URBAN DESIGN AND LANDSCAPE PLAN

Moorebank Precinct East Stage 1

19 DECEMBER 2018

SYDNEY INTERMODAL TERMINAL ALLIANCE PROJECT

Moorebank Precinct East Stage 1

Urban Design and Landscape Plan

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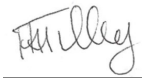
Approver	Heather Tilley	
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REVISIONS

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ACRONYMS AND DEFINITIONS

Acronym / Term	Meaning
AHD	Australian height datum
ARTC	Australian Rail Track Corporation
AS	Australian Standard
Boot land	The area of native vegetation located to the east of Moorebank Avenue, north of the East Hills rail line and south and east of the MPE site. Owned by the Commonwealth of Australia. Lot 4 DP 1197707.
CoC	Conditions of Consent
CSWMP	Construction Soil and Water Management Plan
Cwth	Commonwealth
DNSDC	Defence National Storage and Distribution Centre
DCP	Development Control Plan
DP&E	Department of Planning and Environment
EIS	Environmental Impact Statement
EP&A Act	*Environment Planning and Assessment Act 1979*
EPA	Environment Protection Authority
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999*
ESCP	Erosion and Sediment Control Plan
GPTs	Gross pollutant traps
HV	High voltage
IMEX	Import-export
IMT	Intermodal Terminal Facility. The MPE Stage 1 Project includes the construction of the following key components together comprising the IMT: • IMEX Terminal Facility including truck processing and loading areas • Rail loading and container storage areas • Administration facility and associated car parking • Rail Link.
km	kilometre
kV	kilovolt
LED	Light-emitting diode
LCC	Liverpool City Council
LV	Low voltage
m	metre
Moorebank Intermodal Terminal Precinct	The site which is the subject of both the MPE Concept Approval (MP_10_0913) and the MPW Concept Approval (SSD 5066)
MPE	Moorebank Precinct East
MPE Site	The site at Moorebank as approved by the Concept Plan (MP_10_0913)
The Project	The whole of the land to which the MPE Stage 1 Project approval SSD 6766 relates, including both MPE Stage 1 Package 1, and MPE Stage 1 Package 2.

Acronym / Term	Meaning
MPE Stage 1, Package 1	Also known as the Rail Link. The construction of the Rail Link connecting the Southern Sydney Freight Line to the IMEX Terminal Facility, traversing across the Boot land, RailCorp Land, Moorebank Avenue, the MPW Golf Course, Georges River, and Glenfield Waste Facility
MPE Stage 1, Package 2	Also known as the IMEX Terminal Facility. The construction of the IMEX Terminal Facility, including the following key components: • Truck processing, holding and loading areas - entrance and exit from Moorebank Avenue • Rail loading and container storage areas - installation of four rail sidings with adjacent container storage area serviced by manual handling equipment initially and overhead gantry cranes progressively • Administration facility and associated car parking - light vehicle access from Moorebank Avenue
MPW	Moorebank Precinct West
Native vegetation	Areas of plant community types mapped by Arcadis and WSP Parsons Brinckerhoff in the Moorebank Precinct (including MPE and MPW) being a consolidation of all assessments for the Moorebank Precinct conducted since 2011.
NSWFR	NSW Fire and Rescue
OEH	Office of Environment and Heritage
OSD	Onsite detention
POEO Act	*Protection of Environment Operations Act 1997*
Rail corridor	Area defined as the 'Rail Corridor' within the Concept Plan Approval (MP_10_0913). The Rail Link is also included within this area.
RailCorp Land	Lot 1 DP 825352 (part of the rail corridor) and owned by RailCorp
RL	Relative levels
REW	Reinforced Earth Wall
RMS	Road and Maritime Services
SIMTA	Sydney Intermodal Terminal Alliance
SME	School of Military Engineering
SSD	State Significant Development
SSFL	Southern Sydney Freight Line
UDLP	Urban Design and Landscape Plan
Wattle Grove Offset Area	Occurs within the Boot land. Contains all of the species credits that will deliver the direct offset for EPBC Act threatened flora. An application for a biobanking agreement has been lodged with the OEH to establish a biobank site which includes this offset area.
WSUD	Water sensitive urban design

CONTENTS

REVISIONS ..... **II**
ACRONYMS AND DEFINITIONS ..... **III**
1 INTRODUCTION **1**
1.1 Background and Scope 1
1.2 Project Description 1
1.2.1 Environmental Planning Approval 1
1.3 Purpose and Application 2
2 DEVELOPMENT CONCEPT **3**
3 IMPLEMENTATION **4**
3.1 Context and Scale 4
3.2 Topography and Landform 4
3.3 Land Use 4
3.4 Existing Vegetation 5
3.4.1 IMEX Terminal Facility 5
3.4.2 Rail Corridor 5
3.5 Transport Network 6
3.6 Other 7
4 URBAN DESIGN CONTEXT **8**
4.1 Vegetation 8
4.2 Transport Network 8
4.3 Access 8
4.3.1 Access Tracks 8
4.4 View Corridors 9
4.5 Stormwater Management 10
4.6 Site Characteristic Analysis 10
5 IDENTIFICATION OF VISION, OBJECTIVES AND PRINCIPLES **11**
5.1 Vision 11
5.2 Urban Design Principles 11
5.3 Objectives 12
6 IMEX TERMINAL FACILITY **13**
6.1 Structures 13
6.1.1 Administration Building 13
6.1.2 High Voltage Substation 13
6.1.3 Fire Water Tanks 14
6.1.4 Pumphouse 15
6.1.5 Footpaths, Cycle Paths and Car Parks 16
6.2 Landscaping 16
6.3 Fencing, Gates, Barriers and Signage 17

6.3.1 Fencing and Gates 17
6.3.2 Barriers 17
6.3.3 Signage 17
6.4 Erosion and Sediment Control 17
6.5 Noise 18
6.6 Non-Paved Surface Treatment 18
6.7 Lighting 19
6.7.1 Lighting Design – Manual Phase 19
6.7.2 Lighting Design – Automatic Phase 19
7 RAIL LINK 20
7.1 Structures 20
7.1.1 Georges River Bridge 20
7.1.2 Reinforced Earth Wall 21
7.1.3 Moorebank Avenue Overbridge 22
7.1.4 Anzac Creek Culvert 23
7.1.5 Signal Bungalow and Location Cases 24
7.2 Landscaping 24
7.3 Fencing, Gate and Signage 24
7.3.1 Fencing 25
7.3.2 Gates 25
7.3.3 Signage 25
7.4 Erosion and Sediment Control 25
7.5 Noise 25
7.6 Lighting 25

APPENDICES

APPENDIX A LANDSCAPE PLANS
APPENDIX B SITE LAYOUT, ADMINISTRATION BUILDING AND HV SUBSTATION
APPENDIX C EXAMPLE FENCING, GATES, BARRIERS AND SIGNAGE DRAWINGS
APPENDIX D LIGHTING PLAN AND LIGHTING LAYOUTS
APPENDIX E CAR PARK PAVEMENT MATERIALS
APPENDIX F DEPOT LICENCE APPLICATION GUIDELINES
APPENDIX G RAILCORP MAINTENANCE ACCESS ROAD
APPENDIX H RAIL LINK EARTHWORKS DESIGN

LIST OF TABLES

Table 1 Conditions of Consent (CoC) viii
Table 2 Infrastructure Sustainability Council of Australia (ISCA) Requirements viii

Table 3 Rail Link Access Tracks 9
Table 4 Concrete and Reinforcement Properties for the Georges River Bridge 20
Table 5 Key Reinforced Earth Wall Design Features 21
Table 6 Key Bridge Design Features 22
Table 7 Concrete and Reinforcement Properties for the Anzac Creek Culvert 24

LIST OF FIGURES

Figure 1 Administration Building 13
Figure 2 Fire Water Tank Model 15
Figure 3 Pumphouse Model 16
Figure 4 Artists Impression of Georges River Bridge 20

COMPLIANCE MATRICES

Table 1 Conditions of Consent (CoC)

CoC	Requirement	Document Reference
C3	The Application shall prepare and implement an Urban Design and Landscape Plan for the project. The Plan shall present an integrated urban design for the project. The Plan shall include, but not necessarily limited to:	This plan
	a) Final design details of the proposed external materials and finishes;	Section 6.1 Section 7.1 Appendix B
	b) Location of existing vegetation and proposed landscaping (including use of indigenous and endemic species where possible) and design features;	Section 3.4 Sections 4.1 Appendix A
	c) Strategies for progressive landscaping of other environmental controls such as erosion and sedimentation controls, drainage and noise mitigation; and	Section 6.2 Section 6.4 Section 6.5 Section 6.6 Sections 7.2 Section 7.4 Section 7.5 Appendix D
	d) Location and design treatments for any associated footpaths and cyclist elements and other features such as seating, lighting (in accordance with AS 4282-1997 Control of the Obtrusive Effective of Outdoor lighting), fencing, and signs;	Section 6.3 Section 6.7 Section 7.3 Section 7.6 Appendix C Appendix E Appendix F
G4	Signage shall be installed in accordance with Drawing A3001 Issue C (Terminal – Signage Details) dated 14/04/2015, unless otherwise agreed by the Secretary.	Section 6.3 Appendix C

Table 2 Infrastructure Sustainability Council of Australia (ISCA) Requirements

ISCA Credit Reference	Requirement	Document Reference
Urb-1	An urban and landscape design plan is developed and implemented that includes the following: 1. Site analysis 2. Vision and objectives for the infrastructure 3. Site planning 4. Strategies that respond to: a. The relevant People and Place principles outlined in the Australian Urban Design Protocol (AUDP) or	1. Section 3 2. Section 5 3. Section 4 4. Refer to MPE S2 UDLP

ISCA Credit Reference	Requirement	Document Reference
	b. Other ISCA approved guidelines.	

1 INTRODUCTION

The Sydney Intermodal Terminal Alliance (SIMTA) received approval for the construction and operation of Stage 1 of the Moorebank Precinct East (MPE) Project, comprising an Intermodal Terminal (IMT) Facility including Rail Link (Package 1) and Import Export (IMEX) Terminal Facility (Package 2) on 12 December 2016 (SSD 6766). This Urban Design and Landscape Plan (UDLP) has been developed to satisfy condition C3 of the Conditions of Consent (CoC) and covers both Package 1 and Package 2 of the MPE Stage 1 Project (the Project).

This UDLP has been established to demonstrate SIMTA's approach to urban design for the Project. This UDLP addresses the relevant requirements of the Development Consent, including the Environmental Impact Statement (EIS), Submissions Report and Minister's CoC, and all applicable guidelines and standards.

1.1 Background and Scope

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

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

- Stage 1 - Construction of the IMEX Terminal Facility and Rail Link
- Stage 2 - Construction of warehouses and distribution facilities
- Stage 3 - Extension of the IMEX Terminal Facility and completion of warehouses and distribution facilities.

Stage 1 will be constructed across two packages (refer to Figure 1):

- Package 1: The Rail Link includes a connection to the IMEX Terminal Facility, and traverses across Moorebank Avenue, Anzac Creek and Georges River prior to connecting to the Southern Sydney Freight Line (SSFL).
- Package 2: The IMEX Terminal Facility includes the following key components:
  - Truck processing, holding and loading areas - entrance and exit from Moorebank Avenue
  - Rail loading and container storage areas - installation of four rail sidings with adjacent container storage area serviced by handling equipment initially and overhead gantry cranes progressively
  - Administration facility and associated car parking - light vehicle access from Moorebank Avenue.

