Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

Costin Roe Consulting Pty Ltd
ABN 50 003 696 446
Level 1, 8 Windmill Street, Walsh Bay
PO Box N419, Sydney, NSW, 1220, Australia
tel: (02) 9251 7699 fax: (02) 9241 3731
email: mail@costinroe.com.au
web: www.costinroe.com.au

7 September 2021

Qube Holdings Ltd
Attention: Ms Danielle Eloss
Level 27
45 Clarence Street
SYDNEY NSW 2000

Dear Sir

Re: Moorebank Precinct West – Moorebank Avenue, Moorebank
Moorebank Precinct West Stage 3 (MPW S3)
Addendum to the MPW S2 Construction Soil and Water Management Plan

Introduction

The Sydney Intermodal Terminal Alliance (SIMTA) received approval for the construction and operation of Stage 2 of the Moorebank Precinct West (MPW) Project (State Significant Development (SSD) 7709) and subsequently Modification 1 (MOD1), which comprises the second stage of development under the MPW Concept Approval (SSD 5066).

The MPW Stage 2 Project involves the construction and operation of a multi-purpose Intermodal (freight) Terminal (IMT) facility, rail link connection, warehousing, freight village, and upgrades to the Moorebank Avenue and Anzac Road intersection and the subdivision of site including ancillary works.

The MPW Stage 3 (SSD 10431) was approved by the IPC on 11 May 2021. The MPW Stage 3 Project involves the progressive subdivision of the MPW Site into nine allotments, importation of unconsolidated clean fill for compaction up to final land level and structural fill for warehouse pad completion, establishment of a temporary works compound area in the southern portion of the MPW Site, and ancillary development. The MPW Stage 3 Site is located wholly within the MPW Stage 2 construction footprint in the southern portion of the site.

Costin Roe Consulting Pty Ltd has been commissioned by Qube Holdings Ltd to prepare this *Addendum* to the *MPW Stage 2 Construction Soil and Water Management Plan* (ACSWMP). In accordance with MPW Stage 3 CoC B19 and B22, the approved MPW Stage 2 CSWMP has been updated to reflect MPW Stage 3 consent requirements.

This ACSWMP provides confirmation that the SSD_10431 Proposal construction stormwater management system and associated erosion and sediment control plans meet the requirements and principles set out in the approved MPW Stage 2 *Construction Soil and Water Management Plan* (CSWMP).

The submission of this MPW Stage 3 **ACSWMP** for approval by DPIE has been completed in accordance with the approved MPW Stage 2 **CSWMP,** and **Conditions of Consent (CoC) B19 and B22** as approved by DPIE for MPW Stage 3 (SSD_10431).

This MPW Stage 3 **ACSWMP** forms part of the MPW Stage 2 **CSWMP** and associated MPW Stage 2 *Construction Environmental Management Plan (CEMP)*.

Refer to **Enclosure 2** for confirmation of each MPW stage 3 **CoC**.

The content of this MPW Stage 3 ACWMP confirms how the approved MPW Stage 3 development meets the intent of the approved MPW Stage 2 **CSWMP** and where there are any differences in the requirements of the approved MPW Stage 2 **CSWMP**.

MPW Stage 3 Project

The MPW Stage 3 Project involves the progressive subdivision of the MPW Site into nine allotments, grading of the land, importation of unconsolidated clean fill for compaction up to final land level and structural fill for warehouse pad completion, establishment of stockpile areas and a temporary works compound area in the southern portion of the MPW Site, and ancillary development.

The development is bounded by the MPW Stage 2 site, including the Woolworths Development, to the north, the Interstate Rail Terminal and Moorebank Ave to the east, the Southern Sydney Freight line to the south, and the Georges River riparian corridor and the MPW Stage 2 OSDs 6 and 8 eastern banks to the west.

Access for construction truck and passenger vehicles is provided initially through Chatham Av, from Moorebank Av to the east, and then on the west of the site from the MPW Stage 2 western ring road.

The MPW Stage 3 development layout is shown on **Figure 1** below and the approximate location within the MPW Stage 2 construction boundary shown in **Figure 2**.

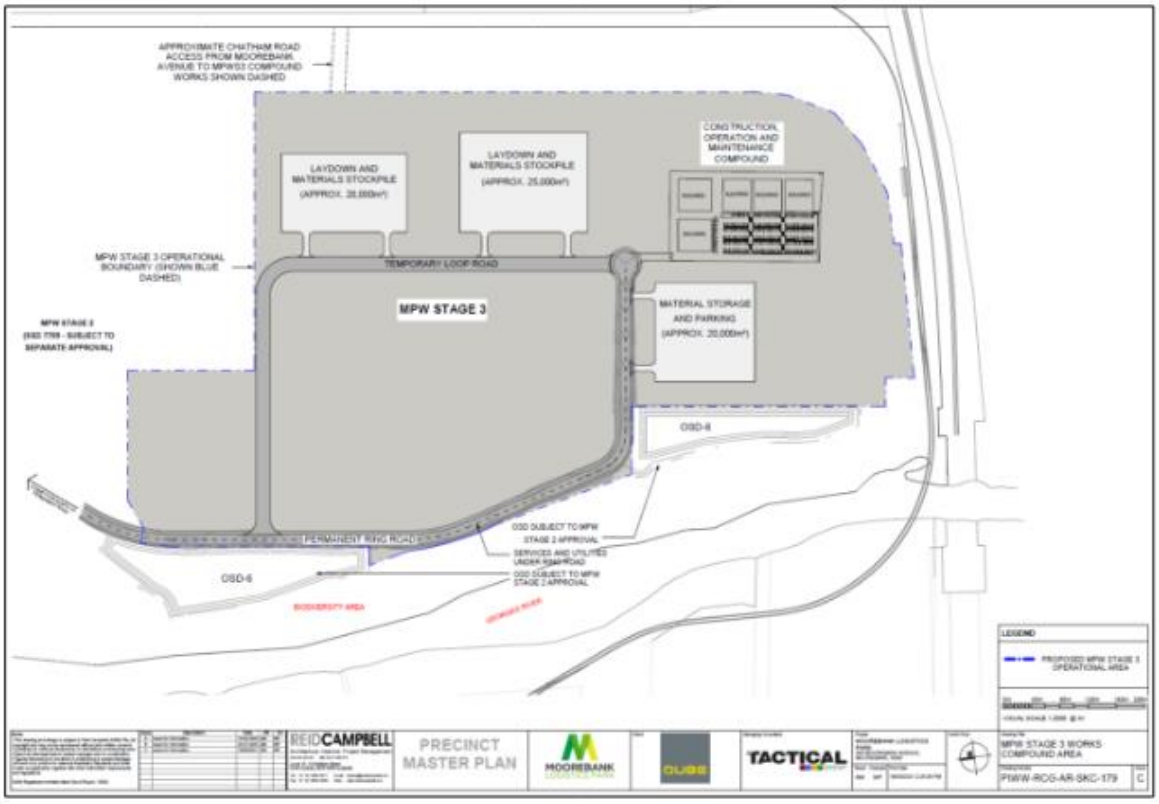


Figure 1. Moorebank Precinct West Stage 3 Layout (Watson YoungArchitects)

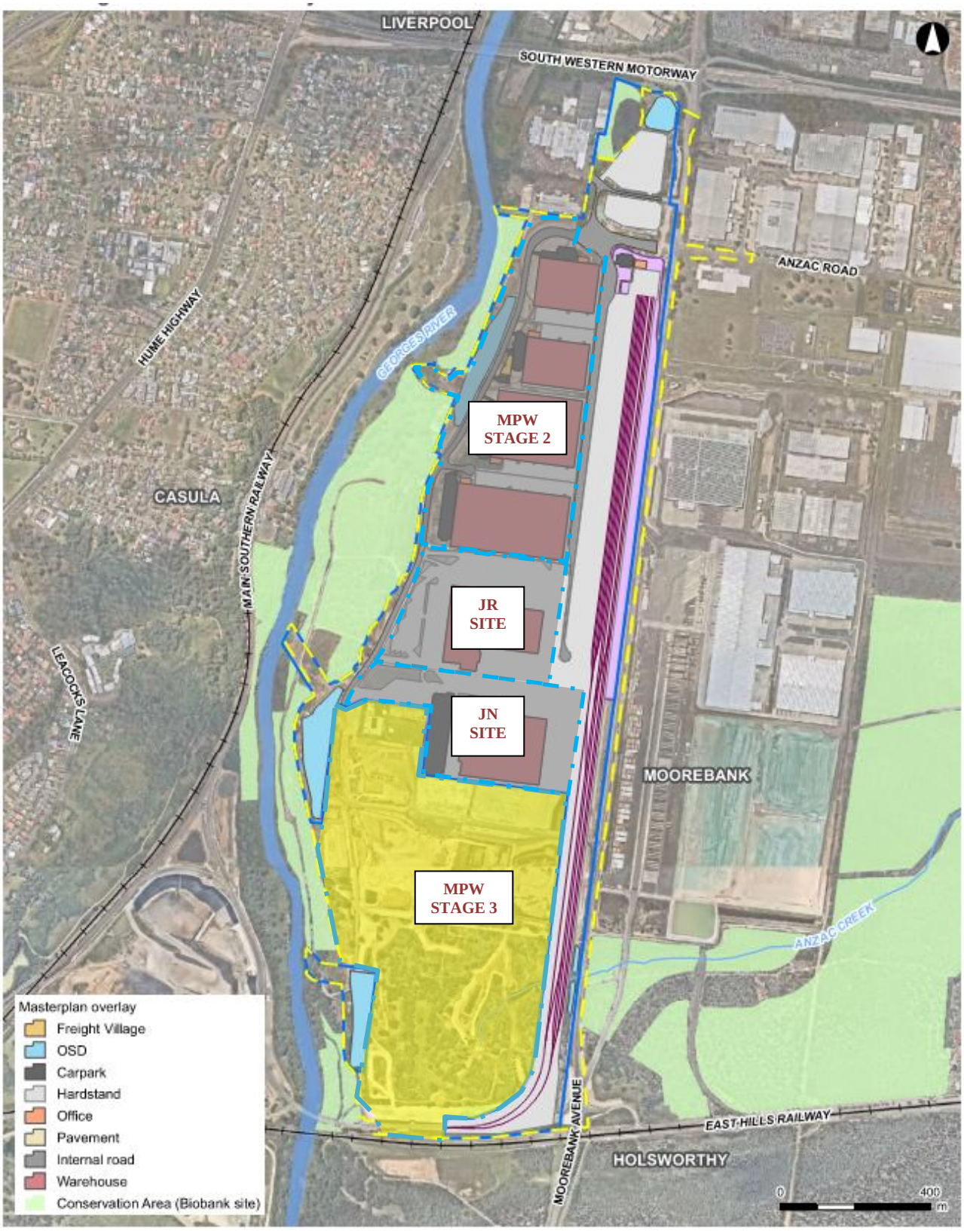


Figure 2. MPW Precinct Locality Plan + MPWS3 (Arcadis CEMP)

General Requirements

This MPW Stage 3 **ACSWMP** has been prepared with the purpose of providing a set of site management procedures to control the severity and extent of soil erosion and pollutant transport during the earthworks and construction phase of the MPW Stage 3 development. This document is to be read in conjunction with the approved MPW Stage 2 CSWMP and the MPW Stage 2 and Stage 3 CEMP.

This document has been completed in accordance with the guidelines in *Managing Urban Stormwater - Soils and Construction Volume 1 (Landcom 2004)* and the "*Environmental Management Plan Guideline: Guideline for Infrastructure Project (DPIE April 2020)"* as required by MPW Stage 3 Condition B16.

An erosion and sediment control plan (ESCP) and details is included on drawings **Co13455.18-MOD-ESC01** through **ESC06** (refer **Enclosure 1**) for works within the MPW Stage 3 development boundaries. This MPW Stage 3 **ACSWMP** is to be read in conjunction with the provided drawings and the approved MPW Stage 2 **CSWMP**.

Contractors will ensure that all soil and water management is undertaken in accordance with the approved MPW Stage 2 **CSWMP** and the conditions and amendments contained within the MPW Stage 3 **ACSWMP**, and the guidelines in *Managing Urban Stormwater - Soils and Construction Volume 1 (Landcom 2004)*.

Contractors are to ensure that all legal and regulatory requirements set out in **Section 3.3** of the MPWS2 CSWMP and the MPWS3 A**CSWMP** have been met throughout the works. The contractor is to ensure all water discharge meets the requirements set out in **Section 3.6** of the MPWS2 **CSWMP**.

Roles and Responsibilities

All Project Personnel are responsible for the implementation of this MPW Stage 3 **ACSWMP** and have the responsibility to stop works if there is potential for a safety or environmental incident to occur.

The key roles and responsibilities for the Project personnel in relation to soil and water management are outlined below in **Table 1**.

Table 1 Roles and Responsibilities

Role	Responsibilities
Contractor's Project Manager (Contractor's PM)	Manage the delivery of the construction process in relation to soil and water quality management at the site in conjunction with the Contractor's EM and the MPW Contractors EM. Provide for training in erosion and sediment control for personnel directly involved with the implementation of this plan, as required. Identify and allocate Project resources to implement the requirements of this plan. Oversee the implementation and maintenance of this plan.
Contractor's Construction Manager (Contractor's CM)	Communicate with all workers including sub-contractors regarding compliance with this MPW Stage 3 **ACSWMP** and the approved MPW Stage 2 **CSWMP**. Record and communicate volume of spoil imported to site to the Principal's Representative on a weekly basis. Coordinate the implementation and maintenance of erosion and sediment controls and provide support for the Contractor's EM.
Contractor Environmental Manager (Contractor's EM)	Develop, implement, monitor and update the progressive CESCPs as required. Direct works to be performed in accordance with this plan. Review works proposed within the riparian zone. Maintain site records confirming achievement of water quality objectives prior to discharge. Maintain relevant waste disposal records Co-ordinate the sampling and assessment of waters and sediments in control structures to enable classification and reuse, discharge or disposal in an appropriate manner on or off site. Maintain the site water quality register. Record environmentally relevant incidents. Manage and respond to reported incidents.

