.

This ESCP presents conceptual design of a series of proposed measures that will need to be implemented during demolition, site clearing and infrastructure works. The objectives of the proposed erosion and sediment control measures incorporated in this ESCP are to:

- Acknowledge the activities on a construction site which may contribute to erosion, sedimentation and water quality impacts.
- Conserve and protect soil resources.
- Minimise potential impacts on receiving land and waters from demolition, site clearing and construction activities.
- Describe industry best management practices to minimise adverse water quality and sedimentation impacts brought about through construction activities.
- Demonstrate compliance with relevant regulatory requirements.

The final sizing, location and sequencing of erosion and sediment control measures will be subject to the proposed construction sequencing, which will ultimately be determined by the principal civil contractor nominated by the Proponent. The principal civil contractor (or its representative) will be responsible for the preparation and implementation of detailed Progressive Erosion and Sediment Control Plans (PESCPs), which will be incorporated into an overarching Construction Environmental Management Plan (CEMP).

1.3. Key references

This ESCP references several guidelines that document minimum requirements and best practice for erosion and sediment control:

Document title	Abbreviation
■ International Erosion Control Association (IECA) Australasia, <i>Best Practice Erosion & Sediment Control</i> , November 2008	IECA (2008)
■ International Erosion Control Association (IECA) Australasia, <i>Appendix B; Sediment basin design and operation</i> (Revision – June 2018), www.austieca.com.au/documents/item/697	IECA Appendix B (2018)
■ Landcom, <i>Managing Urban Stormwater: Soils and Construction (Volume 1)</i> , 4 th edition, March 2004	The Blue Book
■ NSW Department of Planning and Environment, <i>Technical guidance for achieving Wianamatta-South Creek stormwater management targets</i> , September 2022	DPE Technical Guidance (2022)

In addition to these documents, fact sheets prepared by [Catchments and Creeks Pty Ltd](#) have also been referred to throughout this ESCP.

1.4. Supporting and Reference Documentation

The following documentation is referred to throughout and should be read in conjunction with this report:

1. Civil Drawings – C5300 series (AT&L)
2. Civil Infrastructure Report (AT&L)
3. Water and Stormwater Management Plan (AT&L)
4. Geotechnical and Groundwater Summary – 200 Aldington Road Industrial Estate (Douglas Partners, September 2021, Rev4)
5. Primary erosion and sediment control plan (EMM, August 2023)

2. Pre-Development Site Conditions

2.1. General

The site is currently under development with activities including vegetation clearing, stripping of topsoil and organic material and bulk earthworks in progress. These works are being undertaken under the development consent for stage 1 SSD-10479.

The Site is zoned *IN1 – General Industrial* under the *State Environmental Planning Policy (Industry and Employment) 2021*. The Site is also located in the Mamre Road Precinct and is therefore subject to controls outlined in the *Mamre Road Development Control Plan 2021*.

Refer to the Water and Stormwater Management Plan (AT&L, 2023) for details of the pre-development site conditions including waterways and vegetation, topography and catchment delineation.

2.2. Site Geology

A desktop study and geotechnical investigation of the Site was prepared by Douglas Partners (September 2021). This study identified that the site is underlain by Bringelly Shale from the Wianamatta Group of Middle Triassic Age and Fluvial Sediments of Quaternary Period. Most of the site is underlain by the Bringelly Shale formation typically comprising shale, carbonaceous claystone, laminite, fine to medium grained lithic sandstone and some coal bands and tuff. The north-eastern portion of the site is underlain by fluvial (stream deposited) soils comprising fine grained sand, silts and clays.

Douglas Partners undertook site investigation works in 2019, consisting of two (2) boreholes and 19 test pits excavated to depths of up to 3 metres. Based on these tests, a summary of the inferred subsurface conditions across the Site is summarised below:

- Topsoil/topsoil filling to depths between 0.1m and 0.3m)
- Fill to depths of up to 1.4m over parts of the site, but deeper in localised areas such as dam walls.
- Residual clay – typically stiff to hard consistency – to depths in the range of 0.6m and 3.3m.
- Shale bedrock initially very low strength becoming low to medium strength below a depth of 3.3m (Bore 7) and 5.2m (Bore 19).

2.2.1. Salinity

Based on site investigations undertaken by Douglas Partners in 2019, materials within the site were found to be non-saline to very saline. Further investigations were completed by ADE Consultants in 2021-23 and a Salinity Management Plan was prepared for the CEMP for the Estate works under SSD 10479. This salinity management plan applies to the initial earthworks under stage 1 and future building developments.

2.2.2. Sodicty

Based on site investigations undertaken by Douglas Partners in 2019, materials within the site were found to be non-sodic to very sodic.

2.3. Soil Landscapes

Reference to the *Soil Landscape Series Map – Penrith* (refer to **Figure 3**) shows that the soil landscape grouping for the majority of the Site is or the majority of the site is:

Luddenham (lu) – undulating to low rolling hills on Wianamatta Group shales, often associated with Minchinbury Sandstone. Local relief 50-80m, slopes 5-20%. Narrow ridges, hillcrests and valleys. Extensively cleared tall open-forest (wet sclerophyll forest). Soils – shallow (<100cm) dark Podzolic Soils or massive earthy clays on crests; moderately deep (70-150cm) Red Podzolic Soils on upper slopes; moderately deep (<150cm) Yellow Podzolic Soils and Prairie Soils on lower slopes and drainage lines. Limitations – high soil erosion hazard, localised impermeable highly plastic subsoil, moderately reactive.

The soil landscape in the south-western portion of the Site is:

Blacktown (bt) – gently undulating rises on Wianamatta Group shales. Local relief to 30 m, slopes usually < 5%. Shallow to moderately deep (< 100 cm) hard setting mottled texture contrast soils, red and brown podzolic soils on crests grading to yellow podzolic soils on lower slopes and in drainage lines.

South Creek (sc) – floodplains, valley flats and drainage depressions of the channels on the Cumberland Plain. Usually flat with incised channels, mainly cleared. Often very deep layered sediments over bedrock or relict soils.

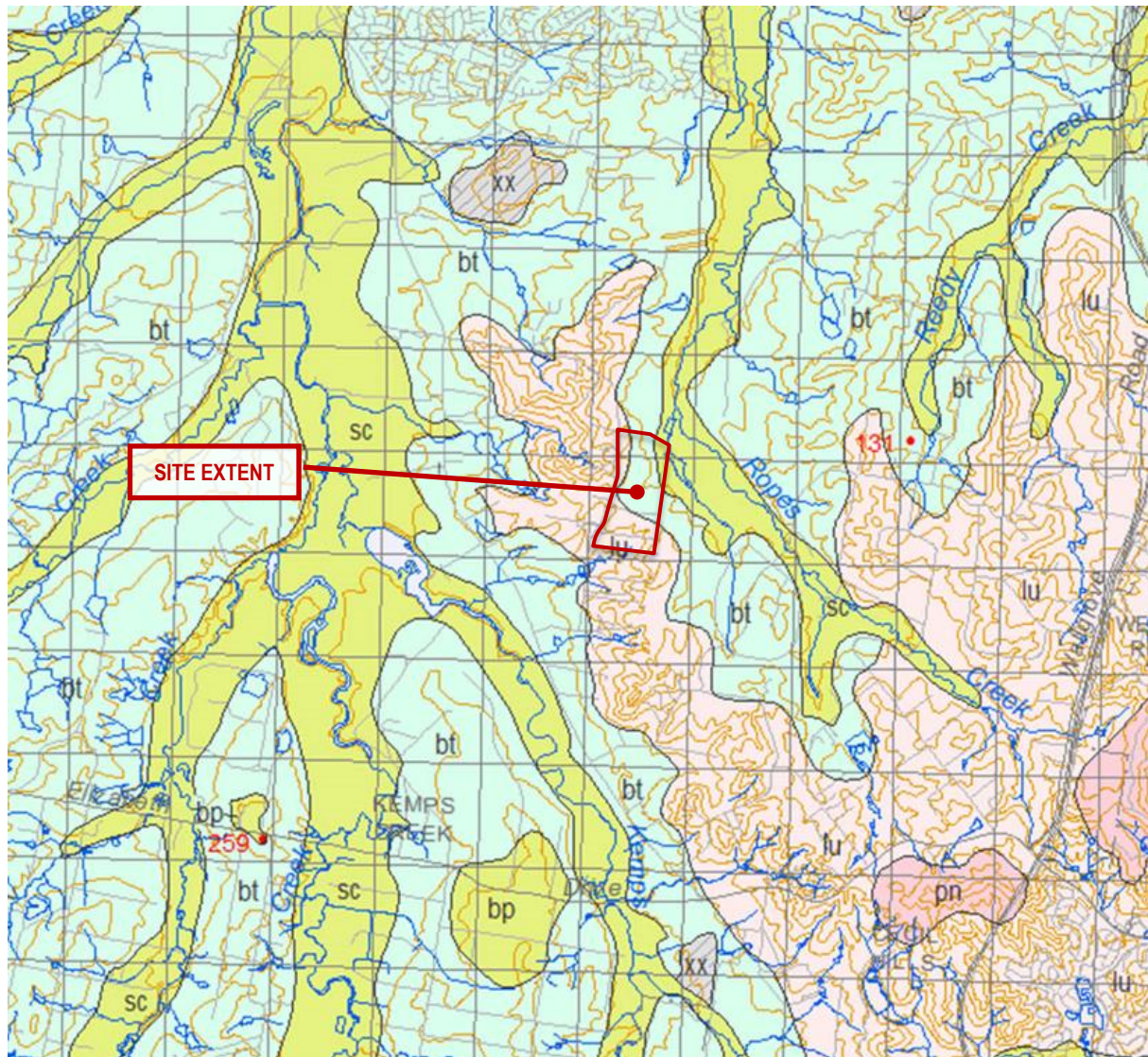


Figure 3: Extent of Luddenham (lu) soil landscape (eSPADE NSW Soil and Land Information)

The Wianamatta Group extends to a depth of up to 110 m within the southern Sydney Basin and is underlain by Hawkesbury Sandstone, which is known to contain significant amounts of groundwater in some parts of the Sydney Basin.

3. Objectives and Controls

The Mamre Road Precinct DCP establishes the construction and operational phase stormwater quality and quantity (flow) targets for the Site. This ESCP addresses construction phase water quality targets only. Operational phase targets are addressed in a separate Water and Stormwater Management Plan for the Site.

The construction phase stormwater flow targets adopted in the Mamre Road Precinct DCP are summarised in **Table 1**.

Table 1: Construction phase stormwater quality targets adopted in the Mamre Road Precinct DCP

Parameter	Construction Phase Target	Reference in this ESCP
TSS and pH	All exposed areas greater than 2500 square metres must be provided with sediment controls designed, implemented and maintained to a standard achieving at least 80% of the average annual runoff volume of the contributing catchment treated (i.e., 80% hydrological effectiveness) to 50mg/L TSS or less, and pH in the range 6.5–8.5.	Section 5.3 Section 6.2 Section 6.3
Oil, litter and waste contaminants	No release of oil, litter or waste contaminants.	The proposed management and mitigation measures outlined in Section 5.1 would provide inherent capture of oil, litter and waste generated throughout the construction phase. It is expected that further specific measures to address potential impacts associated with the discharge of oil, litter and waste contaminants would be contained within a Construction Waste Management Plan.
Stabilisation	Prior to completion of works for the development, and prior to removal of sediment controls, all site surfaces must be effectively stabilised including all drainage systems. An effectively stabilised surface is defined as one that does not, or is not likely to result in visible evidence of soil loss caused by sheet, rill or gully erosion or lead to sedimentation water contamination.	Section 5.4

4. Potential erosion and sedimentation impacts

4.1. Summary of impacts

The major potential impacts on receiving waters downstream of the Site relate to erosion of distributed areas or stockpiles and sediment transportation. Potential adverse impacts from erosion and sediment transportation can include:

- Loss of topsoil.
- Increased water turbidity.
- Decreased levels of dissolved oxygen.
- Changed salinity levels.
- Changed pH levels.
- Smothering of stream beds and aquatic vegetation.
- Reduction in aquatic habitat diversity.
- Increased maintenance costs.
- Decrease in waterway capacity leading to increased flood levels and durations.

4.2. Sources of pollution

The activities and aspects of the works that have potential to lead to erosion, sediment transport, siltation and contamination of natural waters include:

- Earthworks undertaken immediately prior to rainfall periods.
- Work areas that have not been stabilised.
- Extraction of construction water from waterways during low rainfall periods.
- Clearing of vegetation and the methods adopted, particularly in advance of construction works.
- Stripping of topsoil, particularly in advance of construction works.
- Bulk earthworks and construction of pavements.
- Works within drainage paths, including depressions and waterways.
- Stockpiling of excavated materials.
- Storage and transfer of oils, fuels, fertilisers and chemicals.
- Maintenance of plant and equipment.
- Ineffective implementation of erosion and sediment control measures.
- Inadequate maintenance of environmental control measures; and
- Time taken for the rehabilitation / revegetation of disturbed areas.

4.3. Assessment of erosion hazard

To inform the design of the ESCP, an analysis using the Revised Universal Soil Loss Equation (RUSLE) has been undertaken in accordance with the “Blue Book”. This analysis has been undertaken to predict the long term, average and annual soil loss from sheet and rill flow from the site under specified management conditions.

Estimating soil loss for a proposed development has four important applications to soil and water management. These are to:

1. Assess the erosion risk at a site.
2. Identify suitable measures to overcome the erosion risk.
3. Estimate the required capacity of sediment retarding basins.
4. Compare the effectiveness of various erosion control measures.

Refer to **Table 2** below for estimates of soil loss on the site.

Table 2: RUSLE Analysis

Parameter	Item (Blue Book Reference)	
Rainfall Erosivity Factor (R)	1893	(Equation 2, Appendix A2)
Soil Erodibility Factor (K) (Table C20, Blue Book)	0.05	(Table C19, Appendix C) For South Creek (sc) soil landscape
Slope Length / Gradient Factor (LS)	3.25	Table A1, Appendix A Assuming a maximum slope length of 300m and a maximum slope gradient of 6%
Erosion Control Practice Factor (P)	1.20	Table A1, Appendix A5 Assuming slopes are track-walked along the contour
Ground Cover and Management Factor (C)	1	Assumed that all soil is recently disturbed, thus a C factor of 1 is chosen.
Computed Soil Loss (tonnes per hectare per year)	369	
Soil Loss Class	4	(Table 4.2 of the Blue Book)
Erosion Hazard		(Table 4.2 of the Blue Book)

5. Erosion and sediment control measures

5.1. Summary of measures

This section outlines the proposed erosion and sediment control measures that have been incorporated in this ESCP. An indicative layout and details of these proposed measures is presented on a series of concept erosion and sediment control plan drawings, included in **Appendix A**.

As a minimum, the following erosion and sediment control measures and construction methodology will be adopted to minimise the impact of sedimentation due to construction works:

- Minimising the extent and duration of land disturbance
- Diversion of surface runoff from undisturbed areas away from disturbed areas and discharge via suitable scour protection.
- Provision of hay bale type flow diverters to catch drainage and divert to “clean” water drains.
- Diversion of sediment-laden water into temporary sediment control basins to capture the design storm volume and undertake flocculation (if required).
- Provision of construction traffic shaker grids and vehicle / wheel wash facilities to prevent vehicles carrying soils beyond the Site, in particular onto the road network adjacent to the Site.
- Provision of catch drains to carry sediment-laden water to sediment basins.
- Provision of silt fences to filter and retain sediments at source.
- Rapid stabilisation of disturbed and exposed ground surfaces with hydro-seeding areas where future construction and building works are not currently proposed.
- All temporary sediment basins will be located clear of the 1% AEP flood extents from local overland flow.

5.2. Design criteria

All design, documentation, installation and maintenance of sediment and erosion controls has been undertaken in accordance with the requirements of:

- *Protection of the Environment Operations Act*
- The Blue Book
- IECA (2008) and IECA Appendix B (2018)
- DPE Technical Guidance
- Penrith City Council’s guidelines and specifications

5.3. Sediment basins

Sediment basins will be required based on the area of the Site that will be disturbed and the construction phase water quality targets adopted in the Mamre Road Precinct DCP.

The *Technical guidance for achieving Wianamatta-South Creek stormwater management targets* specifies that to achieve the adopted construction phase water quality targets, sediment basins need to be sized and operated as either a Type-A or Type-B basin as per IECA Appendix B (2018). Type A and Type B basins incorporate automated flocculant dosing systems and a suitable supply of flocculant or coagulant.

An indicative location of the proposed Type B sediment basin is presented on drawing 19-6091-C5395, refer to **Appendix A**. Ultimately, the final temporary sediment basin(s) locations and sizes will be provided to suit development staging requirements and will be sized and maintained in accordance with the requirements of the above-mentioned authority documents.

5.4. Site stabilisation

As per The Blue Book (Landcom, 2004), site stabilisation will be achieved to protect disturbed surfaces from erosive forces. Maximum cover factors (C-factor) applicable to the Site are specified in **Table 3**.

Table 3: Target cover factor (C) during and after construction (Landcom, 2004)

Land	Nominated duration	Maximum C-factor	Comments
Waterways and other areas subject to concentrated flows (e.g., downstream of proposed detention basin)	Post-construction	0.05	Applies after 10 working days from completion of formation and before they are allowed to carry any concentrated flows.
Material stockpiles	Post-construction	0.10	Applies after 10 working days from completion of formation.
All lands, including waterways and stockpiles	During construction	0.15	Applies after 20 working days of inactivity, even though works might continue later.

Various stabilisation methods can be implemented (refer to Table A3 of The Blue Book), such as:

- Biodegradable mulches (e.g., wood chip, hydromulching, bonded fibre)
- Rolled Erosion Control Products (RECPs) (e.g., jute, coir, plastic fibre netting)
- Hydraulic soil stabilisers (bitumen emulsion)
- Temporary seeding
- Rolled turf

6. Inspection, Maintenance and Monitoring

6.1. Site inspection and maintenance

The inspection and maintenance requirements outlined in this section must be carried out while earthworks are being conducted, and until all areas are re-established.