1.2 Project Description

The layout of the IMEX Terminal Facility generally comprises operational areas, an administration area, rail sidings, utilities and drainage infrastructure, landscaping and signage. The operational areas of the IMEX Terminal Facility consist of the primary and secondary container loading / unloading areas and container storage areas, and the truck holding area.

1.2.1 Environmental Planning Approval

The Project has been assessed by the Department of Planning and Environment (DP&E) under Part 4.1 (now division 4.7 as of 1 March 2018) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as State Significant Development (SSD). The Planning Assessment Commission (PAC) granted approval for the MPE Stage 1 Project on 12 December 2016 and is subject to the Minister's CoC, 18 December 2016 (SSD 6766). The construction and operation of the MPE Stage 1 project was subject to an appeal in September 2017 (Appeal Number 2017/00081889). The approval was upheld and the revised CoC were released on 13 March 2018.

The Project's impacts, consultation and mitigation were documented in the following suite of documents:

- State Significant Development Consent SSD 6766 (as amended in the Land and Environment Court 13 March 2018)
- SIMTA Intermodal Terminal Facility – Stage 1 – Environmental Impact Statement (EIS) (Hyder Consulting Pty Ltd, May 2014)
- SIMTA Intermodal Terminal Facility – Stage 1 – Response to Submissions (Hyder Consulting Pty Ltd, September 2015)
- *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) Approval (No. 2011/6229) granted on March 2014.

1.3 Purpose and Application

This UDLP has been prepared to satisfy CoC C3 to facilitate for the commencement of permanent built works for the Rail Link and IMEX Terminal Facility. CoC C3 of the Development Consent (SSD 6766) states the following:

The Applicant shall prepare and implement an Urban Design and Landscape Plan for the project. The Plan shall present an integrated urban design for the project. The Plan shall include, but not necessarily be limited to:

a. *final design details of the proposed external materials and finishes;*
b. *location of existing vegetation and proposed landscaping (including use of indigenous and endemic species where possible) and design features;*
c. *strategies for progressive landscaping of other environmental controls such as erosion and sedimentation controls, drainage and noise mitigation; and*
d. *location and design treatments for any associated footpaths and cyclist elements, and other features such as seating, lighting (in accordance with AS 4282-1997 Control of the Obtrusive Effect of Outdoor Lighting), fencing, and signs;*

The Plan shall be submitted for the approval of the Secretary prior to the commencement of permanent built works and/ or landscaping, unless otherwise agreed by the Secretary.

This UDLP provides the overarching design principles, visions and objectives for the Project and provides detail on how these have been incorporated into urban design and landscaping. The following steps were undertaken in this UDLP and the document has been structured accordingly:

- Identification of key features of the site that will influence the planning and design of the development (Section 3)
- Identification of local site context findings on the site and in the area surrounding the site that will influence the planning and design of the development (Section 3)
- Description of the potential impacts and mitigation measures associated with various aspects of the Project's regional and local site context, which have been assessed in the EIS (Section 4)
- Identification of the vision and objectives of the development relating to urban design and landscape (Section 5)
- Analysis of the key design feature strategies for progressive landscaping of other environmental control such as drainage, erosion and sedimentation control and noise mitigation (Section 6 and 7).

2 DEVELOPMENT CONCEPT

Re-development of the Project involves the demolition of the former DNSDC site and will include the following typical built form and operating elements:

Intermodal Terminal (IMT) Facility: The IMT facility will be located on the western part of the Project site, adjacent to Moorebank Avenue. The total terminal area is approximately 244,000 m^2 including the following key elements:

- Four rail sidings of up to approximately 600 m in length
- Container hardstand to be used for container sorting and storage (up to 5 containers high or 12.5 m)
- Administration offices and ancillary operational facilities.

The IMT facility is anticipated to operate 24 hours a day, 7 days a week and use the following equipment:

- Automated and remote operated gantry systems to move containers from rail cars
- Modern container and secondary freight handling equipment
- An operations and control centre, ancillary facilities and amenities
- Container washdown facilities (likely to be of steel construction)
- Diesel and LPG fuel storage tanks (steel construction).

Rail Link: Fundamental to the operation of the IMT facility is a 2.8 km train line along with its required infrastructure, to connect the IMEX Terminal Facility and Interstate Terminals to the SSFL, and which is capable of accommodating trains up to 1.8 km in length. These primary built form and operating zones will be integrated together in a cohesive manner by addressing the following supporting urban issues:

- **Accessibility**: Well defined roadways and pathways for vehicles, pedestrians and cyclists will be designed for safe and comfortable movement, whilst providing clear and legible internal connectivity.
- **Streetscape**: Defined streetscape and urban elements will provide visual character, theming and a sense of place throughout the development.
- **Landscaping**: The landscape design will create a strong uniform identity throughout the development through the reinforcement and extension of the surrounding natural context and ecological qualities. It will create clear entry markers, enhance vistas, and reinforce the hierarchy of roads within the Project.
- **Signage and Lighting**: Signage and lighting will be utilised throughout the development to enhance the quality and experience of the occupants and users. Signage will complement the design style and streetscape to create a unique identity and sense of place.
- **Safety and Security**: Measures will be implemented to ensure a high level of safety and security at all times, to the development, its occupants, and the community populating surrounding lands.

Warehousing on the MPE Site is subject to a separate approval, SSD 7628, and is not discussed within this UDLP.

3 IMPLEMENTATION

3.1 Context and Scale

The Project is located approximately 2.5 km to the south of Liverpool City Centre near a number of significant industrial areas, including Moorebank (Yulong and Amiens) and Warwick Farm to the north, Chipping Norton to the north-east, Prestons to the west and Glenfield and Ingleburn to the southwest. The Holsworthy Military Reserve is located to the south on the opposite side of East Hills Passenger Line. Nearby residential areas include Wattle Grove, Moorebank, Holsworthy and Casula, which are located to the east and northeast.

The Moorebank Industrial Area is north of the Project, with the majority situated to the north of the M5 Motorway between Newbridge Road, the Georges River and Anzac Creek. This industrial area comprises approximately 200 hectares, and supports a range of industrial uses including freight and logistics, heavy and light manufacturing office and business park developments.

The Rail Link connecting the SSFL to the IMEX Terminal Facility, traverses across the Boot Land (to the south of the Project), RailCorp Land, Moorebank Avenue, the Moorebank Precinct West (MPW) Golf Course, Georges River (running along the western boundary of MPW), and Glenfield Waste Facility.

3.2 Topography and Landform

The Project topography is generally flat with relative levels (RLs) ranging between 14 m and 16 m Australian height datum (AHD) along the eastern Project boundary. The land rises from approximately RL 14 m AHD at each end to a localised peak of RL 22 m AHD about midway along the length.

The Project site has been subjected to substantial development over the years, and considerable changes have been made to the natural landscape. Consequently, the Project is underlain with a mixture of residual soils and filled materials, with undisturbed areas retaining some residual topsoil.

The most prominent natural features in close proximity to the site include Anzac Creek external to the Southern Boundary of the IMEX Terminal Facility and Georges River to the west of the Project. There is an existing stormwater discharge point on Moorebank Avenue, and another two discharge points on the eastern site boundary. The riparian setback for Anzac Creek, as specified by the NSW Office of Water, is 30 m.

3.3 Land Use

The Project was previously occupied by the Department of Defence and is commonly known as the DNSDC site. Previous operational activities on the Project can be generally described as including warehousing and logistics operations, vehicle and equipment hardstands, as well as some container storage serviced by an internal road network.

The residential suburb of Wattle Grove is located to the northeast and east. The Casula residential area is approximately 1 km west of the Project and divided by the School of Military Engineering (SME), Georges River and the SSFL.

Approximately 1 km to 1.5 km west from the Project, the SSFL and passenger rail line run in a north-south direction and are bounded by the Casula residential area. To the south of the Project, the existing East Hills railway line runs in an east-west direction. The outer area to the east and north of the site comprises the Wattle Grove residential area (primarily low density), extensive commercial and industrial developments and major motorways.

Surrounding natural elements include:

- Georges River which runs along the western boundary of the SME
- Anzac Creek, which runs along the eastern boundary of the Commonwealth owned land, linking to Chipping Norton Lake and Georges River to the north
- Existing landscape and vegetation known as the ‘Cumberland Plain Woodland’ running along approximately one half of the eastern boundary and full length of southern boundary of the site, forming a physical barrier to surrounding areas. This bushland is primarily regenerated vegetation and includes

Anzac Creek. The density of the bushland provides significant screening to much of the south and east of the Project from surrounding areas.

3.4 Existing Vegetation

3.4.1 IMEX Terminal Facility

In its undeveloped state circa 1930, the area of the IMEX Terminal Facility appeared to be vegetated with a mosaic of low vegetation types, possibly including woodland and dense healthy shrub land, with some clearing in the east and numerous tracks intersecting the site and lands to the east and south.

Due to the industrial history, almost all the natural vegetation has been largely cleared from the Project with the exception of what appears to be an increase in growth of trees and shrubs in the south of the Project, particularly along the constructed drainage channels and adjoining areas to the south and west.

Based on the results of the field assessment reported in the Biodiversity Assessment Report (Hyder 2015), the vegetation within the IMEX Terminal Facility consists almost entirely of planted trees with a mown or managed understorey, and does not meet the criteria for any threatened ecological communities. The planted tree species are typical of cultivated eucalypts that are commonly found as mature street trees in suburban Sydney, with *Eucalyptus microcorys* (Tallowwood), *E. saligna* (Sydney Blue Gum), *Corymbia maculata* (Spotted Gum) and *C. citriodora* (Lemon-scented Gum) frequently recorded.

Photograph 1: Mature trees of *Eucalyptus saligna* and *Corymbia maculata* on the Project site (Hyder 2015)

Photograph 2: Mature trees of *Eucalyptus microcorys* on the Project site (Hyder 2015)

The ground layer in the non-paved areas of the Project consisted of mown grass lawns, dominated by *Cynodon dactylon* (Couch), *Pennisetum clandestinum* (Kikuyu) and other exotic grass species; there was a native grass component persisting in some locations, with native grasses observed including *Paspalidium distans*, *Austrodanthonia sp*. (Wallaby Grass) and *Eragrostis leptostachya* (Paddock Lovegrass) as well as some small native herbs.

To the south and southeast of the IMEX Terminal Facility, and north of the Boot Land, is a network of drainage channels with some tree plantings and some apparent tree and shrub regeneration. The channels supported a mixture of native, non-local native and exotic trees and shrubs including *Eucalyptus saligna, E. tereticornis* (Forest Red Gum), *Corymbia maculata, Melaleuca quinquenervia* (Broad-leaved Paperbark), *Casuarina glauca* (Swamp Oak) and *Eucalyptus parramattensis* (Parramatta Red Gum).

3.4.2 Rail Corridor

The rail corridor contains the Rail Link which extends through portions of the former DNSDC south and Southern Boot Land, RailCorp Land, MPW site, Glenfield Waste Facility, Georges River and connects to the SSFL.