Role	Responsibilities
	Ensure coordination of site ESC measures with estate ESC measures as documented in the MPW Stage 2 **CSWMP**.
Site Supervisor	Present toolbox talks that include the requirements of this plan. Inform staff of their obligation to comply with EWMS and CESCPs. Communicate the volume of spoil imported to site on a daily basis to the Contractor's CM. Manage and respond to reported incidents. Approval to make new infrastructure operational. Co-ordinate and report on daily and weekly inspections. Co-ordinate inspection and monitoring of equipment washdowns, waste handling and other construction related activities that influence the site's management of soils and water.
All Personnel	Comply with the requirements of this MPW Stage 3 **ACSWMP** and the approved MPW Stage 2 **CSWMP**. Report any observed failure of ERSED infrastructure to the Contractor's EM or Site Supervisor. Report all environmental incidents to the Site Supervisor and/or the Contractor's EM.

Conditions of Consent and Final Environmental Mitigation Measures

This **MPW Stage 3 ACSWMP** and associated **ESCP** have been completed in accordance with the approved MPW Stage 2 **CSWMP** and the stormwater management strategy and EIS defined by Arcadis and approved in the NSW DPIE in SSD_10431, the NSW DPIE in SSD_10431 and RMMM in Appendix 3 of the Consent (SSD_10431).

With reference to **Enclosure 2**, confirmation of how and where, within this letter, the approved MPW Stage 2 **CSWMP** or respective drawings and models, each of the requirements of **SSD_10431`** and requirements of the Landcom Managing Urban Stormwater-Soils and construction 4th Edition (2004) – the "Bluebook" have been met including the Applicants Revised Management and Mitigation Measures Items 5A to 5F.

Conclusion

This letter is noted to comprise an addendum to the approved MPW Stage 2 **CSWMP**. This letter provides site specific erosion and sediment controls and confirms how the required MPW Stage 3 CoC have been met in relation to the SSD 10431 approval.

We trust the information contained herein meets your current requirements, please contact the below if clarification of any points are required.

Yours faithfully,
COSTIN ROE CONSULTING PTY LTD

MARK WILSON MIEAust CPEng NER
Director

Encl. 1. Costin Roe ESCP's
2. Consent Condition Matrix

ENCLOSURE 1
COSTIN ROE CONSULTING ESCP DRAWINGS

MOOREBANK PRECINCT WEST - STAGE 3

MOOREBANK AVENUE, MOOREBANK, NSW

CONSTRUCTION STORMWATER MANAGEMENT PLAN - MODIFICATION

TABLE 1 - STABILISATION REQUIREMENTS AND TREATMENT METHODS

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

LANDS	STABILISATION REQUIREMENT	TIMEFRAMES	TREATMENT METHODS - PRODUCTS	REMARKS
ALL LANDS	C-FACTOR = 0.15 (50% EQUIVALENT GROUND COVER[1])	APPLIES AFTER 20 WORKING DAYS OF INACTIVITY (EVEN THOUGH WORKS MIGHT CONTINUE LATER)	SOIL BINDER (I.E VITAL P47/STONEWALL OR EQUIVALENT[TS])	- SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT[TS] - VITAL DILUTION RATE = 1:10(VITAL:WATER). -RE-APPLY/MAINTAIN AS NECESSARY (APPROX. EVERY 3-6 MONTHS WITHOUT SUITABLE VEGETATION COVER) TO ENSURE THE REQUIRED COVER IS PROVIDED.
			GEOTEXTILE, JUTE MATTING, BLACK PLASTIC OR EQUIVALENT[TS]	- COVER ALL EXPOSED SOILS. - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.
WATERWAYS, DRAINAGE LINES AND CONCENTRATED FLOW AREAS	C-FACTOR = 0.05 (70% GRASS COVER OR EQUIVALENT GROUND COVER[2])	APPLIES AFTER 10 WORKING DAYS FROM COMPLETION OF FORMATION AND BEFORE THEY ARE ALLOWED TO CARRY CONCENTRATED FLOWS.	REFER TO THE DRAIN SPECIFICATIONS DETAILED ON THE PLAN FOR SPECIFIC LINING/STABILISATION REQUIREMENTS. EXAMPLE TREATMENT METHODS ARE SHOWN BELOW.	
			TEMPORARY LINING - GEOTEXTILE (I.E. BIDIM A24 OR EQUIVALENT[TS])	- COMPLETE ANY SUBSOIL TREATMENT BEFORE LAYING THE MATTING. - INSTALL MATTING IN ACCORDANCE WITH SD 5-7. - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.
			JUTE MESH, SEEDING AND SOIL BINDER (I.E. VITAL P47/STONEWALL OR EQUIVALENT[TS]) - LOW FLOWS TO MODERATE	- COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF 5 TONNES/Ha). - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75mm. - COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING. - INSTALL MATTING IN ACCORDANCE WITH SD 5-7. - SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT[TS]. - VITAL DILUTION RATE = 1L / m^2 OF DILUTED VITAL MIXTURE. - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
			JUTE MATTING (~350gsm) AND SEEDING OR EQUIVALENT[TS] - LOW FLOWS TO MODERATE	- COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF STONNES/Ha). - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75mm. - COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING. - INSTALL MATTING IN ACCORDANCE WITH SD 5-7. - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
			TURF REINFORCEMENT MATTING (TRM) (E.G. TERRAMAT OR EQUIVALENT[TS]) - MODERATE FLOWS	- COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF STONNES/Ha). - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75mm. - COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING. - INSTALL MATTING IN ACCORDANCE WITH SD 5-7. - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
			ROCK LINING - HIGH FLOWS	- COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF STONNES/Ha). - INSTALL GEOTEXTILE UNDERLAY (IF SPECIFIED) IN ACCORDANCE WITH SD 5-7. - INSTALL ROCK ARMOURING (TO THE DEPTH AND SIZE AS SPECIFIED ON THE PLAN).
STOCKPILES	C-FACTOR = 0.10 (60% GRASS COVER OR EQUIVALENT GROUND COVER[2])	APPLIES AFTER 10 WORKING DAYS FROM COMPLETION OF FORMATION	SEEDING AND SOIL BINDER (I.E. VITAL P47/STONEWALL OR EQUIVALENT[TS])	- APPLY SEED TO ALL STOCKPILE SURFACES (NOTE: SEEDING MAY NOT BE REQUIRED IF EXISTING SEEDBED IS PRESENT). -SPRAY ALL STOCKPILE SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT[TS]. - VITAL DILUTION RATE = 1:10 (VITAL:WATER). - APPLICATION RATE = 1L / m2 OF DILUTED VITAL MIXTURE. - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
			GEOTEXTILE, JUTE MATTING, BLACK PLASTIC OR EQUIVALENT[TS]	- COVER ALL EXPOSED SOILS - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.
GENERAL SURFACES	C-FACTOR = 0.10 / 0.05 (60% / 70% GRASS COVER OR EQUIVALENT GROUND COVER[2])	C-FACTOR = 0.1 APPLIES AFTER 10 WORKING DAYS FROM COMPLETION OF FORMATION AND C-FACTOR = 0.05 APPLIES WITHIN A FURTHER 60 DAYS	TOPSOIL, SEEDING AND SOIL BINDER (I.E. VITAL P47/STONEWALL OR EQUIVALENT[TS])	- REFER TO SD 7-1 - COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF STONNES/Ha). - PLACE GYPSUM TREATED TOPSOIL TO A DEPTH OF AT LEAST 75mm. - APPLY ANY FERTILISERS REQUIRED. - APPLY SEED TO ALL SURFACES. - SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT[1]. - VITAL DILUTION RATE = 1:10 (VITAL:WATER). - APPLICATION RATE = 1L / m2 OF DILUTED VITAL MIXTURE. - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
			HYDROMULCH OR EQUIVALENT[TS]	- REFER TO SD 7-1 - COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF STONNES/Ha). - PLACE GYPSUM TREATED TOPSOIL TO A DEPTH OF AT LEAST 75mm. - APPLY HYDROMULCH WITH APPROVED SEED MIX TO SOIL SURFACE. - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.

[1] - EQUIVALENT COVER/PRODUCT MUST ACHIEVE THE EQUIVALENT C-FACTOR WITH PROVEN RESEARCH/DOCUMENTATION TO VERIFY THIS.

STANDARD DRAWINGS REFERENCED CAN BE LOCATED IN THE 'SOILS & CONSTRUCTION, MANAGING URBAN STORMWATER - VOLUME 1' BOOK BY LANDCOM. ALTERNATIVE DETAILS MAY BE SOUGHT IN CONSULTATION WITH THE ENGINEER

TABLE 2 - LIMITATIONS TO ACCESS DURING CONSTRUCTION

LAND USE	LIMITATION	REMARKS
CONSTRUCTION AREAS	LIMITED TO 5 (PREFERABLE 2) METRES FROM THE EDGE OF ANY ESSENTIAL CONSTRUCTION ACTIVITY AS SHOWN ON ENGINEERING PLANS.	ALL SITE WORKERS SHOULD CLEARLY RECOGNISE THESE AREAS THAT, WHERE APPROPRIATE, ARE IDENTIFIED WITH BARRIER FENCING (UPSLOPE) AND SEDIMENT FENCE (DOWNSLOPE) OR SIMILAR MATERIALS.
ACCESS CORRIDORS	LIMITED TO A MAXIMUM WIDTH OF 7 METERS	THE SITE MANAGER WILL DETERMINE AND MARK THE LOCATION OF THESE ZONES ON SITE, THEY CAN VARY IN POSITION SO AS TO BEST CONSERVE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE BEING CONSIDERATE OF THE NEEDS EFFICIENT WORKS ACTIVITIES. ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE BOUNDARIES.
REMAINING LANDS, INCLUDING REVEGETATION AREA	ENTRY PROHIBITED EXCEPT FOR ESSENTIAL MANAGEMENT WORKS	THINNING OF GROWTH MIGHT BE NECESSARY, FOR EXAMPLE, FOR FIRE REDUCTION OR WEED REMOVAL

DUST CONTROL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE DUST CONTROL MEASURES ARE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES REQUIREMENTS.
2. THE APPLICATION OF LIQUID BASED DUST SUPPRESSION MEASURES MUST BE SUCH THAT SEDIMENT LADEN RUNOFF RESULTING FROM SUCH MEASURES DOES NOT CREATE A TRAFFIC OR ENVIRONMENTAL HAZARD. (EG UTILISING SEDIMENT CONTROLS)
3. DUST GENERATION ASSOCIATED WITH WIND EROSION TO BE CONTROLLED USING WATER TRUCKS, DUST SUPPRESSING FOG, MIST GENERATORS, SEALANT PLACED OVER THE SOIL, SURFACE ROUGHENING OR RE-VEGETATION.
4. THE FOLLOWING ACTIVITIES SHALL BE ADOPTED, IF NECESSARY, TO MANAGE DUST CONTROL ON SITE:
   - LIMITING THE AREA OF SOIL DISTURBANCE AT ANY GIVEN TIME
   - REPLACING TOPSOIL AFTER COMPLETION OF EARTHWORKS.
   - PROGRAMMING WORK TO MINIMISE THE LIFE OF STOCKPILES.
   - TEMPORARILY STABILISING LONG-TERM STOCKPILES.
   - GRAVELLING UNSEALED ACCESS AND HAUL ROADS.
   - MINIMISING TRAFFIC MOVEMENT ON EXPOSED SURFACES.
   - LIMITING VEHICULAR TRAFFIC TO 15km/h.
   - RETAINING EXISTING VEGETATION AS WIND BREAKS.
   - UTILISING A WATER CART WITH POTABLE WATER ONLY
5. OIL, LANDFILL GAS CONDENSATE OR ANY CONTAMINATED LEACHATE IS NOT TO BE USED FOR DUST SUPPRESSION.

EROSION CONTROL NOTES

ALL SEDIMENT CONTROL WORK INCLUDING DIVERSION BANKS, CATCH DRAINS, V-DRAINS AND SEDIMENT FENCES SHALL BE COMPLETED IN ACCORDANCE WITH THE STAGED PLANS PRESENTED AND SHALL FACILITATE A STAGED CONSTRUCTION METHODOLOGY.