The Contractor will be required to inspect the Site after every rainfall event and at least weekly, and will:

- Inspect and assess the effectiveness of the ESCP and identify any inadequacies that may arise during normal work activities or from a revised construction methodology.
- Construct additional erosion and sediment control works as necessary to ensure the desired protection is given to downstream lands and waterways.
- Ensure that drains operate properly and to affect any repairs.
- Remove spilled sand or other materials from hazard areas, including lands closer than 5 metres from areas of likely concentrated or high velocity flows especially waterways and paved areas.
- Remove trapped sediment whenever less than design capacity remains within the structure.
- Ensure rehabilitated lands have affectively reduced the erosion hazard and to initiate upgrading or repair as appropriate.
- Maintain erosion and sediment control measures in a fully functioning condition until all construction activity is completed and the Site has been rehabilitated.
- Remove temporary soil conservation structures as the last activity in the rehabilitation.
- Inspect the sediment basin during the following periods:
 - ▶ During construction to determine whether machinery, falling trees, or construction activity has damaged and components of the sediment basin. If damage has occurred, repair it.
 - ▶ After each runoff event, inspect the erosion damage at flow entry and exit points. If damage has occurred, make the necessary repairs.
 - ▶ At least weekly during the nominated wet season (if any), otherwise at least fortnightly; and
 - ▶ Prior to, and immediately after, periods of 'stop work' or Site shutdown.
- Clean out accumulated sediment when it reaches the marker board/post and restore the original volume. Place sediment in a disposal area or, if appropriate, mix with dry soil on the Site.
- Do not dispose of sediment in a manner that will create an erosion or pollution hazard.
- Check all visible pipe connections for leaks, and repair as necessary.
- Check all embankments for excessive settlement, slumping of the slopes or piping between the conduit and the embankment, make all necessary repairs.
- Remove the trash and other debris from the basin and riser; and
- Submerged inflow pipes must be inspected and de-silted (as required) after each inflow event.

6.2. Sediment basin maintenance

The proposed development Site contains 'Type F' soils, or soils that contain a significant proportion of fine grained (33% or more of finer than 0.02mm) and require a much longer residence time to settle.

Stormwater within the settling zone should be drained or pumped out within 5 days (design time), if the nominated water quality targets can be met, to the satisfaction of the superintendent. Flocculation should be employed where extended settling is likely to fail to meet the objectives within the 5-day period. Flocculation is when flocculating agents are applied to the sediment basins causing the colloidal particles to clump into larger units or 'floc' that can either settle in a reasonable time or be filtered.

Refer to Appendix E4 of The Blue Book for flocculation methodologies and manufacturer's instructions for application rates, regarding the proposed sediment basins.

6.3. Performance assessment

As required by IECA Appendix B (2018), ongoing review of sediment basin performance will need be carried out throughout the construction phase of the development. As noted in IECA Appendix B, '*sediment basins are not designed to achieve a specific water quality; rather, they are designed to either capture and treat a specific volume of runoff, or to treat discharges up to a specified peak flow*'. Considering this, site specific water quality management practices such as those suggested in IECA Appendix B will need to be implemented by the Contractor responsible for implementation of the ESCP. Demonstration of adaptive management practices and decision-making processes such as that presented in **Figure 4** will provide greater certainty that all reasonable and practicable actions are being undertaken to minimise potential impacts associated with release of sediment laden water from the Site.

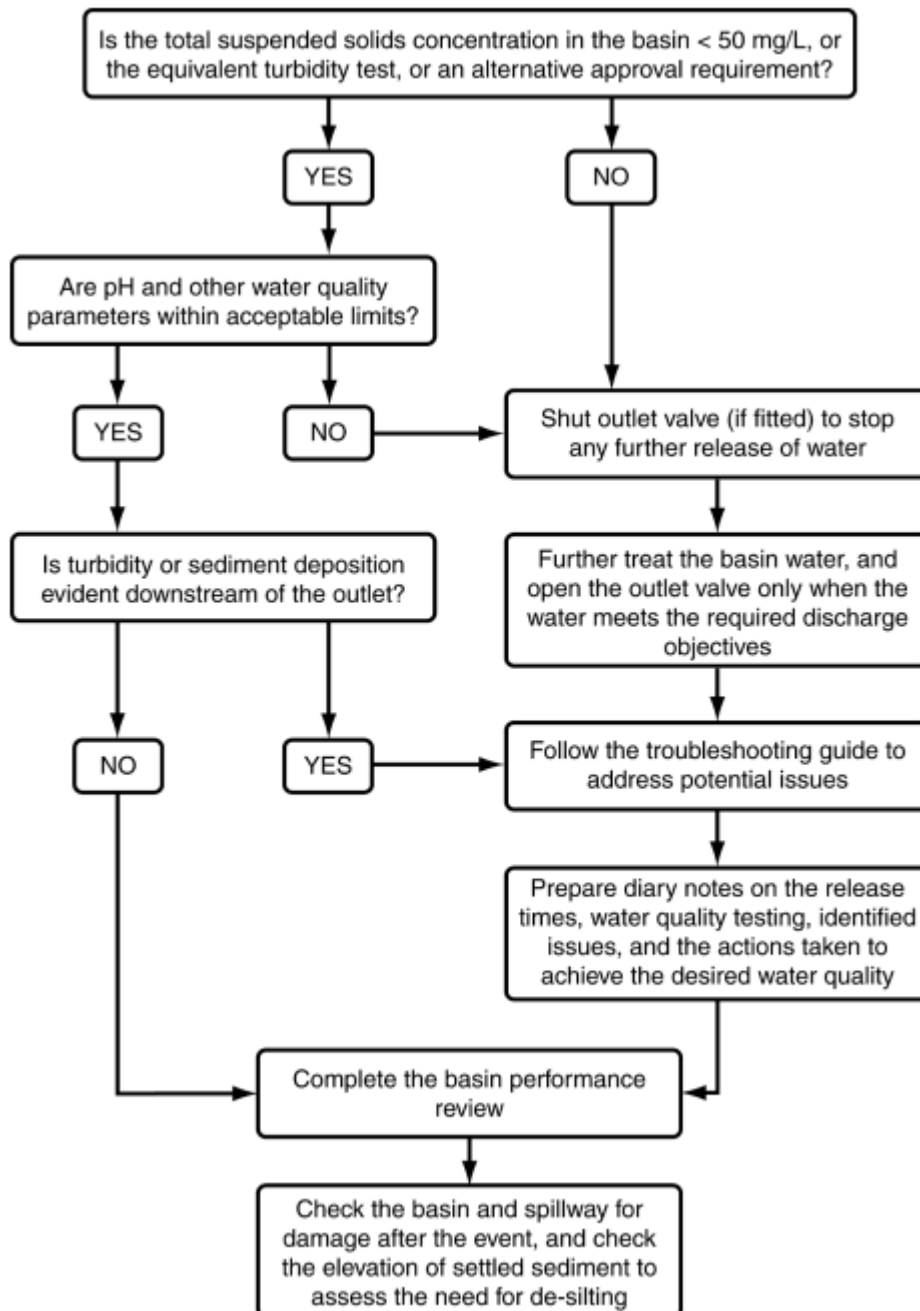


Figure 4: Sediment basin performance assessment process (IECA Appendix B, 2018)

7. Review and improvement

Continuous review and improvement of this ESCP will be achieved by ongoing evaluation of the performance of erosion and sediment control measures against the requirements of the standards and guidelines listed in **Section 1.3** and the objectives and controls outlined in **Section 3**.

This ESCP will be revised to address agency comments, monitoring outcomes, lessons learned and as otherwise necessary. The ESCP will also be revised whenever the construction programme, scope of work or work methods change to a degree that warrant amendments to the proposed erosion and sediment control measures.

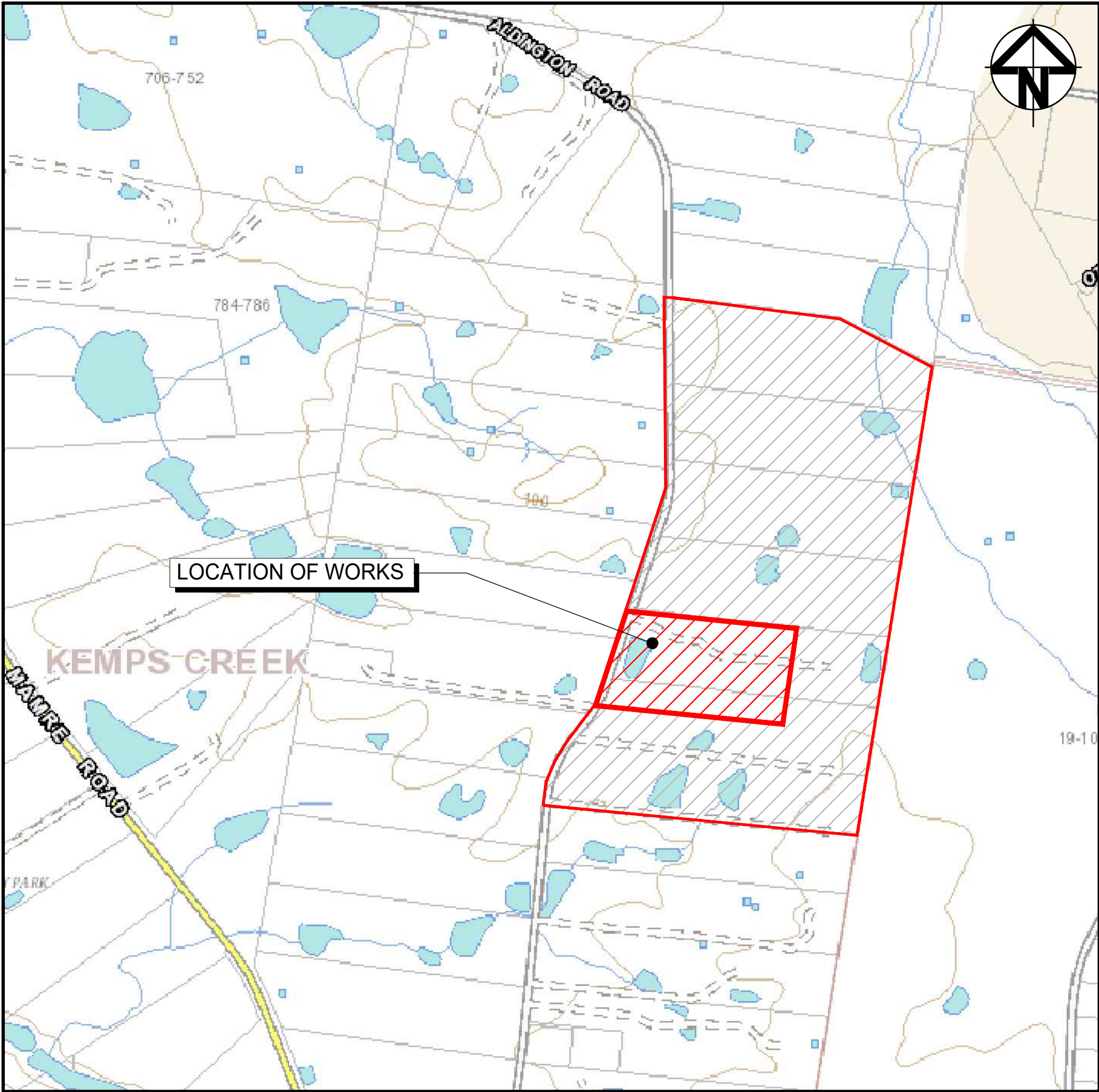
Appendix A – Concept Erosion and Sediment Control Plan Drawings

KEMPS CREEK INDUSTRIAL ESTATE

LOT J

CONCEPT EROSION & SEDIMENT CONTROL PLAN

SSD - 61212208



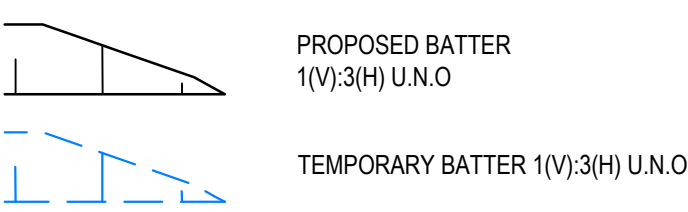
LOCALITY PLAN
NTS

DRAWING LIST	
19-609-C5390	COVER SHEET & DRAWING LIST
19-609-C5391	NOTES AND SPECIFICATIONS SHEET 1
19-609-C5392	NOTES AND SPECIFICATIONS SHEET 2
19-609-C5393	NOTES AND SPECIFICATIONS SHEET 3
19-609-C5395	CONCEPT ESCP BULK EARTHWORKS
19-609-C5396	SEDIMENT BASIN TYPICAL ARRANGEMENT
19-609-C5397	DETAILS SHEET 1
19-609-C5398	DETAILS SHEET 2
19-609-C5399	DETAILS SHEET 3

		Bar Scales	THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L	Client  Stockland 	Scales N.T.S.	Drawn	RC	Project KEMPS CREEK INDUSTRIAL ESTATE SSD-61212208 LOT J	Civil Engineers and Project Managers  Level 7, 153 Walker Street North Sydney NSW 2060 ABN 96 130 882 405 Tel: 02 9439 1777 Fax: 02 9923 1055 www.atl.net.au info@atl.net.au
					Designed	TM			
					Grid MGA	Checked	TM		
					Height Datum AHD	Approved	DF		
								Title COVER SHEET & DRAWING LIST	
P2	ISSUED FOR APPROVAL	08.12.23							
P1	ISSUED FOR APPROVAL	16.11.23							
Issue	Description	Date							
		Project - Drawing No. 19-609-C5390 Issue P2							

SITEWORKS LEGEND

- - - - - EXISTING BOUNDARY
 - . - . - EXISTING BOUNDARY TO BE REMOVED
 - - - - - EXISTING EASEMENT
 - . - . - PROPOSED BOUNDARY
 - - - - - PROPOSED FILL RETAINING WALL
 - - - - - PROPOSED CUT RETAINING WALL
 - - - 48.00 - - - PROPOSED MAJOR CONTOUR
 - - - 48.20 - - - PROPOSED MINOR CONTOUR



SEDIMENT AND EROSION LEGEND

- | | |
|---|---|
|  | SEDIMENT FENCE |
|  | CATCH DRAIN |
|  | BARRIER FENCE |
|  | MESH AND GRAVEL INLET FILTER (SD 6-11) |
|  | GEOTEXTILE INLET (SD 6-12) |
|  | STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA |
|  | PROPOSED SITE ACCESS GATE |
|  | STRAW BALE FILTER (SD 6-7) |

GENERAL REQUIREMENTS

EROSION AND SEDIMENT CONTROL DESIGN

1. THE DETAILS SHOWN WITHIN THIS PLAN ARE OVER-ARCHING EROSION AND SEDIMENT CONTROL REQUIREMENTS ONLY FOR THE INITIAL STAGE OF THE BULK EARTHWORKS. AS THE WORKS PROGRESS AND SITE CONDITIONS CHANGE, THIS PLAN IS TO BE UPDATED ACCORDINGLY. SITE SPECIFIC PROGRESSIVE EROSION AND SEDIMENT CONTROL PLANS (PESCPs) WILL ALSO BE REQUIRED TO DETAIL SPECIFIC WORKS. THIS ESCP HAS BEEN PREPARED TO ACCOMPANY THE PROJECTS CEMP.
2. THIS EROSION AND SEDIMENT CONTROL PLAN (ESCP) HAS BEEN PREPARED BY A CPESC (AS CERTIFIED) IN ACCORDANCE WITH BLUE BOOK VOLUME 1 (LANDCOM, 2004) AND TO MEET THE REQUIREMENTS OF THE CONSTRUCTION WSUD PRINCIPALS SET OUT IN THE DRAFT TECHNICAL GUIDANCE FOR ACHIEVING WIANAMATTA SOUTH CREEK STORMWATER MANAGEMENT TARGETS (NSW GOVERNMENT, 2022). IT DEMONSTRATES THE CONSTRUCTION APPROACH AND TIMING REQUIREMENTS FOR ACHIEVING THE CONSTRUCTION PHASE STORMWATER QUALITY TARGETS.
3. THE NSW GOVERNMENT (2022) TECHNICAL GUIDELINE (AS NOTED ABOVE) REQUIRES 80% OF THE AVERAGE ANNUAL RUNOFF VOLUME ACHIEVES 50mg/L TOTAL SUSPENDED SOLIDS (TSS) OR LESS AND PH IN THE RANGE (6.5-8.5). THE STANDARD BLUE BOOK SEDIMENT BASIN DESIGN AND OTHER STANDARD EROSION AND SEDIMENT CONTROL MEASURES ARE ESTIMATED TO ACHIEVE APPROXIMATELY 60% HYDROLOGICAL EFFECTIVENESS. THEREFORE, IN ORDER TO ACHIEVE 80% HYDROLOGICAL EFFECTIVENESS, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES ABOVE THE STANDARD BLUE BOOK DESIGN HAVE BEEN RECOMMENDED WITHIN THIS PLAN - REFER TO THE FOLLOWING INSTRUCTIONS AND NOTES AND THE PLANS ON ESCP3&4. THESE ADDITIONAL MEASURES INCLUDE:
4. SEDIMENT BASIN DESIGN TO THE 85TH PERCENTILE RAINFALL DEPTH RATHER THAN THE STANDARD 80TH PERCENTILE BLUE BOOK REQUIREMENT PROVIDING ADDITIONAL WATER STORAGE VOLUME;
5. UTILISING EXISTING DAMS AND/OR FUTURE WATER RETENTION DEVICES WHERE PRACTICABLE TO PROVIDE ADDITIONAL WATER STORAGE VOLUME AND BREAK UP CATCHMENTS;
6. ENHANCED EROSION CONTROLS (E.G. REDUCED SLOPE LENGTHS, INCREASED FOCUS ON TEMPORARY AND PROGRESSIVE STABILISATION, ADDITIONAL CHECK DAMS AND A FOCUS ON TEMPORARY DRAINAGE CONTROL);
6. PASSIVE BROADCAST GYPSUM SPREADING OVER THE ENTIRE DISTURBED CATCHMENT PRIOR TO LARGER RAINFALL EVENTS BEYOND THE SEDIMENT BASIN DESIGN TO ASSIST WITH WATER TREATMENT AND TO MINIMISE SOIL LOSS;
7. PRE-LADING SEDIMENT BASIN, SEDIMENT TRAPS AND THEIR INLET DRAINAGE DEVICES WITH GYPSUM OR BIOPOLYMER SOCKS TO SPEED UP SETTLEMENT RATES; AND
8. REGULAR (MONTHLY) INSPECTIONS BY A CPESC TO MONITOR THE SITE CONDITIONS AND WATER QUALITY AND PROVIDE ADVICE IF CHANGES TO THE EROSION AND SEDIMENT CONTROLS ARE NECESSARY.

