

Construction Soil and Water Management Plan January 2025

CONSTRUCTION SOIL AND WATER MANAGEMENT PLAN

Moorebank Precinct East Stage 1, Package 2

15 January 2025



Moorebank Precinct East, Stage 1, Package 2 Construction Soil and Water Management Plan

Current Revision Author	
Checker	
Approver	
Report No	IMEX-QPMS-EN-PLN-00000
Date	15/01/2025
Revision Text	015



Original Author Details

Original Author Details	Qualifications and Experience
Environmental Scientist and Certified	Erosion and Sediment Control Best Management Practices (2011) – Licence 7313
Professional in Erosion and Sediment Control	Bachelor of Environmental Science – Environmental Rehabilitation (2007)
	Over eight years of professional experience specialising in Soil and Water Management Plans, Erosion and Sediment Control Plans (including basin design, water balances, catchment analysis, erosion hazard).



Limitations on use and reliance

Aspect Environmental Pty Ltd has prepared this report solely for the use of the Client and those parties with whom a warranty / end-user agreement or licence has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from Aspect Environmental Pty Ltd; a charge may be levied against such approval. Aspect Environmental Pty Ltd accepts no responsibility or liability for:

a) the consequences of this document being used for any purpose or project other than for which it was commissioned, and

b) the use of, or reliance on, this document by any third party with whom an agreement has not been formally executed.

The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client).

Should additional information become available which may affect the opinions expressed in this report, Aspect Environmental Pty Ltd reserves the right to review such information and, if warranted, to modify the opinions accordingly

© Copyright 2024 ESR Australia & NZ. The concepts and information contained in this document are the property of ESR Australia & NZ. Use or copying of this document in whole or in part without the written permission of ESR constitutes an infringement of copyright. Limitation: This report has been prepared on behalf of, and for the exclusive use of ESR's Client, and is subject to, and issued in accordance with, the provisions of the contract between ESR and the Client. ESR accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.



Construction Soil and Water Management Plan January 2025

REVISIONS

Revision	Date	Description
0	17/05/16	Draft for SIMTA review / consultation
1	20/06/16	Addressed SIMTA comments
2	31/01/17	Update CoC for consultation
3	22/02/17	Update based on stakeholder consultation and submission to DP&E
4	09/03/2017	Update based on DPI Water review comments
5	11/04/2017	Update based on DPE review comments
6	02/05/2017	Update based on DPE review comments
7	26/10/2017	Minor Revision of construction boundary associated with IMEX RfMA 003
8	10/01/2018	Boundary revisions and activities associated with IMEX RfMA 005
9	04/05/2018	Revised EDO Conditions of Consent
10	02/10/2018	Revisions associated with the internal environmental and sustainability audit & RfMA 008. Updated to incorporate Water Quality Monitoring location change
11	11/01/2019	Revision associated with RfMA 012 and minor updates associated with 'non- conformance,' 'non-compliance' and 'corrective and preventative actions'
12	11/07/2019	Revisions associated with RfMA 011
13	22/10/2019	 Minor updates associated with: RfMA 016 – Moorebank Precinct EPL updates RfMA 018 - Additional construction compound to enable installation of gantry cranes for the IMEX terminal
14	07/07/2021	Revision associated with Disused Rail Spur removal
15	15/01/2024	Revision associated with RfMA 024 and minor administrative updates



ACRONYMS AND DEFINITIONS

Term	Explanation
ANZECC	Australia New Zealand Environment and Conservation Council
ACM	Asbestos Containing Material
ASS	Acid Sulfate Soil
CCOS	Council of City of Sydney
CEMP	Construction Environmental Management Plan
CoC	Conditions of Consent
ССоА	Commonwealth Conditions of Approvals
СММ	Commonwealth Mitigation Measures
CPCoA	Concept Plan Conditions of Approval
CSWMP	Construction Soil and Water Management Plan
Blue Book	Managing Urban Stormwater: Soils and Construction, published by Landcom in 2004
BTEXN	Benzene Toluene Ethylbenzene Xylenes and Naphthalene
DPE	Department of Planning & Environment
DURS	Disused Rail Spur
EDO	Environmental Defenders Office
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EPL	Environment Protection Licence
ER	Environmental Representative
ERAP	Environmental Risk Action Plan
ERSED	Erosion & Sedimentation
FCMM	Final Compilation of Mitigation Measures
FERP	Flood Emergency Response Plan
IFD	Intensity Frequency Duration
IMEX	 Import Export Terminal. Includes the following key components: Truck processing, holding and loading areas - entrance and exit from Moorebank Avenue



Term	Explanation		
	 Rail loading and container storage areas – installation of four rail sidings with adjacent container storage area serviced by manual handling equipment initially and overhead gantry cranes progressively 		
	Administration facility and associated car parking- light vehicle access from Moorebank Avenue.		
IMT facility	MPE Stage 1 Package 2 including the construction of the following key components together comprising the Intermodal Terminal (IMT):		
	 Truck processing and loading areas. Rail loading and container storage areas. Administration facility and associated car parking Rail link. 		
LNAPL	Light Non-Aqueous Phase Liquid		
MC	Managing Contractor		
MPE	Moorebank Precinct East		
MPE Stage 1, Package 1	The construction of the Rail Link connecting the Southern Sydney Freight Line to the IMEX, traversing across the Boot land, RailCorp Land, Moorebank Avenue, the MPW Golf Course, Georges River, and Glenfield Waste Facility		
	Construction of the IMEX Terminal (Figure 1) including the following key components:		
	1. Truck processing, holding and loading areas - entrance and exit from Moorebank Avenue		
MPE Stage 1, Package 2	 Rail loading and container storage areas – installation of four rail sidings with adjacent container storage area serviced by manual handling equipment initially and overhead gantry cranes progressively 		
	Administration facility and associated car parking- light vehicle access from Moorebank Avenue		
MPE Stage 1 Project	The whole of the land to which the MPE Stage 1 Project approval SSD 6766 relates including both MPE Stage 1 Package 1, and MPE Stage 1 Package 2.		
MPE Stage 2 Project Site	The whole of the land to which the MPE Stage 2 Project approval SSD 7628 relates		
MPW	Moorebank Precinct West		
MPW Site	The site at Moorebank as approved by the Concept Plan (SSD 5066)		
Non- compliance	An occurrence, set of circumstances, or development that results in a non-compliance or is non-compliant with Development Consent SSD 6766 Conditions of Consent or EPBC Act Approval (EPBC 2011/6229) Conditions of Approval but is not an incident		
Non- conformance	Observations or actions that are not in strict accordance with the CEMP and the aspect specific sub-plan.		
NTU	Nephelometric Turbidity Unit		
OC/OP	Organochlorides/Organophosphates		
OEH	Office of Environment and Heritage		



Construction Soil and Water Management Plan January 2025

Term	Explanation
PAH	Polycyclic Aromatic Hydrocarbons
PASS	Potential Acid Sulfate Soil
PMF	Probable Maximum Flood
RUSLE	Revised Universal Soil Loss Equation
RSoC	Revised Statement of Commitments
SIMTA	Sydney Intermodal Terminal Alliance
The Project	The subject of this sub-plan, Package 2 of the MPE Stage 1 Project includes all work areas of the MPE Stage 1 site (including the Operational area and indicative construction area). This area does not include the Rail Corridor.



COMPLIANCE MATRICES

Table 1 Ministers Conditions of Consent (CoC)

CoC	Requirement	Document Reference
E6	Soil and water management measures consistent with Managing Urban Stormwater - Soils and Construction Vols 1 and 2, 4th Edition (Landcom, 2004) shall be employed during construction to minimise soil erosion and the discharge of sediment and other pollutants to land and/or waters.	Section 5.4 Table 11, SW1
E7	Construction shall be undertaken to comply with section 120 of the Protection of the Environment Operations Act 1997, which prohibits the pollution of waters.	This Plan Sections 2.1, 5.2, and 5.4 Table 11
E8	The Applicant shall store all chemicals, fuels and oils used on- site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and/or EPA's Storing and Handling Liquids: Environmental Protection – Participants Handbook.	Section 5.4 Table 11, SW14
E34 (f)	As part of the CEMP for the SSD, the Applicant shall prepare and implement:	This Plan Section 5
	a Construction Soil and Water Management Plan to manage surface and groundwater impacts during construction. The plan shall be developed in consultation with, EPA, DPI Water, DPI Fisheries, and relevant Councils, and include, but not necessarily be limited to:	Table 11, SW1
(i)	details of construction activities and their locations, which have the potential to impact on water courses, storage facilities, stormwater flows, and groundwater, including identification of all pollutants that may be introduced into the water cycle;	Table 9 for existing contamination Table 10 for construction activities and associated impacts
(iii)	emergency response procedures addressing potential flood impacts or spill incidents;	Section 5.3 Table 11, SW14, SW22
(iv)	an Erosion and Sediment Control Plan, detailing measures to manage any erosion and sedimentation impacts into the Georges River or Anzac Creek;	Appendix C ESCP measures also outlined in Appendix D and Table 11, SW1
(v)	an Acid Sulfate Soils Management Plan, if required, including measures for the management, handling, treatment and disposal of acid sulfate soils, including monitoring of water quality at acid sulfate soils treatment areas, should construction activities impact on acid sulfate soils;	Not applicable to this Project as Acid Sulfate soils do not exist.
(vi)	a description of how the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how often this monitoring would be undertaken, the locations where monitoring would take place, how the results of the monitoring would be recorded and reported, and, if any exceedance of the criteria is detected how any non-compliance can be rectified; and	Section 6.3
(vii)	mechanisms for the monitoring, review and amendment of this plan.	Section 6.6



Table 2 Final Compilation of Mitigation Measures (FCMM)

FCMM	Requirement	Document Reference
5A	A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP), or equivalent, will be implemented, in accordance with the Preliminary Erosion and Sediment Control (PESCPs), included within the Stormwater and Flooding Environmental Assessment Report (Appendix P of this EIS). The following aspects will be addressed within the SWMP and ESCPs:	This Plan Table 11, SW1
	• The guiding principles for erosion and sediment control within the Blue Book will be adopted in the SWMP and when planning construction works, being:	Section 5.2
	 Minimise the area of soil disturbed and exposed to 	Section 5
	erosion at any one time.	Table 11, SW1, SW7, SW8, SW10, SW15
	 Priority should be given to management practices that minimise erosion, rather than to those that capture sediment downslope or at the catchment outlet 	Table 11, SW7, SW8, SW10
	 Divert clean water around the construction site or control the flow of clean water at non-erodible velocities through the construction site 	Table 11, SW3, SW19, SW22
	 Provision of boundary treatments around the perimeter of construction areas to minimise the migration of sediment offsite. 	Section 5.2, Table 11, SW5
	 Permanent or temporary drainage works will be installed as early as practical in the construction program to minimise uncontrolled drainage and associated erosion, including the onsite detention (OSD) and flood conveyance works 	Table 11, SW3
	 Stockpiles will be located away from flow paths on appropriate impermeable surfaces, to minimise potential sediment transportation. Where practicable, stockpiles will be stabilised if in place for more than ten days and will be formed with sediment filters in place immediately downslope 	Table 11,SW10
	 Existing catchments and sub-catchment boundaries will be maintained as far as practicable 	Section 5.2
	 Site imperviousness and grades should be limited to the extent of existing imperviousness and grades under existing development conditions. 	Section 5.2
	 Rehabilitate disturbed lands as soon as practicable 	Section 5.2, Table 11, SW15
	 The wheels of all vehicles will be cleaned prior to exiting the construction site where excavation occurs to prevent the tracking of mud. Where this is not practical, or excessive soil transfer occurs onto 	Section 5.2, Table 11, SW6



FCMM	Requirement	Document Reference
	paved areas, street cleaning will be undertaken when necessary.	
	 Inspection of all permanent and temporary erosion and sedimentation control works prior to and post rainfall events and prior to closure of the construction site. 	Section 6.3, Table 11, SW15
	 Erosion and sediment control structures to be cleaned repaired and augmented as required. 	Section 5.2, Table 11, SW15
	• Where required, construction sediment basins and their outlets will be designed to be stable in the peak flow from at least the 10-year ARI time of concentration event. Sediment basins should be sized to accommodate the 5 day, 80th percentile storm event, with sufficient size and capacity to manage Type F soils. Sediment basins must be regularly cleaned to maintain the design capacity. Sediment basins will be located clear of waterway bed and banks and no additional riparian vegetation will be cleared outside the 20 metre Rail link to accommodate sediment basins. Prior to discharge from sediment basins, water will be tested for the following parameters to identify construction impacts:	Table 11, SW4, SW5
	– pH	
	 Turbidity / Total Suspended Solids (TSS) Oil and grease. 	
5G	A Flood Emergency Response Plan (FERP) will be developed for the Stage 1 site. The FERP will take into consideration, site flooding and broader flood emergency response plans for the Georges River and Anzac Creek floodplains and Moorebank area.	CEMP Table 11, SW22
	The FERP will also include the identification of an area of safe refuge within the SIMTA site that will allow people to wait until hazardous flows have receded and safe evacuation is possible.	