1. ALL EROSION & SEDIMENT CONTROLS SHALL BE COMPLETED IN ACCORDANCE WITH THE 'SOILS AND CONSTRUCTION, MANAGING URBAN STORMWATER - THE BLUE BOOK' BY LANDCOM.
2. SEDIMENT FENCES AND SEDIMENT FENCE RETURNS SHALL BE ERECTED CONVEX TO THE CONTOUR TO POND WATER.
3. STRAW BALE BARRIERS & GEOFABRIC FENCES OR SEDIMENT FANCNES ARE TO BE CONSTRUCTED TO TOE OF BATTER, PRIOR TO COMMENCEMENT OF EARTHWORKS, IMMEDIATELY AFTER CLEARING OF VEGETATION AND BEFORE REMOVAL OF TOP SOIL.
4. ALL TEMPORARY EARTH BERMS, DIVERSION AND SEDIMENT BASIN EMBANKMENTS ARE TO BE MACHINE COMPACTED, SEEDED AND MULCHED FOR TEMPORARY VEGETATION COVER AS SOON AS THEY HAVE BEEN FORMED. REFER TO TABLE 1 FOR APPROVED STABILISATION METHODS.
5. CLEAN OR NON-SITE WATER IS TO BE DIVERTED AWAY FROM DISTURBED GROUND AND INTO THE DRAINAGE SYSTEM OVER STABLE SURFACES.
6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROVIDING ON GOING ADJUSTMENT TO EROSION CONTROL MEASURES AS REQUIRED DURING CONSTRUCTION.
7. ALL SEDIMENT TRAPPING STRUCTURES AND DEVICES ARE TO BE INSPECTED AFTER STORMS OF 5mm OR GREATER WITHIN A 24 HOUR PERIOD FOR STRUCTURAL DAMAGE OR CLOGGING, TRAPPED MATERIAL IS TO BE REMOVED TO A SAFE, APPROVED LOCATION.
8. THE SITE IS TO BE INSPECTED FOLLOWING A RAINFALL EVENT OF 5mm OR GREATER WITHIN A 24 HOUR PERIOD FOR EVIDENCE OF EROSION AND RESPOND WITH INCREASED CONTROL IF REQUIRED.
9. ALL FINAL EROSION PREVENTION MEASURES INCLUDING THE ESTABLISHMENT OF GRASSING ARE TO BE MAINTAINED UNTIL THE END OF THE DEFECTS LIABILITY PERIOD.
10. ALL EARTHWORKS AREAS SHALL BE ROLLED ON A REGULAR BASIS TO SEAL THE EARTHWORKS.
11. ALL FILL AREAS ARE TO BE LEFT WITH A BUND AT THE TOP OF THE SLOPE AT THE END OF EACH DAY'S EARTHWORKS TO DIRECT WATER TO A STABLE OUTLET OVER THE BATTER OR INTERNALLY TOWARDS SEDIMENT CONTROL. THE HEIGHT OF THE BUND SHALL BE A MINIMUM OF 200mm.
12. ALL CUT AND FILL SLOPES ARE TO BE SEEDED AND HYDROMULCHED WITHIN 10 DAYS OF COMPLETION OF FORMATION.
13. AFTER PERMANENT STABILISATION OF THE SITE IS COMPLETE (I.E. BY TOPSOILING, PAVING ETC) AND THE SITE IS DEEMED TO BE STABLE IN THE OPINION OF A SUITABLY QUALIFIED PERSON ALL TEMPORARY WORK SUCH AS SEDIMENT FENCE, DIVERSION DRAINS ETC SHALL BE REMOVED.
14. ALL STOCKPILES ARE TO BE SUITABLY COVERED AND STABILIZED TO THE SATISFACTION OF THE SITE MANAGER TO PREVENT WIND AND WATER EROSION.
15. ANY AREA THAT IS NOT APPROVED BY THE CONTRACT ADMINISTRATOR FOR CLEARING OR DISTURBANCE BY THE CONTRACTOR'S ACTIVITIES SHALL BE CLEARLY MARKED AND SIGN POSTED, FENCED OFF OR OTHERWISE APPROPRIATELY PROTECTED AGAINST ANY SUCH DISTURBANCE.
16. ALL STOCKPILE SITES SHALL BE SITUATED IN AREAS INDICATED ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR APPROVED FOR SUCH USE BY THE SITE MANAGER. A 6m BUFFER ZONE SHALL EXIST BETWEEN STOCKPILE SITES AND ANY STREAM OR FLOW PATH. ALL STOCKPILES SHALL BE ADEQUATELY PROTECTED FROM EROSION AND CONTAMINATION OF THE SURROUNDING AREA BY USE OF THE MEASURES IN THE APPROVED ESCP.
17. ACCESS AND EXIT AREAS SHALL INCLUDE TRUCK SHAKER GRID OR OTHER METHODS APPROVED BY THE SITE MANAGER FOR THE REMOVAL OF SOIL MATERIALS FORM MOTOR VEHICLES.
18. THE CONTRACTOR IS TO ENSURE RUNOFF FROM ALL AREAS WHERE THE NATURAL SURFACE IS DISTURBED BY CONSTRUCTION, INCLUDING ACCESS ROADS, DEPOT AND STOCKPILE SITES, SHALL BE FREE OF SEDIMENTS BEFORE IT IS EITHER DISPERSED TO STABLE AREAS OR DIRECTED TO NATURAL WATERCOURSES.
19. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SLOPES, CROWNS AND DRAINS ON ALL EXCAVATIONS AND EMBANKMENTS TO ENSURE SATISFACTORY DRAINAGE AT ALL TIMES WATER SHALL NOT BE ALLOWED TO POND ON THE WORKS UNLESS SUCH PONDING IS PART OF AN APPROVED ESCP / SWMP.

SEDIMENT CONTROL BASIN NOTES

1. TYPE D BASIN IS REQUIRED.
2. VOLUME OF THE BASINS SHALL BE AS NOMINATED ON DRAWING. NOMINAL POND LOCATIONS AND NOMINAL DIMENSIONS.
3. SEDIMENT BUILD UP TO NOT EXCEED 33% TOTAL CAPACITY OF BASIN.
4. DEWATERING OF BASIN TO BE PERFORMED TO THE BOTTOM OF THE SEDIMENT SETTLING ZONE FOLLOWING ACHIEVEMENT OF WQO'S, MANAGEMENT OF DOSAGE AND DISCHARGE TO BE ACHIEVED WITHIN 5 DAYS OF THE INITIAL RAINFALL EVENT.
5. FOLLOWING DEWATERING PER NOTE 4, WATER LEVEL TO BE MAINTAINED AT 20% CAPACITY AFTER A FOUR DAY SETTLING PERIOD FOLLOWING A STORM EVENT SUCH THAT THE BASIN HAS SUFFICIENT CAPACITY TO CONTAIN RUNOFF AND SEDIMENT FROM SUBSEQUENT RAINFALL EVENTS.
6. WATER TO BE DOSED WITH GYPSUM TO ACCELERATE SETTLEMENT OF SUSPENDED SOLIDS AS REQUIRED.
7. GYPSUM DOSAGE RATE TO BE APPLIED AT APPROX. 32kg PER 100 CUBIC METRE OF COLLECTED RUNOFF.
8. THE USE OF ALUM (OR ANY OTHER ALTERNATIVE) AS A FLOCCULANT IS NOT RECOMMENDED. ALUM OR ANY OTHER FLOCCULANT IS TO BE USED ONLY FOLLOWING CONSULTATION WITH AND ACCEPTANCE FROM COUNCIL ESC OFFICERS.
9. DISCHARGE FROM POND IS PERMISSIBLE WHEN THE WATER PH IS 6.5-8.5 AND IS CLARIFIED TO AT OR BELOW A TSS OF 50mg/L. CLARIFICATION WOULD GENERALLY BE ACHIEVED IN 36-72 HOURS WITH THE USE OF GYPSUM PLUS NO VISIBLE OIL OR GREASE. CORRELATION TESTS MUST BE UNDERTAKEN ON SITE TO ENSURE THIS IS ACHIEVED.
10. DEWATERING SHALL BE DONE IN SUCH A MANNER AS TO REMOVE THE CLEAN WATER (BEING WATER WITHIN THE ADOPTED CRITERIA) WITHOUT REMOVING OR DISTURBING THE SEDIMENT THAT HAS SETTLED. THE PUMP INTAKE PIPE IS NOT TO REST ON THE SETTLED SEDIMENT LAYER.
11. IF WATER EXCEEDS TSS OF 50mg/L DURING DEWATERING, PUMPING IS TO CEASE. RECORDS ARE TO BE KEPT (ON-SITE AT ALL TIMES) OF ALL MEASUREMENT PRIOR TO, DURING AND AFTER DISCHARGE. RECORDS TO BE MADE AVAILABLE TO COUNCIL OFFICERS UPON REQUEST.
12. PROVIDE SECURITY FENCE TO BASIN FOR SAFETY.

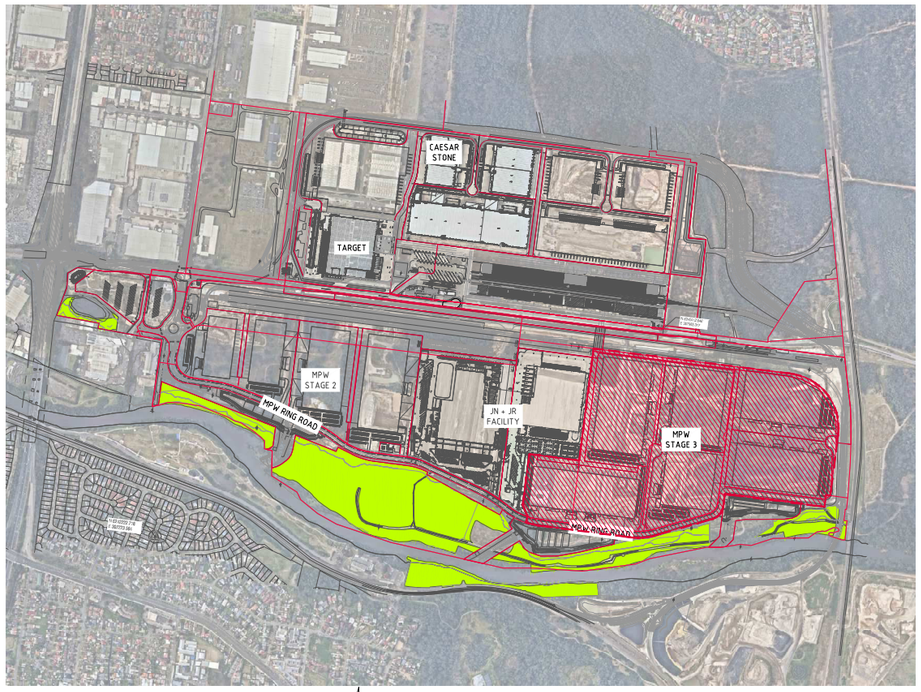
INSTREAM WORKS:

1. SEDIMENT FENCES AND SEDIMENT FENCE RETURNS TO BE ERECTED PRIOR TO THE COMMENCEMENT OF ANY WORK. SEDIMENT FENCES TO REMAIN UNTIL COMPLETION OF INSTREAM WORK IN THESE LOCATION TO PROTECT EXISTING DOWNSTREAM PROPERTIES AND ROAD PAVEMENT. (REFER TO DWG MOD-ESC05 & ESC06 FOR DETAILS).
2. UNDERTAKE WORK DURING A PERIOD OF DRY FORECASTED WEATHER.
3. PROTECT DISTURBED AREA WITH COFFERDAMS AS REQUIRED.
4. TEMPORARY LOW FLOW DIVERSION PIPE OR PUMPED SYSTEM MAY BE INSTALLED AT THE BASE OF CHANNEL TO DIVERT CLEAN WATER FROM UPSTREAM BASEFLOW.
5. UNDERTAKE ALL INSTREAM WORK IN THE SPECIFIED SECTION OF THE CHANNEL IN ACCORDANCE WITH APPROVED PLANS AND IMMEDIATELY PLANT TO STABILISE THE WORKS.
6. PLANT WITH APPROPRIATE SPECIES, AT A DENSITY THAT WOULD NATURALLY OCCUR.

INSPECTION & MAINTENANCE NOTES:

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ADEQUATE INSPECTIONS AND MAINTENANCE ARE CARRIED OUT DURING SITE WORKS. DAILY AND WEEKLY INSPECTION CHECKLISTS HAVE BEEN PROVIDED IN THE COSTIN ROE SOIL AND WATER MANAGEMENT PLAN (SWMP) Co13455.07-03.rpt DATED AUGUST 2021.

AS NOTED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ADEQUATE MAINTENANCE OF EROSION & SEDIMENT CONTROL MEASURES ARE UNDERTAKEN DURING THE WORKS PERIOD. DAMAGED, DISLODGED OR FAULTY ESC MEASURES ARE TO BE IMMEDIATELY RECTIFIED AND THE SURROUNDING AREA IS TO BE REMEDIATED AS PER NOTES ON THIS DRAWING, THE SWMP AND THE LANDCOM 'BLUE BOOK'.



LOCALITY PLAN
NOT TO SCALE

SITE STABILITY NOTE:

LAND DISTURBANCE & LAND FILLING ACTIVITIES MUST BE UNDERTAKEN IN A PHASED MANNER, DISTURBED AREAS MUST BE STABILISED TO A C-FACTOR OF 0.05 PRIOR TO THE COMPLETION OF ANY OTHER WORKS PER CONDITION B4.1(b). REFER TO TABLE 1 ABOVE FOR APPROVED STABILISATION METHODS

SOIL & WATER MANAGEMENT PLAN NOTE:

ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SOIL AND WATER MANAGEMENT PLAN BY COSTIN ROE CONSULTING, REF 13455.07-03.rpt & THE RELEVANT CONDITIONS OF CONSENT

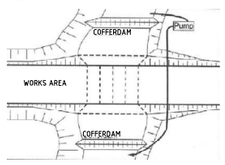
SEDIMENTATION BASIN NOTE:

REFER TO SEDIMENT & EROSION CONTROL NOTES.

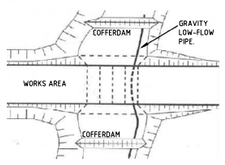
FOR SEDIMENT AND EROSION CONTROL DETAILS, REFER TO THE LANDCOM 'BLUE BOOK' AND EXTRACTS ON DRAWING Co13455.18-MOD-ESC05 & ESC06.

SEDIMENTATION BASIN SIZING BASED ON RECOMMENDATIONS OF 'SOILS AND CONSTRUCTION, MANAGING URBAN STORMWAER-THE BLUE BOOK'. CAPACITY BASED ON 5-DAY RAINFALL DEPTHS AT 85th PERCENTILE INTENSITY (32.2mm) IN THE LIVERPOOL CATCHMENT AREA.