IF ALL OF THE PROPOSED MEASURES WITHIN THIS PLAN ARE IMPLEMENTED SUCCESSFULLY, THE TARGET WATER QUALITY OUTCOMES CAN BE ACHIEVED FOR AT LEAST 80% OF THE AVERAGE ANNUAL RUNOFF AS REQUIRED BY THE NSW GOVERNMENT (2022) TECHNICAL GUIDELINE.

DESIGN ASSUMPTIONS

- THE IFD: 2YEAR, 6HOUR STORM INTENSITY = 9.13MM/H (BOM).
2. THE SITE IS LOCATED ON THE BLACKTOWN SOIL LANDSCAPE (ACROSS THE MAJORITY OF THE SITE), THE LUDDENHAM SOIL LANDSCAPE (A SMALL PORTION OF THE SITE AT THE HIGHEST TOP CREST) AND SOUTH CREEK SOIL LANDSCAPE (A VERY SMALL PORTION OF THE SITE AT THE LOWEST PART OF THE SITE WITHIN THE DRAINAGE AREAS THAT CROSS MAMRE ROAD).
3. POTENTIAL LIMITATIONS TO THE SOILS/LANDSCAPES INCLUDE LOCALISED SEASONAL WATERLOGGING, LOCALISED WATER EROSION HAZARD, MODERATELY REACTIVE HIGHLY PLASTIC SUBSOILS, MODERATE SALINITY POTENTIAL, POTENTIALLY SODIC AND HIGHLY DISPERSIVE SUBSOILS, LOCALISED SURFACE MOVEMENT POTENTIAL, LOCALISED IMPERMEABLE AND LOCALISED HIGH WATER TABLES.
4. THE K-FACTOR IS LUDDENHAM SOIL LANDSCAPES OF 0.038. THIS IS THEN INCREASED BY 20% TO ACCOUNT FOR POTENTIAL DISPERSIBLE SOILS. THIS GIVES AN K-FACTOR OF 0.0456.
5. 5-DAY, 85TH %ILE RAINFALL DEPTH = 34MM - BASED ON AN AVERAGE OF THE RAINFALL DEPTHS FOR BLACKTOWN, LIVERPOOL, PENRITH AND WALLACIA PROVIDED WITHIN THE BLUE BOOK (KEMPS CREEK IS APPROXIMATELY IN THE MIDDLE OF THESE LOCATIONS).
6. VOLUMETRIC RUNOFF COEFFICIENT (CV) = 0.64 (ASSUMING HYDROLOGIC GROUP D RUNOFF COEFFICIENT - LOW INFILTRATION, HIGH RUNOFF).
7. RUNOFF COEFFICIENT (C10) = 0.9.
8. GROUNDWATER IS NOT EXPECTED TO BE ENCOUNTERED IN THE EARTHWORKS ASSOCIATED WITH THE PROJECT AS NOTED WITHIN THE GEOTECHNICAL DUE DILIGENCE ASSESSMENT DOUGLAS PARTNERS, 2021

EROSION AND SEDIMENT CONTROL

NOTES

GENERAL INSTRUCTIONS

1. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION INCLUDING THE MAINTENANCE PERIOD.
2. THE EXTENT AND POSITION OF THE EROSION AND SEDIMENT CONTROL MEASURES TO BE DETERMINED ON SITE BY THE CONTRACTOR TO SUIT THE CONSTRUCTION PROGRAM.
3. THESE PLANS PRESENT CONCEPTS ONLY AND THE MEASURES SHOWN ON THIS DRAWING(S) ARE MINIMUM REQUIREMENTS ONLY.
4. THE CONTRACTOR SHALL AT ALL TIMES BE RESPONSIBLE FOR THE ESTABLISHMENT, MANAGEMENT AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES TO MEET COUNCIL STANDARDS.
5. LARGE OPEN AREAS OR STEEP BATTERS SHOULD NOT BE LEFT EXPOSED/UNSTABILISED FOR MORE THAN 10 DAYS OR IF WET WEATHER IS FORECAST.
6. EXPOSED AREAS INCLUDING BATTERS WHICH REMAIN UN-WORKED FOR MORE THEN 10 DAYS SHOULD BE STABILISED USING TEMPORARY HYDROMULCHING, HYDROSEEDING OR MULCHING, EVEN IF AREAS WILL BE WORKED AT A LATER TIME.
7. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE INSTITUTION OF ENGINEERS AUSTRALIA, 'SOIL EROSION AND SEDIMENT CONTROL - ENGINEERING GUIDELINES FOR QUEENSLAND CONSTRUCTION SITES'.
8. THE CONTRACTOR SHALL BE AWARE OF ITS RESPONSIBILITIES FOR PROTECTING THE DOWNSTREAM ENVIRONMENT AND RECEIVING WATER FROM POLLUTED AREAS TO PREVENT ENVIRONMENTAL HARM, UNDER THE ENVIRONMENTAL PROTECTION ACT, 1994.
9. ADDITIONALLY THE CONTRACTOR SHALL BE AWARE OF ITS DUTY TO NOTIFY THE LOCAL AUTHORITY AND THE ENVIRONMENTAL PROTECTION AGENCY OF A POTENTIAL OR ACTUAL INCIDENT OF ENVIRONMENTAL HARM.

RECOMMENDED IMPLEMENTATION SEQUENCE:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO WORKS COMMENCING AND IN THE FOLLOWING SEQUENCE:
 - a. CONSTRUCT TEMPORARY STABILISED SITE ACCESS, ENSURING ADJACENT STORMWATER RUN OFF IS DIVERTED AWAY FROM ACCESS
 - b. INSTALL SEDIMENT FENCING AND/OR BARRIER FENCING TO CONFIN EGRESS TO AND EGRESS FROM THE SITE TO STABED ACCESS POINT(S) ONLY.
 - c. PROVIDE INLET PROTECTION TO STORMWATER INLETS AND GULLIES ON ALL ROADS ADJOINING THE SITE.
 - d. CONSTRUCT BARRIER FENCING AROUND RESTRICTED 'NO-GO' ZONES OF RETAINED VEGETATION, AREAS NOT TO BE DISTURBED AND AREAS WHICH WILL REMAIN UN-WORKED.
 - e. CONSTRUCT UPSTREAM DIVERSION CHANNELS TO DIVERT CLEAN WATER AROUND WORKSITE, AND INSTALL APPROPRIATE CHANNEL STABILISATION.
 - f. CONSTRUCT LOW FLOW EARTH BANKS AS CATCH DRAINS PARALLEL TO CONTOURS TO LIMIT LARGE SLOPE LENGTHS (SLOPES SHOULD BE LESS THEN 80M IN LENGTH).
 - g. INSTALL ALL TEMPORARY SEDIMENT FENCES.
 - h. CONSTRUCT ANY NOMINATED SEDIMENT BARRIERS AND SEDIMENT TRAPS.
 - i. STABILISE ALL DISTURBED AREAS ASAP AND PROGRESSIVELY AS WORKS ARE COMPLETED. TEMPORARY STABILISATION TO BE DONE USING MULCHING, HYDROMULCHING, HYDROSEEDING OR DIRECT SEEDING TO GIVE A 70% COVERAGE OF GROUND SURFACE WITHIN 14 DAYS OF WORKS COMPLETING (EVEN IF WORKS MAY CONTINUE LATER).
- UNDISTURBED DEVELOPMENT AREAS SO THAT LAND DISTURBANCE IS CONFINED TO MINIMUM WORK AREAS.
- DISTURBED AREAS TO EXTEND NO MORE THAN 5 METRES (PREFERABLY 2 METRES) FROM ESSENTIAL WORKS AREAS.
- WORK AREAS TO BE DELINEATED BY BARRIER FENCING AND DIVERSION CHANNEL UPSLOPE AND SEDIMENT FENCING DOWNSLOPE.
- THE CONTRACTOR SHALL ENSURE THAT THE EXISTING VEGETATION AND GROUND COVER IS RETAINED AS MUCH AS POSSIBLE.
- TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR LATER USE ONSITE.
- SITE VEGETATION APPROVED FOR CLEARING SHOULD BE MULCHED AND STOCKPILED FOR LATER USE IN LANDSCAPING, STABILISATION AND/OR SITE REHABILITATION WORKS.
- AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND PROTECT ANY DOWNSTEAM CONSTRUCTION AND RECEIVING ENVIRONMENTS.
- EROSION AND SEDIMENT CONTROL PROTECTION MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONTRACT.
- PLANS AND CONTROL MEASURES FOR LARGE SITES WILL NEED TO BE REVISED AND UPDATED TO REFLECT THE SITE STAGES AND PROGRESSION OF WORKS.
- MEASURES INCLUDING SEDIMENT FENCES SHOULD BE MOVED AND REINSTATED AS WORKS PROGRESS.
- FOOT AND VEHICULAR TRAFFIC TO BE RESTRICTED IN RECENTLY STABILISED AREAS INCLUDING THOSE HYDROSEEDED, TURFED OR SEEDED.

DUST CONTROL

1. DURING WINDY AND DRY WEATHER ANY UNPROTECTED AREAS SHALL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. WHERE WATER IS NOT AVAILABLE IN SUFFICIENT QUANTITIES, SOIL BINDERS OR DUST RETARDANTS TO BE USED FOR DUST SUPPRESSION.
2. EXPOSED SURFACES INCLUDING BATTERS SHOULD BE LEFT ROUGH TO REDUCE WIND SPEEDS AND POTENTIAL FOR WIND EROSION.
3. USE OPEN WEAVE BARRIER FENCING ON WINDWARD SIDE OF SITE IF REQUIRED. FENCING IS GENERALLY REQUIRED WHERE AREA OF DISTURBANCE IS >5000m².

CONTROL MEASURES

1. FINAL SITE LANDSCAPING SHALL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS OF CONSTRUCTION COMPLETION
2. SEDIMENT LADEN WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM BY USING INLET PROTECTION.
3. ALL PERIMETER BANKS AND CHANNEL DRAINS SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
4. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED ONCE SITE IS STABILISED AND UPSTREAM WORKS HAVE BEEN COMPLETED.
5. AT CONSTRUCTION COMPLETION ALL TEMPORARY EARTH STRUCTURES INCLUDING SOIL STOCKPILES ARE TO BE TRACK ROLLED AND SEEDED. THE CONTRACTOR IS TO ENSURE A 70% COVERED WITHIN 14 DAYS.

OTHER MATTERS

1. ACCEPTABLE RECEPTORS AND DISPOSAL PRACTICES WILL BE USED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHERS, LITTER AND GENERAL WASTE MATERIALS.
2. ANY EXISTING TREES WHICH ARE NOT REQUIRED OR APPROVED TO BE CLEARED FOR THE WORKS AND/OR FORM PART OF THE FINAL LANDSCAPING PLAN SHOULD BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
 - a. PROTECTING THEM WITH BARRIER FENCING OR MARKERS.
 - b. ENSURING NOTHING IS NAILED TO THEM
 - c. PROHIBITING PAVING, GRADING OR PLACING OF STOCKPILES WITHIN DRIP LINE.
3. ALL VEHICLE AND EQUIPMENT WASHING SHOULD BE CONTAINED IN SPECIFIC BUNDED AREAS, DISCONNECTED FROM CONCENTRATED FLOW PATHS AND THE STORMWATER SYSTEM.
4. ANY NECESSARY VEHICLE OR EQUIPMENT REFUELLING SHOULD BE UNDERTAKEN AWAY FROM CONCENTRATED FLOW PATHS AND PREFERABLY WITHIN A BUNDED AREA.
5. ANY ONSITE FUEL STORAGE AREAS SHOULD BE COVERED AND BUNDED.

MAINTENANCE OF PUBLIC ROADS

1. ALL CONSTRUCTION VEHICLES DEPARTING FROM THE SITE SHALL HAVE THEIR TYRES WASHED DOWN OR SEDIMENT REMOVED BY A STABILISED SITE ACCESS DEVICE.
2. THE STABILISED SITE ACCESS AREAS SHALL BE LOCATED SUCH THAT SILTED WATER IS FILTERED THROUGH A SUITABLE SEDIMENT TRAP (SUCH AS A SEDIMENT FENCE) INSTALLED DOWNSTREAM OF ACCESS.
3. THE CONTRACTOR SHALL INSPECT THE PUBLIC ROADS ADJACENT TO THE SITE DAILY AND MANUALLY REMOVE ANY SEDIMENT DEPOSITS (BY SWEEPING NOT WASH DOWN).

SITE INSPECTION AND MAINTENANCE

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED REGULARLY, IMMEDIATELY BEFORE SITE CLOSURE, PRIOR TO PREDICTED LARGE STORM EVENTS AND AFTER EVERY SIGNIFICANT (>5MM) RAINFALL EVENT OR AT LEAST ON A WEEKLY BASIS.
2. THE CONTRACTOR WILL AS A MINIMUM CONDUCT EACH INSPECTION IN LINE WITH THE FOLLOWING
 - a. RECORD TYPE OF DEVICE/CONTROL MEASURE BEING INSPECTED AND ITS LOCATION;
 - b. RECORD THE CONDITION OF EVERY CONTROL MEASURE;
 - c. RECORD MAINTENANCE REQUIREMENTS FOR EVERY CONTROL DEVICE;
 - d. RECORD SEDIMENT VOLUMES REMOVED FROM SEDIMENT TRAPPING DEVICES;
 - e. RECORD DETAILS OF SEDIMENT BASIN TREATMENT, FLOCCULANT DOSAGE AND CLEANOUT;
 - f. RECORD SEDIMENT DISPOSAL PROCEDURES AND LOCATION.
3. REPAIRS AND MAINTENANCE OF ALL DEVICES AND MEASURES INCLUDING DIVERSION CHANNELS SHALL BE UNDERTAKEN AS REQUIRED, ENSURING ALL MEASURES ARE FULLY FUNCTIONAL AT ALL TIMES.
4. ENSURE SEDIMENT LADEN WATER HAS NOT BEEN DIVERTED AROUND DEVICES.
5. REPAIR SCOUR DAMAGE TO SEDIMENT CONTROL MEASURES AFTER RAINFALL EVENTS AND REINSTATE DEVICES AS NECESSARY.
6. SEDIMENT FENCES WILL REQUIRE CLEANING WHEN SEDIMENT REACHES 300MM DEPTH OR ONE-HALF THE HEIGHT OF THE FILTER FABRIC AND ALL OTHER SEDIMENT TRAPS WILL REQUIRE CLEANING OUT WHEN 30% OF DESIGN CAPACITY IS REACHED.
7. ALL INLET AND GULLY TRAPS TO BE CLEANED NOT HOSED AFTER EVERY RAINFALL EVENT, (15-mm) OR AT LEAST ON A WEEKLY BASIS.
8. ANY TRAPPING DEVICE THAT IS FOUND TO BE RELOCATED, ENSURING FURTHER POLLUTION TO DOWNSTREAM ENVIRONMENTS WILL NOT OCCUR.
9. ALL SEEDING, HYDROSEEDING AND TURFING REQUIRES REGULAR WATERING, UNTIL EFFECTIVE COVER ESTABLISHED AND PLANTS ARE GROWING VIGOROUSLY. WATERING SHOULD VARY DEPENDING ON WEATHER AND SOIL CONDITIONS.
10. WATERING SHOULD START IMMEDIATELY AFTER PLANTING AND SHOULD COMPLY WITH THE FOLLOWING AS A MINIMUM:

WEEK 1	3 WATERINGS/WEEK
WEEK 2-6	2 WATERINGS/WEEK
WEEK 7-12	1 WATERING/WEEK
11. EXCESSIVE VEGETATION GROWTH WILL BE CONTROLLED THROUGH MOWING OR SLASHING.
12. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE INSPECTION, MAINTENANCE AND TESTING OF DEVICES IS UNDERTAKEN ON SITE.
13. THE CONTRACTOR TO KEEP DETAILED AND LEGIBLE RECORDS OF ALL INSPECTION AND MAINTENANCE UNDERTAKEN ON THE EROSION AND SEDIMENT CONTROL DEVICES.
14. ALL SITE WASTE INCLUDING GENERAL RUBBISH TO BE DISPOSED OF IN AN ENVIRONMENTALLY RESPONSIBLE MANNER IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION (WASTE MANAGEMENT) POLICY 2000 AND ENVIRONMENTAL PROTECTION (WASTE MANAGEMENT) REGULATION 2000.
15. THE CONTRACTOR SHALL CONSTRUCT AND IMPLEMENT ADDITIONAL MEASURES AS NECESSARY TO ENSURE PROTECTION OF DOWNSTREAM ENVIRONMENTS.