Table 3 Concept Plan Conditions of Approval (CPCoA)

CPCoA	Requirement	Document Reference
2.7	Any future Development Application for stage 1 shall include an assessment of soil and water impacts for the entire site including rail link. The assessment shall:	This document
	 a) assess impacts on surface and groundwater flows, quality and quantity, with particular reference to any likely impacts on Georges River and Anzac Creek; b) assess flooding impacts and characteristics, to and from the project including rail link), with an assessment of the potential changes to flooding behaviour (levels, velocities and direction) and impacts on bed and bank stability, through flood modelling, including: i) Hydraulic modelling for a range of flood events; 	Section 3



CPCoA	Re	quireme	ent	Document Reference
	c)	ii) iii) i∨) identify properti project,	Description, justification and assessment of design objectives (including bridge, culvert and embankment design); an assessment of afflux and flood duration (inundation period) on property; and consideration of the effects of climate change, including changes to rainfall frequency and/or intensity, including an assessment of the capacity of stormwater drainage structures.; and assess the soil characteristics and es that may impact or be impacted by the including acid sulfate soils;	
	 d) include a contaminativith the guidelines in Land Management A the EPA for the subjutive Vaste Facility. The analysis is the potential risks of site ii) the potential risks of site 		a contamination assessment in accordance guidelines made under the Contaminated anagement Act 1997 and in consultation with for the subject site including the Glenfield Facility. The assessment shall include:	Glenfield Waste Facility works are not applicable to MPE Stage 1, Package 2. This will be addressed in MPE Stage 1 Package 1 documents. A contamination assessment and Remediation Action Plan have been prepared separately to this document
			the potential environmental and human health risks of site contamination on the project site;	Contamination Management Plan and Health & Safety Plan have been prepared separately to this document which address this condition
			a Remediation Action Plan	Remediation Action Plan (RAP) is prepared separately to this document
		iii)	consideration of implications of proposed remediation actions on the project design and timing; and	RAP is prepared separately to this document
		iv)	a Phase 2 environmental site assessment of the project site including rail corridor.	RAP and CMP are prepared separately to this document

Table 4 Concept Plan Revised Statement of Commitments (RSoC)

RSoC	Requirement	Timing	Document Reference
Contamination	 Developing a Contamination Management Plan with detailed procedures on: Handling, stockpiling and assessing potentially contaminated materials encountered during the development works; Landfill gas management during the excavation, handling and stockpiling of waste materials, if excavation is required during the development, in the Glenfield Quarry and Landfill; Assessment, classification and disposal of waste in accordance with relevant legislation; and A contingency plan for unexpected contaminated materials, such as materials that are odorous, stained or 	Prior to Construction of the three major stages of the Concept Plan	CMP is prepared separately to this document Glenfield Waste facility works are included within MPE Stage 1 Package 1 and not included within package 2. Table 11, SW14



RSoC	Requirement	Timing	Document Reference
	containing anthropogenic materials that may be encountered during site works.		
	Implementation of management plan strategies prior to commencement of the staged construction phase	Prior to Construction	This Plan and CEMP will be implemented prior to and throughout Construction Phase
Stormwater and Flooding	Monitoring and review performance of sediment and water control structures during construction	Construction	Section 4.5 Table 11, SW15, SW16, SW17
	The Proponent will prepare and update a flood emergency response plan as necessary to address the staged development of the site. Details are to be provided prior to the construction of each of the three major stages of the development	Prior to Construction of the three major stages	Section 3.4 CEMP Appendix R Table 11, SW22

Table 5 Commonwealth Conditions of Approvals (CCoA)

CCoA	Requirement	Document Reference
2b	Implement all feasible and practicable measures that ensure sedimentation and/or erosion (as a result of the proposed action) do not lead to any further reductions in the water quality or degradation of, <i>Macquarie Perch</i> habitat.	Section 4 Table 11, SW1

Table 6 Commonwealth Mitigation Measures (CMM)

СММ	Re	quirement	Document Reference
Hydrology	Th pro floo pro	e following mitigation measures will be adopted for the SIMTA posal to mitigate potential impacts on hydrology, water quality and oding resulting from construction and operation of the SIMTA posal:	Section 4
	•	Rainwater tanks will be installed to collect roof water from the warehouses on the SIMTA site, and will be used for non-potable water demands such as toilet flushing and outdoor use.	Warehouse are part of MPE Stage 2 and not included in Scope of Works
	•	Pre-treatment measures will be incorporated into the site stormwater design, including buffer strips and gross pollutant traps where deemed appropriate.	Table 11, SW23 Design Plans
	•	Bio-retention systems will be incorporated into the site stormwater design, including rain gardens and bioswales, where deemed appropriate. These structures will also act as on-site detention basins, minimising the velocity and volume of flows leaving the site during storm events. Bio-retention systems will be designed to achieve the pollution reduction targets set out in the Liverpool DCP.	Table 11, SW24 Design Plans



СММ	Requirement	Document Reference
	• On-site stormwater detention will be designed to achieve flood management in accordance with the flood modelling results outlined in the Flood Study and Stormwater Management report prepared by Hyder Consulting (Hyder Consulting, 2012a) and as updated within the Stormwater and Flooding Assessment (Hyder Consulting, 2012b).	Table 11, SW25 Design Plans
	• The following design principles will be adopted during the design phase of the Georges River bridge: Bridge design will comply with the requirements of Australian Standard 5100:2004 - Bridge Design and RailCorp Engineering Standard ESC 310 - Under bridges.	Applicable for Rail Link only
	 Bridge piers will be located and orientated to align with the piers of the existing East Hills Railway Line bridge. 	
	 The bridge deck height will match the height of the existing East Hills Railway Line bridge 	
	 Bridge piers will be designed and orientated to avoid the formation of large-scale turbulence or the erosion of the bed and banks of the waterway. 	
	 Light penetration under bridges to encourage fish passage will be maximised. 	
	 Use and extent of those bed and bank erosion control measures that may reduce aquatic habitat values or inhibit the regrowth 	
	• During construction of the Georges River bridge the following management approaches will be adopted:	Applicable for Rail Link only
	 Works across the bed of the Georges River will be staged to minimise the total disturbance at any given time and to allow the full bypassing of stream flows around the works to maintain fish passage. 	
	 The management principles outlined in Managing Urban Stormwater (Landcom 2004) for sites with high erosion potential will be implemented. 	
	• The following design principles will be adopted for design and sizing of the culverts across Anzac Creek: Fish passage requirements will be considered when selecting the type of culvert.	Applicable for Rail Link only
	 Where practical, culverts will be aligned with the downstream channel to minimise bank erosion. 	
	 A multi-cell culvert design will be considered with a combination of elevated "dry" cells to encourage terrestrial movement, and recessed "wet" cells to facilitate fish passage. 	
	 Altering the channel's natural flow, width, roughness and base-flow water depth through the culvert's wet cells will be avoided where possible. Wet cells will aim to have a minimum water depth of 0.2-0.5 metres to facilitate fish passage. 	
	 The culvert will be designed to maximise the geometric similarities of the natural channel profile from the bed of the culvert up to a flow depth of 0.5 metres ("Low Flow Design") as a minimum. 	



СММ	Requirement	Document Reference
	 Where conditions allow, the construction of pools will be considered at both the inlet and outlet of the culvert to assist in the dissipation of flow energy and to act as resting areas for migrating fish. 	
	 If a low-flow channel is constructed within the base slab of the culvert, the channel will extend across the inlet and outlet aprons. 	
	 Debris deflector walls may be used to reduce the impact of debris blockages on fish passage. 	
	 Rock protection and/or the formation of a stabilised energy dissipation pool at the outlet will be considered if necessary to assist in minimising erosion to avoid the formation of a perched culvert and damage to the stream bed and banks. 	
	 The design of the crossing will refer to the detailed engineering guidelines provided in Fairfull and Witheridge (2002). 	
	 The following management measures will be implemented during works in and adjacent to Anzac Creek to mitigated potential impacts on water quality during construction: 	Applicable for Rail Link only
	 All reasonable efforts will be taken to program construction activities during those periods when flood flows and fish passage is not likely to occur. As a minimum requirement, fish migrations and breeding periods, as advised by NSW DPI, will be avoided. 	
	 Temporary sidetrack crossings will be constructed from clean fill (free of fines) using pipe or box culvert cells to carry flows, or a temporary bridge structure. 	
	 All temporary works, flow diversion barriers and in-stream sediment control barriers will be removed as soon as practicable and in a manner that does not promote future channel erosion. 	
	 The construction site will be left in a condition that promotes native revegetation and shading of habitat pools. 	
	 The management principles outlined in Managing Urban Stormwater (Landcom 2004) for sites with high erosion potential will be implemented. 	
	 A flood emergency response plan would be prepared and updated as necessary to address the staged development of the site. 	
	 A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP) will be implemented for the construction and operation phases of the development, with monitoring and review performance of sediment and water control structures during construction and operation phases. The SWMP and ESCPs will be developed in accordance with the principles and requirements of Managing Urban Stormwater 	
	(Landcom, 2004).	



COMPLIANCE MATRICES	. VII
1 INTRODUCTION	17
1.1 Development Ownership	17
1.1.1 MLP Acquisition and Applicant Transfer	17
1.2 Development Overview	17
1.3 Background and Scope	17
1.3.1 Removal of Disused Rail Spur	18
1.3.2 Environmental Planning and Approval	18
1.4 Purpose and Application	20
1.5 Objectives and Targets	20
1.6 Consultation Summary	21
2 ENVIRONMENTAL OBLIGATIONS	24
2.1 Legislation	24
2.2 Project Approval Conditions	24
2.3 Guidelines	24
3 EXISTING ENVIRONMENT	25
3.1 Topography and Hydrology	25
3.2 Soils	25
3.3 Contamination	25
3.4 Water Quality	26
3.5 Rainfall Patterns	26
3.6 Groundwater	27
3.7 Acid Sulfate Soils	27
4 ASPECTS, IMPACTS AND RISKS	28
4.1 Soils	28
4.2 Contamination	29
4.3 Water Quality	29
4.4 Flooding	29
4.5 Groundwater	29
5 -MANAGEMENT MEASURES	30
5.1 Key Soil and Water Management Tools	30
5.2 Management Principles	30
5.3 Emergency Spill Response	33
5.4 Controls	33
6 COMPLIANCE MANAGEMENT	44
6.1 Roles and Responsibilities	44
6.2 Training	44
6.3 Monitoring, Auditing and Reporting	44
6.4 Enquiries, Complaint6s and Incident Management	49
6.5 Non-compliances, Non-conformance and Actions	50



LIST OF TABLES

Table 1 Ministers Conditions of Consent (CoC)	vii
Table 2 Final Compilation of Mitigation Measures (FCMM)	viii
Table 3 Concept Plan Conditions of Approval (CPCoA)	ix
Table 4 Concept Plan Revised Statement of Commitments (RSoC)	x
Table 5 Commonwealth Conditions of Approvals (CCoA)	xi
Table 6 Commonwealth Mitigation Measures (CMM)	xi
Table 7 Objectives and Targets	20
Table 8 Consultation Summary	21
Table 9 Stage 1 Site Historical Contamination Summary	25
Table 10 Construction Activities and Associated Impacts	28
Table 11 Mitigation/ Management/ Control Action and Responsibilities	34
Table 12 Monitoring Requirements	44

LIST OF FIGURES

Figure 1 MPE Stage 1, Package 1 Construction Footprint	19
Figure 2 MPE Stage 1, Proposed stockpile locations	32
Figure 3 Emergency Spill Response Procedure	33
Figure 4 Water Quality Monitoring Locations	48
Figure 5 Water discharge points	49



1.1 Development Ownership

In 2022, LOGOS joined the ESR group of companies and since August 2024, the LOGOS and ESR operations have been integrated to now operate under the name ESR Australia & NZ (ESR). The applicant/ approval holder entity remains unchanged at this stage until further notice and references to LOGOS and LOGOS authored documents and/or plans may continue and remains relevant where LOGOS and ESR are used interchangeably.

1.1.1 MLP Acquisition and Applicant Transfer

In December 2021, LOGOS acquired the warehousing and property components of Qube's Moorebank Logistics Park including taking over delivery of the development under the MPE Stage 1 SSD 6766 consent and resulting in a transition away from the Sydney Intermodal Terminal Alliance (SIMTA). In August 2024, LOGOS integrated its operations with ESR Group Limited. This report has been prepared on behalf of ESR Australia & NZ, part of ESR Group.