NOTES:
1. ASSUME TYPE D SOIL (CLAY/SILTY CLAY)
2. ASSUME GROUP D SOIL (HIGH PLASTICITY AND SHRINK/SWELL PROPERTIES)
3. REFER TO DRAWING PIWW-EOS-CV-DWG-0200 FOR SEDIMENTATION BASIN CALCULATIONS



PUMPED SYSTEM OPTION



GRAVITY PIPE OPTION

INSTREAM WORKS COFFERDAM ARRANGEMENT

DRAWING LIST

DRAWING NO.	DRAWING TITLE
Co13455.16-MOD-ESC01	EROSION & SED CONTROL LOCALITY PLAN, DRAWING LIST & ENGINEERING NOTES
Co13455.16-MOD-ESC02	EROSION & SED CONTROL RUSLE CALCULATIONS
Co13455.16-MOD-ESC03	EROSION & SEDIMENT CONTROL PLAN - PHASE 1
Co13455.16-MOD-ESC04	EROSION & SEDIMENT CONTROL PLAN - PHASE 2
Co13455.16-MOD-ESC05	EROSION & SEDIMENT CONTROL DETAILS - SHEET 1
Co13455.16-MOD-ESC06	EROSION & SEDIMENT CONTROL DETAILS - SHEET 2

FOR APPROVAL

AMENDMENTS	DATE	ISSUE
ISSUED FOR APPROVAL	30.08.21	C
ISSUED FOR APPROVAL	03.08.21	B
ISSUED FOR APPROVAL	15.06.21	A

PRECINCT: MOOREBANK LOGISTICS PARK

ARCHITECT: REIDCAMPBELL Architecture, Interiors, Project Management; Level 15, 134 Walker Street North Sydney NSW 2060 Australia; Tel: 61 02 9955 9577 Email: sydney@reidcampbell.com; Fax: 61 02 9929 4390 Web: www.reidcampbell.com; BELL

CLIENT: QUBE

PROJECT: MOOREBANK PRECINCT WEST STAGE 3
MOOREBANK LOGISTICS PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
DS	DS	JUN '21	M.W.	A0	AS SHOWN	Co13455.18-MOD-ESC01

Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 8 Windmill Street
Walsh Bay, Sydney NSW 2000
Tel: (02) 8251-7600 Fax: (02) 9241-3726
email: mail@costinroe.com.au ©

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PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: DRAWING LIST AND GENERAL NOTES

DRAWING NO. Co13455.18-MOD-ESC01 ISSUE C

1. Erosion Hazard and Sediment Basins

Site Name: MOOREBANK LOGISTICS PARK

Site Location: MOOREBANK PRECINCT WEST

Precinct/Stage: STAGE 3

Other Details:

Site area	Sub-catchment or Name of Structure						Notes
	B6	B8					
Total catchment area (ha)	59.1	26.91					
Disturbed catchment area (ha)	59.1	26.91					

Soil analysis (enter sediment type if known, or laboratory particle size data)

Sediment Type (C, F or D) if known:	D	D					From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)							Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)							
% clay (fraction finer than 0.002 mm)							
Dispersion percentage							E.g. enter 10 for dispersion of 10%
% of whole soil dispersible							See Section 6.3.3(e). Auto-calculated
Soil Texture Group	D	D					Automatic calculation from above

Rainfall data

Design rainfall depth (no of days)	5	5					See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25.
Design rainfall depth (percentile)	85	85					
x-day, y-percentile rainfall event (mm)	32.2	32.2					
Rainfall R-factor (if known)							Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)	10.9	10.9					

RUSLE Factors

Rainfall erosivity (*R*-factor)	2580	2580					Auto-filled from above
Soil erodibility (*K*-factor)	0.075	0.075					
Slope length (m)	300	300					
Slope gradient (%)	1	1					RUSLE LS factor calculated for a high rill/interrill ratio.
Length/gradient (*LS*-factor)	0.27	0.27					
Erosion control practice (*P*-factor)	1.3	1.3	1.3	1.3	1.3	1.3	
Ground cover (*C*-factor)	1	1	1	1	1	1	

Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)

Storage (soil) zone design (no of months)	2	2					Minimum is generally 2 months
Cv (Volumetric runoff coefficient)	0.64	0.64					See Table F2, page F-4 in Appendix F

Calculations and Type D/F Sediment Basin Volumes

Soil loss (t/ha/yr)	68	68					
Soil Loss Class	1	1					See Table 4.2, page 4-13
Soil loss (m^3/ha/yr)	53	53					Conversion to cubic metres
Sediment basin storage (soil) volume (m^3)	518	236					See Sections 6.3.4(i) for calculations
Sediment basin settling (water) volume (m^3)	12179	5546					See Sections 6.3.4(i) for calculations
Sediment basin total volume (m^3)	12697	5782					

NB for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required).

2. Flow Calculations

Peak flow is given by the Rational Formula: $Qy = 0.00278 \times C_{10} \times F_Y \times I_{y,\,tc} \times A$

where: Q_y is peak flow rate (m^3/sec) of average recurrence interval (ARI) of "Y" years
C_{10} is the runoff coefficient (dimensionless) for ARI of 10 years.
F_y is a frequency factor for "Y" years.
A is the catchment area in hectares (ha)
$I_{y,\,tc}$ is the average rainfall intensity (mm/hr) for an ARI of "Y" years and a design duration of "tc" (minutes or hours)

Time of concentration (t_c) = $0.76 \times (A/100)^{0.38}$ hrs

Note: For urban catchments the time of concentration should be determined by more precise calculations or reduced by a factor of 50 per cent. Place an x in the appropriate row below to automatically halve the time of concentration for that sub-catchment.

Structure Details									Notes
Name	2-1	2-2							
Catchment Area (ha)	59.1	26.91							
Place an x here to halve tc	X	X							Place an x if disturbed catchment
Time of concentration (tc)	19	14							minutes

Rainfall Intensities

1-year, tc	42.35	69.44							Enter the relevant rainfall intensities (in mm/hr) for each of the nominated rainfall events. The time of concentration (tc) determines the duration of the event to be used
2-year, tc	54.88	90.11							
5-year, tc	71.74	117.9							
10-year, tc	81.79	134.63							
20-year, tc	94.94	156.37							
50-year, tc	112.25	185							
100-year, tc	125.57	207.11							
C10 runoff coefficient	0.9	0.9							Use AR&R or Table F3, pg F-6

Frequency Factors

FF, 1-year	0.8	0.8							Can use 0.8 for a construction site
FF, 2-year	0.85	0.85							Can use 0.85 for a construction
FF, 5-year	0.95	0.95							Can use 0.95 for a construction
FF, 10-year	1	1							Generally always 1
FF, 20-year	1.05	1.05							Can use 1.05 for a construction
FF, 50-year	1.15	1.15							Can use 1.15 for a construction
FF, 100-year	1.2	1.2							Can use 1.2 for a construction site

Flow Calculations									Notes
1-year, tc (m^3/s)	5.01	3.74							
2-year, tc (m^3/s)	6.896	5.157							
5-year, tc (m^3/s)	10.078	7.541							
10-year, tc (m^3/s)	12.094	9.064							
20-year, tc (m^3/s)	14.741	11.055							
50-year, tc (m^3/s)	19.068	14.324							
100-year, tc (m^3/s)	22.281	16.733							

3. Sediment Basin Spillway Design

Structure Details

Structure Name	B6	B8					Auto-filled from Worksheet 1
Catchment Area (ha)	59.1	26.91					Auto-filled from Worksheet 1
Time of concentration (tc)	19	14					Auto-calculated assuming tc is halved

Rainfall Intensities (IFD Values)

1 year, tc	42.35	69.44					Enter the relevant rainfall intensities (in mm/hr) for each of the nominated rainfall events. The time of concentration (tc) determines the duration of the event to be used
2 year, tc	54.88	90.11					
5 year, tc	71.74	117.9					
10 year, tc	81.79	134.63					
20 year, tc	94.94	156.37					
50 year, tc	112.25	185					
100 year, tc	125.57	207.11					
C_{10} runoff coefficient	0.9	0.9					Use AR&R or Table F3, pg F-6
Design ARI event (select):	10	10					Select design ARI (years) from dropdown
Frequency Factor	1	1	#N/A	#N/A	#N/A	#N/A	Auto-filled based on selected ARI
Flow Calculation	12.094	9.064	#N/A	#N/A	#N/A	#N/A	Auto-calculated based on selected ARI

MPWS3 BASIN CALCULATIONS - REFER DRAWING MOD-ESC03 & ESC04

FOR APPROVAL

ISSUED FOR APPROVAL	15.06.21	A	
AMENDMENTS	DATE	ISSUE	

AMENDMENTS DATE ISSUE

PRECINCT: MOOREBANK LOGISTICS PARK

ARCHITECT: REIDCAMPBELL

CLIENT: QUBE

PROJECT: MOOREBANK PRECINCT WEST STAGE 3
MOOREBANK LOGISTICS PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
DS	DS	JUN '21	M.W.	A0	AS SHOWN	C013455.18-MOD-ESC02

Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 6 Windmill Street
Walsh Bay, Sydney NSW 2000
Tel: (02) 9251-7099 Fax: (02) 9241-5721
email: mail@costinroe.com.au

Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: EROSION AND SEDIMENT CONTROL SEDIMENTATION BASIN RUSLE CALCULATIONS

DRAWING No: C013455.18-MOD-ESC02 ISSUE: B

MOOREBANK AVENUE

EXISTING CHATHAM AVENUE WHEEL WASH TO BE UTILISED UNTIL COMPLETION OF WORKS

CAT 6
59.10 Ha

CAT 8
26.91 Ha

WOOLWORTHS DEVELOPMENT
APPROVED UNDER SSD 7709 MOD 1
REFER ACSWMP BY COSTIN ROE CONSULTING (REF: Co13455.16-12.ltr) AND ASSOCIATED 13455.16-MOD-ESC PACKAGE FOR EROSION & SEDIMENT CONTROLS SUBMITTED UNDER

DIVERSION DRAIN TYPE 1

DIVERSION DRAIN TYPE 2

EXISTING COMPOUND TO BE DECOMISSIONED

CHATHAM AVENUE TO BE UTILISED UNTIL COMPLETION OF WESTERN RING ROAD

PROVIDE STABILISED CONSTRUCTION ENTRY PER DETAIL SD 6-14

PROVIDE STABILISED CONSTRUCTION ENTRY PER DETAIL SD 6-14

BASIN 8
CONSTRUCTED AS PART OF MPWS2 WORKS PRIOR TO COMMENCEMENT OF MPWS3. TO BE UTILISED AS INFRASTRUCTURE CONSTRUCTION BASIN UNTIL COMPLETION OF UPSTREAM CATCHMENT.
IN ACCORDANCE WITH REQUIREMENTS OF THE APPROVED ESTATE CSWMP (Co13455.07-03.rpt) & APPROVED ESTATE SDDR (Co13455.07-02.rpt)

SEDIMENT BASIN 8:
CATCHMENT AREA = 26.91 Ha
DISTURBED AREA = 26.91 Ha
REQUIRED SETTLING ZONE = 5,546m³
REQUIRED STORAGE ZONE = 236m³
PROVIDED BASIN VOLUME = 5,782m³
REFER TO SD 6-4

SURFACE WATER MONITORING LOCATION

PROVIDE SEDIMENTATION CONTROLS TO THE BASIN 8 DISCHARGE WORKS. REFER TO MPWS2 CSWMP DRAWING LPWPIW-COS-CV-DWG-0248

BASIN 6
CONSTRUCTED AS PART OF MPWS2 WORKS PRIOR TO COMMENCEMENT OF MPWS3. TO BE UTILISED AS INFRASTRUCTURE CONSTRUCTION BASIN UNTIL COMPLETION OF UPSTREAM CATCHMENT.
IN ACCORDANCE WITH REQUIREMENTS OF THE APPROVED ESTATE CSWMP (Co13455.07-03.rpt) & APPROVED ESTATE SDDR (Co13455.07-02.rpt)

EXISTING HAUL ROAD TO BE COMPLETED AS FINAL RING ROAD AS PART OF MPWS3 CONSTRUCTION

OUTLET 6

PROVIDE SEDIMENTATION CONTROLS TO THE BASIN 6 DISCHARGE WORKS. REFER TO MPWS2 CSWMP DRAWING LPWPIW-COS-CV-DWG-0247

SURFACE WATER MONITORING LOCATION

SEDIMENT BASIN 6:
CATCHMENT AREA = 59.10 Ha
DISTURBED AREA = 59.10 Ha
REQUIRED SETTLING ZONE = 12,179m³
REQUIRED STORAGE ZONE = 218m³
PROVIDED BASIN VOLUME = 20,000m³
REFER TO SD 6-4

GEORGES RIVER

GEORGES RIVER

SITE STABILITY NOTE:

LAND DISTURBANCE & LAND FILLING ACTIVITIES MUST BE UNDERTAKEN IN A PHASED MANNER. DISTURBED AREAS MUST BE STABILISED TO A C-FACTOR OF 0.05 PRIOR TO THE COMPLETION OF ANY OTHER WORKS PER CONDITION B21. REFER TO TABLE 1 ON DRAWING MOD-ESC01 FOR APPROVED STABILISATION METHODS

NOTE:

REFER TO DRAWING Co13455.18-MOD-ESC01 FOR EROSION CONTROL NOTES.

STORMWATER DISCHARGE NOTE:

CONTRACTOR TO DISCHARGE CLEAN WATER & EMERGENCY OVERFLOWS TO THE MOOREBANK WEST ESTATE STORMWATER INFRASTRUCTURE AS NOTED ON PLAN.
IN THE EVENT THE ESTATE INFRASTRUCTURE IS NOT ABLE TO ACCEPT COONSTRUCTION SITE WATER, THE CONTRACTOR IS TO DISCHARGE CLEAN WATER FROM THE SITE TO AN AGREED TEMPORARY DISCHARGE POINT. CONTRACTOR TO PROVIDE THE TEMPORARY DISCHARGE POINT TO THE ENGINEER.

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY CARDNO TITLED 115804548 DATED 05/08/19.