SOIL STRIPPING AND STOCKPILING

1. IDEALLY, STRIP TOPSOIL WHEN IT IS MOIST, NOT TOO WET OR TOO DRY.
2. TAKE CARE WHEN STRIPPING TOPSOIL NOT TO STRIP SUBSOIL WITH THE TOPSOIL. PROFILE, TOPSOIL AND SUBSOLS SHOULD BE MANAGED SEPARATELY.
3. WHEREVER POSSIBLE, STOCKPILES ARE TO BE ESTABLISHED AND MAINTAINED IN ACCORDANCE WITH STANDARD DRAWING SD 4-1 (LANDCOM, 2004).
4. AS MUCH AS IS FEASIBLE, MULCHED VEGETATION, TOPSOIL AND SUBSOIL (IF APPLICABLE) ARE TO BE STOCKPILED SEPARATELY.
5. SEDIMENT FENCING IS TO BE INSTALLED AROUND THE LOWER EDGE OF STOCKPILES AS PER STANDARD DRAWING SD 4-1, UNLESS THE STOCKPILE IS IMMEDIATELY ADJACENT TO A SUITABLE ALTERNATIVE CONTROL SUCH AS A SEDIMENT BASIN. A DIVERSION DRAINBUND IS TO BE INSTALLED ON THE HIGH SIDE OF STOCKPILES IF RUN-ON FROM UPSLOPE LANDS COULD IMPACT ON THE STOCKPILE.
6. STOCKPILES ARE NOT TO BE POSITIONED WITHIN 5M OF POSSIBLE CONCENTRATED WATER FLOW (INCLUDES ROAD GUTTERS AND TABLE DRAINS).
7. STOCKPILES ARE TO BE SITED AT LEAST 50M FROM ANY WATERCOURSE, NATURAL DRAINAGE LINE OR CREEK AND AT LEAST 2M FROM ANY TREES TO BE RETAINED.
8. STOCKPILES WILL NOT BE LOCATED ON FLOOD PRONE LANDS BELOW THE 2 YEAR FLOOD LEVEL.
9. STOCKPILES WILL BE POSITIONED WITHIN THE PROTECTED PROJECT CONSTRUCTION BOUNDARY AND AWAY FROM PROTECTED AREAS (E.G. NATIVE VEGETATION).
10. INACTIVE STOCKPILE FACES ARE TO BE PROVIDED WITH AT LEAST 60% COVER (I.E. RUSLE C-FACTOR OF 0.1) WITHIN 10 DAYS OF FORMATION. STABILISATION OF STOCKPILES CAN BE ACHIEVED BY SEEDING AND SPRAYING WITH A SOIL STABILISER (E.G. VITAL P47). COVERING WITH GEOTEXTILE OR MATTING OR EQUIVALENT (NOTE SEEDING IS NOT REQUIRED FOR STOCKPILES IF THEY WILL BE IN PLACE FOR LESS THAN 3 MONTHS OR IF THEY HAVE AN EXISTING SEEDBANK). STOCKPILES OF TOPSOIL OR MULCH SHOULD BE CONSTRUCTED TO NO MORE THAN 2 METERS IN HEIGHT WHEREVER POSSIBLE (NOTE THIS ONLY APPLIES TO TOPSOIL AND MULCH).
11. STOCKPILES SHOULD BE FORMED TO BE NO STEEPER THAN 2:1 (H:V) WHEREVER POSSIBLE.

DUST SUPPRESSION

1. DUST SUPPRESSION IS TO BE CARRIED OUT WHENEVER NECESSARY TO MINIMISE SEDIMENT BECOMING AIR BORNE DUE TO WIND EROSION.
2. AN APPROPRIATE WATER SOURCE FOR DUST SUPPRESSION AND/OR DUST SUPPRESSANT MANAGEMENT SYSTEM MUST BE IDENTIFIED PRIOR TO STARTING CONSTRUCTION WORKS.
3. ENSURE DUST SUPPRESSION IS CARRIED OUT IN A MANNER TO AVOID WATER RUNOFF, EROSION OR PONDING ON SURFACES (I.E. APPLY IN A GENTLE MANNER AT APPROPRIATE RATES AND MONITOR REGULARLY).
4. TEMPORARY STABILISERS (E.G. VITAL BON-MATT P47), GEOTEXTILE, JUTE MATTING OR EQUIVALENT CAN BE USED IN NON-TRAFFICKED AREAS TO ASSIST WITH DUST CONTROL.

GENERAL REQUIREMENTS

STABILISATION

1. UNDERTAKE PROGRESSIVE STABILISATION OF DISTURBED GROUND SURFACES AS THEY ARE COMPLETED RATHER THAN AT THE END OF THE WORKS PROGRAM (REFER TO TABLES 1 AND 2).
2. FINAL STABILISATION IS TO ACHIEVE THE C-FACTORS (GROUND COVER) DETAILED IN TABLES 1 AND 2.
3. FINAL REHABILITATION IS TO BE IN ACCORDANCE WITH THE LANDSCAPING/REHABILITATION PLANS.
4. AREAS TO BE REVEGETATED ARE TO BE TOPSOILED FIRST. TOPSOIL IS TO BE SPREAD EVENLY TO AT LEAST 75MM. REFER TO STANDARD DRAWING (SD 4-2) FOR INSTRUCTION REGARDING TOPSOIL REPLACEMENT.
5. TOPSOIL IS TO BE TESTED PRIOR TO REVEGETATION TO CONFIRM TREATMENT (AMENDATION/FERTILISATION REQUIREMENTS INCLUDING TESTING FOR DISPERSION, PH, TRACE NUTRIENTS, EC AND CEC).
6. APPROPRIATE SEEDBED PREPARATION SHOULD BE CARRIED OUT WHEN REVEGETATING LANDS (SEE STANDARD DRAWING (SD 7-1)).
7. AS MUCH AS POSSIBLE, AVOID HANDLING TOPSOILS WHEN THEY ARE TOO WET OR TOO DRY. THIS HELPS PRESERVE SOIL STRUCTURE.
8. AVOID BLENDING FRESH MULCH WITH TOPSOIL, AS THIS LEADS TO DE-NITRIFICATION.
9. TO HELP PRESERVE SOIL STRUCTURE, AVOID EXCESSIVE COMPACTION OF TOPSOILS.
10. GYPSUM SHOULD BE APPLIED TO SUBSOILS (AS CLAY BREAKER) AT AROUND 0.5kg/m² FOR GENERAL SURFACES AND BATTERS. RATES TO BE CONFIRMED PRIOR TO REVEGETATION WITH SOIL TESTING.
11. ALL FLOW AREA SUBSOILS (DRAINAGE LINES, WATERWAYS, DIVERSION DRAINS, CHANNELS, BASINS) SHOULD BE GYPSUM TREATED AT A RATE OF 1.5kg/m².
12. TOPSOILS SHOULD BE AMELIORATED WITH LIME TO ADJUST PH IF FIELD TESTING SHOWS PH IS BELOW 6.
13. TOPSOILS WOULD MOST LIKELY BENEFIT FROM AN APPLICATION OF NPK FERTILIZER PLUS TRACE ELEMENTS (S, CA AND MO). SOIL TESTING PRIOR TO RE-SPREADING CAN CONFIRM THE APPROPRIATE RATE.
14. PERMANENT DRAINS ARE TO BE STABILISED IN ACCORDANCE WITH ENGINEERING DESIGN BUT MUST ACHIEVE THE C-FACTORS (GROUND COVER) DETAILED IN TABLE 1. SOIL TESTING OF SUBSOILS AND TOPSOILS IS TO BE UNDERTAKING TO POTENTIAL SOIL TREATMENT/STABILISATION REQUIREMENTS.
15. TEMPORARY DIVERSION DRAINS/BUNDS ARE TO BE STABILISED TO ACHIEVE THE C-FACTORS AS DETAILED IN TABLES 1 AND 2, USING SEEDING - VITAL PAF - JUTE MESHIMATING OR ALTERNATIVELY GEOTEXTILE FABRIC, ROCK OR TRM. SUBSOILS ARE TO BE TREATED FIRST BY LIGHTLY RIPPING GYPSUM INTO THE SURFACE AT A RATE OF APPROX. 1.5kg/m². REFER TO THE PLANS FOR SPECIFIC DETAILS. ALSO REFER TO STANDARD DRAWINGS (SD 5-6 AND SD 5-7).
16. REFER TO THE 'SOIL STRIPPING AND STOCKPILING' NOTES FOR STABILISATION REQUIREMENTS ON TOPSOILS. ALSO REFER TO TABLES 1 AND 2 AND STANDARD DRAWING (SD 4-1).
17. SEDIMENT BASIN INLET/SOULETS ARE TO BE STABILISED IN ACCORDANCE WITH PERMANENT ENGINEERING DESIGN (WHERE APPLICABLE) OR WITH GEOTEXTILE UNDERLAY AND ROCK IN ACCORDANCE WITH RECOMMENDATIONS FOR 'HIGH FLOW AREAS' ON TABLE 1 AND AS DETAILED ON THE PLAN.
18. HIGHLY TRAFFICKED AREAS SUCH AS LAYDOWN/STORAGE AREAS, HAUL ROADS/ACCESS TRACKS AND SITE COMPOUNDS WILL BE FORMED IN ACCORDANCE WITH ENGINEERING SPECIFICATIONS AND STABILISED WHERE NECESSARY AND AS MUCH AS PRACTICABLE TO MINIMISE EROSION AND PROVIDE A TRAFFICABLE SURFACE. STABILISATION OF THESE AREAS WILL BE ACHIEVED WITH SUITABLE TRAFFICABLE MEASURES (E.G. WITH HEAVY BOUND DGB (CEMENT STABILISED), AGGREGATE, CRUSHED ROCK, ROAD BASE OR A HEAVY DUTY TRAFFICABLE SOIL STABILISER) AND RE-GRADING/RE-SURFACING AS NECESSARY.
19. AS SURFACES ARE STABILISED (AT LEAST 90% OF ANY FINISHED AREA HAS AT LEAST 70% GROUND COVER) AND PERMANENT DRAINAGE MEASURES ARE INSTALLED, TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AND WATER MANAGEMENT STRUCTURES CAN BE REMOVED (E.G. DIVERSION DRAINS).
20. TEMPORARY STABILISATION OF EXPOSED SURFACES ON HIGH RISK AREAS (I.E. STEEP SLOPES (>5%), BATTERS, SURFACES NOT DRAINING TO SEDIMENT
21. SURFACES NOT DRAINING TO SEDIMENT BASINS AND WORKS (INNER WATERWAYS) WILL BE UNDERTAKEN PRIOR TO RAINFALL IN ACCORDANCE WITH THE RAINFALL PREPARATION PROCEDURE: NOTES AND THE INSTRUCTIONS ON THE PLAN.
22. ALL EXPOSED LANDS WHERE WORKS ARE NOT ACTIVELY OCCURRING (FOR 20 DAYS OR MORE) ARE TO BE TEMPORARILY STABILISED WITH A TEMPORARY GROUND COVER (I.E. A SOIL BINDER (E.G. VITAL STONEWALL), MATTING, GEOFABRIC OR EQUIVALENT).
23. WHEREVER POSSIBLE, RE-USE CLEARED/MULCHED VEGETATION FOR EITHER TEMPORARY OR PERMANENT STABILISATION OF DISTURBED AREAS.

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SEDIMENT BASINS

- IN ACCORDANCE WITH PLANNING POLICY APPLICABLE AT THE SITE, ALL SEDIMENT BASINS ARE TO BE DESIGNED, CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH IECA "BEST PRACTICE EROSION AND SEDIMENT CONTROL- APPENDIX B - SEDIMENT BASIN DESIGN AND OPERATION" (JUNE 2018) WHICH REQUIRES ALL BASINS TO BE CONTINUOUS FLOW TYPE A OR B BASINS WITH AUTOMATED CHEMICAL DOSING, NOT TRADITIONAL TYPE D/F UNLESS SITE CONSTRAINTS DICTATE.
- THE CONTRACTOR SHALL KEEP DETAILED AND ACCURATE RECORDS OF THE MONITORING, TREATMENT, TESTING AND MAINTENANCE OF THE SEDIMENT BASIN INCLUDING RECORDED RAINFALL VOLUME, FLOCCULATING AGENTS USED.
- ALL CHEMICAL DOSING AND WATER TESTING TO BE UNDERTAKEN BY A SUITABLY QUALIFIED PERSON.
- ALL LABORATORY TESTING TO BE UNDERTAKEN BY A NATA ACCREDITED LABORATORY.
- ALL WATER PUMPED FROM THE SEDIMENT BASIN SHALL BE TESTED FOR ENVIRONMENTAL COMPLIANCE AGAINST THE RELEASE CRITERIA IN THE TABLE BELOW (AS A MINIMUM), UNLESS ALTERNATIVE (MORE STRINGENT) STANDARDS ARE SPECIFIED BY THE LOCAL AUTHORITY PRIOR TO RELEASE

PARAMETER	RELEASE CRITERIA
SUSPENDED SOLIDS	50mg/l MAX
pH	WITHIN RANGE 6.5-8.5
VISUAL AMENITY	NO VISUAL PLUME

- WATER TESTING TO BE UNDERTAKEN USING EITHER A HANDHELD PH/TURBIDITY METER OR SAMPLES COLLECTED FOR LABORATORY TESTING PRIOR TO ANY MANUAL BASIN DEWATERING.
- THE TREATED BASIN SHALL BE DEWATERED WITH A PUMP SYSTEM WITH A FLOATING INLET TO ENSURE SETTLED SEDIMENT IS NOT ENTRAINED AND DISCHARGED.
- COMPLETE BASIN DEWATERING SHALL OCCUR WITHIN 5 DAYS FROM CONCLUSION OF RAINFALL EVENT.
- SEDIMENT BASINS WILL REQUIRE DEWATERING AND SEDIMENT CLEANOUT ONCE STORAGE CAPACITY REACHES 70%.
- CAPTURED SEDIMENT WILL BE DISPOSED OF IN AN ENVIRONMENTALLY RESPONSIBLE MANNER AS TO NOT CAUSE FURTHER CONTAMINATION OR DOWNSTREAM POLLUTION. SEDIMENT SHOULD NOT BE DISPOSED OF IN CONCENTRATED FLOWS, WHERE IT CAN BE RE-ENTRAINED OR WHERE THE RECEIVING WATER HAS A PH OF < 5.5.
- THE BASIN AND ALL OTHER CONTROL DEVICES WILL BE MAINTAINED IN AN OPERATIONAL STATE UNTIL SITE STABILISED.
- REPAIR ANY SCOUR DAMAGE TO THE SEDIMENT BASIN BATTERS AND EMERGENCY SPILLWAY FOLLOWING RAINFALL EVENTS.
- SEDIMENT BASIN SHOULD NOT BE CONSTRUCTED WITH SMOOTH INTERNAL SLOPES AND BASIN BATTERS SHOULD NOT BE STEEPER THAN 3(H):1(V).
- BASINS SHOULD BE APPROPRIATELY FENCED AND MARKED BY WARNING SIGNS IF UNSUPERVISED PUBLIC ACCESS IS LIKELY AND PUBLIC SAFETY IS AT RISK.
- ALL INLET CHUTES TO BE FORMED FROM DUMPED ROCK PLACED OVER GEOTEXTILE LINER (BIDIM A34 OR EQUIVALENT). ROCK USED TO BE CRUSHED, CLEAN, HARD DURABLE AND MINIMUM AVERAGE SIZE (d₅₀)=150mm

DRAIN/BUND STABILISATION AND LINING

SOIL PREPERATION PRIOR TO LINING DRAINS:

- GYPSUM SHALLOW/LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF 500g/m² (eg: RIP IN USING GRADER OR EXCAVATOR BUCKET TINES (TEETH).
- PLACE TOPSOIL OVER ENTIRE DRAIN SURFACE TO A MINIMUM DEPTH OF 75mm. (SOIL PREPARATION ALSO APPLIES TO TEMPORARY DRAINS IN PLACE FOR <6 MONTHS)

DRAIN LINING:

- SEEDING + VITAL P47 (OR VITAL STONEWALL) + JUTE MATTING.
- (VITAL P47/ STONEWALL TO BE APLIED AT A MAXIMUM DILUTION OF 1:10 (VITAL WATER).
- SEEDING TO BE A COMBINATION OF A COVER CROP (eg: RYE GRASS FOR WINTER MONTHS / JAPANESE MILLET FOR SUMMER MONTHS) AND A SUITABLE PERRENNIAL (LONG TERM) LOCAL NATIVE GRASS MIX.

WATERING:

- REGULAR WATERING REQUIRED WHERE RAINFALL IS INSUFFICIENT.
- ENSURE WATER IS APPLIED GENTLY (NOT WITH A PRESSURE SPRAY).
- ENSURE OVERWATERING DOES NOT OCCUR AND IS MINIMISED TO ONLY WHAT IS NECESSARY FOR PLANTS TO THRIVE.

LINING OF TEMPORARY DRAINS (IN PLACE FOR <6 MONTHS:

- LINE WITH GEOTEXTILE (BIDIM A24 MIN. EQUIVALENT).

GENERAL REQUIREMENTS

DIRTY WATER TREATMENT AND DISCHARGE REQUIREMENTS

THE DEVELOPMENT MUST COMPLY WITH SECTION 120 OF THE POEQ ACT WHICH PROHIBITS THE POLLUTION OF WATERS, EXCEPT AS EXPRESSLY PROVIDED FOR IN AN EPL. THE FOLLOWING REQUIREMENTS ARE TO BE ADHERED TO TO ENSURE THIS:

WATER ACCUMULATING IN SEDIMENT BASINS, TRAPS, EXCAVATIONS OR IN ANY OTHER LOW POINTS ONSITE CAN EITHER BE:

- RE-USED FOR DUST SUPPRESSION OR CONSTRUCTION PURPOSES; OR
- TREATED (IF REQUIRED) AND TESTED IN SITY, THEN RELEASED OFF SITE ONCE IT MEETS THE REQUIRED WATER QUALITY DISCHARGE CRITERIA [SEE BELOW]; OR
- PUMPED INTO A TANK, TRUCK OR OTHER HOLDING AREA FOR LATER TREATMENT; OR
- SPREAD OUT AND INFILTRATED ONTO WELL VEGETATED LANDS WITHIN THE SITE BOUNDARY AT LEAST 50m AWAY FROM ANY WATERWAY, SWALE OR DRAINAGE LINE. ENSURE WATER IS APPLIED SLOWLY AND IN A MANNER TO AVOID CONCENTRATED SURFACE RUNOFF AND/OR EROSION.
- ANY ACTIVE DISCHARGE OF WATER FROM THE PROJECT (I.E. WHERE WATER IS MOVED OFFSITE VIA DIRECT ACTION SUCH AS PUMPING RATHER THAN FLOWING OFF THE PROJECT AS A RESULT OF HEAVY RAINFALL) IS TO ACHIEVE:
 - [I 50MG/L OR LESS TSS (TOTAL SUSPENDED SEDIMENT); AND
 - PH 6.5 TO 8.5; AND
 - <10MG/L OIL AND GREASE AND NO VISIBLE TRACE.
- ADEQUATE WATER QUALITY CAN BE ACHIEVED BY USING GYPSUM AT A RATE OF APPROXIMATELY 30 KG/100 M3 OF STORMWATER. ALTERNATIVE FLOCCULATING AGENTS CAN ONLY BE USED IF THEY DO NOT CAUSE ENVIRONMENTAL HARM WHEN DISCHARGED. REFER TO MANUFACTURERS GUIDELINES FOR DOSAGE DETAILS.
- SPREAD THE TREATMENT AGENT EVENLY OVER THE ENTIRE POND SURFACE FOR PROPER TREATMENT OF WATER.
- THESE DE-WATERING REQUIREMENTS APPLY TO DIRTY WATER ACCUMULATING IN ANY SORT OF EXCAVATION, SUMP, OR OTHER PONDED WATER BODY ON THE PROJECT.
- IF THE WATER IS GOING TO BE USED WITHIN THE CONSTRUCTION SITE FOR DUST-SUPPRESSION OR CONSTRUCTION
- PURPOSES AND WILL DRAIN BACK INTO THE SEDIMENT CAPTURE SYSTEM IT DOES NOT REQUIRE TREATMENT.