1.2 Development Overview

Approval for the construction and operation of Stage 1 of the Moorebank Precinct East (MPE) Project, comprising an Intermodal (IMT) Facility including a rail link (Package 1) and Import Export (IMEX) Terminal (Package 2) was received on 12 December 2016 (SSD 6766). The construction and operation of the MPE Stage 1 Project was subject to an appeal in September 2017 (Appeal Number 2017/00081889). The approval was upheld and the revised Conditions of Consent (CoC) were released on 13 March 2018.

This Construction Soil and Water Management Plan (CSWMP) has been developed to manage impacts associated with erosion and sediment control, surface water quality, site wastewater, potential water contamination, groundwater and flooding issues during the construction of Package 2 of the MPE Stage 1 Project (hereafter referred to as the Project).

Within this plan, a strategy has been established to demonstrate the contractor's approach to the management of soil and water. The CSWMP also accounts for requirements of the MPE Stage 1 Project Environmental Impact Statement (EIS) [Appendix P - SIMTA Stage 1 – Stormwater and Flooding Environmental Impact Assessment, and Appendix E - SIMTA Stage 1 – Stormwater and flooding supplementary response material].

This CSWMP addresses the relevant requirements of the Project Approvals, including the EIS, Submissions Report and Minister's Conditions of Consent (CoC), and all applicable guidelines and standards specific to the management of soil and water during construction of the Project.

1.3 Background and Scope

The MPE Project site is located approximately 27 kilometres (km) south-west of the Sydney Central Business District (CBD) and approximately 26 km west of Port Botany and includes the former Defence National Storage and Distribution Centre (DNSDC) site, (see Figure 1).

The MPE Project involves the development of an intermodal facility including warehouse and distribution facilities, freight village (ancillary site and operational services), stormwater, landscaping, servicing and associated works on the eastern side of Moorebank Avenue, Moorebank. It is to be developed in three key stages:

- Stage 1 Construction of the IMT and rail link
- Stage 2 Construction of warehouse and distribution facilities
- Stage 3 Extension of the IMT and completion of warehouse and distribution facilities.

Stage 1 of the MPE Project comprises, and would be constructed across, two packages:



- Package 1 The Rail Link (not included within this Plan) includes a connection to the IMT facility, and traverses across Moorebank Avenue, Anzac Creek and Georges River prior to connecting to the Southern Sydney Freight Line (SSFL)
- Package 2 The IMT (subject of this Plan) includes the following key components:
 - Truck processing, holding and loading areas entrance and exit from Moorebank Avenue
 - Rail loading and container storage areas installation of four rail sidings with adjacent container storage area serviced by manual handling equipment initially and overhead gantry cranes progressively
 - Administration facility and associated car parking- light vehicle access from Moorebank Avenue
- Removal of the Disused Rail Spur (DURS) and rehabilitation of the land containing the DURS as required by CoC C23B of the MPE Stage 1 Consent (as amended by the court decision on 13 March 2018).

The layout of the IMEX facility generally comprises operational areas, an administration area, rail sidings, utilities and drainage infrastructure, landscaping and signage. The operational areas of the IMEX facility consist of the primary and secondary container loading / unloading areas and container storage areas, and the truck holding area. Within these areas containers would be stacked up to five high.

1.3.1 Removal of Disused Rail Spur

Moorebank Intermodal

Precinct

As a result of the NSW Land and Environment Court Order of 13 March 2018, the MPE Stage 1 Consent was amended to include the removal of the DURS as CoC 23B.The DURS removal works involve the removal of the DURS and associated infrastructure, followed by the remediation and rehabilitation of the DURS footprint. Remediation of the site will be covered by the existing "Boot Land" Environmental Management Plan (EMP) prepared by GHD and dated May 2016. This EMP includes procedures for managing unexpected finds, water and sediment monitoring, reporting and record keeping.

Management measures in this CSWMP are considered appropriate to manage the DURS construction activities.

1.3.2 Environmental Planning and Approval

The MPE Stage 1 Project has been assessed by the Department of Planning and Environment (DP&E) under Division 4.7 (Division 4.1 prior to March 2018) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as State Significant Development (SSD). The Planning Assessment Commission (PAC) granted Approval for the MPE Stage 1 Project on 12 December 2016 and is subject to the Minister's Conditions of Consent (CoC, 18 December 2016 (ref SSD-6766)). The MPE Stage 1 Project, its impacts, consultation and mitigation were documented in the following suite of documents:

- State Significant Development Application SSD 6766 (as amended in the Land and Environment Court 13 March 2018)
- SIMTA Intermodal Terminal Facility Stage 1 Environmental Impact Statement (Hyder Consulting Pty Ltd, May 2014)
- SIMTA Intermodal Terminal Facility Stage 1 Response to Submissions (Hyder Consulting Pty Ltd, September 2015)
- SIMTA Intermodal Terminal Facility- Stage 1 Stormwater and Flooding Environmental Impact Assessment, Hyder Consulting Pty Ltd, dated April 2015.
- SIMTA Intermodal Terminal Facility- Stage 1 Response to Submissions Stormwater and Flooding Supplementary Material, Hyder Consulting Pty Ltd, dated September 2015

Table 1 demonstrates compliance with the relevant CoCs for the works, including CoC E34 which requires the Plan to be prepared, consulted and approved.



MPE Stage 1 CSWMP



Figure 1 MPE Stage 1, Package 1 Construction Footprint



1.4 Purpose and Application

Within the submission of planning approval for the MPE Stage 1, Arcadis (then Hyder Consulting) undertook a Stormwater and Flooding Environmental Impact Assessment. This CSWMP has been developed based on the initial Stormwater and Flooding Environmental Impact Assessment, and to address the final compilation of mitigation measures within the EIS and revised statement of commitments. This plan aims to demonstrate how soil and water will be managed during construction of the Project.

This plan provides methods to measure and reduce the impact associated with erosion and sediment control, surface water quality, site wastewater, potential water contamination, groundwater and flooding issues by the contractor during the construction of the Project, including all contractor and consultant partners.

Specifically, the purpose of this CSWMP is to:

- Manage soil and water in accordance with the Project approval documents (as outlined in Section 1.3.2)
- Review and consider the Stormwater and Flooding Environmental Impact Assessment, (Appendix P of EIS) during the construction phase of Package 2 of the MPE Stage 1 Project
- Review and consider the Stormwater and Flooding Supplementary Material, (Appendix E of EIS) during the construction phase of Package 2 of the MPE Stage 1 Project
- all applicable guidelines and standards specific to soil, stormwater and flooding management during the Stage 1 Operational Area construction.
- Ensure that through the use of best practice, impacts associated with soil and water are minimised

This -sub-plan supports the MPE Stage 1 (Package 2) Construction Environmental Management Plan (CEMP).

1.5 Objectives and Targets

This CSWMP provides the basis for the management of erosion, sediment, stormwater, water contamination and flooding issues and to minimise risk of impact during the first stage of development. The high level objectives and targets set for the MPE Stage 1 Project are outlined in Table 7 below:

Table 7 Objectives and Targets

Objectives	Targets
 Minimise erosion on site through implementation maintenance of appropriate erosion and sedimen controls. 	 Following inspections, no occurrence of significant issues/non-compliances and non-conformances.
Limit the disturbed area and stabilise as soon as practicable following the completion of works	Target: no pollution incidents resulting in environmental harm or regulatory action
 Minimise potential pollution to surface water, via segregation of clean and dirty stormwater flows, t ensure existing water quality of surrounding surfa watercourses is maintained. 	 No written warnings or Penalty Infringement Notices arising from the works
 Ensure all discharges from site comply with the objectives of Section 120 of POEO Act. 	No non-compliances with s120 PoEO Act – i.e. no incidents of "pollution
 Minimise demand for, and use of, potable water for construction and maximise opportunities for water use from captured 'dirty' water runoff (within ESC measures e.g. sediment basins) and site wastewater 	or r re-
 Design and construct works to minimise adverse increase in flood impacts to local and regional catchments. No discharge of water without a valid permit to the dischar	
discharge	



1.6 Consultation Summary

The CoC for the Project requires that the CSWMP be prepared in consultation with:

- The Environmental Protection Authority (EPA)
- Department of Primary Industries (DPI) Water
- DPI Fisheries
- Relevant Councils Liverpool City Council

A summary of consultation is provided in Table 8, with supporting evidence in Appendix E.

Table 8 Consultation Summary

Agency	Date	Person Contacted	Comment	Status
Liverpool City council	25/01/17		Phone call made to inform of CEMP and sub plans that would be provided for comment from 1 February to 15 February. LCC indicated they would be happy to receive and provide comment.	Open
	01/02/17		Email sent containing briefing note, CEMP, CSWMP, CTAMP, CHMP, reiterating the two-week deadline for comments received.	Open
	08/02/17		Phone call made on 8 February to confirm delivery of documentation and review progress.	Open
	15/02/17		Email received containing comments. Confirmation email sent to acknowledge receipt of comments.	Closed
Campbelltown City Council	24/01/17		Phone call made. Voice message left outlining provision of CEMP and sub-plans at the beginning of February. Follow up email was sent to on 25 January.	Open
	1/02/17		Email sent containing briefing note, CEMP, CSWMP, CTAMP, CHMP, reiterating the two-week deadline for comments received.	Open
	08/02/17		Phone call and email sent to confirm receival of documentation and review progress. No answer, voicemail left.	Open
	15/02/17		Phone call made to notify comments deadline. Extension for comments deadline granted to 17 February	Open
	17/02/17		Email received with comments relating to plans. No comments were received regarding the CSWMP.	Closed
EPA	22/12/17		Contact by phone to inform CEMP and sub- plans would be submitted in mid-January. EPA stated they were happy to receive.	Open
	22/12/17		Email sent to confirm conversation	Open

Moorebank Intermodal Precinct

Agency	Date	Person Contacted	Comment	Status
	25/01/17		Phone call made to inform of pending provision of sub-plans	Open
	27/01/17		Email received indicating that the EPA would not be endorsing or reviewing the plans, in order to maintain regulatory 'arms reach' of the project.	Closed
DPI Water	22/12/16		Phone call made inform CEMP and sub- plans would be submitted in mid-January. DPI Water stated that the documents should be submitted to the land use enquiries email address.	Open
	23/01/17		Phone call made to confirm plans would be submitted February 1. Janne reiterated that documents should be submitted to land use enquiries email, but confirmed that she would be the person undertaking the reviews.	Open
	01/02/17		Email sent containing briefing note, CEMP and CSWMP and requesting review of documents by 15 February 2017.	Open
	08/02/17		Phone call made to confirm delivery of documentation and to track review progress. No answer, voicemail left.	Open
	16/02/17		Phone call made to confirm that OEH do not wish to make comment as no comments were received. No answer, voice message left.	Open
	16/02/17		Email received indicating that DPI Water require 4 weeks for management plan reviews, and would endeavour to provide comments by 1 March.	Open
	17/02/17		Phone call made to explain that there were no significant issues involving creek crossings or water bodies on the Project site, in an attempt to speed up review process. It was stated however that the review time was standard procedure and prioritisation based on review simplicity is not possible. 2-week extension granted*.	Open
	08/03/17		Email received with comments relating to both the CEMP and CSWMP.	Closed
DPI Fisheries	22/12/16		Phone call made to inform the CEMP would be submitted in mid-January. DPI Fisheries stated they are happy to receive the document	Open



Agency	Date	Person Contacted	Comment	Status
	23/01/17		Phone call made to confirm plans would be submitted February 1. It was confirmed she would provide comment to the documentation within the given timeframe.	Open
	01/02/17		Email sent containing briefing note, CEMP and CSWMP requesting review of documents by 15 February.	Open
	02/02/17		Email received indicating that all relevant plans were reviewed, with no objections, suggested changes or comments.	Closed

* It was agreed during a meeting held with the Department of Planning and Environment (DP&E) on 21/02/17 that the DPI Water review of documentation would be undertaken in conjunction with the DP&E review.

Nioorebank Intermodal Precinct 2 ENVIRONMENTAL OBLIGATIONS

Moorebank

2.1 Legislation

Key legislation relevant to this Plan includes:

- Protection of the Environment Operations Act 1997
- Environmental Planning and Assessment Act 1979
- Environmental Protection and Biodiversity Conservation Act 1999
- Contaminated Land Management Act, 1997 •
- Dangerous Goods (Road and Rail Transport) Act 2008
- Dangerous Goods (Road and Rail Transport) Regulation 2014
- Water Management Act, 2000.