- SHEET-FLOW DIRECTION
- SITE BOUNDARY
- CATCHMENT BOUNDARY
- DIRTY WATER DIVERSION DRAIN
- DEWATERING PUMP LINE
- PIPED DRAINAGE LINE
- SEDIMENT FENCING
- 1 IN 100 YEAR ARI FLOOD EXTENT
- SEDIMENT BASIN (REFER TO PLAN)
- STABILISED EARTH DIVERSION BUND
- CONSTRUCTION SITE ACCESS WHEEL WASH FOR CONSTRUCTION VEHICLES STABILISED SITE ACCESS FOR LIGHT VEHICLES
- HAUL ROAD
- BIO-BANKING AREA

EROSION & SEDIMENT CONTROL PLAN - PHASE 1

SCALE AS SHOWN

10m 0 10 20 30 40 50 60 70 80 90 100m

SCALE 1:1000 AT A0 SIZE SHEET

FOR APPROVAL

AMENDMENTS	DATE	ISSUE
ISSUED FOR APPROVALS	30.08.21	C
ISSUED FOR APPROVALS	03.08.21	B
ISSUED FOR APPROVALS	15.06.21	A

PRECINCT: MOOREBANK LOGISTICS PARK

ARCHITECT: REIDCAMPBELL Architecture, Interiors, Project Management; BELL

CLIENT: QUBE

PROJECT: MOOREBANK PRECINCT WEST STAGE 3
MOOREBANK LOGISTICS PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
DS	DS	JUN '21	M.W.	A0	AS SHOWN	C013455.18-MOD-ESC03

Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 8 Windmill Street
Walsh Bay, Sydney NSW 2000
Tel: (02) 9241-7699 Fax: (02) 9241-5721
email: mail@costinroe.com.au ©

Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: MOOREBANK WESTERN PRECINCT EROSION & SEDIMENT CONTROL PLAN - PHASE 1

DRAWING No: C013455.18-MOD-ESC03 ISSUE: C

MOOREBANK AVENUE

CAT 6
59.10 Ha

PROVIDE 300mm HIGH DIVERSION BUND AT UPSTREAM END OF LAYDOWN AREA

PROVIDE 300mm HIGH DIVERSION BUND AT UPSTREAM END OF LAYDOWN AREA

PROVIDE 300mm HIGH DIVERSION BUND AT UPSTREAM END OF LAYDOWN AREA

PROVIDE 300mm HIGH DIVERSION BUND AT UPSTREAM END OF LAYDOWN AREA

WOOLWORTHS DEVELOPMENT
APPROVED UNDER SSD 7709 MOD 1
REFER ACSWMP BY COSTIN ROE CONSULTING (REF: Co13455.16-12.ltr) AND ASSOCIATED 13455.16-MOD-ESC PACKAGE FOR EROSION & SEDIMENT CONTROLS SUBMITTED UNDER

PROVIDE STABLE WATERWAY CROSSING PER SD5-1 WITH Ø375 CLASS 3 RCP

PROVIDE STABLE WATERWAY CROSSING PER SD5-1 WITH Ø525 CLASS 3 RCP

PROVIDE STABLE WATERWAY CROSSING PER SD5-1 WITH Ø375 CLASS 3 RCP

PROVIDE STABLE WATERWAY CROSSING PER SD5-1 WITH Ø525 CLASS 3 RCP

PROVIDE STABLE WATERWAY CROSSING PER SD5-1 WITH Ø600 CLASS 3 RCP

DIVERSION DRAIN TYPE 2

DIVERSION DRAIN TYPE 2

DIVERSION DRAIN TYPE 2

DIVERSION DRAIN TYPE 2

DIVERSION DRAIN TYPE 1

DIVERSION DRAIN TYPE 1

CAT 8
26.91 Ha

PROVIDE STABLE WATERWAY CROSSING PER SD5-1 WITH Ø375 CLASS 3 RCP

PROVIDE STABILISED CONSTRUCTION ENTRY PER DETAIL SD 6-14

PROVIDE STABILISED CONSTRUCTION ENTRY PER DETAIL SD 6-14

BASIN 8
UTILISED AS INFRASTRUCTURE CONSTRUCTION BASIN UNTIL COMPLETION OF UPSTREAM CATCHMENT.
IN ACCORDANCE WITH REQUIREMENTS OF THE APPROVED ESTATE CSWMP (Co13455.07-03.rpt) & APPROVED ESTATE SDDR (Co13455.07-02.rpt)

SEDIMENT BASIN 8:
CATCHMENT AREA = 26.91 Ha
DISTURBED AREA = 26.91 Ha
REQUIRED SETTLING ZONE = 5,546m³
REQUIRED STORAGE ZONE = 236m³
PROVIDED BASIN VOLUME = 5,782m³
REFER TO SD 6-4

SURFACE WATER MONITORING LOCATION

PROVIDE SEDIMENTATION CONTROLS TO THE BASIN 8 DISCHARGE WORKS. REFER TO MPWS2 CSWMP DRAWING LPWPIW-COS-CV-DWG-0248

GEORGES RIVER

BASIN 6
UTILISED AS INFRASTRUCTURE CONSTRUCTION BASIN UNTIL COMPLETION OF UPSTREAM CATCHMENT.
IN ACCORDANCE WITH REQUIREMENTS OF THE APPROVED ESTATE CSWMP (Co13455.07-03.rpt) & APPROVED ESTATE SDDR (Co13455.07-02.rpt)

OUTLET 6

PROVIDE SEDIMENTATION CONTROLS TO THE BASIN 6 DISCHARGE WORKS. REFER TO MPWS2 CSWMP DRAWING LPWPIW-COS-CV-DWG-0247

SURFACE WATER MONITORING LOCATION

SEDIMENT BASIN 6:
CATCHMENT AREA = 59.10 Ha
DISTURBED AREA = 59.10 Ha
REQUIRED SETTLING ZONE = 12,179m³
REQUIRED STORAGE ZONE = 218m³
PROVIDED BASIN VOLUME = 20,000m³
REFER TO SD 6-4

MPW RING ROAD PAVEMENT WORKS COMPLETED

GEORGES RIVER

GEORGES RIVER

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY CARDNO TITLED 115804548 DATED 05/08/19.

- SHEET-FLOW DIRECTION
- SITE BOUNDARY
- CATCHMENT BOUNDARY
- DIRTY WATER DIVERSION DRAIN
- DEWATERING PUMP LINE
- PIPED DRAINAGE LINE
- SEDIMENT FENCING
- 1 IN 100 YEAR ARI FLOOD EXTENT
- SEDIMENT BASIN (REFER TO PLAN)
- STABILISED EARTH DIVERSION BUND
- CONSTRUCTION SITE ACCESS
  WHEEL WASH FOR CONSTRUCTION VEHICLES
  STABILISED SITE ACCESS FOR LIGHT VEHICLES
- HAUL ROAD
- BIO-BANKING AREA

SITE STABILITY NOTE:

LAND DISTURBANCE & LAND FILLING ACTIVITIES MUST BE UNDERTAKEN IN A PHASED MANNER. DISTURBED AREAS MUST BE STABILISED TO A C-FACTOR OF 0.05 PRIOR TO THE COMPLETION OF ANY OTHER WORKS PER CONDITION B21. REFER TO TABLE 1 ON DRAWING MOD-ESC01 FOR APPROVED STABILISATION METHODS

NOTE:

REFER TO DRAWING Co13455.18-MOD-ESC01 FOR EROSION CONTROL NOTES.

STORMWATER DISCHARGE NOTE:

CONTRACTOR TO DISCHARGE CLEAN WATER & EMERGENCY OVERFLOWS TO THE MOOREBANK WEST ESTATE STORMWATER INFRASTRUCTURE AS NOTED ON PLAN.
IN THE EVENT THE ESTATE INFRASTRUCTURE IS NOT ABLE TO ACCEPT COONSTRUCTION SITE WATER, THE CONTRACTOR IS TO DISCHARGE CLEAN WATER FROM THE SITE TO AN AGREED TEMPORARY DISCHARGE POINT. CONTRACTOR TO PROVIDE THE TEMPORARY DISCHARGE POINT TO THE ENGINEER.

EROSION & SEDIMENT CONTROL PLAN - PHASE 2

SCALE AS SHOWN

10m 0 10 20 30 40 50 60 70 80 90 100m

SCALE 1:1000 AT A0 SIZE SHEET

FOR APPROVAL

AMENDMENTS	DATE	ISSUE
ISSUED FOR APPROVALS	30.08.21	C
ISSUED FOR APPROVALS	03.08.21	B
ISSUED FOR APPROVALS	15.06.21	A

PRECINCT: MOOREBANK LOGISTICS PARK

ARCHITECT: REIDCAMPBELL Architecture, Interiors, Project Management; Level 15, 124 Walker Street North Sydney NSW 2060 Australia; Tel: 61 02 9955 5511 Email: sydney@reidcampbell.com; Fax: 61 02 9954 1999 Web: www.reidcampbell.com; BELL

CLIENT: QUBE

PROJECT: MOOREBANK PRECINCT WEST STAGE 3
MOOREBANK LOGISTICS PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD (REF):
DS	DS	JUN '21	M.W.	A0	AS SHOWN	C013455.18-MOD-ESC04

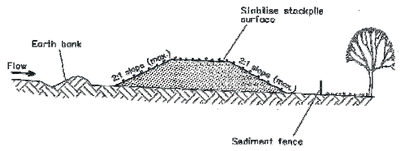
Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 8 Windmill Street
Walsh Bay, Sydney NSW 2000
Tel: (02) 9251-7699 Fax: (02) 9241-5721
email: mail@costinroe.com.au

Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: MOOREBANK WESTERN PRECINCT EROSION & SEDIMENT CONTROL PLAN - PHASE 2

DRAWING No: C013455.18-MOD-ESC04 ISSUE: C

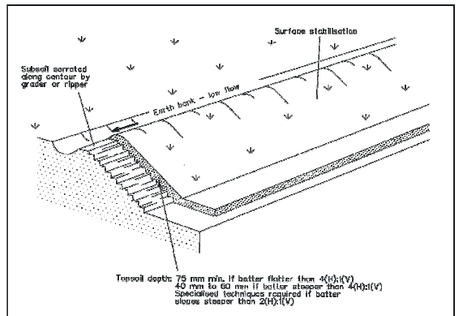


Construction Notes

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

STOCKPILES **SD 4-1**

4-5

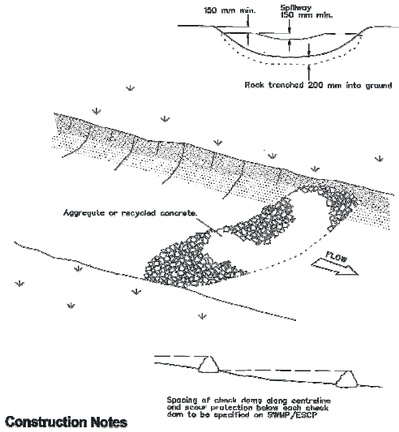


Construction Notes

1. Scarify the ground surface along the line of the contour to a depth of 50 mm to 100 mm to break up any hardsetting surfaces and to provide a good bond between the respread material and subsoil.
2. Add soil ameliorants as required by the ESCP or SWMP.
3. Rip to a depth of 300 mm if compacted layers occur.
4. Where possible, replace topsoil to a depth of 40 to 60 mm on lands where the slope exceeds 4(H):1(V) and to at least 75 mm on lower gradients.

REPLACING TOPSOIL **SD 4-2**

4-6

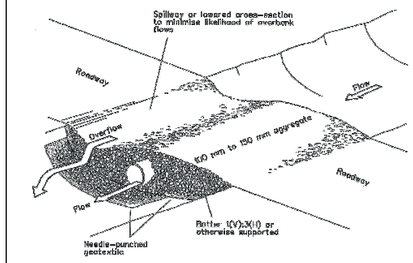


Construction Notes

1. Check dams can be built with various materials, including rocks, logs, sandbags and straw bales. The maintenance program should ensure their integrity is retained, especially where constructed with straw bales. In the case of bales, this might require their replacement each two to four months.
2. Trench the check dam 200 mm into the ground across its whole width. Where rock is used, fill the trenches to at least 100 mm above the ground surface to reduce the risk of undercutting.
3. Normally, their maximum height should not exceed 500 mm above the gully floor. The centre should act as a spillway, being at least 150 mm lower than the outer edges.
4. Space the dams so the top of the upstream dam is level with the spillway of the next downstream dam.

ROCK CHECK DAM **SD 5-4**

5-22

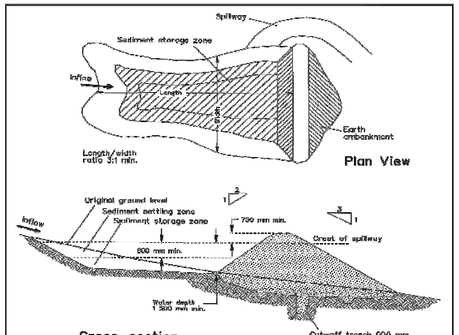


Construction Notes

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

TEMPORARY WATERWAY CROSSING **SD 5-1**

5-22

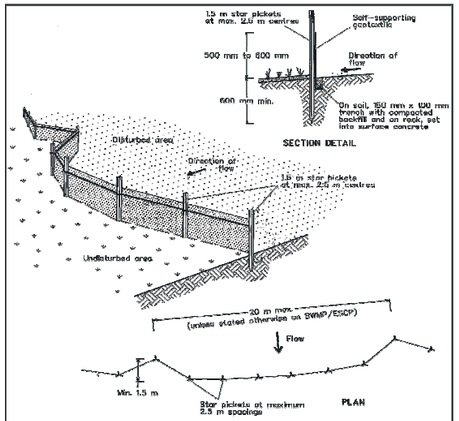


Construction Notes

1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Construct a cut-off trench 600 mm deep and 1,200 mm wide along the centreline of the embankment extending to a point on the gully wall level with the riser crest.
3. Maintain the trench free of water and recompact the materials with equipment as specified in the SWMP to 95 per cent Standard Proctor Density.
4. Select fill following the SWMP that is free of roots, wood, rock, large stone or foreign material.
5. Prepare the site under the embankment by ripping to at least 100 mm to help bond compacted fill to the existing substrate.
6. Spread the fill in 100 mm to 150 mm layers and compact it at optimum moisture content following the SWMP.
7. Construct the emergency spillway.
8. Rehabilitate the structure following the SWMP.