RAINFALL PREPARATION PROCEDURE

- THE WEATHER FORECAST IS TO BE MONITORED REGULARLY (AT LEAST DAILY AND HOURLY WHEN RAINFALL IS IMMINENT)BY THE SITE ENVIRONMENTAL MANAGER (OR THEIR REPRESENTATIVE).
- PRIOR TO FORECAST RAINFALL (> 70% CHANCE OF 5MM OR MORE OVER 24 HOURS) AND SITE CLOSURE OF MORE THAN 2 DAYS, THE FOLLOWING WILL OCCUR:
 - THE SITE ENVIRONMENT MANAGER (OR THEIR REPRESENTATIVE) IS TO INSPECT THE CONDITION OF ALL EROSION AND SEDIMENT CONTROLS AND ACTION ANY URGENT REPAIR, MAINTENANCE OR IMPROVEMENT THEY ARE TO KEEP A RECORD ALL FINDINGS (INCLUDING DETAILS OF ACTIONS AND THEIR CLOSE OUTS).
- SLOPE BREAKS/CONTOUR BERMS WILL BE PUSHED UP OR CUT IN ACROSS LARGE, EXPOSED AREAS FO SLOW DOWN FLOWS AND MINIMISE EROSION. SLOPE LENGTHS ARE TO BE RESTRICTED TO 40M INTERVALS ACROSS ALL EXPOSED SURFACES PRIOR TO AND DURING RAINFALL. DIVERSION BUNDS/DRAINS, LOW FLOW EARTH BANKS (STANDARD DRAWING SD 5-5) OR SANDBAGS/EQUIVALENT SHOULD BE INSTALLED PRIOR TO RAINFALL EVENT TO ACHIEVE THIS WHERE REQUIRED. NOTE THAT SLOPE B BREAKS/CONTOUR BERMS ARE NOT REQUIRED TO BE IN PLACE DURING ACTIVE CONSTRUCTION WORKS WHEN RAINFALL IS NOT FORECAST/OCCURRING. LOCATIONS OF SLOPE BREAKS FOR THE INITIAL EARTHWORKS ARE SHOWN. HOWEVER, AS WORKS PROGRESS LOCATIONS FOR SLOPES BREAKS WILL CHANGE AND THESE ARE TO BE UPDATED ON PROGRESSIVE ESCPS.
- TEMPORARY DIVERSIONS AROUND CULVERT WORKS ARE TO BE INSTALLED TO TAKE UPSLOPE CLEAN WATER FLOWS AROUND/THROUGH THE WORKS - REFER TO THE PLANS AND TO FOR SPECIFIC INSTRUCTIONS.
- ALL EXPOSED SURFACES OF HIGH RISK AREAS (I.E. STEEP SLOPES (5%), BATTERS, SURFACES NOT DRAINING TO SEDIMENT BASINS AND WORKS IN/NEAR WATERWAYS AND FLOW AREAS) WILL BE STABILISED WITH TEMPORARY GROUND COVERS LIE. VITAL P47/STONEWALL, GEOTEXTILE OR BLACK PLASTIC (SECURELY PINNEDOR EQUIVALENT).
- CHECK DAMS ARE TO BE PROVIDED WITHIN ALL DRAINAGE DEVICES INCLUDING ROADSIDE TABLE DRAINS AT 40m INTERVALS.
- PRIOR TO FORECAST HIGH RAINFALL (> 70% CHANCE OF 10mm OR MORE OVER 24 HOURS) AND SITE CLOSURE OF MORE THAN 2 DAYS, THE FOLLOWING WILL OCCUR IN ADDITION TO THE BELOW:
 - WINDROWS/BUNDS ARE TO BE PROVIDED ALONG THE TOP EDGE OF FILL BATTERS TO PROTECT FILL BATTERS. LOCATIONS AND DETAILS ARE TO BE CONFIRMED ONSITE AS WORKS PROGRESS AND DOCUMENTED ON SITE SPECIFIC PROGRESSIVE ESCPS. THEY ARE NOT REQUIRED FOR INITIAL STRIPPING WORKS. THEY ARE TO BE FORMED AS COMPACTED EARTH BERMS (MIN. 600MM HIGH) ALONG THE TOP EDGE OF FILL PLATFORMS PRIOR TO RAINFALL AND SITE CLOSURE (2 DAYS). THEY ARE NOT REQUIRED DURING DRY WEATHER. ADDITIONAL WINDROWS AND GEOFABRIC LINED BATTER CHUTES AT REGULAR INTERVALS MAY NEED TO BE PROVIDED AS THE WORKS PROGRESS - LOCATIONS AND DETAILS ARE TO BE PROVIDED ON SITE SPECIFIC PROGRESSIVE ESCPS.
- PRIOR TO FORECAST RAINFALL (~70% CHANCE OF 34MM OR MORE OVER A 5 DAY PERIOD) AND SITE CLOSURE OF MORE THAN 2 DAYS, THE FOLLOWING WILL OCCUR IN ADDITION TO THE ABOVE:
 - GYPSUM WILL BE SPREAD/DUSTED EVENLY OVER ALL EXPOSED SOIL SURFACES.
 - SEDIMENT BASIN AND SEDIMENT TRAP INLET POINTS WILL BE PRELOADED WITH GYPSUM.
 - MAJOR DIRTY WATER DIVERSION DRAINS WILL HAVE GYPSUM, BIOPOLYMER GEL SOCKS (OR EQUIVALENT) PLACED WITHIN THEM OR REPLENISHED AT 80M INTERVALS (IF NOT ALREADY IN PLACE).

GENERAL REQUIREMENTS

SALINITY CONSIDERATIONS

TO MINIMISE THE RISK OF SALINITY OCCURRING DURING THE CONSTRUCTION PHASE OF WORKS THE FOLLOWING MEASURES ARE TO BE IMPLEMENTED:

- TOPSOIL IS TO BE TESTED PRIOR TO REVEGETATION TO CONFIRM TREATMENT REQUIREMENTS.
- ENSURE TOPSOIL IS SPREAD OVER AREAS TO BE REVEGETATED TO AT LEAST 75MM.
- WATERING OF NEWLY REVEGETATED AREAS IS FO BE MINIMISED FO ONLY WHAT IS NECESSARY FOR PLANTS TO THRIVE. AVOID OVER-WATERING WHICH COULD EXACERBATE CATCHMENT SALINITY.
- THE FLOOR AND WALLS OF EACH SEDIMENT BASIN IS TO BE WELL COMPACTED TO MINIMISE INFILTRATION.
- SWALE/DIVERSION DRAINS ARE TO BE GYPSUM-DUSTED AND LINED WITH MATTING AS NOTED TO PROMOTE FLOW AND REDUCE PONDING AND EROSION.
- AVOID PONDING WATER ACROSS THE SITE IN AREAS WHERE SHALE OR CLAY FILL MATERIALS HAVE BEEN PLACED.
- REHABILITATION AND REVEGETATION OF COMPLETED EARTHWORKS IS TO BE UNDERTAKEN PROGRESSIVELY AS EACH AREA IS FINISHED.

THE ABOVE LIST OUTLINES GENERAL STRATEGIES FOR MINIMISING THE POTENTIAL SALINITY RISK DURING CONSTRUCTION. REFER TO THE PROJECT'S SALINITY MANAGEMENT PLAN (A101023.1725.LTR1.v4f by ADE) FOR DETAILED RECOMMENDATIONS.

SITE INSPECTION, MONITORING AND MAINTENANCE

- REGULAR SITE INSPECTIONS ARE TO BE CONDUCTED BY THE SITE ENVIRONMENT MANAGER (OR THEIR REPRESENTATIVE):
- AT LEAST WEEKLY DURING NORMAL CONSTRUCTION HOURS; AND
- PRIOR TO FORECAST RAINFALL (SEE ABOVE); AND
- DAILY DURING RAIN EVENTS (IF SAFE TO DO SO); AND
- WITHIN 24 HOURS OF THE CESSATION OF A RAIN EVENT THAT CAUSES RUNOFF.
- MINIMUM MONTHLY AUDITS/SITE INSPECTIONS ARE ALSO TO BE CONDUCTED BY A CPESC TO ENSURE ALL OF THE REQUIRED OUTCOMES AND WATER QUALITY TARGETS ARE BEING MET AND WHERE NECESSARY PROVIDE ADVICE AND MODIFICATIONS TO THIS PLAN TO ENSURE ONGOING COMPLIANCE.
- RECORDS OF THE SITE INSPECTIONS/AUDITS ARE TO BE KEPT FOR THE DURATION OF CONSTRUCTION AND FOR A MINIMUM OF 12 MONTHS FOLLOWING THE COMPLETION OF CONSTRUCTION WORKS.
- PRIOR TO FORECAST RAINFALL OF 5MM OR MORE OVER 24 HOURS, THE SITE ENVIRONMENT MANAGER (OR THEIR REPRESENTATIVE) IS TO INSPECT THE CONDITION OF ALL EROSION AND SEDIMENT CONTROLS AND ACTION ANY URGENT REPAIR, MAINTENANCE OR IMPROVEMENT WORKS. THEY ARE TO KEEP A RECORD ALL FINDINGS (INCLUDING DETAILS OF ACTIONS AND THEIR CLOSE OUTS).
- PRIOR TO SITE SHUTDOWN OF MORE THAN 2 DAYS, SLOPE BREAKS/CONTOUR BERMS WILL BE PUSHED UP OR CUT IN ACROSS LARGE, EXPOSED AREAS TO SLOW DOWN FLOWS AND MINIMISE EROSION. DIVERSION BUNDS/DRAINS, LOW FLOW EARTH BANKS (STANDARD DRAWING SD 5-5) OR SANDBAGS/EQUIVALENT SHOULD BE INSTALLED TO ACHIEVE THIS WHERE REQUIRED.
- ADDITIONAL EROSION AND SEDIMENT CONTROLS WILL BE INSTALLED AND EXISTING CONTROLS REPAIRED/UPGRADED/MAINTAINED AS NECESSARY TO ENSURE SATISFACTORY OUTCOMES IN KEEPING WITH THE PROJECT CONDITIONS AND BEST-PRACTICE BLUE BOOK GUIDELINES.
- SITE SPECIFIC PROGRESSIVE ESCPS WILL BE PREPARED AND/OR UPDATED AS REQUIRED.
- SEDIMENT OR ROCKS TRACKED FROM THE SITE WILL BE REMOVED FROM PUBLIC ROADS AS SOON AS POSSIBLE (E.G. WITH STREET SWEEPERS).
- AFTER RAINFALL, SEDIMENT ACCUMULATED IN TRAPPING DEVICES (E.G. BASIN, SEDIMENT FENCE) WILL BE REMOVED TO A SECURE LOCATION WHERE IT CAN'T WASH OR BLOW OFFSITE (PREFERABLY TO AN ACTIVE STOCKPILE).
- WEATHER CONDITIONS WILL BE MONITORED ONSITE AND DAILY RAINFALL WILL BE RECORDED. A RAINFALL GAUGE WILL BE INSTALLED AT THE SITE COMPOUND.
- SAFE STORAGE AREAS FOR WASTES, FUELS, EXCESS CONCRETE AND OTHER POTENTIAL CONTAMINANTS ARE TO BE DELINEATED BY THE SITE MANAGER.
- ADEQUATE SUPPLIES OF EROSION CONTROL MEASURES (E.G. GEOFABRIC ROLLS, JUTE MATTING, HYDRAULIC SOIL BINDERS) ARE TO BE MAINTAINED IN THE SITE COMPOUND FOR RAPID DEPLOYMENT AS REQUIRED.
- WATER TREATMENT CHEMICAL(S) AND EQUIPMENT ARE TO BE MAINTAINED ONSITE.

TABLE 1 - STABILISATION AND TREATMENT METHODS

DURING CONSTRUCTION - TEMPORARY STABILISATION (DURING PERIODS OF INACTIVITY WHEN WORKS ARE ON HOLD)

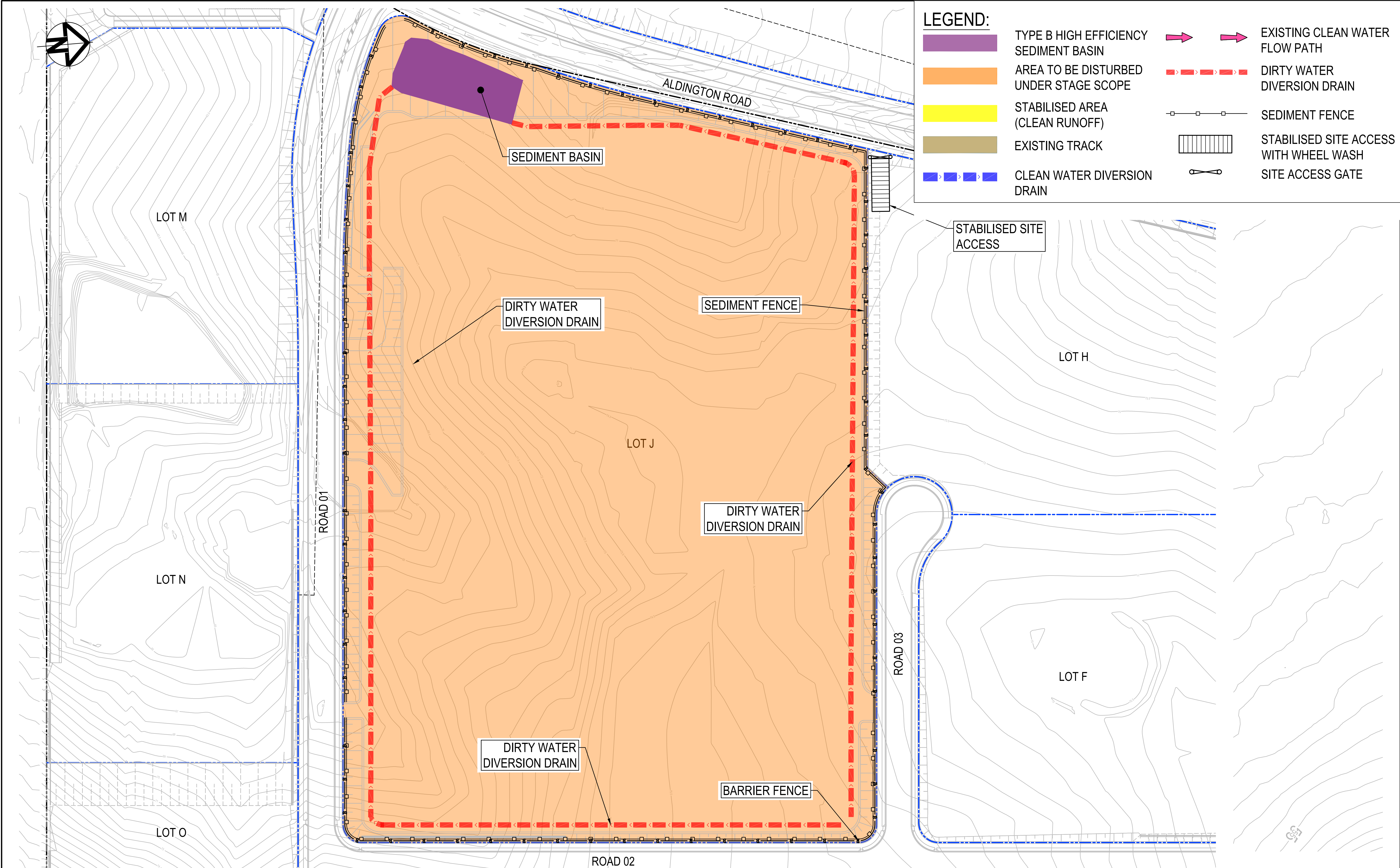
LANDS	STABILISATION REQUIREMENT	TIMEFRAME	TREATMENT METHODS - PRODUCTS	REMARKS
HIGH RISK AREAS SOIL LOSS CLASS 6 OR ABOVE LANDS (WHERE APPLICABLE)	C-FACTOR = 0.1 (60% GRASS COVER OR EQUIVALENT GROUND COVER)	APPLIES PRIOR TO RAINFALL AND AFTER 10 WORKING DAYS OF INACTIVITY (EVEN THOUGH WORKS MIGHT CONTINUE LATER)	SOIL BINDER (ie VITAL P47/STONEWALL OR EQUIVALENT) GEOTEXTILE, JUTE MATTING, BLACK PLASTIC (SECURELY PINNED) OR EQUIVALENT¹	-STABLISE ALL EXPOSED SOILS BY SPARYING SURFACES WITH VITAL P47/STORMWATER OR EQUIVALENT¹. -VITAL DILUTION RATE = 1 : 10 (VITAL MIXTURE). - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED. - COVER ALL EXPOSED SOILS. -RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.
ALL LANDS (INCLUDING WATERWAYS AND STOCKPILES)	APPLIES AFTER 20 WORKING DAYS OF INACTIVITY (EVEN THOUGH WORKS MIGHT CONTINUE LATER)	APPLIES AFTER 20 WORKING DAYS OF INACTIVITY (EVEN THOUGH WORKS MIGHT CONTINUE LATER)	SOIL BINDER (ie VITAL P47/STONEWALL OR EQUIVALENT¹	-SPRAY ALL STOCKPILE SURFACES WITH VITALP47/STONEWALL OR EQUIVALENT¹ -VITAL DILUTION RATE = 1:10 (VITAL WATER). -APPLICATION RATE = 1L/m² OF DILUTED VITAL MIXTURE
			GEOTEXTILE, JUTE MATTING, BLACK PLASTIC (SECURELY PINNED)	- COVER ALL EXPOSED SOILS. - E-APPLY / MAINTAIN AS NECESSARY TO - ENSURE THE REQUIRED COVER IS PROVIDED