A key legislative requirement applicable to construction soil and water management is Section 120 of the Protection of the Environment Operations Act 1997 which relates to pollution of waters and the need to implement all reasonable and feasible measures to minimise the risk of pollution of waters. Part 5.7 of the Act requires that a pollution incident causing or threatening material harm to the environment to be notified to EPA and other relevant authorities as outlined in the CEMP. Material harm constitutes actual or potential harm to the health or safety of humans and/or ecosystems that is not trivial, or results in actual or potential loss or property damage of amounts in excess of \$10,000 in total.

An Environmental Protection Licence (EPL) (No 21054) was issued by the EPA on 4 June 2018 with a further variation issued on 18 April 2019 to capture cut and fill earthworks occurring on the MPE Stage 2 Project Site and additional considerations observed during a site inspection on the 23 November 2018.

The licence applies to the Moorebank Precinct (excluding the MPE Stage 1 Rail Access Land Package (RALP) which has a separate EPL licence (No. 20966) and authorises > 100,000 – 500,000 tonnes crushing, grinding or separating processing capacity per annum and > 500,000 - 2,000,000tonnes extraction, processing or storage capacity per annum. The licence applies to all other activities carried on at the premises, including road construction, bulk earthworks 'cut and fill' and importing fill.

Specific requirements for EPL 21054 are addressed in Table 5 and Section 4.2 of the CEMP.

2.2 Project Approval Conditions

Tables 1-6 demonstrate compliance with the relevant CoCs for the works.

2.3 Guidelines

Additional guidelines and standards relating to the management of soil, stormwater and flooding include:

- NSW Landcom publication Managing Urban Stormwater Soils and Construction Edition 4 March 2004 (Blue Book)
- Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act • 1997 (DECC 2015)
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000) .
- Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004)
- Australian Rainfall and Runoff Volume 1 (2001), Engineers Australia
- NSW EPA Best Practice Note: Land farming (2014). •
- AS 1940-2004 The Storage and Handling of Flammable and Combustible Liquids •
- Australian Dangerous Goods Code Edition 7.4
- State Environment Planning Policy 55



3 EXISTING ENVIRONMENT

3.1 Topography and Hydrology

The topography of the Project site is relatively flat, with reduced levels (RLs) ranging between 14 and 16 metres Australian Height Datum (mAHD). Along the eastern site boundary, the land rises from about RL14 mAHD at each end to a localised peak of RL22 mAHD about midway along the length. Assessment of hydrology across the Project site under current conditions presented in the EIS identified three internal catchment areas and two small upstream catchment areas discharging to the Project site. There are three existing stormwater culvert outlets from the site. Two outlets discharge eastward to Anzac Creek and cross under the Greenhills Road formation via pipes and headwalls (Outlets A and B). Stormwater to these two culvert outlets is conveyed through the site via formal open grass lined channels. From Greenhills Road to Anzac Creek the channels appear less formalised. A summary of existing site catchments and stormwater discharge points is presented as Appendix A.

The Project site falls within the Georges River Estuary catchment with a receiving environment of Botany Bay. The Botany Bay catchment includes residential, industrial, commercial, recreational and bushland with the main sources of pollution coming from stormwater runoff. Hydrology in the local area surrounding the Project site is characterised by the Georges River approximately 800m west of site and Anzac Creek (a tributary to the Georges River) as receivers for the Project site surface water.

3.2 Soils

The Project site is underlain by sand or clayey sand fill to depths of up to 1.5m over interbedded alluvial sand and clay inferred to be present to depths of up to 23m over shale and sandstone bedrock (Golder 2015). The soil landscape of the site is Berkshire Park that have the common constraints of impermeable water logged subsoils and low fertility. The slope range of the landscape varies between 0-5% and the soils belong to hydrologic group C, indicating a moderate to high runoff potential. The soil erodibility factor (or K-factor of this soil type is 0.048 (medium to high erodibility) and is characterised by a fine soil particle.

Previous investigation including intrusive inspection of the soil profile concluded an extremely low to low chance of Acid Sulphate Soils (ASS) exists beneath the Operational Area (JBS&G 2015). The extremely low to low likelihood of encountering ASS eliminates the requirement to prepare an ASS Management Plan.

3.3 Contamination

The Project site operated from 1915 until recently as the Defence National Storage and Distribution Centre (DNSDC), buildings and infrastructure associated with the DNSDC remain on site.

Potentially contaminating sources at the Project site, as identified in the EIS, are summarised in Table 9 below.

Potential Impact	Location	Contaminants of Potential Concern	
General site fill	Inferred to be present across the site.	Metals (As, Cd, Cr, Cu, Pb, Ni, Zn, Hg), Asbestos, OC/OP, TRH, BTEXN, PAH	
Localised fill and a waste storage pit	Adjacent and beneath Building 20.	As above	

Table 9 Stage 1 Site Historical Contamination Summary



Potential Impact	Location	Contaminants of Potential Concern	
Underground collection pits and oil and water separators	Adjacent/beneath existing buildings	TRH, BTEXN, PAH	
Potential fuel leaks and spills associated with fuel storage and distribution	The refuelling area in the south-west corner of the site / adjacent Building 163.	TRH, BTEXN, Pb	
Asbestos and lead based paint associated with demolition of previous structures and the deterioration of current structures	Across the site.	Metals (As, Cd, Cr, Cu, Pb, Ni, Zn, Hg), Asbestos, OC/OP, TRH, BTEXN, PAH, PCB	

Impacts positively identified include:

- Light Non-Aqueous Phase Liquid (LNAPL) on groundwater at the refuelling area (Building 20)
- Asbestos Containing Material (ACM) in surface soil adjacent to the north-western corner of Building 11
- Copper and zinc in soil in the south-east corner of site exceeding ecological assessment criteria only
- Cadmium, copper, nickel lead, zinc in groundwater in northern and southern sections of the site exceeding ecological assessment criteria only.

3.4 Water Quality

Water quality sampling of the Georges River and Anzac Creek found that the majority of water quality parameters were within ANZECC (2000) guidelines for lowland aquatic ecosystems of south-eastern Australia, with the exception of pH and percent dissolved oxygen (DO). In the Georges River the pH was 6.06, below the lower guideline value of 6.5, and the percentage of DO results were also below the lower guideline value of 60 per cent. Within Anzac Creek the recorded pH was 5.62 and DO was at 11.6 percent, which were both considerably below the lower guideline values.

3.5 Rainfall Patterns

Based on historical data recorded since 1968 at Bankstown Airport (Hyder 2015), the region is characterised by moderate rainfall, with a mean annual rainfall of 870 mm, and an annual rainfall range between 493 mm and 1,398 mm. There is significant variation in monthly rainfall throughout the year, with the summer and autumn months typically experiencing higher falls than the remainder of the year. Rainfall data also shows that February is the wettest month with a mean rainfall of 108.5 mm over 11.0 rain days.

Flood plain mapping provided by Liverpool City Council indicated that the Georges River flood prone areas extend to the west of the overbank of the Georges River through to the existing Glenfield Waste Facility which the proposed Rail link would traverse. Ground survey undertaken for the Proposal confirmed that the top of the western bank of the Georges River in this location is approximately 11.8 mAHD, which is 0.3m above the Georges River 100 year ARI flood level in this area. RAFTs and TUFLOW modelling was used to determine the existing flood extent along Anzac Creek floodplain within the vicinity of the site. This modelling showed that under the 100 year average recurrence interval (ARI) event the flood levels to the south of the site is 14.9 mAHD and the probable maximum flood (PMF) level is 15.6 mAHD.

Appendix A presents a summary of flood and stormwater modelling from the EIS and identifies the southern portion of the Project site is likely to be affected by a 1 in 100 year flood and PMF event under existing conditions.



3.6 Groundwater

Groundwater beneath the Project site has been previously observed at depths of 5.5-5.8m and is understood to flow north and west toward the Georges River. A deeper aquifer has been reported at a depth of up to 11m. The deeper aquifer was observed to be more saline than the shallow aquifer perhaps as a result of local recharge.

Groundwater systems have been reported as impacted by various activities across the site. In particular, groundwater within the vicinity of the UPSS has significant light non-aqueous phase liquid (LNAPL) above.

Other than the LNAPL contamination, groundwater samples analysed by JBS&G (2015b) on the Project site and within the Rail link were below the limit of recognition for all analytes, with the exception of several samples that had heavy metal concentrations above the ecological investigation level. However, the heavy metal concentrations in the samples were considered to be representative of background concentrations in groundwater in urban areas of Sydney.

3.7 Acid Sulfate Soils

Given that regional trends indicate an extremely low to low likelihood of ASS and site investigations reviewed to date have not identified ASS the overall risk of ASS occurring on site is considered to be negligible.



4 ASPECTS, IMPACTS AND RISKS

An aspects and impacts register has been created for the project and is located in Appendix O of the CEMP. The project has the potential to impact local soil and water quality through the erosion and transport of sediment and contaminated soils generated from the processing and transport of materials, loss of vegetation cover and the exposure of soils and erosion.

Table 10 summarises the key activities and potential impacts on soil and water quality whilst sections 4.1-4.5 provide further detail as to the impacts.

Table 10 Construction Activities and Associated Impacts

Works Period	Activities	Potential Impacts
1	Site preparation – demolition, salvage	Potential for off-site transport of eroded sediments and pollutants, generation of dust, mobilisation of sediment and potential pollution of waterways
2	Earthworks, drainage, utilities	Potential for off-site transport of eroded sediments and pollutants, generation of dust, mobilisation of sediment and potential pollution of waterways
3	Engineering fill	Potential for off-site transport of eroded sediments and pollutants, generation of dust, mobilisation of sediment and potential pollution of waterways
4	Construction and rail alignment	Potential for off-site transport of eroded sediments and pollutants, generation of dust, mobilisation of sediment and potential pollution of waterways
5	Miscellaneous, finishing works, landscaping	Potential for off-site transport of eroded sediments and pollutants, generation of dust, mobilisation of
	Removal of disused rail spur	sediment and potential pollution of waterways

Further information relating to contamination and the management of contamination on the site is provided in the Contamination Management Plan.

4.1 Soils

The earthworks will require the disturbance of soils thus providing the potential for erosion and the generation of sediment laden water. Exposed soil will have the potential to become mobilised in the wind, with the potential for fugitive dust to leave the site. It is noted that the EIS identified that the majority of the proposal site has a low erosion potential. Open excavations have the potential to capture surface water runoff in the event of precipitation and potentially ground water intrusion, such water becomes heavily sediment laden and potentially contaminated. Soil contamination may occur during construction due to hydrocarbon/other chemical releases from unintentional chemical spills, hydraulic hose leaks and refuelling incidents.

Additionally, targeted excavation of sub-surface features is proposed to address identified contaminant and geotechnical impacts associated with site history.



4.2 Contamination

It is valuable to consider risks associated with contamination during the Project construction in terms of existing contamination and potential contamination that may be generated by construction.

Existing contamination includes:

- LNAPL on groundwater related to the former refuelling facility;
- asbestos in soil;
- heavy metals in soil and groundwater; and
- a range of contaminants associated with remaining site structures (e.g.: asbestos, lead, PCB).

Mobilisation of identified contamination and potentially contaminated building materials during the Project construction is identified as a risk. It is noted that potential impacts associated with heavy metal contamination identified on the site are limited to ecological receptors and are unlikely to occur under current or future land use. Potential mobilisation of heavy metals and subsequent exposure to ecological receptors during the Project construction is however identified as a risk.

Potential contamination that may be directly generated through construction activities include hydrocarbon leaks or spills from equipment during construction, unintentional chemical spills, refuelling incidents, pH and salinity impacts associated with demolished concrete, and generation of dust. Mobilisation of contaminants generated during construction through stormwater runoff or infiltration to groundwater, distribution within site soils and as windblown dust are identified as project risks.

4.3 Water Quality

Potential impacts associated with quality of water discharging off site are primarily associated with a potential increase in sediment entrainment that will result following removal of hardstand and during earthworks. Secondary impacts identified include potential mobilisation of contaminants as discussed in Section 4.2.

4.4 Flooding

The Project construction works, in particular demolition and earthworks components will impact existing stormwater management provisions. An associated risk has been identified for increased potential of adverse flood impacts on neighbouring property. Further, the EIS identifies impacts associated with probable maximum flood (PMF) events should be considered to inform evacuation and refuge requirements during the Project construction. The post-development flows are provided in Appendix A.

4.5 Groundwater

Identified potential impacts to groundwater during the Project construction relate to contamination described in Section 4.2 above. The likelihood of groundwater impacts is expected to relate to the degree and extent of contamination and the amount of surface water infiltration that occurs. Risks associated with potential groundwater impacts include an increase in the degree of contamination on site, migration of contamination in groundwater off site and pollution of proximate surface water receptors through groundwater migration.