To the south of the IMEX Terminal Facility is a fenced area of bushland bordered by the existing rail spur to the east, and Moorebank Avenue to the west. Anzac Creek runs from west to east in the northern portion of this bushland. The section of Anzac Creek supports dense stands of *Typha orientalis* (Broad-leaf Cumbungi) and *Bolboschoenus fluviatilis* (Club-rush) and contains the Wattle Grove Offset Area under the EPBC Act threatened flora.

Fringing Anzac Creek is a narrow band of swamp woodland dominated by *Melaleuca linariifolia* (Flax-leaved Paperbark); the understory of this forest varied from sedges, especially *Leptocarpus tenax* which dominated in patches, to ferns, grasses and dense shrubs. To the south of the eastern part of Anzac Creek there are occasional emergent trees of *Angophora subvelutina* (Broad-leaved Apple) and *Eucalyptus sclerophylla.* Adjoining the southern bank of the western section of Anzac Creek the vegetation is disturbed and dominated by exotic vegetation, with a large stand of *Phyllostachys aurea* (Golden Bamboo), thickets of *Acacia decurrens* (Black Wattle) and *Pennisteum clandestinum.*

To the south of Anzac Creek is a large tract of relatively intact woodland dominated by *Eucalyptus sclerophylla* and *E. parramattensis* with a sub-canopy of *Angophora bakeri* (Narrow-leaved Apple) and *Melaleuca decora* (White Cloud Tree). The understorey varies in structure from relatively open in the mid-layer with dense grass and low shrubs to dense shrubs and a sparse shrub and grass understorey.

The area adjoining the disused rail line in the south-east of the Project supports mature trees of *Eucalyptus sclerophylla* (Hard-leaved Scribbly Gum) and numerous shrubs of Acacia spp., *Allocasuarina littoralis* (Black She-oak), *Hakea salicifolia* (Willow Hakea) and *Melaleuca nodosa* (Ball Honey-myrtle). The ground layer was characterised by native grasses including *Aristida ramosa* (Wiregrass), *Entolasia stricta* (Wiry Panic), *Paspalidium distans* and *Themeda australis* (Kangaroo Grass) and there were a number of small groundlayer herb and shrub species including *Astroloma humifusum* (Cranberry Heath), *Laxmannia gracilis* (Slender Wire Lily), *Pimelea linifolia* (Slender Rice Flower) and *Lomandra* spp. Exotic cover was low, with *Eragrostis curvula* (African Lovegrass) dominating in patches.

The land within approximately 100 m of the eastern bank of the Georges River supports forest vegetation. On the steep slope adjacent to the riverbank, the riparian vegetation is severely degraded, currently reduced to mature trees of *Eucalyptus saligna* x *botryoides* (Blue Gum/Bangalay hybrid) and *E. longifolia* (Woollybutt) with an understorey dominated by *Ligustrum sinense* (Small-leaved Privet) and smothered by exotic weeds, mainly *Cardiospermum grandiflorum* (Balloon Vine), *Lantana camara* (Lantana) and *Delairea odorata* (Cape Ivy).

The vegetation is less disturbed upslope and includes a mixed native and exotic understorey with mature trees of *E. saligna* x *botryoides.* On the western bank of the Georges River, adjacent to the Glenfield Waste Facility, the vegetation is similar in structure and condition to that on the eastern bank. The southern part of the riparian forest on the study area supported a canopy dominated by *E. saligna x botryoides* to 20 m in height.

The understorey on the river flats near the existing rail bridge consists of a mixture of local native shrub, herb and grass species and some dense stands of *Olea europaea* subsp. *cuspidata* and *Lantana camara,* with *Tradescantia fluminensis* dominating the ground layer in some areas.

In the northern parts of the riparian corridor, the steep slopes support trees of *E. saligna* x *botryoides* and *E. baueriana* over a dense shrub layer of *Olea europaea* subsp. *cuspidata, Ligustrum lucidum* and *Lantana camara* (Plate 24). The native small tree species *Backhousia myrtifolia* (Grey Myrtle) and *Melaleuca decora* occurred sporadically.

Most of the area of Glenfield Waste Facility is currently an active quarry and landfill site. The natural landform has been excavated and the vegetation consists of weedy exotic herbs and grasses and some native shrubs and small trees, some of which may have been planted as part of revegetation of constructed slopes. The native trees and shrubs *Angophora floribunda, Acacia decurrens* and *Acacia binervia* were abundant on the slope adjoining the eastern haul road.

3.5 Transport Network

The Project is located approximately 1.3 km south of the intersection of Moorebank Avenue and the M5 Motorway. The M5 Motorway provides the main road link between the Project and the key employment and industrial areas within the West and South Western Sydney Sub-Regions. The M5 Motorway connects with the M7 Motorway to the west, providing access to the Greater Sydney Metropolitan Region and NSW road network. Similarly, the M5 Motorway is the principal connection to Sydney's north and north-east via the Hume Highway.

The Project is within close proximity of the M5 Motorway, which intersects with Moorebank Avenue approximately 600 m to the north. Moorebank Avenue runs in a north-south direction and provides a direct connection between the Liverpool City Centre, M5 Motorway on/off ramps to the north, and the Glenfield / Macquarie Fields residential areas to the south.

The SSFL is located 1 km to the west of the Project. The SSFL is a 36 km dedicated freight line between Macarthur and Chullora. The closest passenger railway stations are Casula and Liverpool. Casula railway station is separated from the Project by the Georges River. Casula railway station is situated on the South and Cumberland railway lines. Liverpool railway station is separated from the Project by the M5 Motorway to the north and the Georges River to the west. This interchange station services the South, Cumberland, Bankstown and Inner West railway lines. The East Hills railway line is to the south of the Project and also forms the boundary to the Rail Link. It crosses the Georges River to the south-west and runs through the Glenfield Waste Facility before connecting into the South and Cumberland railway line corridor.

3.6 Other

For additional information on other existing character aspects, refer to the following sections in the EIS:

- Section 5 - Statutory Planning Approvals (Pages 79-96)
- Section 11 Climate Change Risk and Adaptation Assessment (Pages 50-68)
  - Appendix X Greenhouse Gas and Climate Change Impact Assessment
- Section 16 and 17 - Indigenous Heritage and Non-Indigenous Heritage (Pages 345-368)
- Section 18: Hazard and Risk (Pages 395-413)
- Section 20.4: Property and Infrastructure (Pages 461-485)
- Operational Environmental Management Plan.

4 URBAN DESIGN CONTEXT

4.1 Vegetation

Large native trees and various understorey planting endemic to the local area have been selected to create a buffer and serve in minimising visual impacts from the surrounding urban landscape. Given that the Project site is bounded to the south with existing vegetation communities, the landscape design serves to integrate the development with the surrounding environment by using tree, shrub and groundcover species that are local to the area to create habitat opportunities and links to the surrounding context. The tree planting has been designed with the intent of creating a uniform canopy cover throughout the area.

Proposed plant species have been selected for their site-suitability with many species selected from Liverpool City Council's (LCC) recommended plant list. The selection and location of landscaping has been designed to minimise bushfire impact and through on-going maintenance will contribute to a reduction in bushfire threat.

4.2 Transport Network

An analysis conducted for the EIS found that during operation, the Project will have a minor impact on Moorebank Avenue, Anzac Road, Cambridge Avenue and M5 Motorway. Intersection modelling and analysis of the 2016 scenario indicated that Project will not exceed the current capacity on the M5 Motorway/ Moorebank Avenue, the M5 Motorway/ Hume Highway, the M5 Motorway / Heathcote Road and Cambridge Avenue, nor would it reduce the Level of Service of the Moorebank Avenue / Heathcote Road intersection once the upgrades that have been previously identified by Roads and Maritime Services (RMS) and Transport for NSW are complete.

A Preliminary Operational Traffic Management Plan has been prepared to identify the management strategies to minimise traffic impacts associated with operation of the facility and would be finalised prior to operation of the IMT facility. The Construction Traffic and Access Management Plan provides the management measures relating to traffic and access for the Project. A Final Operational Traffic and Access Management Plan is currently in development.

4.3 Access

Access to the Project will be to and from Moorebank Avenue. However, no heavy vehicles will be permitted to turn right from Moorebank Avenue into the Project. ,

Formal pedestrian facilities are currently provided on the western side of Moorebank Avenue only. The pedestrian pathway extends from the northern boundary of the IMEX Terminal Facility to Chatham Avenue. Traffic light controlled crossings to the eastern side of Moorebank Avenue are provided at:

- Intersection of the access road to the Defence Joint Logistics Unit (east)
- IMEX Terminal Facility main entrance (opposite the Defence Support Rd)
- IMEX Terminal Facility secondary entrance
- Intersection at Chatham Avenue.

The Project will have a pedestrian crossing and signals at the IMEX Terminal Facility Administration Building (near the car park). Further to these external signals and pedestrian crossing, there will be new pedestrian access pathways on the eastern and western boundaries of Moorebank Avenue adjacent to the IMEX Terminal Facility entrance.

4.3.1 Access Tracks

Access tracks will be constructed to facilitate construction and on-going maintenance of the Rail Link. The access tracks will also enable access for the Glenfield Waste Facility operators (on the Glenfield Waste Facility site) and for Sydney Trains (within the RailCorp Land and the East Hills Rail Corridor).

The access tracks will be a combination of pedestrian and vehicular. These access tracks will be located within the identified footprint of the Rail Link and will utilise previously disturbed corridors, wherever possible.

A summary of the access tracks is provided below in Table 3, and the RailCorp Maintenance Access Road detailed design is provided in Appendix G.

Table 3 Rail Link Access Tracks

Location	Track Section	Description
West of Georges River	From the Georges River Bridge to the SSFL, through the Glenfield Waste Facility	• Main access track located on the eastern side of the Rail Link • A level area will be provided near the southern and northern connections to facilitate maintenance • An informal level crossing will be provided over the southern connection at this location • Access through existing gate into Australian Rail Track Corporation (ARTC) / Sydney Trains Rail Corridor • Street access provided from Cambridge Avenue through the Glenfield Waste Facility main entrance.
East of Georges River	From the Georges River bridge to Moorebank Avenue	• Main access track located on the northern side of the Rail Link • The access track provides the opportunity to access under the proposed Georges River Bridge via an existing access track • Pedestrian (restricted personnel) access is available under the Moorebank Avenue overbridge • Street access will be from Moorebank Avenue.
East of Moorebank Avenue	From Moorebank Avenue to Rail Line	• Vehicle access is provided from Moorebank Avenue to Anzac Creek culvert • Vehicle access is also provided from Moorebank Avenue to the rail link just north of the bootland
RailCorp Maintenance Access Road	Access off Moorebank Avenue southbound lane, just north of the existing Moorebank Avenue Bridge over the East Hills Line	• This track is a combination of sealed and unsealed road stretching east approximately 150m from Moorebank Avenue to the existing East Hills rail corridor • 12m wide swing gate and lock at the intersection of the track with Moorebank Avenue • Gate linking the proposed access track to the East Hills Line corridor • Only be accessible to authorised maintenance personnel and is required to ensure members of the public do not enter. • Right hand turn movements into and out of the access road will be banned due to lack of sight; with access / egress restricted to left-in and left-out only.