EARTH BASIN - WET **SD 6-4**
(APPLIES TO 'TYPE F' AND 'TYPE D' SOILS ONLY)

6-19

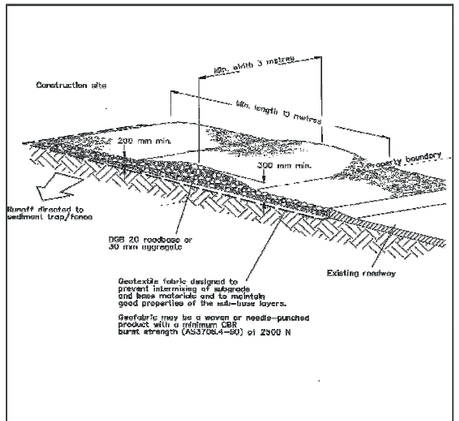


Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SEDIMENT FENCE **SD 6-8**

6-36

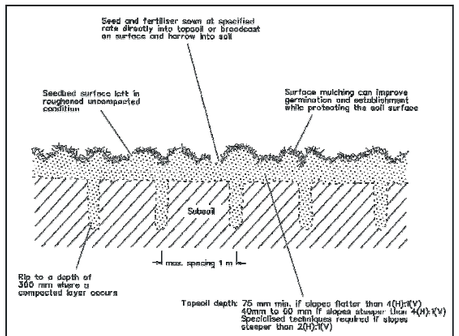


Construction Notes

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

STABILISED SITE ACCESS **SD 6-14**

6-48



Construction Notes

1. Loosen compacted soil before sowing any seed. If necessary, rip the soil to a depth of 300 mm. Avoid rotary hoe cultivation.
2. Work the ground only as much as necessary to achieve the desired tilth and prepare a good seedbed.
3. Avoid cultivation in very wet or very dry conditions.
4. Cultivate on or close to the contour where possible, not up and down the slope.

SEEDBED PREPARATION **SD 7-1**

6-48

EROSION & SEDIMENT CONTROL NOTES: 7-7

REFER TO DRAWING C013455.18-MOD-ESC01 FOR EROSION & SEDIMENT CONTROL NOTES

FOR APPROVAL

AMENDMENTS	DATE	ISSUE
ISSUED FOR APPROVALS	30.08.21	B
ISSUED FOR APPROVAL	15.06.21	A

PRECINCT: MOOREBANK LOGISTICS PARK

ARCHITECT: REIDCAMPBELL Architecture, Interiors, Project Management — Level 15, 126 Kirkbar Street, North Sydney NSW 2060 Australia — Tel: 61 02 9954 5911 Email: sydney@reidcampbell.com — Fax: 61 02 9955 4948 Web: www.reidcampbell.com — BELL

CLIENT: QUBE

PROJECT: MOOREBANK PRECINCT WEST STAGE 3 — MOOREBANK LOGISTICS PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
DS	DS	JUN '21	M.W.	A0	AS SHOWN	C013455.18-MOD-ESC05

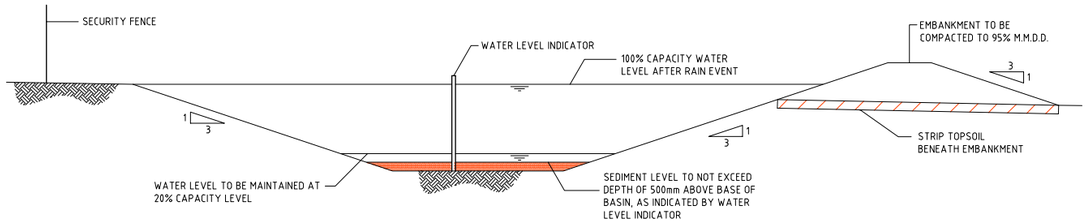
Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 8 Windmill Street
Walsh Bay, Sydney NSW 2000
Tel: (02) 9251-7699 Fax: (02) 9241-3721
email: mail@costinroe.com.au ©

Costin Roe Consulting

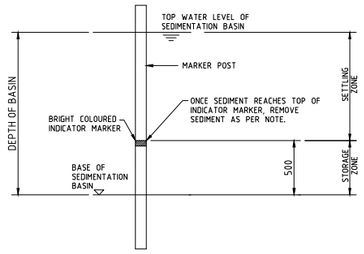
PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: EROSION & SEDIMENT CONTROL DETAILS – SHEET 1

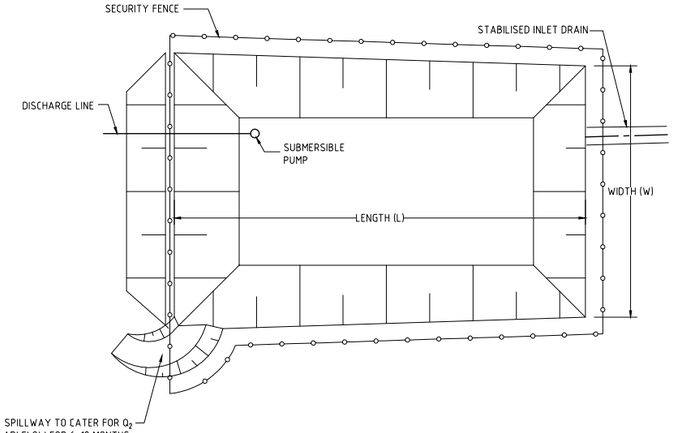
DRAWING No: C013455.18-MOD-ESC05 ISSUE: B



TYPICAL SEDIMENT CONTROL BASIN SECTION
SCALE 1:50

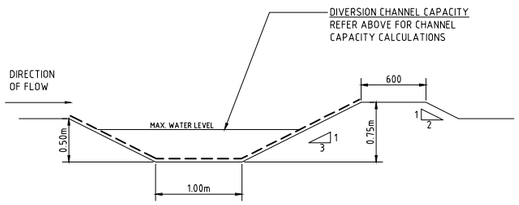


SEDIMENT STORAGE MARKER
SCALE 1:20



TYPICAL SEDIMENT CONTROL POND PLAN
SCALE 1:250

DIVERSION CHANNEL CAPACITY
Q_2 = 1250 l/s (A=7.5 Ha MAX.)
MANNINGS n=0.015, MIN. SLOPE = 0.5%
CHANNEL CAPACITY (d=300mm) = 1510 l/s + 20% FREEBOARD
VELOCITY = 1.75 m/s THEREFORE SCOUR PROTECTION REQ'D.

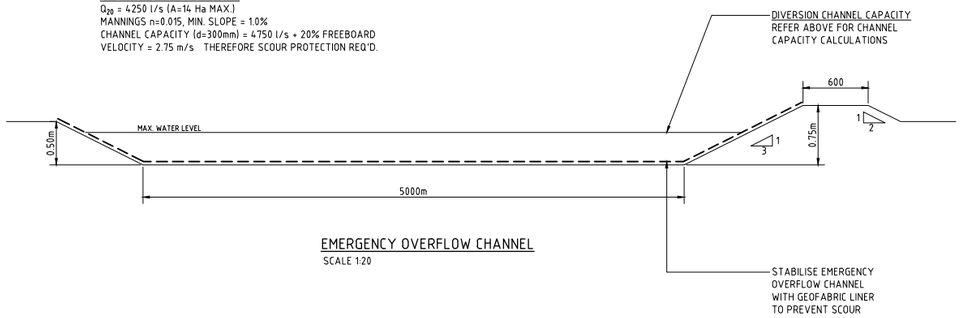


DIVERSION DRAIN SECTION
SCALE 1:20

TEMPORARILY PROTECT SWALES FROM EROSION DURING CONSTRUCTION.

1. TEMPORARY DIVERSION DRAINS SHALL BE STABILISED BY A 3000mm WIDE SECTION OF BIODEGRADABLE JUTE OPEN WEAVE MESH. JUTE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION
2. EARTHEN CLEAN WATER DIVERSION DRAINS SHALL BE STABILISED BY:
   a. TURF REINFORCEMENT; OR
   b. GEOFABRIC LINER; OR
   c. POLYMER HYDRAULIC SOIL STABILISER. DOSAGE TO BE TO MANUFACTURER'S SPECIFICATION FOR FLOW RATES NOMINATED. DOSAGE SHALL BE SUCH THAT C=0.05.

DIVERSION CHANNEL CAPACITY
Q_{50} = 4250 l/s (A=14 Ha MAX.)
MANNINGS n=0.015, MIN. SLOPE = 1.0%
CHANNEL CAPACITY (d=300mm) = 4750 l/s + 20% FREEBOARD
VELOCITY = 2.75 m/s THEREFORE SCOUR PROTECTION REQ'D.



EMERGENCY OVERFLOW CHANNEL
SCALE 1:20

NOTES:
ALL EROSION & SEDIMENT CONTROL MEASURES TO BE INSPECTED & MAINTAINED DAILY BY SITE MANAGER.

MINIMISE DISTURBED AREAS.

ROADS & FOOTPATHS TO BE SWEPT DAILY.

1.2m TURF TO BE PLACED BEHIND KERBS.

DUST MINIMISATION CONTROL BY WATERING TO BE IMPLEMENTED BY SITE MANAGER AS REQUIRED OR AS DIRECTED BY THE EPA.

EROSION & SEDIMENT CONTROL NOTES:
REFER TO DRAWING Co13455.18-MOD-ESC01 FOR EROSION & SEDIMENT CONTROL NOTES

2m 0 5 10 15 20 25m
SCALE 1:250 AT A0 SHEET SIZE

500mm 0 1 2 3 4 5m
SCALE 1:50 AT A0 SHEET SIZE

200mm 0 500 1000 1500 2000mm
SCALE 1:20 AT A0 SHEET SIZE

FOR APPROVAL

AMENDMENTS	DATE	ISSUE
ISSUED FOR APPROVALS	30.08.21	B
ISSUED FOR APPROVAL	15.06.21	A

PRECINCT: MOOREBANK LOGISTICS PARK
ARCHITECT: REIDCAMPBELL Architecture, Interiors, Project Management. Level 13, 124 Walker Street North Sydney NSW 2060 Australia. Tel: 61 02 8004 8011 Email: sydney@reidcampbell.com Fax: 61 02 8004 6848 Web: www.reidcampbell.com
CLIENT: QUBE
PROJECT: MOOREBANK PRECINCT WEST STAGE 3
MOOREBANK LOGISTICS PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
DS	DS	JUN '21	M.W.	A0	AS SHOWN	C013455.18-MOD-ESC06

Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 8 Windmill Street
Walsh Bay, Sydney NSW 2000
Tel: (02) 8251-7600 Fax: (02) 8241-3721
email: mail@costinroe.com.au ©

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PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: EROSION & SEDIMENT CONTROL DETAILS - SHEET 2
DRAWING NO: C013455.18-MOD-ESC06
ISSUE: B

ENCLOSURE 2
CONSENT MATRIX & RMMM CONFIRMATION

SSD10431 Consent Condition Matrix

CoC No.	***Item and Response***
A8	*Importation of imported fill must not exceed a total of 13,000m^3 of material per day across this development, MPW Stage 2 (SSD 7709) and MPE Stage 2 (7628) on the same day* Response MPW Stage 2 & 3 CSWMP Section 3.4 has been revised in accordance with MPW Stage 3 CoC A8.
A9	*Prior to physical commencement of work under this consent, the Applicant is required to modify the following development consents by replacing "22,000m^3" wherever occurring with "13,000m^3" in* *(a) Condition A9 of SSD 7709; and* *(b) Condition B56(a) of SSD 7628* Response The requirement for a maximum of 13,000 m^3 of material imported per day is included in **Section 3.4** of the MPW Stage 2 & 3 **CSWMP**.
A10	*The total volume of uncompacted fill to be imported for compaction up to the final land level must not exceed 280,000m^3. This volume is additional to the 1,600,000m^3 of uncompacted fill permitted to be imported to site under the MPW Stage 2 (SSD 7709) consent, and may only be imported once importation of the volume permitted under the MPW Stage 2 (SSD 7709) consent is complete* Response MPW Stage 2 & 3 CSWMP Section 3.4 has been revised in accordance with MPW Stage 3 CoC A10.

A11	*The total volume of structural fill to be imported for warehouse pad completion under this consent must not exceed 540,000m^3. Prior to the importation of structural fill for any given area of the site, the Applicant is to provide the ER and the Planning Secretary with a report prepared by a suitably qualified and experienced engineer outlining the volume of structural fill it proposes to both receive and emplace on that given area of the site. The Applicant may not at any time possess on site a volume of structural fill material that exceeds the volume that the applicant proposes to be emplaced on site in the next 6 months* Response MPW Stage 2 & 3 CSWMP Section 3.4 has been revised in accordance with MPW Stage 3 CoC A11.
A20	*No construction (including but not limited to clearing and maintenance access, stockpiling or other earthworks) is permitted within the riparian corridor and signs must be provided along the adjacent boundary fence to this effect.* Response MPW Stage 2 & 3 CSWMP Section 3.4 has been revised in accordance with MPW Stage 3 CoC A20.
A21	*No works in the riparian corridor outside the site are permitted under this approval and signs must be provided along the adjacent boundary fence to this effect.* Response MPW Stage 2 & 3 CSWMP Section 3.4 has been revised in accordance with MPW Stage 3 CoC A21.
B16	*Management plans required under this consent must be prepared having regard to the relevant guidelines, including but not limited to the Environmental Management Plan Guideline: Guideline for Infrastructure Projects (DPIE April 2020)* Response *The approved Moorebank Logistics Park Precinct West Stage 2 CSWMP (Rev 12, dated 30 March 2021) has been revised to include the requirements of the MPW Stage 3 (SSD 10431) development consent. The revised MPW Stage 2 and Stage 3 CSWMP (including this ACSWMP) generally meet the requirements of the guideline.*
B19	*The Applicant may elect to prepare the CEMP (and relevant sub-plans) required under condition B17 as a standalone document, or as updated versions of CEMP documents already approved by the*