Disturbance of groundwater during the Project works is not predicted except during remediation of hydrocarbon impacts associated with the refuelling facility. It is noted that in the event of identifying the potential for these works to intersect the groundwater table, a report detailing the results of further investigations into surface water, groundwater and geotechnical issues will be prepared in consultation with the EPA and NOW and submitted to the Secretary prior to these potentially impacting works commencing. This report would include identification of relevant licencing requirements or other approvals under the Water Act 1912 and/or Water Management Act 2000 and consideration of impacts against the NSW Aquifer Interference Policy. If contaminated groundwater is intersected by the construction works and dewatering is required, the requirements set in section 4.2 above prevail.



5 -MANAGEMENT MEASURES

This Section describes the overall approach and principles associated with managing and mitigating soil, stormwater and flooding risks during the Project.

The management measures prescribed for the Project construction herein are based on the mitigation measures presented in the EIS, Commonwealth conditions of approval of the EIS and the Minister's Conditions of Consent (CoC), the Moorebank Precinct Environmental Protection Licence (EPL 21054) as well as applicable industry guidelines.

5.1 Key Soil and Water Management Tools

The hierarchy of management documentation used for the implementation of the mitigation measures on each site are as follows:

- 3. Construction Soil and Water Management Plan (CSWMP) this Plan key guidance document from which the practical site-based management tools are developed
- Environmental Controls Map (ECM) plan/map based tool specific to site/work area and includes the location of existing waterways, environmental protection measures, monitoring requirements, environmentally/community sensitive areas, etc.
- 5. Erosion and Sedimentation Control Plans (ESCPs) A site-specific ESCP developed to ensure conformance with the Blue Book and POEO Act requirements. Consisting of the initial Primary ESCP prior to construction followed by Progressive ESCPs (PESCPs) to reflect changing nature of the site as works progress. The ESCPs would include the location of existing drainage infrastructure in proximity to the works and associated controls to be installed.

5.2 Management Principles

The following points have been identified as the key techniques to control water quality on the project. These points collectively fulfil the principles of sound soil conservation practice. In selecting appropriate control structures care must be taken so that their use does not exceed design limitations. Where exceedance of design limitations cannot be avoided detailed design of the structure will be required.

The guiding principles for erosion and sediment control within the Blue Book will be adopted in the SWMP and when planning construction works as follows:

- Priority should be given to management practices that minimise erosion, rather than to those that capture sediment downslope or at the catchment outlet
- Minimise the area of soil disturbed and exposed to erosion at any one time
- Divert clean water around the construction site or control the flow of clean water at non-erodible velocities through the construction site
- Provision of boundary treatments around the perimeter of construction areas to minimise the migration of sediment offsite
- Permanent or temporary drainage works will be installed as early as practical in the construction
 program to minimise uncontrolled drainage and associated erosion, including the onsite detention
 (OSD) and flood conveyance works
- Stockpiles will be located away from flow paths on appropriate impermeable surfaces, to minimise potential sediment transportation (refer Figure 2 below). Where practicable, stockpiles will be stabilised if in place for more than ten days and will be formed with sediment filters in place immediately downslope.
- Existing catchments and sub-catchment boundaries will be maintained as far as practicable
- Site imperviousness and grades should be limited to the extent of existing imperviousness and grades under existing development conditions
- Rehabilitate disturbed lands as soon as practicable



- The wheels of all vehicles will be cleaned prior to exiting the construction site where excavation occurs to prevent the tracking of mud. Where this is not practical, or excessive soil transfer occurs onto paved areas, street cleaning will be undertaken when necessary
- Inspection of all permanent and temporary erosion and sedimentation control works prior to and post rainfall events and prior to closure of the construction site
- Erosion and sediment control structures to be cleaned repaired and augmented as required.

The key measures associated with sediment and erosion control will include:

• Any additional construction areas, such as site offices and stockpile locations will be located, where possible, within existing cleared or disturbed areas.

Check the operation of all project-related sediment and erosion controls at least once per day during operational hours, to help identify potential water pollution risks. A Preliminary Erosion and Sediment Control Plan has been developed and presented in Appendix C.



MPE Stage 1 CSWMP



Figure 2 MPE Stage 1, Proposed stockpile locations



5.3 Emergency Spill Response

In the event of a spill incident, the emergency spill response procedure below will be implemented. Emergency spill clean-up kits will be maintained on-site in agreed locations that are accessible and known to all site workers. Spill kits will be used in the event of inadvertent spills of fuels, oils, hydraulic fluids and other hazardous wastes, to contain the spill and avoid contamination of waters. Workers will be trained in the use of spill kits. Contaminated soils shall be excavated and disposed by means to be authorised by the Site Superintendent. Contamination mitigation and management measures are further outlined in Table 11, SW14.

Emergency Spill Response



Figure 3 Emergency Spill Response Procedure

5.4 Controls

The Table 11 outlines controls/mitigation measures that will be implemented during construction.



Table 11 Mitigation/ Management/ Control Action and Responsibilities

ltem	Mitigation / Management / Control Measure	Timing	Responsibility	Reference
Controls	3			
	Erosion and Sediment Control Plan			
SW1	An Erosion and Sediment Control Plan (ESCP) for the Project construction is presented as Appendix C. The plan includes ERSED controls in accordance with <i>Managing Urban</i> <i>Stormwater: Soils and Construction Volume 1</i> (Landcom 2006) (the Blue Book") as outlined further below. Standard Drawings of ERSED controls are provided in Appendix D. These drawings outline construction measures and methods of installation of controls.	Pre-Construction Construction	Environmental Manager Supervisors	CoC E34(f) CMM - Hydrology CCoA 2b FCMM 5A
	The ESCP must be developed and approved by the Principal. The Principal's Environmental Representative will inspect the installation of the controls prior to breaking ground.			
SW2	Vegetation			
	The following controls will be implemented to minimise impacts associated with vegetation:			
	 Clearing of vegetation will not be undertaken during overland flow events Clearing areas will be constrained by clear identification of sensitive areas and 			
	 areas for construction. The extent of clearing should be delineated with high visibility temporary fencing and the extent and limitations to vegetation clearing will be clearly identified on construction plans All disturbed areas where trees and other vegetation are removed are to be extended and or supported and on any with the contractual requirements are any supported and any support of the contractual requirements are any support of the contractual requirements any support of the contractual requirements are any support of the contractual requirements any support of the contractual requirements are any support of the contractual requirements any support of the contractual requirements are any support of the contractual requirements are any support of the contractual requirements any support of the contractual requirements are any support of the contractual requirements are any support of the contractual requirements any support of the contractual requirements are any support of the contractual requirements are any support of the contractual requirements any support of the contractual requirements are any support of the contractual requirements any support of the contractual requirements are any support of the contractual requirements ar	Pre-Clearing Clearing Construction	Construction Manager Supervisors	FCMM 5A
				CFFMP
	soon as practical following final land shaping			FCMM 5A
	 Any additional construction areas, such as site onices, construction stockpile locations and machinery/equipment laydown areas will be located, where possible, within existing cleared or disturbed areas. A preliminary plan presenting construction areas across the Project site is presented in Figure 1. Rehabilitation will commence as soon as possible. 			
SW3	Drainage	0	Design Manager	CoC C9. E6.
	Upslope diversion drains/bunds are to be installed to prevent clean water runoff from entering disturbed construction catchments. Clean water diversion drains are to be lined	Construction	Supervisor	E7, E8, E34



ltem	Mitigation / Management / Control Measure	Timing	Responsibility	Reference
	with geo-fabric and discharge to stabilised areas via level spreaders. Final design swales need to be established as soon as is practicable as they will play a role in the sediment control on the site, upon the insertion of rock check dams.			FCMM 5A
	Sediment Basins			
SW4	Sediment basins were originally proposed in the ESCP by Hyder (2015), however upon completion of the erosion hazard assessment and annual soil loss calculation it has been determined that sediment basins are no longer necessary. The details of the erosion hazard assessment are provided in Appendix B.	Construction	Environmental Manager	CoC E34(f)(iv) FCMM 5A
	Sediment Fences			
SW5	Sediment fences are located around the perimeter of the site to ensure no untreated runoff leaves the site. They have also been located around the existing and proposed drainage channels to minimise sediment migration into waterways and sediment basins. Sediment fences are to be installed in accordance with Standard Drawing (SD) 6-8 as provided in Appendix D.	Construction	Environmental Manager	CoC E34(f)(iv) FCMM 5A
			Supervisors	
SW6	Stabilised Site Access and Truck Washdown			
	A stabilised site access is to be located on Moorebank Avenue, and a truck wheel wash bay, is proposed via a detour along the Main IMT construction haul road, to the north of the Main IMT compound area (refer to Environmental Control Mapping, Appendix Q of this CEMP). The wheel wash is to be used by all trucks leaving the site, limiting the risk of sediment being transported onto Moorebank Avenue and other public roads. The stabilised site access is to be installed in accordance with SD 6-14. Where required, a street sweeper will also be utilised as required during the construction phase of the project.	Construction	Construction Manager Environmental Manager	CoC E34(f) CMM - Hydrology FCMM 5A
SW7	Batter and Excavation Face Protection			
	Exposed batters and/or disturbed surfaces of the site during earthworks represent a significant source of readily erodible material until final stabilisation is achieved. To minimise the potential for the generation of sediment laden water run-off from exposed surfaces during the works, various materials such as geotextile fabric, polymers, cover crop, plastic sheeting etc. will be placed and secured as a temporary erosion control measure where practical. To be installed in accordance with SD 5-2. In addition to these materials, other options such as progressive revegetation and staged clearing will be considered.	Construction	Construction Manager Environmental Manager Supervisors	CoC E34(f) CMM - Hydrology FCMM 5A
SW8	Sandbags and Sediment Socks	Construction	Supervisors	CoC E34(f) CMM - Hydrology


ltem	Mitigation / Management / Control Measure	Timing	Responsibility	Reference
	Sandbags and sediment socks are utilised to create a weir or check dam in table drains to slow the runoff water velocity and enable coarse sediment to settle. They can also be used to create diversion drains or bunds walls to contain liquids, or to supplement existing sediment controls and will be placed around any existing live stormwater pits or drop inlets prior to decommissioning of the structure. Locations will be confirmed on site and included in working sediment and erosion control plans.			FCMM 5A
	Dust Control			
SW9	Water carts fitted with sprays will be used to wet down any unsealed haul roads and fill areas to minimise the amount of dust generated where required. The number and size of the water carts shall be regularly reviewed by the Site Supervisor and the Project Manager to ensure that adequate watering is taking place and dust is kept to a minimum. Care is to be exercised to limit the amount of water used to ensure run-off does not occur and leave the site.	Construction	Supervisors Water cart contractor	CoC E34(f) CMM - Hydrology FCMM 5A
	Stockpiles			
	Temporary stockpiles shall be located away from drainage lines and water courses. Sediment barriers shall be erected on the down slope side so that any sediment laden runoff from the stockpile is captured and controlled. On the upslope, berms or catch drains shall be installed, if practicable, to divert clean water away from the stockpile.			
	Stockpiles will be covered or stabilised when not in use to minimise erosion and dust.			
SW10	Contaminated Material Stockpiling All USTs and associated infrastructure within the Project site would be decommissioned and most likely removed by a suitably qualified contractor. During this process, any hydrocarbon impacted soils identified will be chased out from the walls and base of the excavations formed. Excavated material would segregated and stockpiled, based on initial screening levels of contamination, on an area of plastic sheeting that would provide a separation layer between the potentially contaminated soils and surface soils. Excavation validation sampling would then be undertaken in accordance with the RAP	Construction	Supervisors Contamination Consultant Environmental Manager Construction Manager	CoC E34(f) CMM - Hydrology FCMM 5A
	to confirm that contaminated soils have been removed to the practicable limits of excavation. Clean or validated material would be used to backfill the excavation. Impacted soils would be bio-remediated, in accordance with the NSW EPA <i>Best Practice Note: Landfarming</i> (2014). Impacted soils would be spread out on the designated, lined and bunded bioremediation area. The soils would be turned monthly over a period of three to four months.			