4.4 View Corridors

There are a number of existing view corridors looking toward the Project. The prominence of these views are strongest passing along the direct frontage at Moorebank Avenue, and to some extent from further distances where there is currently minimal visual impairment across cleared or unobstructed land. Views from further surrounding residential areas generally have minimal or no views due to the significant viewing distance, undulated topography and landform, or shielding by other existing structures and vegetation.

Measures to reduce the visual impact of the Project primarily comprise of screen planting in key areas and visual buffers to produce a high-quality landscape that reinforces and extends the surrounding natural context and ecological qualities. The landscape treatment will visually and physically connect with the existing landscape and vegetation adjacent to the site.

Along the Moorebank Avenue frontage, an 18 m wide corridor of screening vegetation and a bio-retention swale will be comprised of native tree species with a dense tree canopy and lower screen planting. Along the site boundaries, a “Boundary Treatment” and “Buffer Zone” will incorporate landscape treatment consistent with existing local species in the area and provide an essential scale of planting to complement the developments built-form.

Where landscaping is clear of railway lines, planting will comprise mixed tree planting to create natural feeling through landscape zones and mixed under-storey planting consisting of native shrubs and ground covers to form a virtually impenetrable barrier when mature. This treatment will mitigate views from surrounding areas, and the existing tree planting (where retained) along Moorebank Avenue in conjunction with proposed screening and feature walls, would screen a large proportion of potential views from the north-west.

Overall, the proposed landscape treatments will result in an improvement in the visual amenity of the entire site and will increase the current level of screening.

4.5 Stormwater Management

Construction of the Project will require vegetation clearing and bulk earthworks, which have the potential to lead to erosion and generate sediment laden runoff into the Georges River or Anzac Creek, thereby impacting water quality. The Construction Soil and Water Management Plan (CSWMP) and Erosion and Sediment Control Plan (ESCP) has been prepared in accordance with the principles and requirements of the Blue Book.

The Project will result in changes to the Project’s site catchment boundaries during operations. In addition, the Project will result in an increase in surface water generation and pollutant loads as a result of the increase in impervious surfaces on the site. Onsite detention (OSD) basins, outlet channels and water sensitive urban design (WSUD) elements will be sized to provide adequate system capacities and mitigate potential adverse flood impacts and increases in stormwater discharge from the site that may otherwise result from the Project. WSUD measures, including gross pollutant traps (GPT) and rain gardens, will be designed to ensure the quality of stormwater leaving the Project will be of equivalent quality to the existing conditions, or provide an improvement to stormwater quality leaving the Project.

Refer to the Flood Emergency Response Plan for information on flood management strategy for the Project.

4.6 Site Characteristic Analysis

An analysis of the Project, to demonstrate the integration of the general and local site context, and the proposed objectives and principles, was undertaken to determine constraints and opportunities for the development. The general and local site context findings are discussed in Section 3, while the landscape and building design objectives and principles are presented in Sections 5 and 6. The following constraints and opportunities were determined and are presented in relative importance:

- Due to site dimensional constraints, space is a premium within the Rail Link. The rail corridor must not exceed 20 m in width, as this area will be cleared for the construction and operation of the Rail Link. This corridor will also be 20 m wide within ecologically sensitive areas including the Southern Boot Land and Georges River riparian corridor. As such, this presents an opportunity for the development to integrate into surrounding land uses and existing developments through use of considered structures, existing landforms and vegetation.
- The Project is located in an industrial area, and will be zoned as industrial. As such, this provides an opportunity for the development to provide safe and efficient circulation for pedestrian, cyclists and vehicles.
- Due to the large scale of the development, there is opportunity for landscape screening along the boundary of the Project site to partially shield the operating environment of the development. Utilising a ‘Buffer Zone’ for the Project along Moorebank Avenue, strong shielding vegetation will be provided on either side of a bio-retention swale and will include a combination of dense tree canopy cover as well as lower screen planting.
- Opportunities to include the history of the site throughout the Project will be developed through a Heritage Interpretation Plan.

5 IDENTIFICATION OF VISION, OBJECTIVES AND PRINCIPLES

5.1 Vision

The Project will not only provide vital infrastructure and employment growth, it will be a premier business logistics centre, providing the Moorebank business area with a unique identity through urban renewal. The process will see the Project become an integrated component within the existing landscape and becoming a significant feature in terms of local and community identity and connectivity to the greater Sydney and Liverpool areas.

The design for the Project will aim to improve the existing landscape and be sensitive to existing environmental qualities. The urban design principles outlined in Section 5.2 are proposed to ensure that the unique aspects of the Project and surrounding areas are reflected in the development design solution.

The built form, open space and landscape elements aim to promote visually pleasing environments. Both the urban and building design principles proposed in this document are generally in accordance with the requirements and objectives stated in Sections 1.2 and 1.4 of the Liverpool Development Control Plan (DCP) 2008. It is intended that the built form shall be varied and interesting to provide an attractive and articulated streetscape. The selection of building materials and colours will be appropriate for intended use according to the land use structure.

5.2 Urban Design Principles

The urban design principles and overall Project vision have been formed around a set of core values, derived from Sections 3 and 4 presented above, which can be summarised as:

Responsive: the design will be both responsive and sympathetic to the form, colours and textures of the natural and cultural character of the existing landscape. The Project will integrate with, and improve the existing site character to form a high performance and quality urban landscape feature.

- **Community**: while the Project will have limited access to the general public, the Project will include a provision for suitable and sufficient amenity which may be accessible by both the occupants and the public (albeit predominantly indirectly). This improved local amenity will incorporate landscaping and open spaces for employees, creating a ‘sense of place’ and conveying a feeling of community.
- **Considerate**: landscape and urban treatments will be considerate of the need to provide visual and acoustic shielding in the form of vegetation, landform and structures. A positive visual, environmental and management relationship with adjoining lands will be reinforced.
- **Connectivity**: a suite of design instruments will connect the various MPE site precincts, including well defined landscaping, entry statements, newly constructed landforms and streetscape elements, signage, street furniture and other built elements. Provision will be made to accommodate on-site heritage interpretation options.
- **Identity**: the urban design and landscape form will express the character of the Project and communicate a strong and unique identity that complements the surrounding land uses.
- **Adaptability**: a high quality urban design standard will be adopted which is both adaptable and flexible in each key component to enable longevity, maintained value and ability to suit the needs of future generations, for its stakeholders, occupants and the community.
- **Sustainability**: ecologically sustainable development principles will be incorporated into all facets of the Project where feasible and reasonable. WSUD will be integrated into the built and landscaped elements of the development, and on-site collection and re-use of stormwater and recycled water will be considered.
- **Movement**: the urban design will support an internal vehicular and pedestrian traffic network that will be both safe and efficient and may incorporate an integrated public or on-site transport system as well as pedestrian and cycle connections throughout the Project and to surrounding areas
- **Visually Appealing**: the urban design will be visually appealing to the public and surrounding areas to ensure continuity between the Project and surrounding areas.

5.3 Objectives

A summary of the urban design objectives that have been adopted for the Project is outlined below:

- Preferential use of native and endemic plant species and maximise landscaped areas wherever possible
- Create a distinctive and attractive natural environment within the context of an industrial complex
- Maintain landscape values and be sensitive to the existing environmental values of the site and surrounding area
- Maximise environmentally sustainable design where feasible and reasonable
- Provide an aesthetically pleasing and safe environment for workers and visitors alike
- Signage to promote and enhance safety, security and efficient way-finding for pedestrians, cyclists and vehicles at all hours of operation
- Promote appropriate lighting and security systems design to ensure that all employment areas are safe and secure at all hours of operation as well as out of hours
- Minimise visual impacts on surrounding areas through façade design and integration of the Project with surrounding land uses
- Meet sustainability requirements of the Project (per the Clean Energy Finance Corporation mandated conditions).

6 IMEX TERMINAL FACILITY

6.1 Structures

6.1.1 Administration Building

The administration building has been designed:

- In accordance with the Building Code and relevant Australian Standards (AS)
- To be suitable to support a peak demand of 30 office staff and 10 field staff
- With a building management system, capable of controlling and regulating air-conditioning and electrical utilities. Fit out of the administration building must be to the Principal's satisfaction and approval.

All IMEX Terminal Facility operations will be controlled from the administration building control room and all utilities will be monitored via the administration building. A model of the administration building is presented in Figure 1. The materials and external finishes are listed in Appendix B.

Figure 1 Administration Building

6.1.2 High Voltage Substation

A new 11 kilovolt (kV) high voltage (HV) power supply will be provided to the Project to service the IMEX Terminal Facility and the future site expansion (MPE Stage 2). From the Endeavour Energy substation outside the Project boundary, one 11 kV feed will connect to a northern HV switchroom constructed and energised initially for manual stage operations. During this manual phase the HV switchroom will contain two HV switchboards including the Main Switchboard North (MSN) and Distribution Switchboard North (DSN).

For the future automated stage, a second southern HV switchroom will be constructed and energised via the second 11kV feed from the Endeavour Energy second switching station. The southern HV switchroom will contain three HV switchboards, Main Switchboard South Distribution Switchboard South and Crane Supply Switchboard South. The configuration of these switchboards will be similar to switchboards in the north switchroom.

Conduit reticulation will be installed around the site, both for HV and low voltage (LV) power. The conduits will be capped initially at the manual phase boundary, then extended during a future contract scope for automated works to power infrastructure within the automated phase boundary. HV conduits will also be installed and capped at the boundary to cater for supply to the future eastern precinct warehouses.

New 11kV power feeds connect to the Anzac Zone substation in Anzac Road, where three existing panels will be made available. From there, three cables will follow the southern verge of Anzac Road and cross Moorebank Ave. A feed will be provided to the future MPW expansion. The cables will continue to run within the western verge of the proposed widened Moorebank Avenue to the existing stormwater culvert. Then, the cables will cross the road and connect to two new Endeavour Energy substations. From there power will be reticulated to the northern HV substation.

The HV switchroom design is presented in Appendix B.

6.1.3 Fire Water Tanks

The fire water supplies to service the IMEX Terminal Facility include provision for fire water storage tanks, two fire hydrant diesel pumps and one jockey pump,.

The fire hydrant system design has adopted the following design criteria:

- Designed to provide coverage for the IMEX Terminal Facility in compliance with the Fire Engineering Report and NSW Fire and Rescue (NSWFR) operational specificationsFire hydrant pumps have been designed to provide required pressures and flows for the IMEX Terminal Facility in compliance with the AS 2419.1 and AS 2941 requirements and in accordance with Fire Engineering Report and NSWFR operational specifications. They will also provide nominated flows and pressure at the MPE Stage 2 site boundary
- Above ground water storage tanks which provide the water supply will be compliant with AS2419.1 requirements and in accordance with Fire Engineering Report and NSWFR operational specifications (2 x 415 kl tanks)
- Pumps will comply with AS 2941 requirements for automated starting
- IMEX Terminal Facility fire hydrant system flow will be 40 L/s
- IMEX Terminal Facility minimum residual pressure at the most disadvantaged fire hydrant will be 700 kPa
- Trenching methods shall follow AS3500; embedment of pipe shall be Controlled Low Strength Material (CLSM) or concrete encased when subject to utility crossings or reduced cover
- In ground fire hydrant main ring is PE100 PN16 SDR11 DN280 pipe and fittings with electrofusion joints and poly-wrap sleeve
- In ground fire hydrant branches to hydrant shall be PE100 PN16 SDR11 DN180 pipe and fittings with electrofusion joints and poly-wrap sleeve
- Above ground fire hydrant main ring service shall be DN100 roll grooved hot dipped galvanised steel medium pipes, fittings and couplings
- In ground sprinkler service, main pipe shall be PE100 PN16 SDR11 DN315 pipe and fittings with electrofusion joints and poly-wrap sleeve.