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					N.T.S.	Designed	TM					
					Grid	MGA	Checked				TM	
					Height Datum	AHD	Approved				DF	
												
						Title		NOTES AND SPECIFICATIONS SHEET 2	Status FOR APPROVAL NOT FOR CONSTRUCTION	A1		
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P1	ISSUED FOR APPROVAL	16.11.23										
Issue	Description	Date									Project - Drawing No. 19-609-C5392	Issue P2

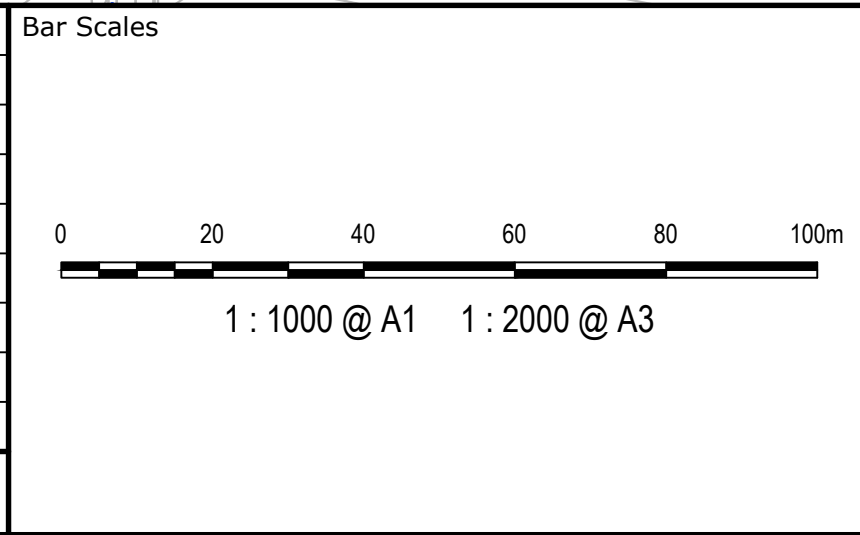
TABLE 2 - STABILISATION REQUIREMENTS AND TREATMENT METHODS CONTINUED				
POST CONSTRUCTION				
LANDS	STABILISATION REQUIREMENT	TIMEFRAMES	TREATMENT METHODS PRODUCTS	REMARKS
WATERWAYS, DRAINAGE LINES AND CONCENTRATED FLOW AREAS	C-FACTOR = 0.05 (70% GRASS COVER OR EQUIVALENT GROUND COVER ¹)	APPLIES AFTER 10 WORKING DAYS FROM COMPLETION OF FORMATION AND BEFORE THEY ARE ALLOWED TO CARRY CONCENTRATED FLOWS.	REFER TO THE DRAIN SPECIFICATIONS DETAILED ON THE PLAN FOR SPECIFIC LINING/STABILISATION REQUIREMENTS. EXAMPLE TREATMENT METHODS ARE SHOWN BELOW.	
			TEMPORARY LINING - GEOTEXTILE (i.e. BIDIM A24 OR EQUIVALENT ¹)	- COMPLETE ANY SUBSOIL TREATMENT BEFORE LAYING THE MATTING. -INSTALL MATTING IN ACCORDANCE WITH SD 5-7 -RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.
			JUTE MESH, SEEDING AND SOIL BINDER (i.e VITAL P47/STONEWALL OR EQUIVALENT ¹) - LOW FLOWS	-COMPLETE SUBSOIL TREATMENT (E.G. GYPSUM LIGHTLY RIPPED INTO SURGRADE AT A RATE OF 15 TONNES/ha). TESTING TO CONFIRM TREATMENT RATES. - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75MM. - COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING ". - INSTALL MATTING IN ACCORDANCE WITH SD 5-7. - SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT ¹ . - WATERWAYS AND (50% GRASS COVER OR * OF INACTIVITY LEVEN THOUGH MONTHS- - VITAL DILUTION RATE = 1:10 (VITAL-WATER). - APPLICATION RATE = 1L / 7m² OF DILUTED VITAL MIXTURE. - RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
			JUTE MATTING (350gsm) AND SEEDING OR EQUIVALENT ¹ - LOW TO MODERATE FLOWS	-COMPLETE SUBSOIL TREATMENT (E.G. GYPSUM LIGHTLY RIPPED INTO SURGRADE AT A RATE OF 15 TONNES/ha). TESTING TO CONFIRM TREATMENT RATES. - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75MM. - COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING ". - INSTALL MATTING IN ACCORDANCE WITH SD 5-7. - SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT ¹ . - WATERWAYS AND (50% GRASS COVER OR * OF INACTIVITY LEVEN THOUGH MONTHS- - VITAL DILUTION RATE = 1:10 (VITAL-WATER). - APPLICATION RATE = 1L / 7m² OF DILUTED VITAL MIXTURE. - RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
			- TURN REINFORCEMENT MATTING (TRM) (e.g TERRAMAT OR EQUIVALENT ¹) (TRN) -MODERATE FLOWS	-COMPLETE SUBSOIL TREATMENT (E.G. GYPSUM LIGHTLY RIPPED INTO SURGRADE AT A RATE OF 15 TONNES/ha). TESTING TO CONFIRM TREATMENT RATES. - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75MM. - COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING. - RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
STOCKPILES	C-FACTOR = 0.10 / 0.05 (60% GRASS COVER OR EQUIVALENT GROUND COVER ¹)	APPLIES AFTER 10 WORKING DAYS FROM COMPLETION OF FORMATION	ROCK LINING - HIGH FLOWS	-COMPLETE SUBSOIL TREATMENT (E.G. GYPSUM LIGHTLY RIPPED INTO SURGRADE AT A RATE OF 15 TONNES/ha). TESTING TO CONFIRM TREATMENT RATES. - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75MM. - COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING. - RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
			SEEDING AND SOIL BINDER (i.e VITAL P47/ STONEWALL OR EQUIVALENT ¹)	- APPLY SEED TO ALL STOCKPILE SURFACES (NOTE: SEEDING MAY NOT BE REQUIRED IF EXISTING SEEDBED IS PRESENT). - SPRAY ALL STOCKPILE SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT ¹ . - VITAL DILUTION RATE = 1L / m² OF DILUTED VITAL MIXTURE. - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
GENERAL SURFACES	C-FACTOR = 0.10 / 0.05 (60% / 70% GRASS COVER OR EQUIVALENT GROUND COVER ¹)	APPLIES AFTER 10 WORKING DAYS FROM COMPLETION OF FORMATION AND C-FACTOR= 0.05 APPLIES WITHIN A FURTHER 60 DAYS	GEOTEXTILE, JUTE MATTING, BLACK PLASTIC (SECURELY PINNED) OR EQUIVALENT ¹	- COVER ALL EXPOSED SOILS. - RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.
			TOPSOIL, SEEDING AND SOIL BINDER (i.e VITAL P47/STONEWALL OR EQUIVALENT ¹)	-REFER TO SD 7-1 -COMPLETE SUBSOIL TREATMENT (i.e GYPSUM LIGHTLY RIPPED INTO SURGRADE AT A RATE OF 15 TONNES/ha). TESTING TO CONFIRM TREATMENT RATES. - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75MM. - APPLY ANY FERTILISERS REQUIRED. - APPLY SEED TO ALL SURFACES (Note: SEEDING MAY NOT BE REQUIRED IF EXISTING SEEDBED IS PRESENT. - INSTALL MATTING IN ACCORDANCE WITH SD 5-7. - SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT ¹ . - VITAL DILUTION RATE = 1:10 (VITAL-WATER). - APPLICATION RATE = 1L / 7m² OF DILUTED VITAL MIXTURE. - RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
			HYDROMLUCH OR EQUIVALENT ¹	-REFER TO SD 7-1 -COMPLETE SUBSOIL TREATMENT (i.e GYPSUM LIGHTLY RIPPED INTO SURGRADE AT A RATE OF 15 TONNES/ha). TESTING TO CONFIRM TREATMENT RATES. - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75MM. - APPLY ANY FERTILISERS REQUIRED. - APPLY SEED TO ALL SURFACES (Note: SEEDING MAY NOT BE REQUIRED IF EXISTING SEEDBED IS PRESENT. - INSTALL MATTING IN ACCORDANCE WITH SD 5-7. - SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT ¹ . - VITAL DILUTION RATE = 1:10 (VITAL-WATER). - APPLICATION RATE = 1L / 7m² OF DILUTED VITAL MIXTURE. - RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.

TABLE 3 - LIMITATIONS TO ACCESS DURING CONSTRUCTION		
LAND USE	LIMITATION	REMARKS
CONSTRUCTION AREAS	LIMITED TO 5 (PREFERABLE 2) METRES FROM THE EDGE OF ANY ESSENTIAL CONSTRUCTION ACTIVITY AS SHOWN ON THE ENGINEERING PLANS.	ALL SITE WORKERS SHOULD CLEARLY RECOGNISE THESE AREAS THAT, WHERE APPROPRIATE, ARE IDENTIFIED WITH BARRIER FENCING (UPSLOPE) AND SEDIMENT FENCING (DOWNSLOPE) OR SIMILAR MATERIALS.
ACCESS AREAS	LIMITED TO A MAXIMUM WIDTH OF METRES	THE SITE MANAGER WILL DETERMINE AND MARK THE LOCATION OF THESE ZONES ON SITE. THEY CAN VARY IN POSITION SO AS TO BE BEST CONSERVE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE BEING CONSIDERATE OF THE NEEDS OF EFFICIENT WORKS ACTIVITIES. ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE BOUNDARIES.
ALL LANDS (INCLUDING WATERWAYS AND STOCKPILES)	APPLIES AFTER 20 WORKING DAYS OF INACTIVITY (EVEN THOUGH WORKS MIGHT CONTINUE LATER)	APPLIES AFTER 20 WORKING DAYS OF INACTIVITY (EVEN THOUGH WORKS MIGHT CONTINUE LATER)

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					Designed	TM											
Grid	MGA				Checked	TM											
Height Datum	AHD				Approved	DF											
							Title		NOTES AND SPECIFICATIONS SHEET 3		Project - Drawing No. 19-609-C5393		Issue P2				
P2	ISSUED FOR APPROVAL				08.12.23												
P1	ISSUED FOR APPROVAL				16.11.23												
Issue	Description	Date															



P2	ISSUED FOR APPROVAL	08.12.23
P1	ISSUED FOR APPROVAL	16.11.23
Issue	Description	Date



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Project

KEMPS CREEK INDUSTRIAL ESTATE
SSD-61212208
LOT J

Title

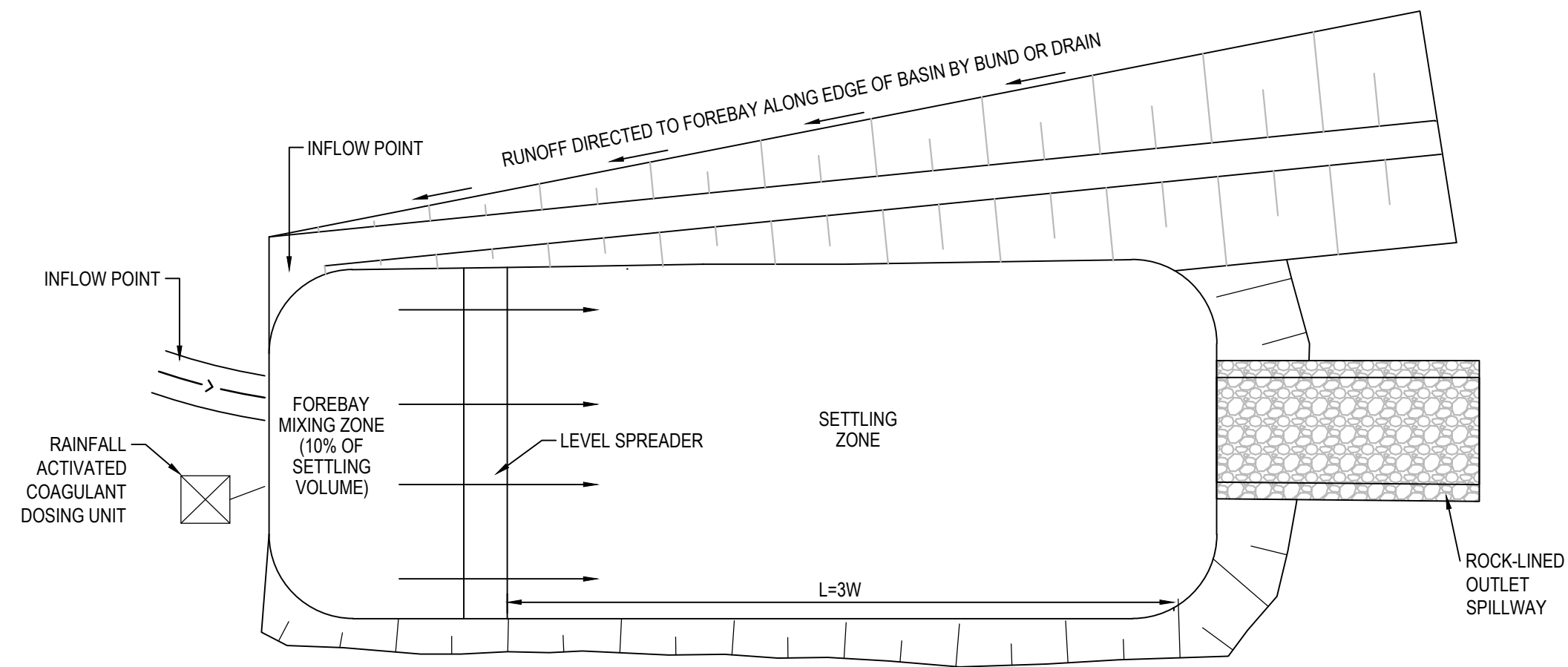
CONCEPT ESCP
BULK EARTHWORKS

Civil Engineers and Project Managers

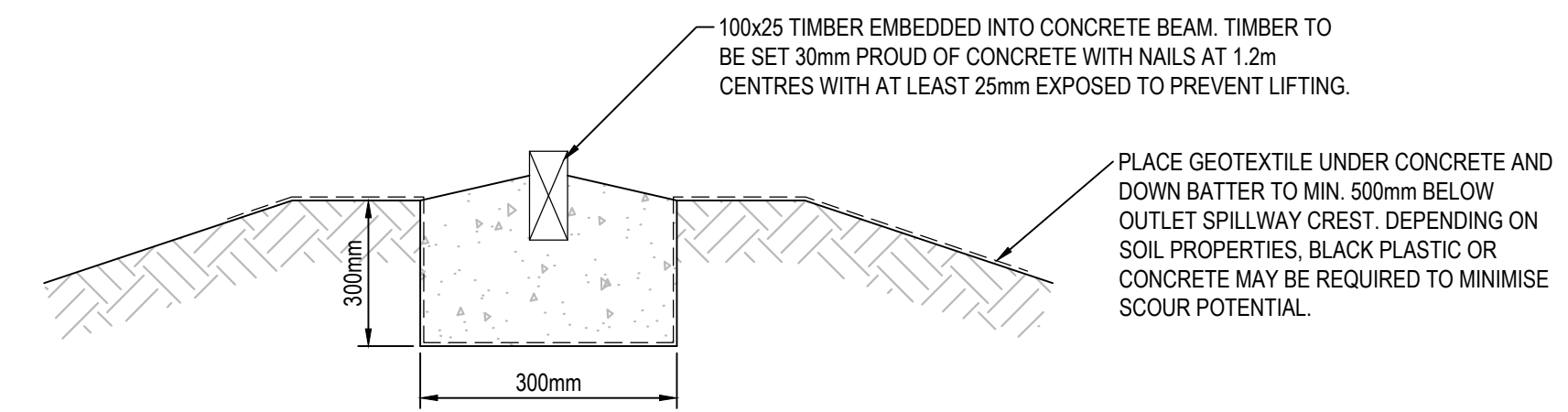


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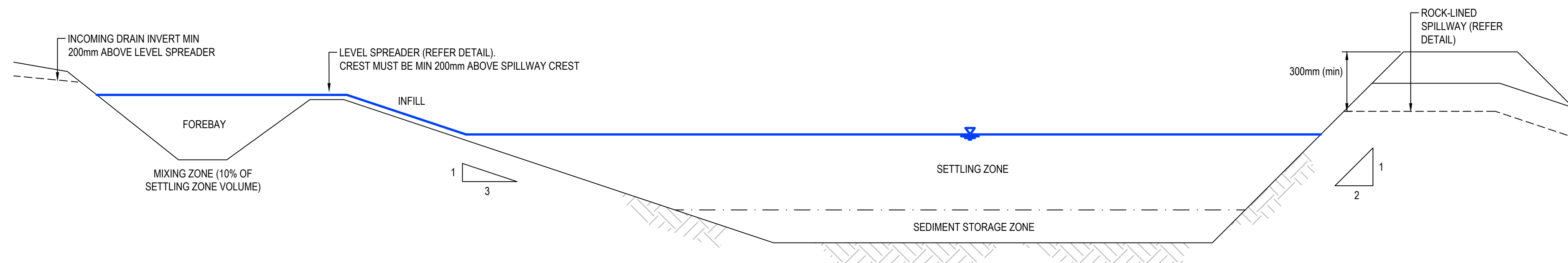
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Project - Drawing No.	19-609-C5395	Issue P2