ltem	Mitigation / Management / Control Measure	Timing	Responsibility	Reference
	During this period an environmental consultant would sample the material every eight weeks until the soil has reached suitable levels to be used as backfill within the Proposal site. Any material that is unsuitable to be used as backfill on the site would be classified in accordance with the Waste Classification Guidelines (NSW EPA, 2014), prior to offsite disposal at an appropriately licensed facility.			
	SD 4-1 demonstrates stockpile protection measures to be implemented on-site.			
	Rock Check Dams			CoC E34(f)
SW11	Rock checks are effective to slow the velocity of runoff collected in diversion drains, and allow some entrained sediment to settle out. They are simple to construct and are very effective. Refer to SD5-4 Rock Check Dam.	Construction	Supervisors	CMM - Hydrology FCMM 5A
	Inlet Pit Protection			
SW12	Inlet pits linking to subsurface drainage will be implemented progressively across the site as construction is completed. As these pits are completed sediment controls will need to be installed until the upslope catchment conveying water to the inlet pit is considered stabilised and sediment laden runoff is no longer generated.	Supervisors	CoC E34(f) CMM – Hydrology FCMM 5A	
	SD 6-11 and 6-12 provide design characteristics for the protection of inlet pits to be utilised on site as appropriate			CoC E34(f) CMM - Hydrology FCMM 5A CoC E34(f) CMM – Hydrology FCMM 5A CoC E34(f) CMM – Hydrology FCMM 5A CoC E34(f) CMM – Hydrology FCMM 5A CoC E8 RSoC FCMM 5A MLP EPL No. 21054
	Vegetated Buffer Zones			CoC E34(f)
SW13	The vegetated area down gradient of the eastern cut area will provide further treatment of any runoff coming from the disturbed catchment following treatment through the perimeter control of a mulch bund or sediment fence. This will provide additional area for infiltration of runoff and the vegetation will facilitate further settlement of fines.	Construction	Construction Manager	CoC E34(f) ager CMM – Hydrology FCMM 5A
	Contamination Control			
SW14	A site audit statement has been prepared for the Project stating that the site is suitable for use as a commercial/industrial site subject to compliance with the Environmental Management Plan, Former DNSDC, Moorebank NSW, developed by GHD Pty Ltd in September 2016. The GHD Environmental Management Plan outlines procedures to be followed for:	Construction	Contamination Consultant Construction Manager Environmental	CoC E8 RSoC FCMM 5A
	 Asbestos Containing Material Unexploded Ordnance Unexpected Finds 		Manager	IVILF EFL INU. 21034



ltem	Mitigation / Management / Control Measure	Timing	Responsibility	Reference
	 Record Keeping Review of EMP Implementation Review of EMP – Site and/or Land Ownership Changes 			
	Furthermore, a Construction Contamination Management Plan has been produced which outlines further detail as to how to manage contamination on site.			
	Management of contamination will be in accordance with these procedures.			
	A hazardous materials assessment will be undertaken prior to the commencement of demolition			
	Primary management measures for potential contamination that may be generated during construction and target prevention of contamination are manifest within standard operating procedures. Procedures specific to prevention of contamination include:			
	 regular maintenance and pre-start checking of all machinery used on-site to minimise potential for leaks and spills from vehicles refuelling of mobile plant within a designated lined and bunded area where practicable. Refuelling will be undertaken at a minimum of 40m away from surface water features such as creeks, rivers, drains, swales, stormwater pit inlets etc. Plant nappies/drip trays will be utilised for all refuelling operations. emergency spill clean-up kits will be maintained on-site in agreed locations that are accessible and known to all site workers. Spill kits will be used in the event of inadvertent spills of fuels, oils, hydraulic fluids and other hazardous wastes, to contain the spill and avoid contamination of waters. Workers will be trained in the use of spill kits. Contaminated soils shall be excavated and disposed by means to be authorised by the Site Superintendent. fuels, oils, lubricants and similar products will be stored in designated secondary containment areas (e.g. internally bunded shipping containers or purpose built structures). Bulk storage areas for fuels, oils and chemicals used during construction will be contained within an impervious bund to retain any spills of more than 110% of the volume of the largest container in the bunded area. Any spillage will be immediately contained and absorbed with a suitable absorbent material. Storage will comply with AS 1940-2004 The Storage and Handling of Flammable and Combustible Liquids. 			
	 trade waste receptacles will be provided for the safe and efficient storage of all construction and missellaneous wastes. Desculable materials shall be supported at 			
	construction and miscellaneous wastes. Recyclable materials shall be separated			



ltem	Mitigation / Management / Control Measure	Timing	Responsibility	Reference
	 and recycled where possible. Otherwise, disposable wastes will be removed from site regularly and disposed by approved means. All potentially contaminated material will be tested in line with NSW Waste Classification guidelines and disposed of at a licensed facility. 		ResponsibilityReferenceConstruction Manager	
Item M A A A B C M C M M A A SW15 T R C M M A A A A A A A A A A A A A A A A A	Additional general environmental measures that will be include:			
	 the drainage controls defined in SW3 which will mitigate potential migration of contamination through surface water and the dust controls presented in SW9 which will mitigate potential airborne migration of contamination. 			
	Inspections and Wet Weather			
SW15	Construction water quality structures and sediment controls will be implemented and maintained until such times as disturbed areas have been stabilised. Weather forecast will be checked daily by supervisors and wet weather plans will be developed accordingly. Wet weather plans during pre-rainfall inspections will include predicted rainfalls and erosion sediment controls will be implemented accordingly.			
	The Site Supervisor and Project Environmental Manager will continually inspect the site's environmental controls during active works and when controls are required to be installed and left on site between shifts, and within 24 hours of expected rainfall. An inspection of the site will also be undertaken following heavy rainfall events (within 18 hours following an event of sufficient intensity to cause runoff onsite), further details of monitoring and inspection requirements are outlined in section 6.3 of this CSWMP.		Construction Manager	FCMM 5A RSoC
	The Site Supervisor and Environmental Manager will also inspect the site prior to Rostered Day Off (RDO site shut-down day) weekends or other periods of extended	Construction	Environmental Manager	
	closure.		Supervisors	
	Permanent and temporary sediment control structures which become blocked or overloaded with sediments will be cleaned out using appropriate methods such as an excavator, backhoe or by manual means. Cleaning shall be performed prior to or when the accumulated sediment has reduced the capacity of the structure to less than 60%, based on a visual assessment.			
	Silt collected from cleaning temporary and permanent sediment and erosion control measures shall be mixed with dry material and incorporated into the works where deemed appropriate.			
	All temporary erosion and sediment controls will be removed and the areas rehabilitated as per the revegetation and landscaping details.			



Item	Mitigation / Management / Control Measure	Timing	Responsibility	Reference
Site Wa	ter Controls			
SW16	 Trade waste and sewage will be generated during the Project. Sewage waste will be disposed of by a licensed waste contractor in accordance with Sydney Water and OEH requirements. Trade waste will be discharged to the sewer through a trade waste agreement with Sydney Water. If wastewater is to be re-used for dust suppression or is discharged to vegetation for the purpose of maintaining biodiversity offset areas, it will be applied in a manner that does not cause surface run-off or release spray offsite or into a watercourse. The application of wastewater will also not exceed the absorption capacity of the soil. 	Construction	Supervisors	RSoC MLP EPL No. 21054
SW17	 Concrete Washout The Site Supervisor will locate a designated washout area a minimum of 20m away from any natural watercourses or drainage lines a concrete washout pit will be established within the approved project limits for cleaning out the concrete pump and be located in as flat an area as possible. Inflows will be redirected around the washout The washout is to be established prior to the arrival of the concrete trucks; Concrete truck chutes and concrete pump and hand tools may be washed within concrete washout pit but concrete trucks must return to the batch plant to washout agitators, where possible; Concrete for testing will be placed in to skip bins, where volumes are significant enough to warrant this technique; Excess concrete will be left to harden over night before removal from the washout The washout will be lined with black construction plastic. Concrete Washout areas will be set up in accordance with the intent of the NSW EPA guideline <i>'Environmental Best Management Practice Guideline for Concreting Contractors' (2002).</i> 	Construction	Supervisors	RSoC
Water D	Discharge Requirements			
SW18	Criteria for Discharge to Water from areas identified as not potentially contaminated	Construction	Supervisors Environmental	FCMM 5A

SW18	contaminated	Construction	Environmental	CoC E34(f)
	Water quality performance targets are derived from the mitigations measures defined		Manager	
	within the EIS approval requirements and are summarised in Table 5.1 below.		Construction Manager	MLP EPL No. 21054



Item	Mitigation / Management / Cor	/ Management / Control Measure g discharge criteria ended Solids (TSS) 50mg/L en and any potential surface runoff entering the excavation around the ind Petroleum Storage Sy			Responsibility	Reference		
	Dewatering discharge criteria							
	Analyte	Criteria						
	Total Suspended Solids (TSS)	50mg/L						
	Turbidity	25 NTU						
	рН	6.5-8.5						
	Oil and Grease	Visible sheen						
	Prior to discharge, the quality of demonstrate compliance. TSS a Figure 5 do not apply when the o at the premises which exceeds; 5 day period	the discharge is to be tested and ch nd turbidity limits for the discharge p discharge occurs solely as a result of a total of 24.4 millimetre of rainfall o	haracterised to points identified in of rainfall measured over any consecutive					
	Discharge from areas identified as contaminated							
SW19	Groundwater and any potential s Underground Petroleum Storage extraction. Should MPE not be a appropriate for disposal of conta Contaminated areas should be a prevent the likelihood of surface should be utilised to prevent sur	surface runoff entering the excavation e System (UPSS) will be managed by appropriate a liquid waste vacuum tr iminated waters at a licenced off-site exposed for the absolute minimum pr water inflow requiring treatment. Up face water infiltration into disturbed	on around the by multiphase ruck may be more te facility. period possible to pslope diversions areas.	Construction	Supervisors Environmental Manager	FCMM 5A CoC E34(f)		
	In the event that remediation works of groundwater impacts associated with the				Construction Manager	MLP EPL No. 21054		
	refuelling facility (SW corner of S detailing the results of further inv geotechnical issues will be prepa submitted to the Secretary prior contaminated groundwater is ex reused on site.	Stage 1 site) intersect the groundwa vestigations into surface water, grou ared in consultation with the EPA ar to these potentially impacting works tracted during any activity on site, it	ater table a report undwater and nd NOW and s commencing.If t should not be		Contamination Consultant			
					Supervisors			
SW20	Discharge to Land			Construction	Environmental Manager	FCMM 5A		
00020	Limitations on infiltration rates associated with clay soils underlying the site and salinity of groundwater make discharge to land impractical and undesirable		Constituction	Construction Manager	COC E34(I) MLP EPL No. 21054			



ltem	Mitigation / Management / Control Measure	Timing	Responsibility	Reference
SW21 Drainag	Reuse on Site Water to be reused on site for dust suppression or other uses will not require the TSS, TP and TN criteria to be assessed as the water will not be discharged from the Project site, however pH testing and visual inspection for oil and grease is still to be undertaken. Rain water collection systems will be installed on mobile site sheds. Collected rain water will be utilised for toilet flushing and cleaning where required. e/Flood Response and Construction	Supervisors Construction Environmental Manager Construction Manager		FCMM 5A CoC E34(f)
SW22	 A Flood Emergency Response Plan (FERP) has been addressed as an Environmental Risk Action Plan (ERAP) within CEMP Appendix A: Monitor meteorological conditions – develop contingency strategy for rainfall > 100mm in 24hours or potential for > 1in 5 ARI All chemicals, fuels and other hazardous substances to be in secured containers and stored within a sealable shipping container Remove plant and equipment from low lying areas Secure plant that cannot be removed Review site drainage flow paths: Redirect site drainage to prevent flooding of residential/business premises Ensure site drainage does not concentrate surface flow Review and address the potential for excess water entering the site Review and maintain erosion and sedimentation controls Evacuate personnel to safe refuge area in the north of the site based on likely flood behaviour. 	Construction	Supervisors Environmental Manager Construction Manager	FCMM 5A RSoC
SW23	Pre-treatment measures will be incorporated into the site stormwater design, including buffer strips and gross pollutant traps where deemed appropriate.	Design Construction	Design Manager	CMM - Hydrology
SW24	Bio-retention systems will be incorporated into the site stormwater design, including rain gardens and bioswales, where deemed appropriate. These structures will also act as on-site detention basins, minimising the velocity and volume of flows leaving the site during storm events. Bio-retention systems will be designed to achieve the pollution reduction targets set out in the Liverpool DCP.	Design Construction	Design Manager	CMM - Hydrology
SW25	On-site stormwater detention will be designed to achieve flood management in accordance with the flood modelling results outlined in the Flood Study and Stormwater	Design Construction	Design Manager	CMM - Hydrology



Construction Soil and Water Management Plan January 2025

Item	Mitigation / Management / Control Measure	Timing	Responsibility	Reference
	Management report prepared by Hyder Consulting (Hyder Consulting, 2012a) and as updated within the Stormwater and Flooding Assessment (Hyder Consulting, 2012b).			



6 COMPLIANCE MANAGEMENT

6.1 Roles and Responsibilities

All roles and responsibilities are detailed in Section 9.1 of the CEMP. Further to this, the management measures outlined in Section 5 detail personnel responsible for undertaking specific actions.