A model of the fire water tanks is presented in Figure 2.

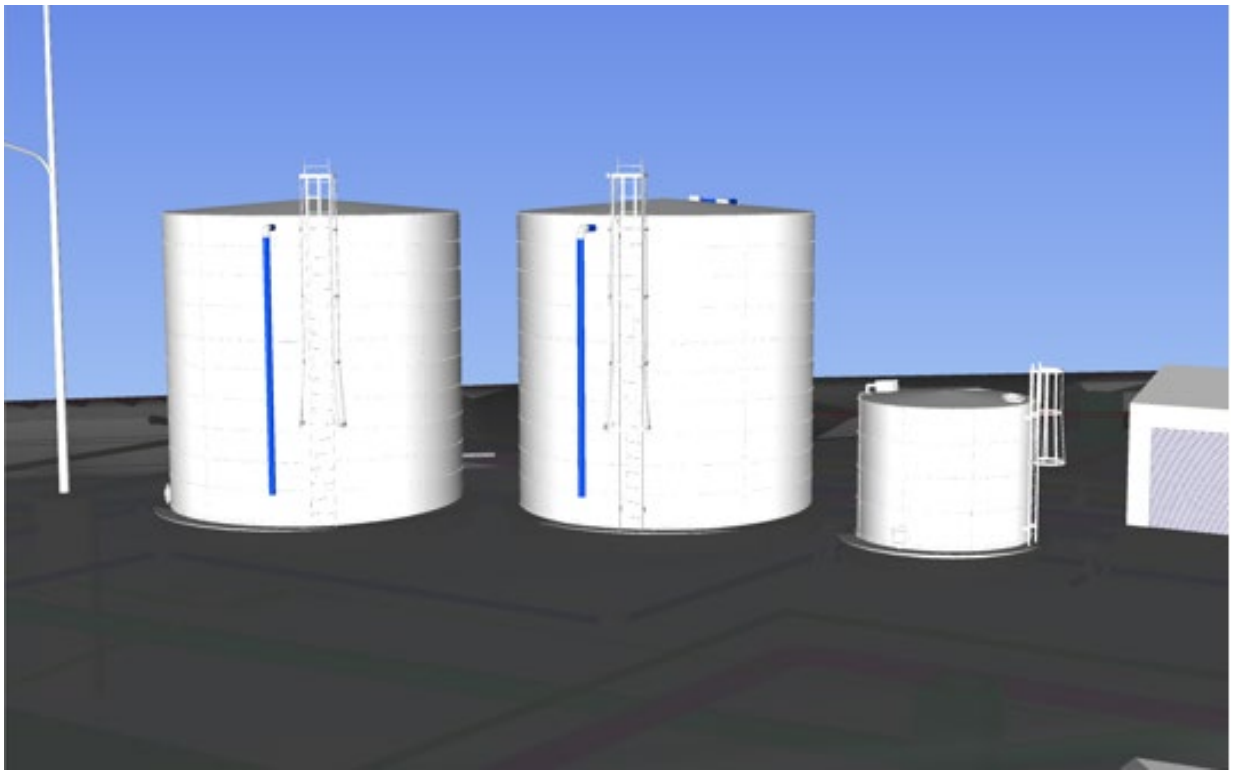


Figure 2 Fire Water Tank Model

6.1.4 Pumphouse

Potable water for the site will be sourced from the DN200 cast iron cement lined (CICL) Sydney Water Corporation water main in Moorebank Avenue, via a proposed new DN200 connection that will supply potable, hydrant and sprinkler water to both the IMEX Terminal Facility and the future SIMTA precinct expansion (MPE Stage 2).

The potable water service on the IMEX Terminal Facility will extend from the connection point on Moorebank Avenue through an authority water meter assembly and via an underground poly welded pipe to a pressure pump set located in the pump house. From there the line is routed to the Administration Building fixtures, with a further extension to the south of the Administration Building for future maintenance use. No other facilities in the IMEX Terminal Facility will require supply of potable water.

The allocations for the future precinct (MPE Stage 2) will include space allowances for both a 50 kL tank and pressure pump set in the pumphouse.

The potable water service will enter the site and feed into the pumphouse and the pressure pump set. From the pumphouse, the potable water service will reticulate around the northern end of the carpark to the Administration Building.

The pumphouse will be constructed using the same cladding as the Administration Building. The external finish materials are provided in Appendix B.

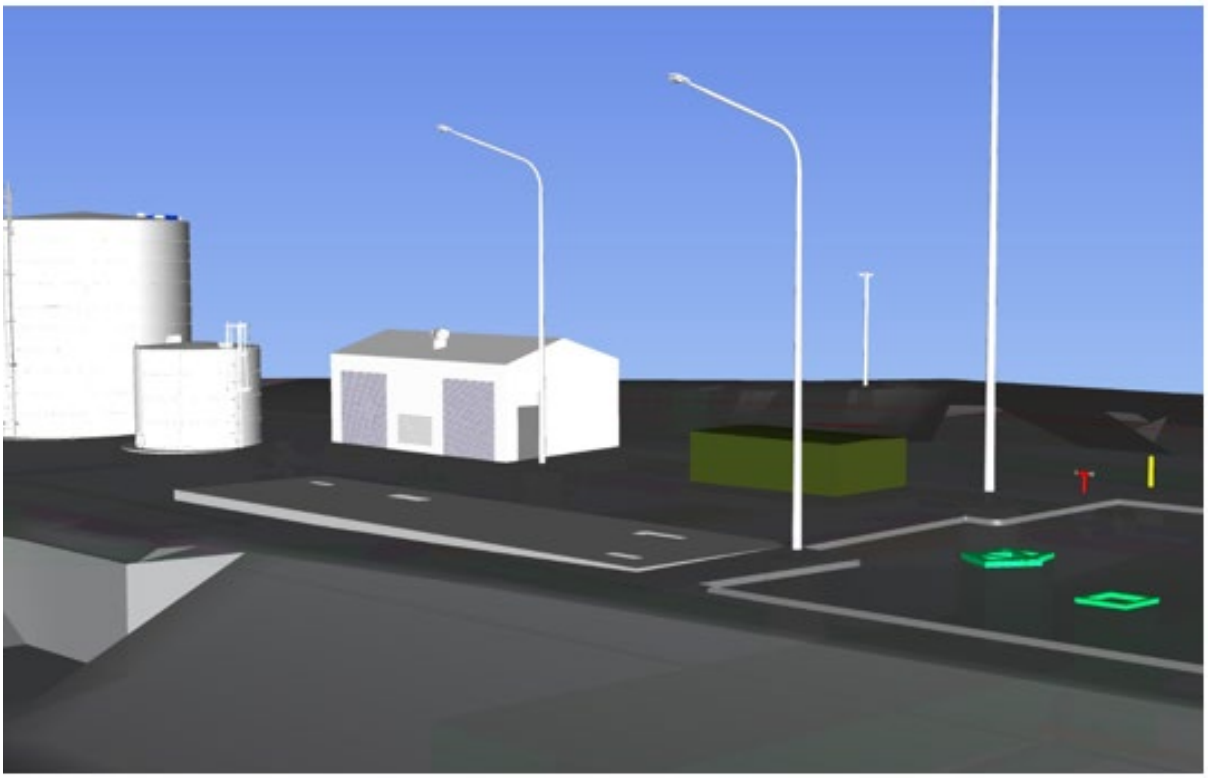


Figure 3 Pumphouse Model

6.1.5 Footpaths, Cycle Paths and Car Parks

There are no pedestrian footpaths or cycle paths within the IMEX Terminal Facility.

There is one car park connected to the administration building which will be accessible by the public. The pavement materials are provided in Appendix E.

6.2 Landscaping

The landscape focus of the Project centres along the Moorebank Avenue frontage which forms a major connection to the Project. This frontage incorporates a vegetated bio-retention channel which follows the length of the Moorebank Avenue frontage (refer to Appendix A). Large native trees and various understorey planting endemic to the local area have been selected within this area to create a buffer and serve in minimising visual impacts from the surrounding urban landscape.

Given that the Project site is bounded to the south with existing vegetation communities, the landscape design serves to integrate the development with the surrounding environment by using tree, shrub and groundcover species that are local to the area to create habitat opportunities and links to the surrounding context. The tree planting has been designed with the intent of creating a uniform canopy cover throughout the area.

Plant species have been selected for their site-suitability with many species selected from LCC's recommended plant list. Topsoil will be placed in the landscaped areas throughout the Project site. The Landscape Plans for IMEX Terminal Facility have been developed by Ground Ink (refer to Appendix A).

6.3 Fencing, Gates, Barriers and Signage

6.3.1 Fencing and Gates

Fences and gates are detailed in the Approved for Construction Design Report – Fencing, Gate and Signage Package

Fencing shall generally be in accordance with AS1725.1 (2010). Different types of fencing will be designed and include the following (refer to Appendix C):

- A 3 m high security fence inclusive of five strands of barbed wire, with own footings which will be located around the bonded areas
- A 2.1 m high fence with own footings or base plate adaptors for selected paved areas. For concrete block pavements, the fence posts will be carried on separate footings. This fence will be located around culverts, service installations and other internal or interim site boundaries to separate specific use areas.

Fencing will comprise of the following:

- Chain wire mesh, which is hot dip galvanised
- Wire pitch will be 50 mm
- Wire thickness will be 3.15 mm
- Support posts, top and bottom rails, and bracing cable/poles will be installed as per relevant standards.

Where gates are non-standard or specialist, a general performance requirement has been stipulated on plans. This will assist the Construction Contractor in obtaining quotations and installing compliant gates. This requirement is particular to the site entry gate, rail gate as well as other automated gates. All standard gates will comply with AS1725.1 (2010).

Perimeter fencing will be constructed according to the Depot Licence Application Guidelines (refer to Appendix F) and will include the following:

- Base to be secured where practicable and topped with fixed security wire
- No overhanging trees which could facilitate a breach of the perimeter
- To be maintained in good condition.

6.3.2 Barriers

Barriers are used on the Project for multifunctional purposes including providing a fence / security outcome, separating use areas and mitigating potential incidents. The following barriers will be used at the Project:

- Road and Maritime Services (RMS) standard F-Type barrier (including embankment)
- RMS standard W-Beam barrier (including median)
- RMS standard Thriebeam Barrier
- RMS standard Temporary F-Type barrier (modified with drainage slots).

6.3.3 Signage

Signage for the IMEX Facility Terminal is generally in accordance with CoC G4 and Drawing A3001 in Appendix C.

6.4 Erosion and Sediment Control

The erosion and sediment management measures prescribed for the Project are based on the mitigation measures presented in the EIS, Commonwealth Conditions of Approval (CoA), and the Minister's CoC, as well as applicable industry guidelines. Further erosion and sediment control details are outlined in the CSWMP and Progressive ESCP.