	Planning Secretary as part of the MPW Stage 2 (SSD7709) consent. In the event the Applicant elects to prepare the CEMP or sub-plan) as an updated version of an existing approved document, the Applicant must clearly identify how the document has been updated to satisfy the conditions of this consent, as well as how it continues to satisfy the conditions of the consent under which it was originally approved, and seek the Planning Secretary's approval of the updated CEMP (or sub-plan) under both condition B17 and that other consent. Response In accordance with MPW Stage 3 CoC B19 and B22, this MPW Stage 3 ACSWMP has been prepared and the approved MPW Stage 2 & 3 CSWMP has been updated where relevant to reflect the MPW Stage 3 consent requirements.
B22	*The applicant must prepare a Construction Soil and Water Management Sub-Plan (CSWMP) and the plan must address, but not be limited to the following:* *a) Be prepared by a suitably qualified expert;* *b) Detail measures to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the site;* *c) Describe all erosion & sediment controls to be implemented during construction, including as a minimum, measures in accordance with the publication Managing Urban Stormwater: Soils & Construction (4th edition, Landcom 2004) commonly referred to as the 'Blue Book' and the relevant requirements of the conditions of this consent;* *d) Provide a plan of how all construction works will be managed in a wet-weather event (i.e. storage of equipment, stabilisation of the site);* *e) Detailing all off-site flows from the site; and* *f) Describe the measures that must be implemented to manage stormwater and flood flows for small and large sized events, including, but not limited to, 1 in 5 year ARI and 1 in 100 year ARI.* Response a- Qualification details are provided at the front of the approved MPW Stage 2 & 3 CSWMP. b- Reference to be made to **Section 5.2** of the MPW Stage 2 CSWMP and the drawings in Enclosure 1 of this MPW Stage 3 **ACSWMP** c- Erosion and sediment control plan (ESCP) drawings have been prepared and are included in **Enclosure 1** of this MPW Stage 3 **ACSWMP.**

	d- Management Measures to be implemented during the construction phase of works are detailed in **Section 2** of the MPW Stage 2 **CSWMP** e- Refer MPW Stage 3 Erosion & Sediment Control plans contained in **Enclosure 1** for management of storm flows from the site. f- The Erosion & Sediment Control plans contained in **Enclosure 1** are designed with due consideration to all storms up to the 1 in 100 year ARI Storm event. Erosion & Sediment controls such as diversion swales and emergency overflow weirs have been designed for storms up to and including the 1 in 100 year ARI storm event.
B25	*Prior to the commencement of earthworks, the Applicant must prepare an unexpected contamination procedure to ensure that potentially contaminated material is appropriately managed. Where any material identified as contaminated is to be disposed off-site, the disposal location and results of testing submitted to the Planning Secretary prior to its removal from the site.* Response An Unexpected (Onsite Contamination) Finds Protocol and an Unexpected (Contamination within Imported Spoil) Finds Protocol are provided as Appendix D of the MPW Stage 2 and Stage 3 CEMP.
B29	*Prior to the commencement of construction, the Applicant must describe the measures that must be implemented to manage stormwater and flood flows for small and large sized events, including, but not limited to 1 in 1 year ARI, 1 in 5 year ARI and 1 in 100 year ARI.* Response Erosion and sediment control plan (ESCP) drawings have been prepared and are included in **Enclosure 1** of this MPW Stage 3 **ACSWMP**. Erosion & Sediment controls such as diversion swales and emergency overflow weirs have been designed for storms up to and including the 1 in 100 year ARI storm event. Reference to **Enclosure 1** should be made for drawings which include existing and proposed contours, exit and entry locations, drainage paths, limits of disturbance, earthworks extent ad erosion and sediment control locations as required of Items (i) to (vii) above of condition **B22** above.
B30	*Prior to the commencement of construction, the Applicant must implement measures to manage Acid Sulfate Soils. These measures*

	must include handling, treatment, monitoring of water quality at treatment areas and disposal of Acid Sulfate Soils. Response Refer to the *Acid Sulfate Soils Management Plan* included in MPW Stage 2 & 3 CEMP Appendix M and **Section 2.6** of the MPW Stage 2 & 3 CSWMP.
C7	*The Applicant must carry out the construction of the development in accordance with the most recent version of the CEMP (including Sub-Plans)* Response This MPW Stage 3 ACSWMP is part of the MPW Stage 2 and 3 CSWMP ,which forms part of the MPW Stage 2 and Stage 3 CEMP and is included as a sub plan in *Appendix F* of the MPW Stage 2 and Stage 3 **CEMP**.
C19	*All erosion & sediment control measures must be effectively implemented and maintained at design capacity for the duration of the construction works and until such time as all ground disturbed by the works have been stabilised and rehabilitated so that it not longer acts as a source of sediment. Erosion & sediment control techniques, as a minimum, are to be in accordance with the publication Managing Urban Stormwater: Soils & Construction (4th edition, Landcom, 2004) commonly referred to as the 'Blue Book'* Response The extent and duration of land disturbance will be kept to minimum duration until a C-Factor (per Blue Book) of less than 0.05 is achieved or more than 75% of construction is achieved. Note that methods to achieve the required stabilisation per Landcom Blue Book meeting C-factor being less than 0.05 per **Section 5.8** of the approved MPW Stage 2 & 3 **CSWMP** and the MPW Stage 3 Erosion & Sediment Control plan **Co13455.18-MOD-ESC01**. Water movement through and from the site is managed via dedicated flow paths and drainage swales to sediment basins, as shown on drawings in **Enclosure 1**. Diversion swales have been designed with either non-erodible velocities or where velocity is higher than erosion potential include measures to reduce erosion potential to at or below acceptable levels per Blue Book. These include rock check dams, jute (or other similar lining), rock base channel, geotextile lined channel and low velocity channels. Boundary treatment including diversion swales, silt fencing, berms and acceptable measures per Blue Book have been included in the

	design. Refer the Erosion & Sediment Contol plans in Enclosure 1 of this MPW Stage 3 **ACSWMP**.. Permanent and temporary drainage measures will be constructed as early as practical with sediment basins to be constructed initially as per **Section 6 & 8** of the Approved MPW Stage 2 & 3 **CSWMP** and the Erosion & Sediment Control plans in Enclosure 1 of this MPW Stage 3 **ACSWMP**. Stockpiles are located away from any proposed waterways or diversion paths and as per requirements set out per **Section 5.3** of the Approved MPW Stage 2 & 3 **CSWMP**.
C20	*The Applicant must:* *(a) Ensure that only VENM, ENM, or other material approved in writing by the EPA is brought onto the site;* *(b) Keep accurate records of the source, volume and type of fill imported to, and material removed from, the site; and* *(c) Make these records available to the Certifier, Department or EPA upon request* <u>Response</u> The requirement for VENM and ENM is included in **Section 3.2 & Section 3.4** of the Approved MPW Stage 2 & 3 **CSWMP**.
C21	*Land Disturbance and land filling activities across the site must be undertaken:* *(a) In a phased manner, impacting a maximum contiguous area of 65 hectares at any one time; and* *(b) With no disturbance (including vegetation clearing) of another area (other than the construction of erosion & sediment control measures and associated drainage for the separation of clean and dirty water) until:* *(i) A C-factor of 0.05 has been achieved on the previous phase; and* *(ii) At least 75% of the permanent stabilisation works have been implemented for the previous phase; and* *(iii) At least 95% of all the permanent stabilisation works on any other previously disturbed area have been implemented* ***Note 1:** for the purposes for this condition, permanent stabilisation works include established grass cover* ***Note 2:** For the avoidance of doubt, the site incorporates land across Moorebank Precinct West shown in Appendix 1, and subject to either MPW Stage 2 consent or this development* <u>Response</u>

	The extent and duration of land disturbance will be kept to minimum duration, and maximum land disturbance of 65 Ha at any one time until a C-Factor (per Blue Book) of less than 0.05 is achieved or more than 75% of construction is achieved. Note that methods to achieve the required stabilisation per *Landcom Blue Book* meeting C-factor being less than 0.05 per **Sections 3.5, 5.1 and 5.8** of the Approved MPW Stage 2 & 3 **CSWMP** and the Erosion & Sediment Control plans in Enclosure 1 of this MPW Stage 3 **ACSWMP**. Water movement through and from the site is managed via dedicated flow paths and drainage swales to sediment basins, as shown on ESCP drawings **Co13455.18-MOD-ESC01** to **ESC06** in **Enclosure 1**. Sediment basins are located clear of flood prone areas of the site as discussed in **Section 2.8** of the Approved MPW Stage 2 & 3 **CSWMP** and as shown on the Erosion & Sediment Contol plans in Enclosure 1 of this MPW Stage 3 **ACSWMP**. Soil erosion will be minimised by limiting exposed area and duration throughout the works, and managing measures as set out in **Section 5** of this Approved MPW Stage 2 & 3 **CSWMP** and the Erosion & Sediment Control plans in Enclosure 1 of this MPW Stage 3 **ACSWMP**. Sediment from site runoff will be retained through implementation of sediment basins which will collect and store the majority of all site runoff as shown on ESCP drawings **Co13455.18-MOD-ESC01** to **ESC06** in **Enclosure 1** and per the requirements set out in **Approved** MPW Stage 2 & 3 **CSWMP Sections 5 & 6**, and **ESCP** in **Appendix A**. and the Erosion & Sediment Control plans in Enclosure 1 of this MPW Stage 3 **ACSWMP** Prompt and progressive stabilisation of the site will be achieved using accepted methods set out in **Section 5.8** of the Approved MPW Stage 2 & 3 **CSWMP** and the Erosion & Sediment Control plans in Enclosure 1 of this MPW Stage 3 **ACSWMP**. No changes to the stabilisation are proposed or required of this MPW Stage 3 **ACSWMP**.
C22	*Stockpiling of imported material is not permitted for longer than 6 months before placement* <u>Response</u> The stockpile management has been set out in **Section 5.3** of the Approved MPW Stage 2 & 3 **CSWMP**.
C23	*Stockpiles must:*

	(a) Not exceed 10m in height; *(b) Be benched over 4m in height;* *(c) Have maximum 1V:3H slopes; and* *(d) Be stabilised if not worked on for more than 10 days* Response The stockpile management has been set out in **Section 5.3** of the Approved MPW Stage 2 & 3 **CSWMP**.
C24	*Placed fill must be stabilised if construction does not commence within 10 days* Response Placed fill management has been set out in **Section 5.8** of the Approved MPW Stage 2 & 3 **CSWMP**.
C25	*The design of fill batters must ensure stability, mitigate visual impacts, provide for maintenance activities and demonstrate that there are no impacts on adjacent lands, including biodiversity offset areas and the riparian corridor* Response The design of fill batters has been set out in response to SSD7709 Condition B45 in **Section 1.3** of the Approved MPW Stage 2 & 3 **CSWMP**.

Applicants Revised Management and Mitigation Measures (RMMM) Matrix

RMMM No.	***Item and Response***
0B	*The Construction Environmental Management Plan (CEMP) and sub-plans prepared for MPW Stage 2 (listed below) will be amended, where required, to accommodate MPW Stage 3 conditions:* ▪ *Construction Traffic and Access Management Plan (CTAMP)* ▪ *Construction Noise and Vibration Management Plan (CNVMP), prepared in accordance with the Interim Construction Noise Guideline* ▪ *Cultural Heritage Assessment Report/ Management Plan* ▪ *Construction Air Quality Management Plan* ▪ *Construction Soil and Water Management Plan (CSWMP), prepared in accordance with Managing*

RMMM No.	***Item and Response***
	Urban Stormwater, 4th Edition, Volume 1, (2004)Erosion Sediment and Control Plan ▪ *Construction Emergency Response Plan* ▪ *Bushfire Risk Management Strategy* *Community Communication Strategy* *Flora and Fauna Management Plan (FFMP).* <u>Response</u> The Approved MPW Stage 2 & 3 **CSWMP** and this MPW Stage 3 **ACSWMP** form the Construction Soil and Water Management Plan (SWMP), prepared in accordance with Managing Urban Stormwater, 4th Edition, Volume 1, (2004) and the Erosion and Sediment Control (Enclosure 1) *Plan* in accordance with this **RMMM**
1B	*Importation of fill to site during construction of the Proposal is to not exceed a total of 22,000 m3 of material per day. This limit is to be further reduced by an amount equivalent to any fill being imported to the MPW Stage 2 (SSD 7709) and MPE Stage 2 (SSD 7628) on the same day such that the combined importation of fill to the MPW site and MPE site does not exceed 22,000 m3 on any given day.* <u>Response</u> Refer **SSD10431 CoC A9** response.
4D	*Erosion & sediment control measures would be used to minimise sedimentation of streams and resultant impacts on aquatic habitats and water quality. The erosion and sediment controls to be included avoid, minimise and mitigate against the potential for construction of the Proposal to result in erosion & sedimentation impacts will be determined in consideration of the erosive potential of locally occurring soils, and the characteristics of the clean general fill to be imported as part of construction of the Proposal* <u>Response</u> This ACSWMP and associated primary erosion and sediment control plans have been completed as required of *Managing Urban Stormwater - Soils and Construction Volume 1 (Landcom 2004),* and per accepted engineering

RMMM No.	*Item and Response*
	and best practice. The proposed measures include measures to avoid, minimise and mitigate against the potential for the construction of the Proposal to result in erosion and sedimentation impacts. The design considers local soil properties and erosive potential of the local soils as set out in listed in **Section 6.1(8)**, and monthly rainfall erosivity in **Appendix G** of the approved **MPW Stage 2 & 3 CSWMP.** Consideration to the erosion potential for imported soils has been based on worst case of expected imported soil types (residual clays or crushed sandstone) and is considered conservative in nature. Primary ECSPs are prepared prior to any construction on a project, and a series of progressive ESCPs are continually prepared prior to the start of each stage and updated as construction progresses and site conditions change (e.g. initial clearing, bulk earthworks) or prior to the commencement of a specific type of high-risk activity (e.g. culvert or OSD outlet structure). Primary and progressive ESCPs are discussed in Section 4 of the approved **MPW Stage 2 & 3 CSWMP**.
5A	*A Construction Soil and Water Management Plan (CSWMP) and Erosion and Sediment Control Plan (ESCP), or equivalent, have been prepared for MPSW Stage 2, and where required, amended in accordance with MPW Stage 3 conditions. The CSWMP and ESCPs would be prepared in accordance with the principles and requirements of the Blue Book and based on the Preliminary ESCPs provided in the Stormwater and Flooding Assessment Report. The following aspects have been addressed within the SWMP and ESCPs, and would continue to apply to MPW Stage 3* - *Minimise the area of soil disturbed and exposed to erosion* - *Priority should be given to management practices that minimise erosion, rather than to those that capture sediment downslope or at the catchment outlet* - *Divert clean water around the construction site or control the flow of clean water at non-erodible velocities through the construction area*