PLAN
MULTIPLE INFLOWS TO BASIN
NTS

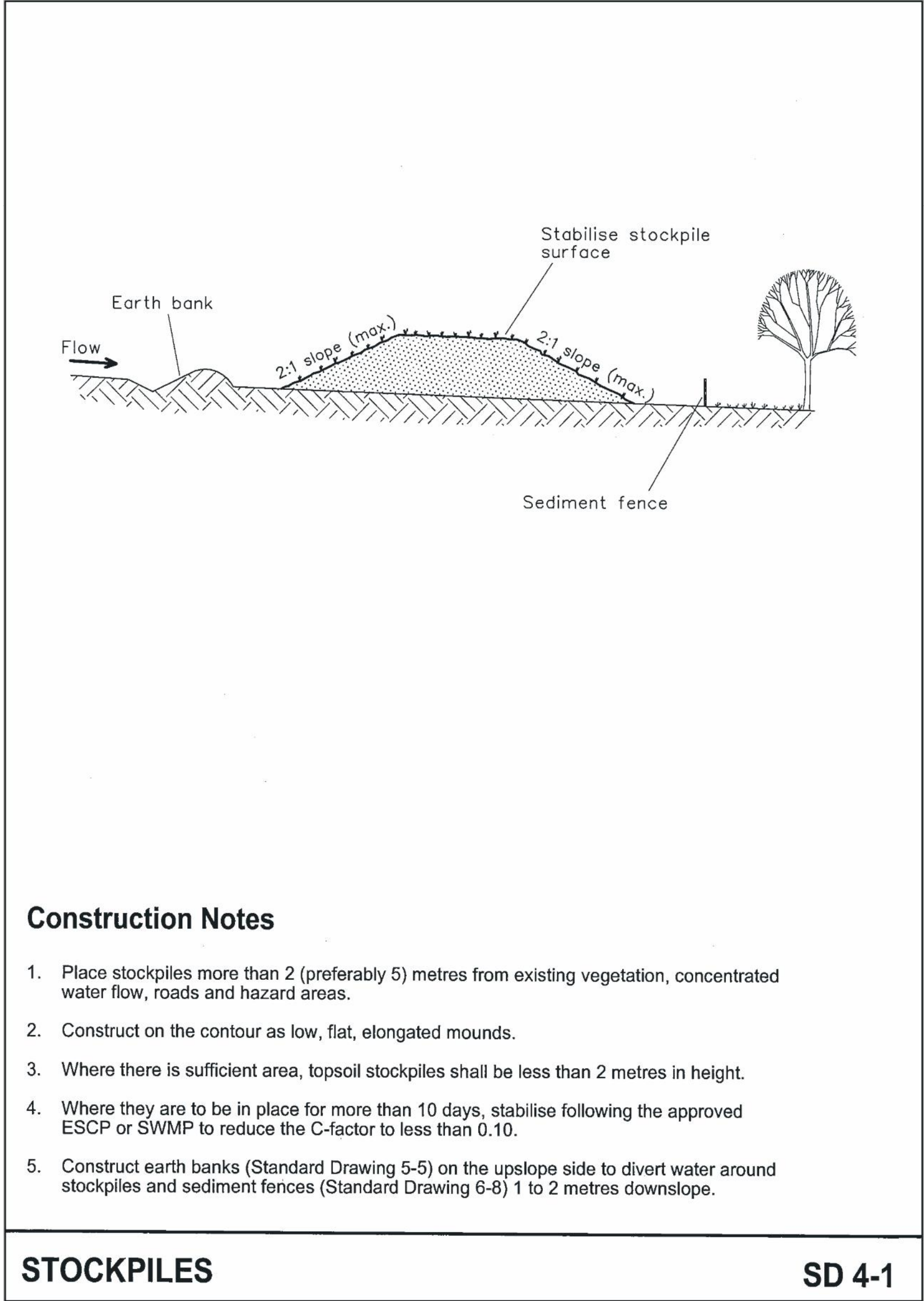


TYPICAL DETAIL FOR TYPE 'B' BASIN LEVEL SPREADER
NTS

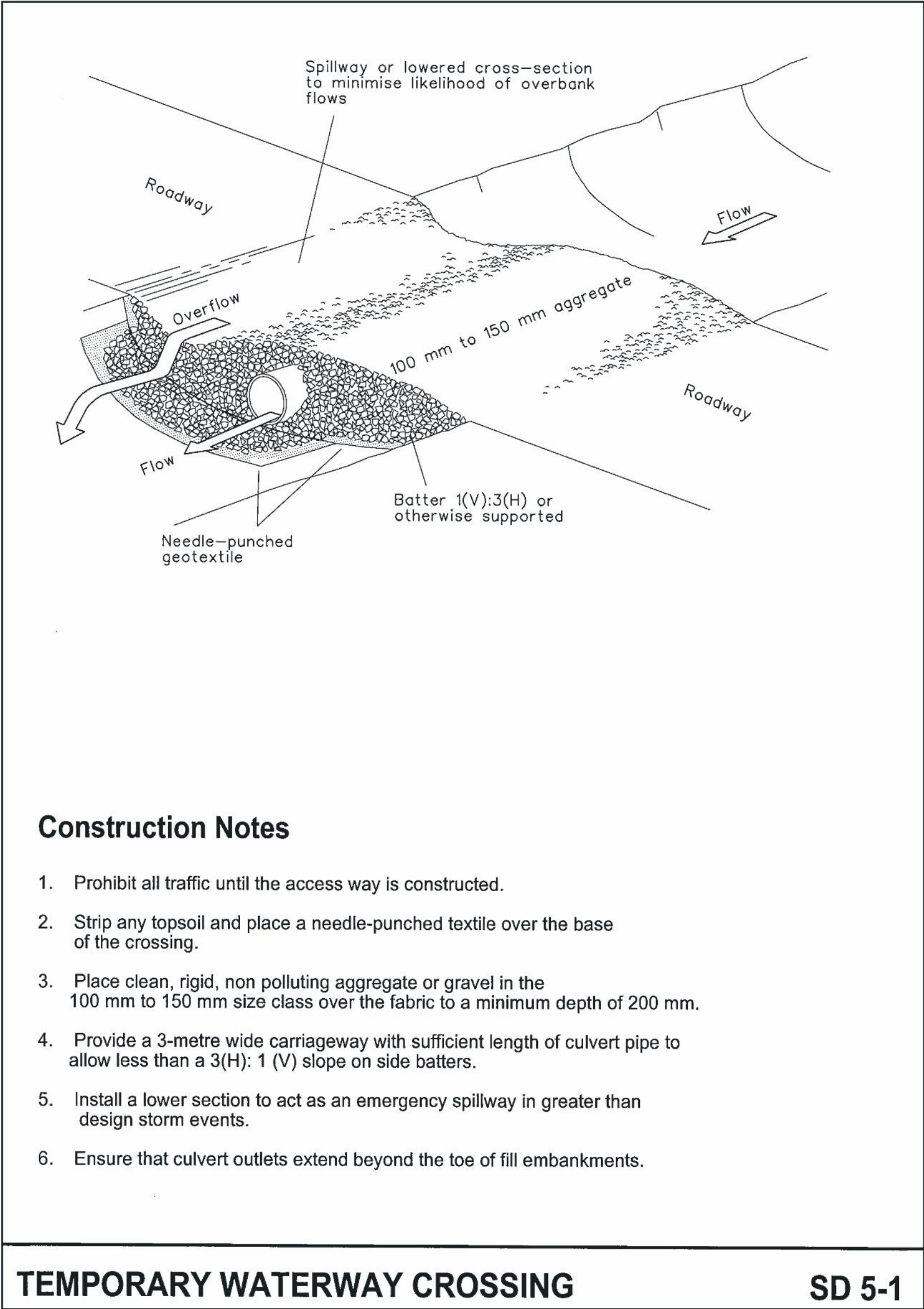


LONG SECTION
TYPE 'B' BASIN
NTS

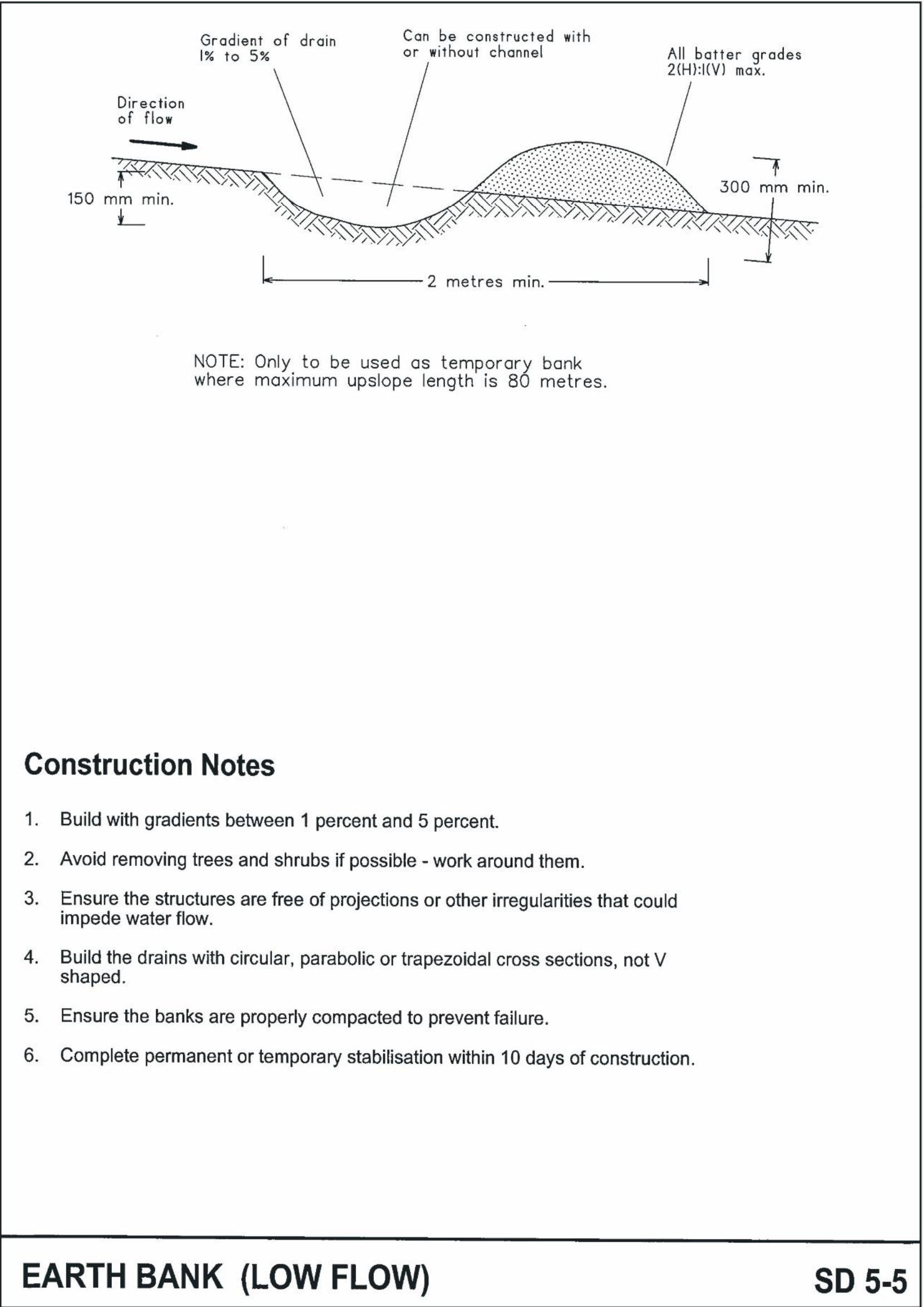
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								N.T.S.	Designed		TM		Level 7, 153 Walker Street North Sydney NSW 2060 ABN 96 130 882 405 Tel: 02 9439 1777 Fax: 02 9923 1055 www.atl.net.au info@atl.net.au		
								Grid	MGA		Checked			TM	
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P1	ISSUED FOR APPROVAL		16.11.23												
Issue	Description		Date												



4-5

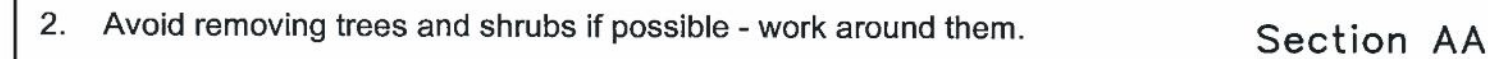


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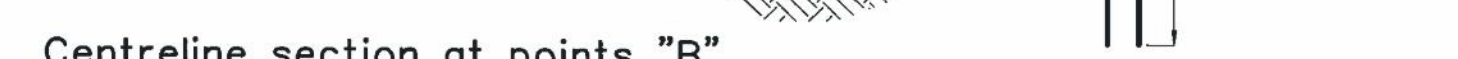
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					N.T.S.	Designed	TM			
Grid	MGA				Checked	TM				
Height Datum	AHD				Approved	DF				
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P1	ISSUED FOR APPROVAL	16.11.23								
Issue	Description	Date								



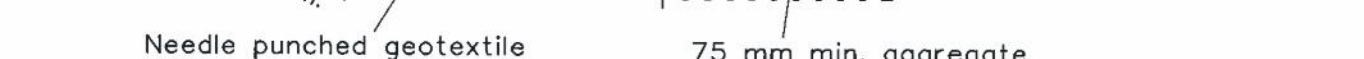
3. Ensure the structures are free of projections or other irregularities that could impede water flow.

-



controlling section at points B :

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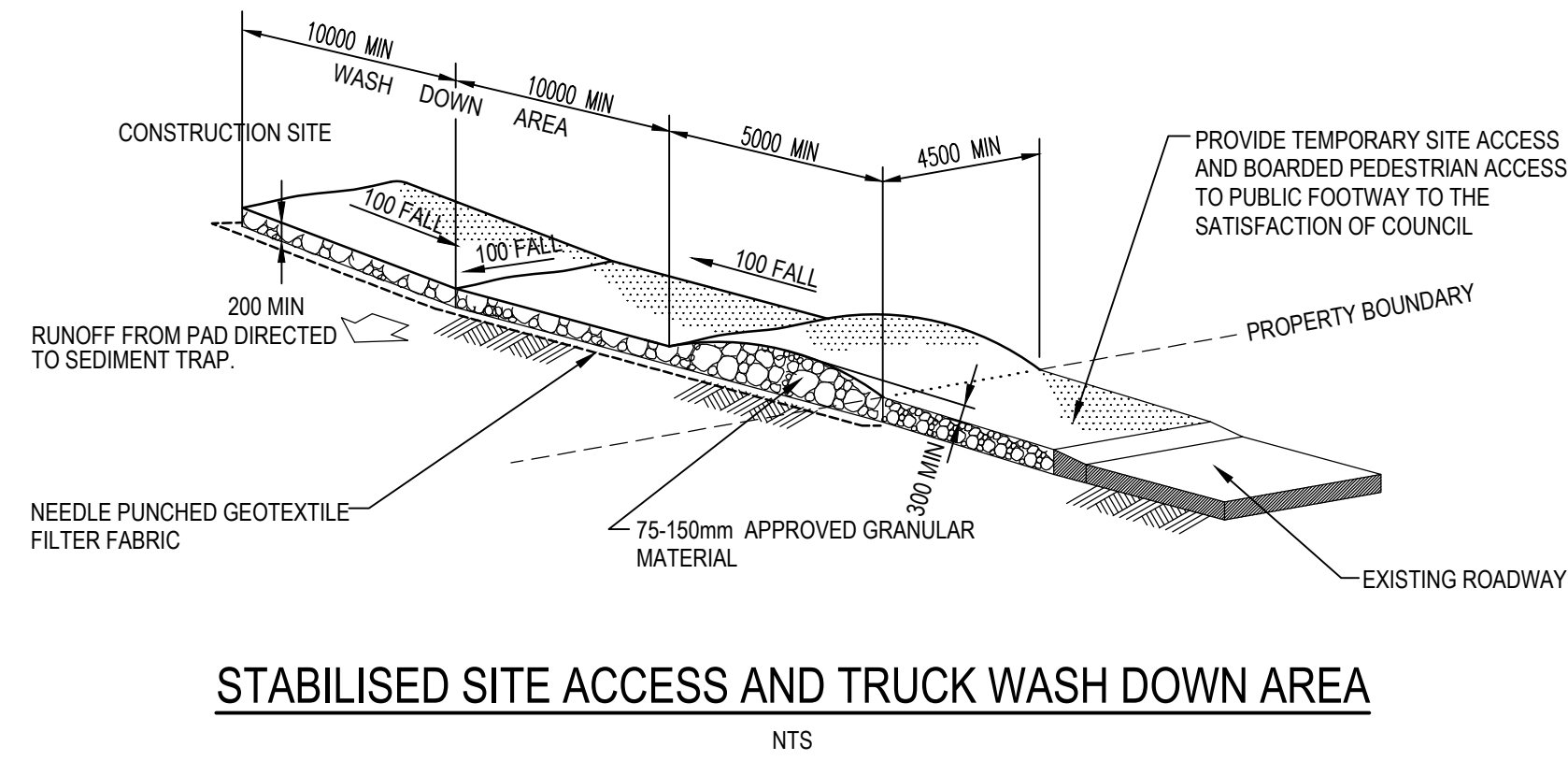