The guiding principles for erosion and sediment control that were adopted are as follows:

- Priority should be given to management practices that minimise erosion, rather than to those that capture sediment downslope or at the catchment outlet
- Progressively stabilise and rehabilitate exposed surfaces as soon as practicable
- Minimise the area of soil disturbed and exposed to erosion at any one time
- Divert clean water around the Project or control the flow of clean water at non-erodible velocities through the Project
- Provision of boundary treatments around the perimeter of construction areas to minimise the migration of sediment off the Project
- Permanent or temporary drainage works will be installed as early as practical in the construction program to minimise uncontrolled drainage and associated erosion, including the OSD basins and flood conveyance works
- Stockpiles will be located away from flow paths on appropriate impermeable surfaces, to minimise potential sediment transportation. Where practicable, stockpiles will be stabilised if in place for more than ten days and will be formed with sediment filters in place immediately downslope.
- Existing catchments and sub-catchment boundaries will be maintained as far as practicable
- Site imperviousness and grades should be limited to the extent of existing imperviousness and grades under existing development conditions
- The wheels of all vehicles will be cleaned prior to exiting the construction site where excavation occurs to prevent the tracking of mud. Where this is not practical, or excessive soil transfer occurs onto paved areas, street cleaning will be undertaken when necessary
- Inspection of all permanent and temporary erosion and sedimentation control works prior to and post rainfall events and prior to closure of the Project
- Erosion and sediment control structures to be inspected and maintained, repaired or augmented as required.

6.5 Noise

As per the EIS, no noise mitigation measures that require landscaping will be constructed on the IMEX Terminal Facility.

6.6 Non-Paved Surface Treatment

Non-paved surface treatment will be provided at the following locations for the manual operation phase:

- Along the western boundary, within either side of the OSD channel and setback areas from the channel to internal pavements, facilities areas and the administration building
- Within either side of the temporary eastern drainage channel
- Within the batter and tie-in areas along the southern boundary.

The majority of these areas are stormwater conveyance channels, therefore will be treated with various geo-matting to provide initial and longer-term erosion control. A hydroseed grass mix will be applied to these areas to promote medium-long term establishment of vegetation for erosion protection. Areas not designated for stormwater conveyance will be treated with a hydroseed grass mix as minimum to assist in stabilisation of the area.

The automated phase will require the western OSD channel to be filled including the removal of surface treatment within the area.

6.7 Lighting

The lighting design for the IMEX Terminal Facility takes into account the eventual transition from manual phase to automatic phase that forms part of the operational strategy of the Project site.

The Basis of Design – Lighting Plan for the IMEX Terminal Facility is provided in Appendix D. AS 4282-1997 *Control of the obtrusive effects of outdoor lighting* was referenced in the lighting design in order to minimise the impacts of lighting spill onto local residents. The report defines how the standard was addressed and included in the current design for the IMEX Terminal Facility. The obtrusive lighting compliance reports against AS 4282 are also provided in Appendix D, which confirm compliance with the standard in all instances. Lighting will be positioned to face downwards to eliminate upward light spill

6.7.1 Lighting Design – Manual Phase

The lighting design features 18 m high mast poles, mounted with high powered light-emitting diode (LED) floodlights, as the main source to illuminate most of the Project.

Within the rail cargo area, 18 m high mast poles have been positioned at less than 50 m spacing along the rail corridor, between the second and third track. Each pole is mounted with four high power LED floodlights, angled 90° apart, with a tilt of 8° to allow wider illumination. The 18 m poles take into consideration the transition phase from manual to automatic operation. Keeping all the high mast poles at no more than 18 m height, the light poles situated within the rail corridor can continue to operate even during the installation of the new crane for automatic phase.

For the remainder of the Project, 18 m high mast poles with one or two high power LED floodlights are used to cover the majority of the drive-in area. A combination of 12 m and 9 m poles is used to provide the additional required lighting in the more restricted areas.

The perimeter fencing is illuminated mainly by the 12 m height pole. These fences are illuminated at a level which allow the perimeter closed circuit television to operate effectively. The local driveways and the carpark are illuminated by a combination of the 18 m high mast poles and the 12 m light poles. The 12 m light poles will be used to illuminate the areas which are difficult to reach from the 18 m high mast poles.

A number of 9 m poles have been allocated near the pedestrian crossing given its higher point vertical illuminance light level requirement as required by AS 1158.

6.7.2 Lighting Design – Automatic Phase

Given that the Project will be transitioned into full automation with no manual labours, SIMTA advised there is little requirement for lighting in the container handling area. Some illumination is anticipated from the automated crane that is to be installed for the automatic phase.

The 18 m high mast poles along the rail corridor will be decommissioned as part of the transition from manual to automated phase. The 12 m light poles provided for the perimeter / security fencing lighting will remain and serve the same purpose as the manual operation phase. Both the eastern and western fence lines will be shifted outward as part of the transition from manual to automatic phase, generating more space within the rail cargo area. As such, the perimeter poles will correspondingly shift with the new fence lines to keep the illuminance the same as manual operation phase.

Additional lighting will be provided around the container transition area, where containers are moved by autonomous carriers onto road transport. This area will have additional lighting for this transition and driver safety.

The local driveway and the carpark will be kept the same as for manual phase. The pedestrian crossing will be removed for the automated phase, but the lighting provided in manual phase will remain applicable for the automated phase. As such, the 9 m poles provided for the pedestrian crossing will be maintained.

7 RAIL LINK

7.1 Structures

Rail Link earthworks detailed design drawings have been provided in Appendix H. These drawings outline the earthworks design, as well as location of the structures associated with the Rail Link (which are further described below).

7.1.1 Georges River Bridge

The Georges River Bridge facilitates the new rail alignment to connect the SSFL to the Project by spanning across Georges River and Tarakan Road. This new structure comprises a six-span structure with an overall length of approximately 178 m, along the deck control line. Span 1 is 23.4 m in length, and the five remaining spans are 31 m long along the deck control line.

The Georges River Bridge has a varying horizontal alignment with the skew angle increasing for each span, reaching a maximum angle of 29° skew to the bridge control line at the Western abutment. The piers and abutments are all parallel, but due to the varying horizontal alignment, the girders in each span have a different end skew. The total width of the rail bridge, perpendicular to the rail, is 10.575 m minimum, and 10.595 m maximum, and accommodates two rail tracks.

There is an existing bridge located immediately upstream of the proposed bridge. The existing bridge soffit level is approximately 13.07 m AHD. The proposed bridge will have a soffit level of 14.1 m AHD to assist with the afflux requirements. A preliminary artist's impression of the Georges River Bridge also showing the existing bridge, is shown in Figure 4.

Figure 4 Artists Impression of Georges River Bridge

Table 4 outlines the concrete and reinforcements properties for the Georges River Bridge.

Table 4 Concrete and Reinforcement Properties for the Georges River Bridge

Design Parameter	Value
Concrete Properties	
Cast in-situ Piles	40 MPa
Super-T girders	50 MPa

Design Parameter	Value
Substructure elements	40 MPa
Approach Slabs	40 MPa
Deck Slabs	40 MPa
Mass Concrete	20 MPa
Reinforcement Properties	
Cast in-situ Piles	40 MPa
Super-T girders	50 MPa
Substructure elements	40 MPa
Approach Slabs	40 MPa
Deck Slabs	40 MPa
Mass Concrete	20 MPa

7.1.2 Reinforced Earth Wall

The design of the reinforced earth wall (REW) assumes a coherent gravity block of reinforced earth, retaining and supporting geotechnically specified loads. Reinforced earth is a composite reinforced soil structure formed by the association of granular soil and facing reinforcement products. The reinforced earth wall will also comprise of the following:

- Temporary hydroseeding as outlined in Section 7.2 and Appendix A to prepare the external surface for landfilling activities that will be undertaken by GWS in the future between approximate southbound chainages 40300 and chainage 40050
- Shotcrete walls where soil nails are being utilised between approximate southbound chainages 40050 and chainage 39900
- High Density Poly-Ethylene liner from top of batter to bench along the southern tie-in to SSFL to prepare the external surface for landfilling activities that will be undertaken by GWS in the future.

The coherent gravity block is defined by the facing, the extent of the reinforcement and its associated granular fill. This block acts as a gravity retaining structure whose external stability takes into account the loading of the block and its resistance to sliding, overturning and bearing pressure at the base. The internal stability takes into account the definition of an active and resistant zone whose geometry is determined by the characteristics of the system and its loading.

The method of design complies with the requirements of RMS design specification R57. The design life is 100 years.

A brief description of the reinforced earth wall is provided below in Table 5.

Table 5 Key Reinforced Earth Wall Design Features

Element	Information
Facing Panels	• TerraPlus® Precast Concrete facing panels • 2000 mm (nominal) high x 2000 mm (nominal) wide • Concrete strength - Grade 40 MPa • Minimum cover to reinforcement - 40 mm

Element	Information
Reinforcing Strips	• Galvanised REhas® Strips reinforcement system - ribbed flat steel reinforcing strip designed to Reinforced Earth Pty Limited's specifications to maximise the tensile and adherence capacity of the reinforcement • Size: 50 mm x 4 mm HA nominal section and 45 mm x 5 mm HAR nominal section • Minimum Yield strength - 400 MPa • Minimum Tensile Strength - 520 MPa • Galvanised Coating Mass – 600 g/m² (85 µm equivalent thickness)
Soil Properties	• Granular material meeting the REPL specifications as a minimum and R57 • Comply with the requirement of free draining material, as such, must have a grading limit of not more than 5% passing the 75 µm sieve
Loading Factors	• Designed to support a uniform live load equivalent to 300 LA rail traffic loading along the railway, and the surcharge from trafficable assess road for maintenance vehicles • Considered the effects of Temporary Fresh Water Inundation up to 100 year ARI Flood level RL11.560 m in front of wall REW 1 and partially in front of REW2

7.1.2.1 Drainage

The track formation supported by the reinforced earth vertical wall and and 0.6H to 1.0V Soil Nail Embankments will be drained via half pipe drains at the top of each retaining structure. Flows from these drains are collected via pits and pipes and discharged through the base of the retaining wall towards the Georges River via GPTs and riprap aprons at the outlets.

The track formation south of the earth retaining structures and up to the maintenance access road (at 40.3 km) will be drained by cess drains to the west side of the track, and to the east side of the track the land will be graded out to the existing maintenance access road to allow stormwater to sheet flow off the Rail Link formation towards the Georges River. The cess drains connect to a GPT, riprap apron and level spreader at 40.085 km, before discharging into the Georges River.

7.1.3 Moorebank Avenue Overbridge

The Moorebank Avenue Overbridge facilitates the new rail alignment to connect the SSFL to the Project by spanning over the rail alignment to be constructed under the existing Moorebank Avenue.

The Moorebank Avenue Overbridge consists of a single span of 9.8 m between pile centrelines. The Moorebank Avenue Overbridge carries road traffic on Moorebank Avenue from Anzac Road to Cambridge Avenue, and allows the new rail alignment to pass beneath the bridge deck and through the existing embankment. The span arrangement is set to ensure that the width of the bridge follows the alignment of the railway beneath the deck slab. The bridge deck covering the rail line has an overall length of approximately 38.5 m along the deck control line. The total width of the bridge between traffic barriers to accommodate the road geometry is 11.8 m.