6.2 Training

All site personnel shall undergo site specific induction training, which will include environmental awareness. It will also include training in the need for effective erosion and sediment control on site. Toolbox meetings will also be undertaken as and when required; covering specific environmental issues and shall include erosion and sediment control measures.

Personnel directly involved in implementing sediment and erosion control measures on site will be given specific training in the construction, operation and maintenance of the various measures to be implemented.

Personnel conducting sampling, measuring, monitoring and reporting activities are to be suitably trained or experienced in the activity. Records of all training are to be filed in accordance with the project filing system.

It is the Project Environment Manager (and Site Environmental Officers) responsibility to ensure all personnel are appropriately trained as outlined above.

6.3 Monitoring, Auditing and Reporting

Monitoring, auditing and reporting will be undertaken in accordance with the CEMP, as well as additional requirements listed below, (Table 12).

Table 12 Monitoring Requirements

Monito ring Details	Area/Loc ation	Responsi bility	Frequency
Weath er	Nearest BOM weather station observati ons	Environm ental Manager	Daily
Rainfall Inspect ions (pre, post, during)	All water quality control and sediment control structures	Environm ental Manager	 Inspection of the site drainage and ESC measures should be undertaken: during dry conditions within 24 hours of expected rainfall. within 18 hours following a rainfall event of sufficient intensity and duration to cause runoff onsite.
Sensiti ve Recept or Inspect ions (post	Anzac Creek	Environm ental Manager	within 18 hours following a rainfall event of greater than 10mm and sufficient to cause runoff from site.



Monito ring Details	Area/Loc ation	Responsi bility	Frequency
rainfall event)			
Supervi sor Daily Inspect ions	Entire Project Site	Superviso r	Daily
Weekly Inspect ions	Entire Project Site	Environm ental Manager	Weekly – also prior to RDO weekends and other times where the site will be closed or inactive for an extended period.
Dischar ge Water Quality	All water quality control and sediment control structures	Environm ental Manager	Prior to, during and after any heavy rainfall event of sufficient intensity and duration to cause runoff onsite.
Receivi ng Water Quality	All water quality control and sediment control structures	Environm ental Manager	Prior to, during and after any heavy rainfall event of sufficient intensity and duration to cause runoff onsite. Regardless of whether trigger rainfall (above) has occurred, on a monthly basis Anzac Creek will be monitored for evidence of visual plume and



Monito ring Details	Area/Loc ation	Responsi bility	Frequency	
			Water Quality Monitoring will take place in locations identified in	
			MPE Stage 1 IMEX Construction Soil and Water Management Pla	an
			<complex-block></complex-block>	
			LEGEND ARCADI AUSTRALIA ARK TO 14 40 JUN Water quality monitoring — Rail link Prong 2 Martana Incention, 80 Comparison Incention, 80 Comparison Construct Page 3 Martana	A RECH
			Ideasion Watercourse Watercourse Watercourse The Music logical And Tagy regime And Tagy regime The Music logical And Tagy regime The Music logical And Tagy regime The Music logical And Tagy regime And Tagy regime The Music logical And Tagy regime And Tagy regime The Music logical And Tagy regime And Tagy And Tagy regime And Tagy And Tag	000 a
				C
			Figure 4: Water Quality Monitoring Locations	T/
			Date: SV070019 Pate: F;WA0007004-GutWatB_MappinFESTIC EX PIC 3MM PSart	1,30



Monito ring Details	Area/Loc ation	Responsi bility	Frequency
			Figure 4. Then if exceedance is identified during the General Site Monitoring, any rectification measures that may be need to be implemented will be identified.
			If non-compliance is found during Water Quality Monitoring a sample will be retaken the same day to confirm the non-compliance. If the non- compliance is confirmed then Incident Response Measures will be implemented.
Plant and Equipm ent	Entire Project Site	Constructi on Manager	Daily

All water quality control and sediment control structures (e.g. sediment fences, drainage protection, temporary check dams/sumps) will be regularly inspected and maintained throughout the project. Inspection of the site should be undertaken during dry conditions within 24 hours of expected rainfall, and within 24 hours following a rainfall event of sufficient intensity to cause runoff on-site. Upon the cessation of any rainfall event, inspections should be undertaken to confirm that controls remain functional and identify if maintenance is required. The Site Construction Manager is responsible for managing the installation of controls and rehabilitation of the site in accordance with the requirements. The Project Environment Manager (and Environmental Site Officers) are responsible for monitoring the installation and maintenance of controls and providing training.

Daily inspections of controls will be made by Supervisors and maintenance will be recorded in site diaries during active site works.

The Project Environmental Manager will conduct a detailed documented inspection at least once per week during active works as well as prior to, during and after any heavy rainfall (as outlined above with events of greater than 10mm and 50mm). An inspection of the site will also be undertaken prior to RDO weekends and other times where the site will be closed or inactive for an extended period. The inspections will focus on the integrity, capacity and performance of the site control measures which will include the sediment fences, temporary check dams/sumps, diversion bunds, drain protection and rehabilitation works.

Items that require repair or action will be documented on the site environmental inspection. Items that require specific and detailed action will be recorded on the Project's Corrective Action Register. The Superintendent will be responsible for providing appropriate resources in terms of labour, plant and equipment to enable the items to be rectified in the nominated timeframes.

If deemed necessary, additional sedimentation control measures will be implemented to ensure that water quality is maintained throughout the works. Improvement requests received from the Principals Environmental Representative, the EPA or other appropriate agencies shall be assessed and responded to within 24 hours if the issue is not environmentally threatening.

The implementation and record keeping of monitoring initiatives listed in Table 12 will allow the Project Environmental Manager and Site Officers to determine compliance with the Ministerial CoC, Environmental Protection Licence (EPL 21054) and Environmental Best Practice. Specific requirements for EPL 21054 are addressed in Table 5 and Section 4.2 of the CEMP.







Figure 4 Water Quality Monitoring Locations





Figure 5 Water discharge points

6.4 Enquiries, Complaint6s and Incident Management

Enquiries, complaints and incident management will be undertaken as per the CEMP, including those related to soil and water management.

Accordingly, in the case of an incident resulting in contamination of water (e.g. fuel spill) or contaminated / turbid water being discharged from the site, the incident management response procedures provided in the CEMP will be implemented. In all cases, the situation will be assessed and if safe to proceed, measures implemented to stop or slow down the released of contaminated material from the site. The Project Construction Manager and Environmental Manager will be informed and all necessary stakeholders informed as per the incident management process in the CEMP.

There is a duty to notify 'relevant authorities' as specified in section 148(8) of the POEO Act (the EPA, local authority, Ministry of Health, SafeWork NSW and Fire and Rescue NSW) of pollution incidents where material harm to the environment is caused or threatened.



6.5 Non-compliances, Non-conformance and Actions

It is the responsibility of all site personnel to report non-compliances and non-conformances to the Site Supervisor and/or the Contractor's EM.

Non-compliances, non-conformances and corrective and preventative actions will be managed in accordance with Section 9.2.1 of the CEMP.

6.6 Review and Improvement

Continuous improvement of this plan will be achieved by the ongoing evaluation of environmental management performance against regulatory environmental policies, legislative requirements, LOGOS's Environmental Policy, Project objectives and targets for identifying opportunities for improvement.

The continuous improvement process is designed to:

- Identify areas of opportunity for improvement of environmental management and performance.
- Determine the cause or causes of non-conformances, non-compliances and deficiencies.
- Develop and implement a plan of corrective and preventative action to address any nonconformances, non-compliances and deficiencies
- Verify the effectiveness of the corrective and preventative actions.
- Document any changes in procedures resulting from process improvement.
- Make comparisons with objectives and targets.

Any revisions to the CSWMP will be in accordance with the process outlined in Section 1.6 of the CEMP. A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure.

This plan will be reviewed annually as a minimum but may be updated more regularly depending on process changes and refinements.



APPENDIX A ADDITIONAL FIGURES



APPENDIX B EROSION HAZARD ASSESSMENT



Revised Universal Soil Loss Equation

The Revised Universal Soil Loss Equation (RUSLE) is designed to predict the long term, average, annual soil loss from sheet and rill flow at nominated sites under specified management conditions. It is used to estimate sediment flux to sediment basins, where these are used on high erosion hazard lands. Additional information can be found in Appendix A of the "Blue Book" (Landcom, 2004).

The equation is represented by:

A = R K LS P C

where,

A = computed soil loss (tonnes/ha/year)

R = rainfall erosivity factor

K = soil erodibility factor

LS = slope length/gradient factor

P = erosion control practice factor

C = ground cover and management factor.

R-Factor

The rainfall erosivity factor, R, is a measure of the ability of rainfall to cause erosion. It is the product of two components: total energy (E) and maximum 30 minute intensity for each storm (I30). Rosewell and Turner (1992) identified a strong correlation between the R-factor and the 2-year ARI, 6-hour storm event (denoted S, equals 10.8 mm/hour at Liverpool, refer attached Intensity Frequency Duration (IFD) table and further information regarding IFD below) and proposed the following equation:

R = 164.74 (1.1177)S S0.6444

Using the above, at Liverpool R = 2530.

K-Factor

The soil erodibility factor, K, is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Texture is the principle component affecting K, but structure, organic matter and permeability also contribute. In the RUSLE, it is a quantitative value that is normally experimentally determined.

A K-factor of 0.048 was obtained from Table C19 of Landcom (2004). The Soil Landscapes of the Penrith 1:100,000 Sheet (Bannerman and Hazleton, 1990) mapping identified that the landscape affected by the Project works is Berkshire Park (bp), with Table C19 detailing that the C-factor for this soil landscape is 0.048. This has been used to account for the fill materials likely to be encountered on the site as well, given that a typical conservative value is 0.05.

LS-Factor

The slope length-gradient factor, LS, describes the combined effect of slope length and slope gradient on soil loss. It is the ratio of soil loss per unit area at any particular site to the corresponding loss from a specific experimental plot of known length and gradient. The LS factor can be read from Table AI in the "Blue Book"). It should be noted that an increase in slope gradient has a proportionately greater effect on LS, compared with an increase in slope length.

The maximum slope length will be maintained at 80 - 100m and slope gradients would be typically in the range of 2%. For a slope length of 80 - 100m and gradient of 2-3%, the LS factor is approximately 0.44 - 0.65.

P-Factor

The erosion control practice factor, P, is the ratio of soil loss with a nominated surface condition ploughed up and down the slope. It is reduced by practices that reduce both the velocity of runoff and the tendency of runoff to flow directly downhill. At construction sites, it reflects the roughening or



smoothing of the soil surface by machinery. The P-factor that shall be used for this project is 1.3, the worst case scenario and value that is normally assigned to compacted construction sites.

C-Factor

The cover factor, C, is the ratio of soil loss from land under specified crop or mulch conditions to the corresponding loss from continuously tilled, bare soil. The most effective method of reducing the C-factor is maintenance, or formation of a good ground cover. The best practices are those that reduce both the soil exposed to raindrop impact and the erosive effects of runoff. The C-factor assigned for the site operations is 1.0, typical of that for bare, compacted soil. Table A3 in the "Blue Book" (Edition 4) provides estimated C-factors for various cover types and is useful in selecting covers for rehabilitating or providing temporary protection to disturbed land.

Soil Loss Calculation Summary

The erosion hazard assessment is provided in the Table below. Total soil loss of greater than 150 tonnes/hectare/year is considered the trigger to warrant installation of a sediment basin. This trigger was not exceeded in any of the disturbed catchments. The alternative controls besides a Basin (Type 1 control) are type 2 and type 3 controls. These include the measures outlined in the report such as sediment fence, rock check dams, vegetative buffers, sandbags and sediment socks. In areas that are greater than 2500m² soil loss of less than 75tonnes/hectare/year can be effectively managed by the lowest form of control, a type 3 control (the predominant form of type 3 control to be used for sediment control in this ESCP is sediment fence). The soil loss from the western fil area and the adjacent storage/laydown area is 70tonnes/hectare/year. The eastern disturbance area where material will be cut from has a soil loss of 103tonnes/hectare/year. With the implementation of a contour bund to halve the slope length in this location, the annual soil loss decreases to 74tonnes/hectare/year. This is shown in the furthest right column of the table below. The cutting to take place in this area will ultimately level the area, thus the slope will be continually decreasing (and thus the annual soil loss will also be decreasing) as the works progress. With the implementation of the contour bund and the eventually levelling of the cut area, the annual soil loss from the disturbed catchments is less than 75tonnes/hectare/year, thus justifying sediment fence to be the primary control method across the site.