RMMM No.	*Item and Response*

	- *Provision of boundary treatments around the perimeter of construction areas to minimise the migration of sediment offsite*
	- *Permanent or temporary drainage works would be installed as early as practical in the construction program to minimise uncontrolled drainage and associated erosion*
	- *Stockpiles would be located away from flow paths on appropriate impermeable surfaces to minimise potential sediment transportation. Where practicable, stockpiles would be stabilised if the exposed face of the stockpile is inactive for more than ten days, and would be formed with sediment filters in place immediately downslope*
	- *Disturbed land would be rehabilitated as soon as practicable*
	- *The wheels of all vehicles would 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 would be undertaken when necessary*
	- *A requirement to inspect all permanent and temporary erosion and sediment control works prior to and post rainfall events and prior to closure of the construction area. Erosion & sediment control structures must be cleaned, repaired and augmented as required.*
	- *Where required, sediment basins and their outlets would 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. Prior to discharge from sediment basins, water would be texted for the following parameters to identify construction impacts:*
	  o *pH*
	  o *Turbidity/TSS*
	  o *Oil and Grease*
	
	<u>Response</u>

RMMM No.	*Item and Response*
	The Approved MPW Stage 2 & 3 **CSWMP** and this MPW Stage 3 **ACSWMP** form the Construction Soil and Water Management Plan (SWMP). The SWMP has been prepared in accordance with *Managing Urban Stormwater, 4th Edition, Volume 1, (2004),* the Preliminary ESCPs provided in the Stormwater and Flooding Assessment Report and the Erosion and Sediment Control (Enclosure 1) *Plan* in accordance with this **RMMM.** The extent and duration of land disturbance will be kept to minimum duration, and maximum land disturbance of 65Ha (as required of **CoC C21**) at any one time until a C-Factor (per Blue Book) of less than 0.05 is achieved or more than 75% of construction is achieved. Note that methods to achieve the required stabilisation per Landcom Blue Book meeting C-factor being less than 0.05 per **Section 5.8** of the Approved MPW Stage 2 & 3 **CSWMP** and the Erosion & Sediment Control plans in Enclosure 1 of this MPW Stage 3 **ACSWMP**. Water movement through and from the site is managed via dedicated flow paths and drainage swales to sediment basins, as shown on drawings **Co13455.18-MOD-ESC01 - ESC06**. Diversion swales have been designed with either non-erodible velocities or where velocity is higher than erosion potential include measures to reduce erosion potential to at or below acceptable levels per Blue Book. These include velocity controls in the form of check dams or appropriate drain lining to withstand the maximum allowable velocities. Boundary treatment including diversion swales, silt fencing, berms and acceptable measures per Blue Book have been included in the primary ESCP design. Refer design drawings noted. The wheels of all vehicles shall 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 would be undertaken when necessary All permanent and temporary erosion and sediment control works are to be inspected & remediated prior to and post rainfall events, and prior to closure of the construction area. Erosion & sediment control structures must be cleaned, repaired and augmented as required.

RMMM No.	*Item and Response*
	Permanent and temporary drainage measures will be constructed as early as practical with sediment basins to be constructed initially as per **Section 6 & 8** of the Approved MPW Stage 2 & 3 **CSWMP** Stockpiles are located away from any proposed waterways or diversion paths and as per requirements set out per **Section 5.3** of the Approved MPW Stage 2 & 3 **CSWMP**. Sediment basin design and management is set out in **Section 6** of the Approved MPW Stage 2 & 3 **CSWMP** for Type F Soil Texture Group and Type D Hydrologic Group soil. Further information pertaining to acceptable discharge criteria (including confirmation of pH, turbidity and oil/grease) are included in **Section 3.6** of the Approved MPW Stage 2 & 3 **CSWMP**. Basins & spillways are designed to be stable for the 1 in 10 year ARI storm event as set out in **Section 6.1** of the of the Approved MPW Stage 2 & 3 **CSWMP.** Works specific to outlets and Georges River have been included in **Section 7** of the Approved MPW Stage 2 & 3 **CSWMP**
5B	*Proposal site exits would be fitted with hardstand material, rumble grids or other appropriate measure to limit the amount of material transported off site* <u>Response</u> Site entry and exits have been designed with Stabilised Construction Access measures per Landcom Blue Book and generally as noted above. Refer Section 5.2 of the Approved MPW Stage 2 & 3 CSWMP and drawings **Co13455.18-MOD-ESC01 - ESC06** as included in **Enclosure 1** for locations and details. An existing automated wheel washer is also present on site which will be maintained throughout the construction period. Management and details of this system are included in the *Construction Traffic and Access Management Plan* (CTAMP Section 3.5).
5C	*The following measures would be considered during the development of construction methodology for the Proposal to mitigate flooding impacts:* - *For all site works, provide temporary diversion channels around temporary work obstructions to*

RMMM No.	*Item and Response*
	allow low and normal flows to safely bypass the work areas - *Locate site compounds, stockpiling areas and storage areas for sensitive plant, equipment and hazardous materials above an appropriate design flood level outside the PMF extent, to be determined based on the duration of the construction work.* <u>Response</u> Local and temporary diversion channels have been included in the Primary Erosion and Sediment Control design drawings. These include clean water diversions around works areas and dirty water conveyance to sediment control basins. It is noted that the site construction levels are all above the 1% AEP flood level (being the normally adopted flood level) and generally above the PMF flood level associated with The Georges River. The main site compound is proposed on the southern third of the precinct and above the PMF event. Temporary and permanent drainage provisions have been made for the compound. Other minor compounds are sited as required above the 1% and PMF flood level and extent. Refer **Section 2.8** and drawings **Co13455.18-MOD-ESC01 - ESC06** as included in **Enclosure 1**
5D	*To minimise potential flood impacts during construction of the Proposal, the following measures would be implemented and documented in the CSWMP prepared for MPW Stage 2 and will continue to apply to MPW Stage 3:* - *The existing site catchment and sub-catchment boundaries would be maintained as far as practicable* - *To the extent practicable, site imperviousness and grades should be limited to the extent of existing imperviousness and grades under existing development conditions* - *Smaller detention storages that provide adequate rainfall runoff mitigation during partial construction/site development would be considered*

RMMM No.	*Item and Response*
	- *Temporary structures used to convey on site runoff during construction would be designed to accommodate flows during prolonged or intense rainfalls* <u>Response</u> Consideration of measures noted above have been made in the Approved MPW Stage 2 and 3 **CSWMP** and MPW Stage 3 **ACSWMP** and associated ESC designs. Existing site catchments have been maintained as far as practical, and generally in accordance with catchments included in the MPW Stage 2 EIS design and confirmed in the MPW Stage 2 SDDR. Catchment areas in MPW Stage 3 are also in accordance with these documents. Site imperviousness and works areas will be limited in duration and extent (<65Ha) as per the CoC and as set out **Sections 4** & **5** of the Approved MPW Stage 2 & 3 **CSWMP**. Sediment basins (refer **Section 6** of the Approved MPW Stage 2 & 3 CSWMP) will be constructed prior to site disturbance to ensure that adequate rainfall runoff mitigation during construction has been made. Temporary stormwater management measures, including diversion swales and OSD basins, have been designed per Landcom Blue Book requirements to accommodate prolonged/intense rainfall during the construction phase of works. The existing drainage channel from Moorebank Avenue to the Georges River is not proposed to be utilised to convey construction runoff, hence the capacity assessment noted is not relevant to the proposed designs.
5F	*Stockpile sites established during construction are to be managed in accordance with relevant stockpile management principles and procedures already in place for the site. Mitigation measures may include:* - *In order to accept fill material characterisation reports/certification showing that the material being supplied is VENM/ENM must be provided;* - *Each truck entering The MPW Stage 3 Proposal site will be visually checked and documented to confirm that only approved materials that are consistent with the environmental approvals are allowed to enter the site.*

RMMM No.	*Item and Response*
	- *Only fully tarped loads are to be accepted by the gatekeeper.* - *Environmental Assurance of imported fill material will be conducted to confirm that the materials comply with the NSW EPA Waste Classification Guidelines and the Earthworks Specification for the MPW site. The frequency of assurance testing will be nominated by the Environmental assuror/auditor.* - *All trucks accessing the site for the purpose of clean general fill importation would enter and exit via the existing MPW Stage 3 access point(s)* - *Stockpiles would not exceed ten-metres in height from the final site levels, with battered walls at gradients of 1V:3H.* - *Ingress and egress to the stockpiling areas would be arranged so that the reversing of trucks within the site is minimised* - *For any stockpile heights greater than 4m, benching would be implemented* - *Where reasonable and feasible, and to minimise the potential for erosion and sedimentation of stockpile(s), stockpile profiles would typically be at angle of repose (the steepest angle at which a sloping surface formed of loose material is stable) with a slight concave slope to minimise the loss of sediments off the slope, or through the profile and the formation of a toe drain* - *The top surface of the stockpile(s) would be slightly sloped to avoid ponding and increase runoff* - *Topsoil stockpiles would be vegetated to minimise erosion* - *Stockpiles would be protected from upslope stormwater surface flow through the use of catch drains, berms or similar features to divert water around the stockpile(s)* - *A sediment control device, such as a sediment fence, berm, or similar, would be positioned downslope of the stockpile to minimise sediment migration* - *Any water seepage from stockpiles would be directed by toe drains at the base of the stockpiles towards the sediment basins, or check dams and*

RMMM No.	*Item and Response*
	away from the emplacement or extraction working face - *Newly formed stockpiles would be compacted (sealed off) using a smooth drum roller at the end of each working day to minimise water infiltration.* - *Haul roads would be located alongside the stockpile to the work/tipping area. As per best practice, the catchment area of haul roads for surface water runoff would be approximately 2530m lengths, facilitated by the provision of spine drains which would convey water from the haul road and toe drains at the base of the stockpile, and then to sediment basins* - *Temporary sediment basins would be established in accordance with the ESCP prepared for the site* - *Any import of clean general fill material that would be subject to stockpiling within the Proposal site for more than a 10-day period without being worked on, would be subject to stabilisation works to minimise the potential for erosion* - *Where the material being stockpiled is less coarse or has a significant component of fines then surface and slope stabilisation would be undertaken. Methods for slope stabilisation may include one or a combination of the following:* o *Application of a polymer to bind material together* o *Application of hydro-seed or hydromulch* o *Covering batters with mulch to provide ground cover* o *Covering batters with geofabric* o *Use of a simple sprinkler system for temporary stockpiles, including use of radiating sprinkler nozzles to maintain fine spray over exposed surfaces* o *Other options identified by the contractor.* - *Topsoil stockpiles would be seeded with a grass/legume or nitrogen fixing species (such as acacia) to assist tin erosion control and reduce loss of beneficial soil nutrients and micro-organisms* <u>Response</u>

RMMM No.	***Item and Response***
	Items 1-6 above are confirmed in Appendix F of the Construction Traffic and Access Management Plan (CTAMP). Stockpiling requirements have been completed per Landcom Blue Book and per the above RMMM items. Refer to **Section 5.3** of the Approved MPW Stage 2 & 3 **CSWMP** and the Erosion & Sediment Control plans in **Enclosure 1** of this MPW Stage 3 **ACSWMP** pertaining to stockpile locations and details**.**
6D	*In order to accept fill material onto the site, the following shall be undertaken:* - *Material characterisation reports/certification showing that the material being supplied is VENM/ENM must be provided;* - *Each truck entry will be visually checked and documented to confirm that only approved materials that are consistent with the environmental approvals are allowed to enter the site. Only fully tarped loads are to be accepted by the gatekeeper. Environmental Assurance of imported fill material will be conducted to confirm that the materials comply with the NSW EPA Waste Classification Guidelines and the Earthworks Specification for the MPW site. The frequency of assurance testing will be nominated by the Environmental assuror/auditor.* <u>Response</u> Management and details of the acceptance of fill protocols are included in the *Construction Traffic and Access Management Plan* (CEMP Appendix E).
6F	*In areas where placement of fill would occur to final site levels, but hardstand and warehousing is not currently proposed, exposed surfaces would be stabilised using hydroseeding, or the application of a bitumen emulsion or a similar stabilisation method.* <u>Response</u> Stabilisation of exposed surfaces is to be completed in accordance with **Section 3.4** and **Section 5.8** of the Approved MPW Stage 2 & 3 **CSWMP**.

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EPBC No.	*Item and Response*
9	*Sections of the CEMP and OEMP relating to water must be prepared by a suitably qualified expert and must:* *a) be consistent with the Water Quality, Stormwater and Flooding Provisional Environmental Management Framework (2 July 2014), provided at Appendix O to the finalised EIS* *b) incorporate all measures 9A to 9AG from Table 7.1 of the finalised EIS that are described as 'mandatory'* *c) explain how all measures 9A to 9AG from Table 7.1 of the finalised EIS that are described as 'subject to review' have been addressed* *d) be approved by the Minister or a relevant New South Wales regulator.* Response The recommendations of *Section 6.1.2 Management Control – Early Works and Construction phase* of the *Water Quality, Stormwater and Flooding Provisional Environmental Management Framework (2 July 2014), provided at Appendix O to the finalised EIS* document have been followed. The recommendations of this document for a Soil and Water Management Plan which includes Erosion and Sediment Controls has been met through the provision of this CSWMP and ESCP. In relation to Table 7.1: • Item 9A – no works are proposed in Conservation Areas as part of the **CSWMP** or **ACSWMP**. • Item 9B – All site compounds, stockpile areas and storage areas are proposed clear of any flood affected areas. Refer **CSWMP Section 2.8**. • Items 9C to 9J (which relate to Bridging of Georges River) are not relevant to the project. • Item 9K - Sediment basins are proposed for management of sediment laden water as shown on **ESCP** and **Section 6**o the **CSWMP**. • Item 9L - The recommendations of this document for a Soil and Water Management Plan which includes Erosion and Sediment Controls has been met through the provision of the **CSWMP, ACSWMP** and **ESCP**. • Items 9M to 9Z are not relevant to the construction phase of the development.

EPBC No.	*Item and Response*
	• Items 9AA to 9AG are not relevant to the soil and water management noting regional groundwater systems (being 8-12m below excavation levels) are not expected to affected by the development. Refer **Section 2.4** of the **CSWMP**.