A brief description of the bridge structure is provided below in Table 7.

Table 6 Key Bridge Design Features

Element	Information
Rail	A single rail track is provided. The total width of the bridge deck perpendicular to the rail, is 8.9 m in accordance with ARTC T&C CoP Section 7 Clearance. The track is classified as 80MLF23, Standard Gauge AS60kg Rail with Medium Duty sleepers and Resilient Fasteners. The track alignment is flat, along the length of the bridge longitudinally, and has a transverse fall of 2%. The top of rail levels have been based on the following depths: • Ballast Depth - min. 250 mm • Rail, Pad & Sleeper depth – (min 355 mm) • The minimum ballast depth is measured from the bottom of the (medium duty) concrete sleeper directly under the low rail.

Element	Information
Road	Moorebank Avenue facilitates road traffic between from Anzac Road and Cambridge Avenue. The road is on a horizontal radius of 500 m to the bridge deck control line. Across the bridge medium performance concrete traffic barriers are provided. The existing Moorebank Avenue road will require lifting at the bridge location to accommodate the rail line below and will necessitate tie-in with the existing road.
Superstructure	The superstructure consists of a cast in-situ reinforced concrete deck slab which is integral with the substructure. The reinforced concrete slab is 650 mm thick, and will have a minimum 85 mm thick asphaltic surfacing layer. Due to the high skew of the bridge, squaring up the deck is necessary to provide propping to the abutment walls where the fill height on one abutment is different to the other which produces a global twisting action of the entire structure. Squaring off the bridge ends results in a dead-zone behind the traffic barriers with safety screen on top. A handrail is provided along this squared off edge of the bridge deck. The steel protection angle is required along the leading edges under the deck over the railway corridor.
Substructure	The substructure arrangement comprises reinforced integral abutments supported on 900mm diameter contiguous bored cast in place concrete piles. The piled substructure will be constructed using a top-down construction method. When the deck is complete, the area in front of the piles will be excavated and shotcrete placed between the piles to retain the existing fill behind.
Foundations	Abutment: Reinforced concrete piles are founded onto medium strength siltstone or better.
Articulation	Longitudinal and transverse forces from the deck are transferred to the substructure through the integral connection. The portal frame structure restrains the deck in both directions and these induced deck forces are transferred to the fill behind the abutments. In this instance the soil pressure behind the walls is utilised to resist longitudinal forces induced from both braking and earthquake effects.

7.1.3.1 Drainage

The location of the Moorebank Avenue Overbridge has impacted on the existing drainage regime of the road. Stormwater runoff is allowed to sheet flow over the fill embankment shoulder with no positive drainage provided.

The provision of the bridge will cause run off from the bridge deck to be concentrated and will need to be collected at the downstream end.

7.1.4 Anzac Creek Culvert

The culvert structure at Anzac Creek is approximately 20.1 m long and consists of an eight-cell 2.1 m by 1.8 m (internal dimensions) supported on a cast in-situ reinforced concrete base slab. Concrete apron slabs are provided both upstream and downstream of the culvert and form monolithic extensions to the base slab. These apron slabs provide stability to the wing walls. The roof slab of the culvert supports the rail tracks and ballast.

The cast in-situ base slab is approximately 4.81 m wide and 20.105 m long and cast on a 0.5% grade (falling upstream to downstream). The 450 mm thick base slab is cast on a 50 mm thick blinding layer. The final width and length of the base slab is dependent on the supplier's details of the crown units to be incorporated into the works.

The base slab is to be constructed as a continuous slab without expansion or contraction joints. Early thermal and shrinkage cracks are controlled by reinforcement provided in accordance with AS5100 and CIRIA C660 assuming full restraint conditions. The apron slabs and the base slab are made continuous through the provision of continuity reinforcement across the construction joint.

Pre-cast wing walls are placed on levelling shim pads and made structurally continuous with the apron slabs using a stitch pour. An isolation joint is provided at the interface between the wing walls and the end precast crown units to allow for differential movement. The joint gap is filled with a compressible filler board and sealed at the back to prevent fines from getting through the joint. Based on the results from the flood

modelling, rip rap scour protection is required. This will take the form of a downturn provided at the front of the apron slab. To satisfy environmental requirements, the rip rap has been extended to create a shallow "pool" both upstream and downstream of the apron slab.

The concrete and reinforcement properties for the Anzac Creek Culvert are outlined in Table 7.

Table 7 Concrete and Reinforcement Properties for the Anzac Creek Culvert

Design Parameter	Value
Concrete Properties	
Wing Walls	40 MPa
Base slab and Apron slab	40 MPa
Mass Concrete	20 MPa
Reinforcement Properties	
Deformed Bars – D500N Grade	500 MPa

7.1.4.1 Drainage

The deck has a 0.5% cross fall in the transverse direction and a selected fill material laid on top of the waterproofing membrane over the crown unit will facilitate a 0.5% long fall. The runoff will be collected at the downstream end of the culvert where there is a drainage trench beneath the ballast. At the lower end of the drainage trench there is a 200 mm thick concrete upstand which holds a 250 mm diameter pipe. This allows the runoff collection to be piped along and behind the wing wall to discharge onto the drainage system at the bottom of the embankment.

7.1.5 Signal Bungalow and Location Cases

Two pieces of essential rail utility infrastructure, specifically a signal bungalow and location cases, will be installed adjacent to the rail corridor. The signal bungalow is located near the IMEX Terminal Facility, while the location cases will be in the SME land.

7.1.5.1 Drainage

The signal bungalow comprises a hut measuring 4000 mm by 3100 mm that sits on a concrete slab footing of 5,160 mm by 6,000 mm. The bungalow is designed to comply with the flood levels. The location case is composed of a 2 mm aluminium grade 5052 cabinet that measures 1995 mm by 591 mm by 2065 mm.

No additional impacts to the local drainage regime are expected from these structure, beyond those previously assessed.

7.2 Landscaping

Hydroseeding is nominated for all batters within the Rail Link to maintain a low fuel. The seed mix nominated will be based upon what is available and where the seeding is to take place on the Project site. The seed mix will be confirmed in consultation with either the Landscape Architect and / or the Project Ecologist but will be based upon the suggested hydroseeding mix outlined in Appendix A.

7.3 Fencing, Gate and Signage

Fencing, Gate and Signage details can be found in the Approved for Construction Design Report – Fencing, Gate and Signage Package. Indicative fencing, gates, barriers and signage drawings have been provided in Appendix C.

7.3.1 Fencing

A boundary fence will provide security to the 3.8 km rail corridor to ensure access is restricted to authorised personnel only. The fence will be tied into the existing fencing of the SSFL Corridor and runs along both sides of the northern and southern connections from the rail corridor to the SSFL. This fencing continues to the proposed Georges River Bridge where it has been tied into the bridge abutments. East of the Georges River Bridge, the fencing will provide a boundary fence between the eastern abutments of the Georges River Bridge and the Moorebank Avenue Overbridge.

The fence will be chain link fabric 1800 mm in height with a maximum ground clearance of 80 mm. All pipe posts, bracing rails and stays shall be medium quality to AS 1163 Grade C250L0.

The extent of the rail corridor includes all rail assets, combined services route, cut and fill batters, retaining structures, cess and batter drains, access tracks, and all other components, to allow all operational and maintenance activities to be undertaken within the fence lines.

7.3.2 Gates

There are 15 gates allowing access into the rail corridor, including 4 m wide swing gates with signage along the shared access roads which allows for maintenance and emergency vehicle access.

Gates are provided where required to allow access to / from existing maintenance access roads, to drainage infrastructure, access to Georges River Bridge, Moorebank Avenue Overbridge, at Service Crossings, at the GWS detention basin, the GWS triangle of land, Anzac Creek Culvert and RailCorp Maintenance Access Road linking Moorebank Avenue to the East Hills Rail Corridor. Gates will be 4m wide to allow for maintenance and emergency vehicle access. All gate hinges will be constructed to prevent tampering, removal or damage in order to ensure that gates are of equal strength in construction to the remainder of the fencing. Where required, drop bolts, locking chains and padlocks shall be in accordance with the standard drawings showing the details.

7.3.3 Signage

Signage will meet the specifications of ARTC or Sydney Trains, as required. Signage includes:

- Rail Corridor Entry Signs (Pedestrian and Vehicles) – W560
- Network Control Boundary Signs
- Trackside Signage
- Limited Clearance warning signs
- Danger Sign – No Safe Place.

7.4 Erosion and Sediment Control

The overarching principals of erosion and sediment control are detailed within Section 6.4.

7.5 Noise

As per the EIS, no noise mitigation measures that require landscaping will be constructed on for the Project, however, provision for noise walls has been incorporated into the design along the entirety of the Rail Link in accordance with CoC C27.

7.6 Lighting

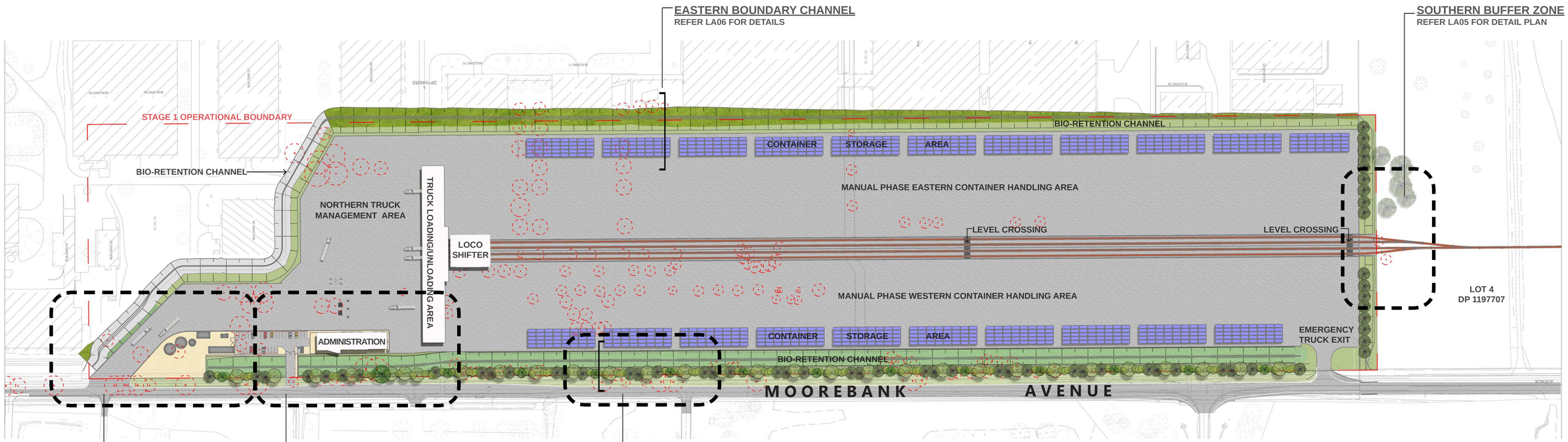
There are no lighting provisions for the rail corridor.