75 mm mini aggregate

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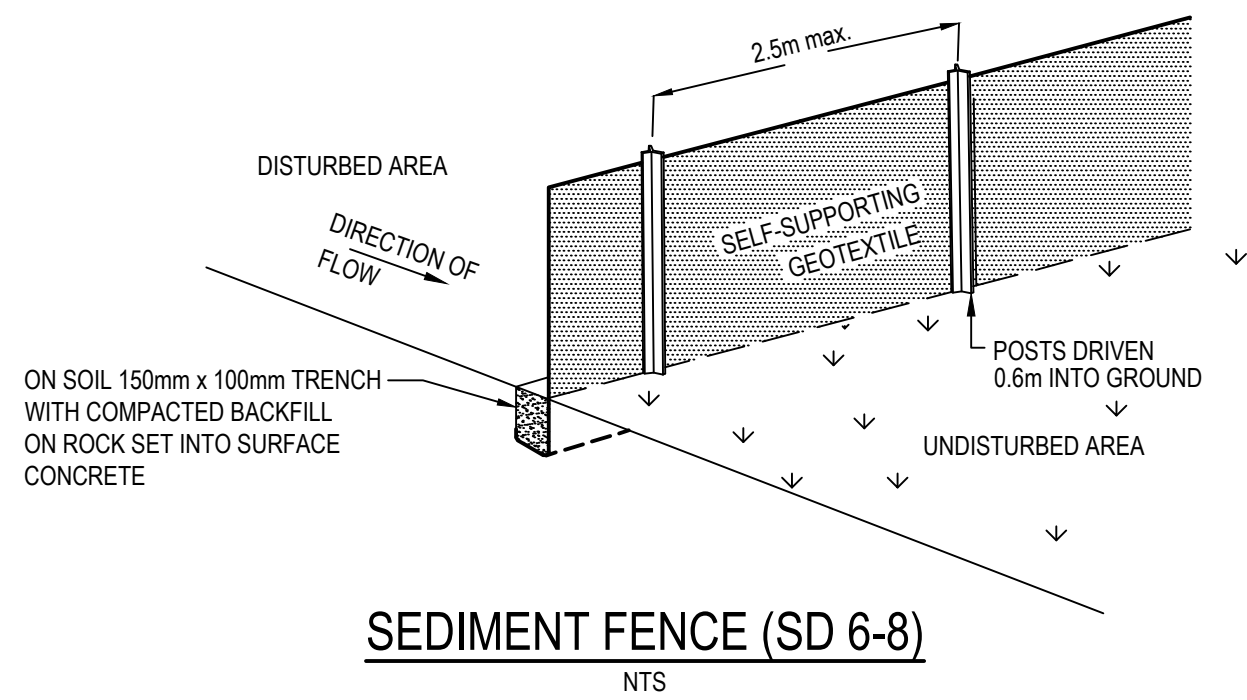
100mm on Original

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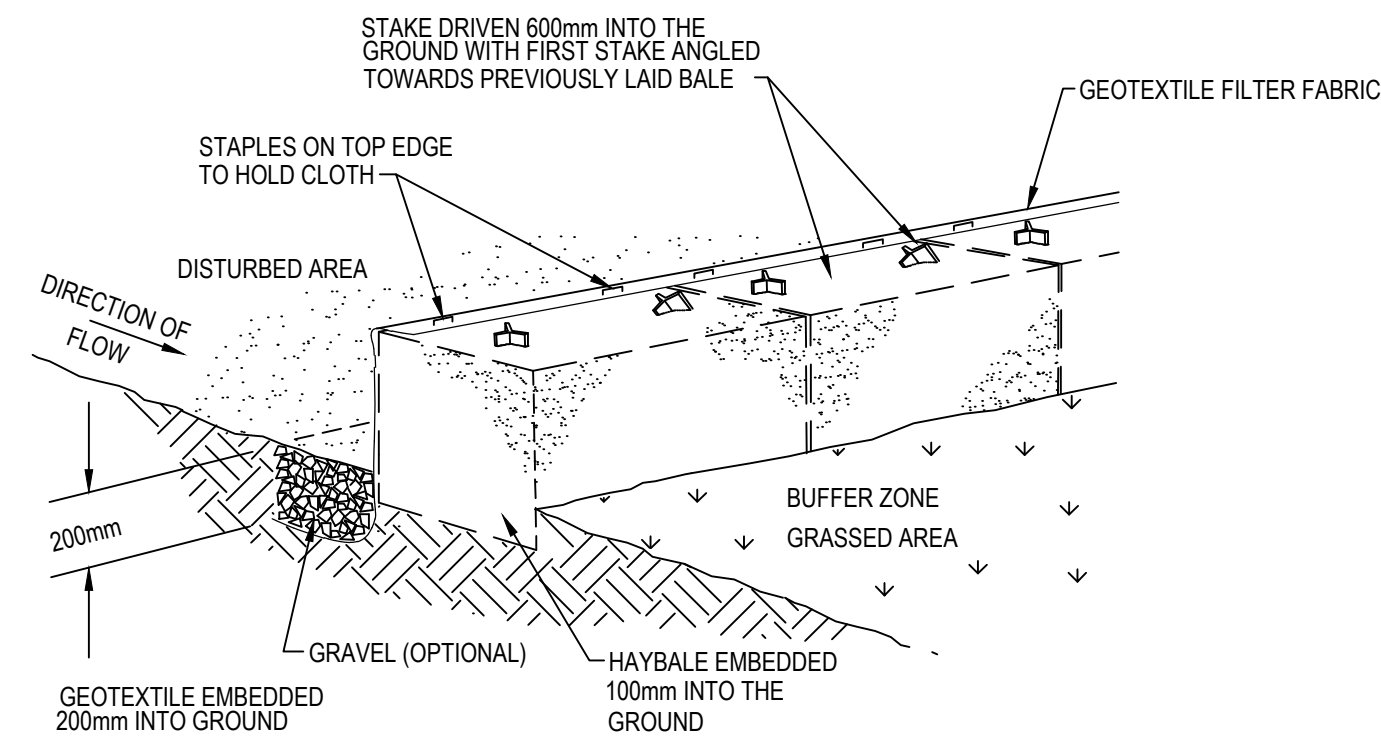
STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA

NTS



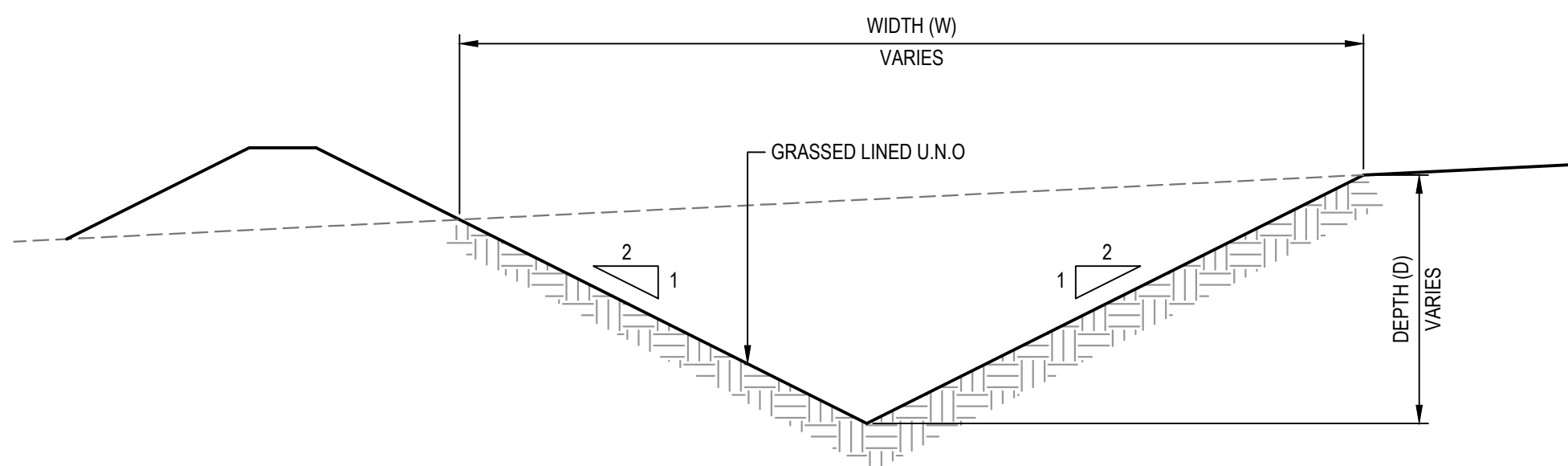
SEDIMENT FENCE (SD 6-8)

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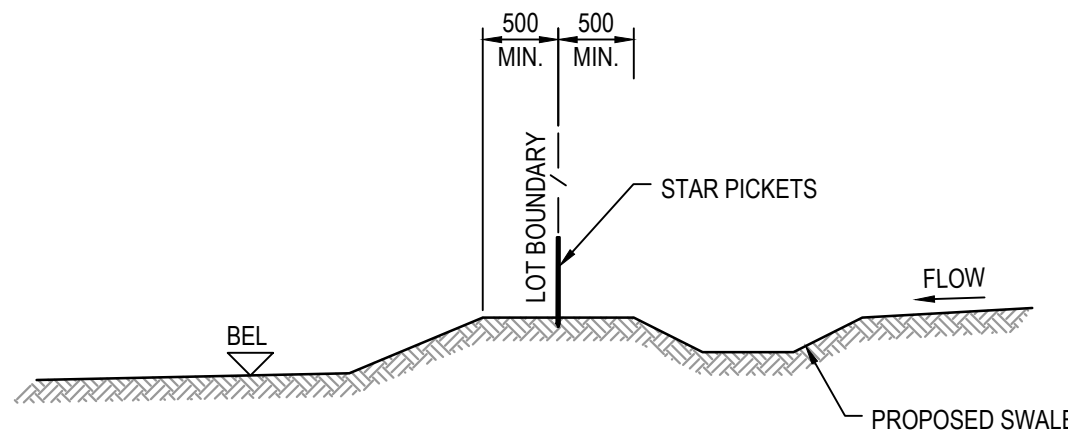
HAYBALE AND GEOTEXTILE SEDIMENT FILTER

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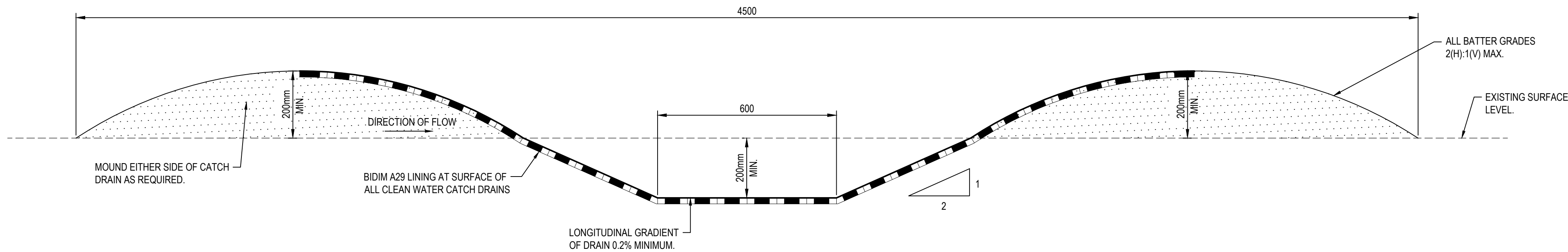
CATCH DRAIN (DIRTY WATER)

SCALE 1:10



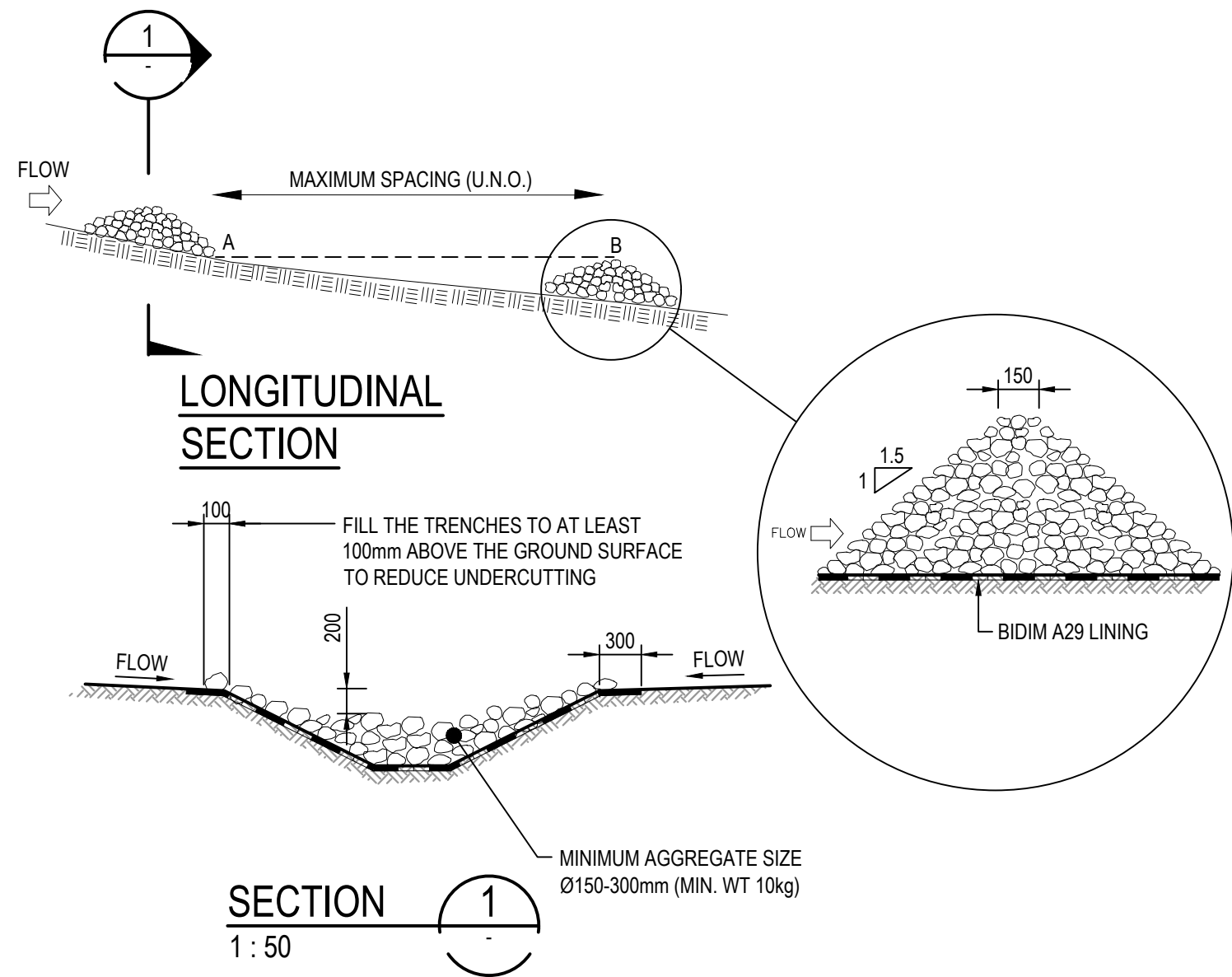
TYPICAL LOT BOUNDARY DETAIL

1 : 50



CATCH DRAIN DETAIL (CLEAN WATER)

SCALE 1:10



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Appendix F

Air Quality Assessment Letter – RWDI 2023



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11 September 2023

Jose Guedes
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jose.guedes@stockland.com.au

Re: **200 Aldington Road, Kemps Creek**
Update of Concept Masterplan (Lot J) – Air Quality
RWDI Project # 2400469

Dear Jose,

We acknowledge the update of Lot J (the Update) to the Concept Master Plan and the resulted amendments to the Stage1 development (Stage 1 – SSD 10479).

The Update would replace the previously proposed single warehouse layout (74,130m²) by a three-warehouse layout in Lot J. The three warehouses -- Warehouse 1, Warehouse 2, and Warehouse 3 – will cover a total area of 7919m², 4117m², and 3882m² and locate at the southwest boundary, southeast boundary, and north boundary of Lot J, respectively.

RWDI conducted an air quality impact assessment for the proposed Stage1 development at 200 Aldington Road, Kemps Creek. The application proposed the site usage as Warehouse and Distribution.

The Update (Lot J Warehouse Layout)

The air quality assessment considered the potential air quality impacts of the construction and operation of industrial, warehouse and distribution facility development (the Concept Masterplan) and Stage 1.

The conclusion of the construction air quality assessment was that potential air emissions from the proposed construction works would be low risk of both dust soiling and human health impacts for earthworks and for haulage (trackout) activities if dust mitigation measures are not implemented. The change of dust impacts associated with the Update would be considered insignificant when considered holistically with the previous assessment, and the conclusion remains consistent with report no.20254 Version F 20 September 2021.



RWDI Australia Pty Ltd operates a Quality Management System which complies with the requirements of AS/NZS ISO 9001:2015 for the provision of consultancy services in acoustic engineering and air quality; and the sale, service, support and installation of acoustic monitoring and related systems and technologies.
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Considering the main three pollutants PM₁₀, PM_{2.5} and NO₂, the conclusion of the air quality assessment for the operation of the facilities (the Concept Masterplan) was:

- Negligible PM₁₀ impact and not significant due to the conservatism of the assessment.
- Moderate PM_{2.5} impact as the existing concentration is slightly above criteria and not significant due to the conservatism of the assessment.
- Negligible NO₂ and not significant.

There are no specific additional details of the future activities within the industrial lots/warehouses identified in the Update and it is anticipated that the major source of air impacts would remain the trucks entering and leaving the site and their numbers would be similar to that of the Concept Masterplan. Therefore, the air quality impacts considered in the Concept Masterplan, as assessed in report no.20254 Version F 20 September 2021, will remain consistent with the original assessment.

At the time of writing this memorandum, detailed design for each site is not available. It is anticipated that if impacts would be identified during the DA or detailed design for any of the industrial lots, air filtration systems or similar measures could be installed to ensure the amenity of the surrounding area and air quality would meet NSW air quality criteria.

Conclusion

RWDI has been requested to review the potential air quality impacts associated with the proposed Update. RWDI are of the opinion that the Update would not result in a material change to the SSDA as approved, and air emissions from future industrial use could be identified and managed during the detailed design stage.

I trust this information is sufficient. Please contact us if you have any further queries.

Yours Sincerely

RWDI

A handwritten signature in grey ink, appearing to read 'Ginn Cheng'.

Ginn Cheng, Ph.D., CFD
Project Engineer
RWDI

Reviewed by:

A handwritten signature in grey ink, appearing to read 'John Wassermann'.

John Wassermann
Senior Technical Director
RWDI

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