Further inputs – Intensity Frequency Duration (IFD) Data

Site hydrological data was obtained from an intensity-frequency-duration (IFD) table developed for the site using the process outlined in Australian Rainfall and Runoff (Pilgrim, 1987). The Bureau of Meteorology's web-based IFD application was used to develop the table (found at <u>http://www.bom.gov.au/hydro/has/cdirswebx/cdirswebx.shtml</u>). A copy of the IFD table is provided below.



APPENDIX C EROSION AND SEDIMENT AND CONTOL PLAN



MPE Stage 1 CSWMP





APPENDIX D LANDCOM "BLUE BOOK" STANDARD DRAWINGS



Landcom Standard Drawings

NSW Landcom Standard Drawing	SD 4-1	Stockpiles
NSW Landcom Standard Drawing	SD 5-2	RECP: Sheet Flow
NSW Landcom Standard Drawing	SD 5-4	Rock Check Dams
NSW Landcom Standard Drawing	SD 5-5	Earth Bank (Low Flow)
NSW Landcom Standard Drawing	SD 6-8	Sediment Fence
NSW Landcom Standard Drawing	SD 6-9	Alternative Sediment Fence
NSW Landcom Standard Drawing	SD 6-11	Mesh and Gravel Inlet Filter
NSW Landcom Standard Drawing	SD 6-12	Geotextile Inlet Filter
NSW Landcom Standard Drawing	SD 6-14	Stabilised Site Access









SOURCE: Managing Urban Stormwater, Soils and Construction (Vol 1, 4th ed.)





SOURCE: Managing Urban Stormwater, Soils and Construction (Vol 1, 4th ed.)



























APPENDIX E CONSULTATION EVIDENCE



Liverpool City Council provided comments on the Construction Soil and Water Management on 15/02/2017. The comments were addressed and submitted to Liverpool Council on 21/02/17 as detailed below.

Liverpool City Council Comment	Response
The Construction Soil and Water Management Plan, Moorebank Precinct East Stage 1, Package 2, Revision V2 prepared by Tim Haydon dated 31 January 2017 was presented to the Environment and Health Section for review. Section 2.1 of the Construction Soil and Water Management Plan refers to the Dangerous Goods Act 1975 which has been repealed.	Reference to this repealed act has been removed. References to the Dangerous Goods (Road and Rail Transport) Act 2008, Dangerous Goods (Road and Rail Transport) Regulation 2014, Australian Dangerous Goods Code Edition 7.4 and State Environment Planning Policy 55 have been included and referenced.
Section 2.3 of the Construction Soil and Water Management Plan specifies the Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (DECC 2009). This reference may also need to be updated as these Guidelines were revised in September 2015 by the NSW Environment Protection Authority.	Update reference to the 2015 guideline.
AS 1940-1993 The Storage and Handling of Flammable and Combustible Liquids was also specified within the Plan. This standard was revised and republished in 2004 and is now known as AS 1940-2004 The storage and handling of flammable and combustible liquids. Consequently, these references must be updated accordingly.	Updated reference to the AS1940-2004 standard.

The Department of Primary Industries (Water) provided comments on the Construction Environmental Management plan and Construction Soil and Water Management Plan on the 08/03/17. The comments were addressed and submitted to Department of Primary Industries (Water) on 15/03/17 as detailed below.

DPI Water Comment	Response
2.1.1 Works Period 1: Site Preparation The CEMP indicates that Package 2 for the IMEX facility includes clearing of approximately 1.25 ha of native vegetation (page 34). It is recommended the clearing of native vegetation includes a procedure that native plants are to be translocated from the remnant areas that are to be cleared and planted in the riparian areas that are to be rehabilitated on the MPW site and along Anzac Creek and the Georges River associated with MPE Stage 1 Package 1 (Rail link)	Reference to clearing of 1.25 Ha related to the RALP works, and not to MPE. It was erroneously included within the CEMP, and has now been removed. Additionally, for information, and as per the MPE Construction Flora and Fauna Management Plan, the ecological survey found: Based on the results of the field assessment reported in the Biodiversity Assessment Report (Hyder 2015), the vegetation within the Project site consists almost entirely of planted trees with a mown or managed understorey, and does not meet the criteria for any threatened ecological communities
Section 2.1.2 of the CEMP notes that where possible "excavated soil would be reused on site for foundation preparation, levelling works or maintenance access roads" (page 41). It is recommended this section includes that topsoil (and seedbank) collected from native vegetation areas to be cleared should be stockpiled and used in the rehabilitation of riparian land.	The following has been included with Section 2.1.2: In disturbance areas containing a clearly discernible 'A' profile (topsoil), the topsoil will be stripped and stored on site for later re-use within site landscaping, or riparian restoration where appropriate, Topsoil stockpiles will not exceed a 2m windrow height, be clearly sign-posted, and separated from sub-soil stockpiles.
Section 4.1 of the CEMP indicates Appendix M details the key legislative requirements for the	Appendix M updated to include reference to Water Act 2012, and specifically:



DPI Water Comment	Response
project (page 52). If groundwater is to be encountered as part of the works and temporary dewatering is required, Appendix M must outline:	"• If during construction earthworks, the temporary dewatering of groundwater (from an excavation) is deemed necessary, then a licence to carry out such activity will be required under the Water Act."
the temporary dewatering of the groundwater during construction requires a licence under the Water Act	 SIMTA must provide DPI Water with details on the volume of groundwater that
1912,	is encountered and the duration of pumping,
the proponent must provide DPI Water with details on the volume of groundwater that is encountered and the duration of pumping,	• It is a legal requirement for any take of groundwater to be authorised by a Water Act 1912 licence (in the case of dewatering activity) or a Water Access Licence (for onsite reuse) unless an exemption applies."
note that it is a legal requirement for any take of groundwater to be authorised by a Water Act 1912 licence (in the case of dewatering activity) or a Water Access Licence	
(for onsite reuse) unless an exemption applies.	
SWMP	
Table 7 Objectives and Targets	Table 7 revised to clarify that only disturbed area (dirty)

Table 7 in the CEMP includes an objective to minimise the demand for, and use of, potable

water for construction and maximise opportunities for water reuse from captured stormwater and groundwater (page 4). The SWMP needs to provide further details on the proposed reuse of groundwater and clarify whether the water to be reused only comprises groundwater that

needs to be dewatered during construction, or if it is proposed to abstract groundwater as a water supply. In relation to dewatering activities, a licence will be required under Part 5 of the Water Act 1912 and any reuse of this water will require a Water Access Licence.

The SWMP should clarify whether the surface water that it is proposed to be reused consists

of any clean surface water runoff, or only runoff from disturbed areas. The collection of dirty water in sediment basins for a water supply is exempt from requiring a licence under the Water Management (General Regulation) 2011 but any collection of clean surface water runoff for a water supply is not exempt and must be in accordance with an appropriate Water Access Licence and a nominated work. Table 7 revised to clarify that only disturbed area (dirty) runoff is collected for re-use, and reference to 'groundwater' removed, thus:

"• Minimise demand for, and use of, potable water for construction and maximise opportunities for water re-use from captured 'dirty' water runoff (within ESC measures e.g. sediment basins) and site wastewater. "

4.5 Groundwater

Section 4.5 notes disturbance of groundwater during the project works is not predicated except during remediation of hydrocarbon impacts associated with the refuelling facility. It indicates in the event that these works intersect the groundwater table a report detailing the results of further investigations into groundwater issues will be prepared (page 11). It is recommended Table 11 is amended to include this as a mitigation /management measure that this report must Table 11 Item SW19 amended to now include:

"In the event that remediation works of groundwater impacts associated with the refuelling facility (SW corner of Stage 1 site) intersect the groundwater table a report detailing the results of further investigations into surface water, groundwater and geotechnical issues will be prepared in consultation with the EPA and NOW and submitted to the Secretary prior to these potentially impacting works commencing. If contaminated groundwater is extracted during any activity on site, it should not be reused on site."

and Section 4.5 amended to include:

Moorebank Intermodal Precinct
Intermodal Precinct

DPI Water Comment	Response
be prepared in the event that groundwater is intersected. If contaminated groundwater is	<i>"If contaminated groundwater is intersected by the construction works and dewatering is required, the requirements set in section 4.2 above prevail."</i>
reused on site.	
The SWMP must outline that, if groundwater is intersected by the proposed works and	
dewatering is required, the requirements set in section 4.1 above prevail.	
Table 11 Mitigation /Management/ Control Action and Responsibilities	Reference to clearing of 1.25 Ha related to the RALP works, and not to MPE. It was erroneously included
Section 1.1 outlines that Package 2 for the IMT facility which is the subject of this SWMP	within the CEMP, and has now been removed.
includes clearing of approximately 1.25 ha of native vegetation (page 1). As noted above for	
the CEMP, it is recommended that native plants are translocated, as described above in	
section 2.1.1. It is recommended Table 11 is amended to include the following Mitigation	
/Management/ Control Measures:	
 Native vegetation that is to be cleared as part of Package 2 should be translocated into 	
the riparian corridors along Anzac Creek and/or the Georges River where rehabilitation	
is required as part of the with MPE Stage 1 Rail link project and the MPW project.	
Riparian areas to be rehabilitated should be identified on a scaled plan.	
 topsoil (and seedbank) collected from native vegetation areas to be cleared should be 	
stockpiled and used in the rehabilitation of riparian land.	
6.3 Monitoring, Auditing and Reporting	Table 12 adjusted to include:
Table 12 indicates that all water quality control and	Rainfall Inspections
sediment control structures should be inspected	"Inspection of the site drainage and ESC measures
and following any rainfall events greater than 50 mm	should be undertaken:
(page 27). The draft SWMP for Stage 1 RALP –	during dry conditions within 24 hours of expected rainfall
Package 1 includes that all drainage and erosion	within 18 hours following a rainfall event of
and monitored:	sufficient intensity and duration to cause runoff onsite."
within 24 hours of expected rainfall	
• within 18 hours of a rainfall event of sufficient	And also
Intensity and duration to cause runoff onsite.	Discharge and Receiving Water Quality:
inspects the sediment and erosion control	"Prior to, during and atter any heavy rainfall event of sufficient intensity and duration to cause runoff onsite."
measures in accordance with the above frequencies to be consistent with the SWMP for Stage 1 RALP – Package 1.	


Email documentary evidence

Extract from email correspondence to DPI Fisheries

From:

Sent: Thursday, 2 February 2017 10:36 AM To:

Subject: Re: FW: Moorebank Precinct East, Stage 1 Construction Management: Consultation

Dear

Please be advised that DPI Fisheries has reviewed the following plans sent with your email below and has no objections to what is being proposed and has no suggested changes or other comments to make on these plans:

Construction Environmental Management Plan - Moorebank Precinct East Stage 1, Package 2 (SIMTA, 30 January 2017, Revision Text 001)
Construction Soil and Water Management Plan - Moorebank Precinct East Stage 1, Package 2 (SIMTA, 31 January 2017, V2)

If you wish to discuss this further, please call.

Regards,



W: www.dpi.nsw.gov.au

PERMIT APPLICATION FORMS & FISH HABITAT PROTECTION POLICIES AT: www.dpi.nsw.gov.au/fisheries/habitat/protecting-habitats/toolkit EMAIL COMPLETED APPLICATIONS TO: ahp.central@dpi.nsw.gov.au APPLICATION PROCESSING TIMES (from date received): 28 days for Permits & Consultations; 40 days for IDA Referrals

On 1 February 2017 at 12:41,	wrote:
Dear	

As highlighted previously (I refer back to our telephone discussion on 23 January 2017), we are currently preparing to undertake construction works for the Moorebank Precinct East, Stage 1 Works (Construction of IMEX Terminal). A key component of this work is the preparation of the Construction Environmental Management Plan (CEMP) and sub-plans, which we have now drafted and are now seeking your input as part of the consultation process.

Accordingly, please find dropbox links enclosed for the following documentation:

- Construction Environmental Management Plan (CEMP): https://www.dropbox.com/s/l6ezq7phq5nk1j8/IMEX-QPMS-EN-PLN-00000%20CEMP%20FINAL.pdf?dl=0
- Construction Soil and Water Management Plan (CSWMP): https://www.dropbox.com/s/nin82v7vm59rg5u/IMEX-QPMS-EN-PLN-00008-V2%20SWMP_FINAL%20-%20Signed.pdf?dl=0

Conserve, Share, Provide



Please provide any comments on the plans by the 15th February 2017 (two weeks from today).

Please also find attached a briefing note, intended to provide you with background information regarding the spatial layout, context of the works with regard to the overall precinct, and the role of the CEMP as an effective environmental management tool.

Should you have any questions regarding the above please do not hesitate to call either myself, or Ketan Patel on 8907 2687.

Regards,





APPENDIX F CONTAMINATION MANAGEMENT PLAN



APPENDIX G FLOOD EMERGENCY RESPONSE PLAN