APPENDIX A

Landscape Plans

MOOREBANK PRECINCT EAST - STAGE 1

LANDSCAPE PLAN



DRAWING LIST

LA01 MPE Stage 1 Landscape Masterplan
LA02 Main Entrance Landscape Plan
LA03 Administration Facility Landscape Plan
LA04 Moorebank Avenue Landscape Plan
LA05 Southern Buffer Landscape Plan
LA06 Eastern Boundary Channel

LANDSCAPE DESIGN STATEMENT

The Moorebank Precinct East Stage 1 Proposal involves the development of an intermodal terminal facility including warehouses and distribution facilities, stormwater, landscaping, servicing and associated works east of Moorebank Avenue. The Proposal also includes a Rail link connection within an identified rail corridor connecting the southern area of the Moorebank Precinct development to the Southern Sydney Freight Line.

The Landscape focus of this stage is centres along the Moorebank Avenue frontage which forms a major connection to the Moorebank Precinct Proposal. This frontage incorporates a vegetated bio-retention channel which follows the length of the Moorebank Avenue frontage. Large native trees and various understorey planting endemic to the local area have been selected within this area to create a buffer and serve in minimising visual impacts from the surrounding urban landscape.

Given that the site is bounded to the south with existing vegetation communities, the landscape design serves to integrate the development with the surrounding environment by using tree, shrub and groundcover species that are local to the area to create habitat opportunities and links to the surrounding context. The proposed tree planting has been designed with the intent of creating a uniform canopy cover throughout the area.

Proposed plant species have been selected for their site-suitability with many species selected from Liverpool City Council's recommended plant list.

LEGEND

- STAGE 1 OPERATIONAL BOUNDARY
- EXISTING TREES TO BE RETAINED
- EXISTING TREES TO BE REMOVED
- PROPOSED TREES
- 'JUTE MAT THICK" WITH HYDROSEEDED GRASS MIX
- HYDROSEEDED GRASS MIX
- GEOFABRIC (ENKAMAT 20mm WITH HYDROSEEDED GRASS MIX)
- GEOFABRIC (ENKAMAT TYPE J WITH HYDROSEEDED GRASS MIX)
- BIO-RETENTION PLANTING MIX
- CONCRETE CHANNEL
- CONTAINER STORAGE
- RAIL LINK

NOTE: EXISTING TREES WILL BE RETAINED WHERE REASONABLE, FEASIBLE AND PRACTICAL TO DO SO

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DRAFT FOR REVIEW

Engineer: ARCADIS

Architect: REIDCAMPBELL

Project Manager: TACTICAL GROUP

Issue	Date	Description	Drawn	Checked
A	30.3.15	FOR DEVELOPMENT APPLICATION	KM	RL
B	21.4.17	UDLP REVIEW	BH	RL
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Project
MOOREBANK PRECINCT EAST - STAGE 1
IMEX TERMINAL, Moorebank, NSW

Project Address
Moorebank Avenue, Moorebank, NSW

Date	Revision	Job Number	Drawing Number
16.05.2017	C C	20170305	LA01

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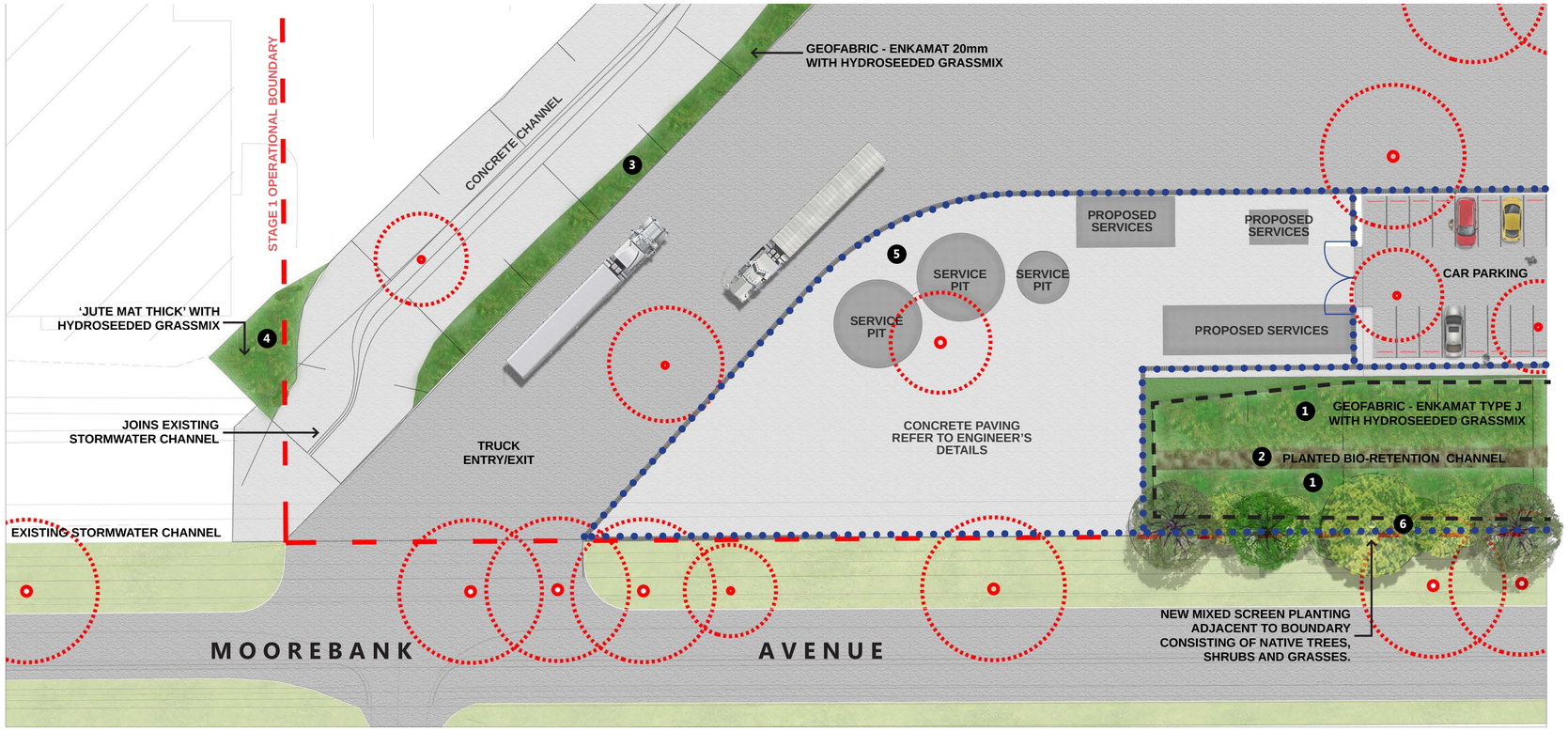
Drawing Name
MPE STAGE 1 - LANDSCAPE MASTERPLAN



LANDSCAPE PLAN

SCALE: 1:200 @ A1 (1:400 @ A3)

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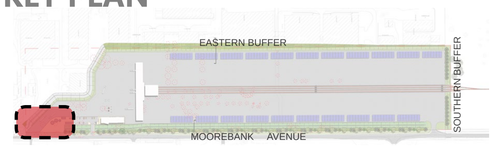
KEY PLAN



LEGEND

- STAGE 1 OPERATIONAL BOUNDARY
- PROPOSED SECURITY FENCE
- EXTENT OF BIO-RETENTION CHANNEL
- EXISTING TREES TO BE REMOVED
- PROPOSED TREES
- BIO-RETENTION PLANTING MIX
- HYDROSEEDED GRASS MIX (REFER TO PLANTING KEY)
- CONCRETE CHANNEL

NOTE: EXISTING TREES WILL BE RETAINED WHERE REASONABLE, FEASIBLE AND PRACTICAL TO DO SO

PLANTING KEY

1. GEOFABRIC - ENKAMAT TYPE J WITH HYDROSEEDED GRASSMIX
2. BIO-RETENTION PLANTING MIX
3. GEOFABRIC - ENKAMAT 20mm WITH HYDROSEEDED GRASSMIX
4. 'JUTE MAT THICK' WITH HYDROSEEDED GRASSMIX
5. LOW NATIVE GRASSES TO ENSURE SITE LINES ARE MAINTAINED
6. NATIVE SCREEN PLANTING

HYDROSEEDED GRASS MIX 1 3 4

BOTANICAL NAME	COMMON NAME	POT SIZE	MIX	EXPECTED MATURE HEIGHT	NATIVE
Groundcovers					
Aristida ramosa	*Wire Grass*	Seed	10%	1.2m	✓
Austrodanthonia fulva	*Wallaby Grass*	Seed	10%	0.5m	✓
Austrostipida pubescens	*Speargrass*	Seed	15%	1.2m	✓
Dianella revoluta	*Blue Flax-lily, Spreading Flax-lily*	Seed	5%	0.8m	✓
Dichondra repens	*Kidney-weed, Mercury Bay Weed*	Seed	10%	0.2m	✓
Erograstis brownii	*Brown's Lovegrass*	Seed	5%	0.3m	✓
Goodenia hederacea	*Ivy Goodenia*	Seed	5%	0.5m	✓
Lomandra cylindrica	*Needle Mat-Rush*	Seed	10%	0.3m	✓
Lomandra longifolia	*Spiny-headed Mat-rush*	Seed	10%	1.5m	✓
Microlaena stipoides	*Weeping Grass, Meadow Rice-grass*	Seed	10%	0.7m	✓
Themeda australis	*Kangaroo Grass*	Seed	10%	0.5m	✓

NATIVE GRASSES PLANT MIX 5

BOTANICAL NAME	COMMON NAME	POT SIZE	MIX	EXPECTED MATURE HEIGHT	NATIVE
Groundcovers					
Austrodanthonia fulva	*Wallaby Grass*	Viro Tube	4/m²	0.5m	✓
Dianella revoluta	*Blue Flax-lily, Spreading Flax-lily*	Viro Tube	4/m²	1.5m	✓
Imperata cylindrica	*Blady Grass*	Viro Tube	4/m²	0.5m	✓
Lomandra longifolia 'katrinus'	*Needle Mat-Rush*	Viro Tube	4/m²	1.2m	✓
Lomandra longifolia 'tanika'	*Spiny-headed Mat-rush*	Viro Tube	4/m²	0.6m	✓
Microlaena stipoides	*Weeping Grass, Meadow Rice-grass*	Viro Tube	4/m²	0.7m	✓
Themeda australis	*Kangaroo Grass*	Viro Tube	4/m²	0.5m	✓

BIO-RETENTION PLANT MIX 2

BOTANICAL NAME	COMMON NAME	POT SIZE	DENISTY	EXPECTED MATURE HEIGHT	NATIVE
Groundcovers					
Baumea articulata	Jointed Twig-rush	Viro Tube	4/m²	1.5m	✓
Bolboschoenus fluviatilis	Club-rush	Viro Tube	4/m²	1.5m	✓
Carex appressa	Tall Sedge	Viro Tube	4/m²	1m	✓
Carex breviculmis		Viro Tube	4/m²	0.4m	✓
Dampiera stricta	Blue Dampiera	Viro Tube	4/m²	0.3m	✓
Dichondra repens	Kidney-weed, Mercury Bay Weed	Viro Tube	4/m²	0.2m	✓
Gahnia clarkei	Tall Saw-sedge	Viro Tube	4/m²	1.8m	✓
Goodenia hederacea	Ivy Goodenia	Viro Tube	4/m²	0.5m	✓
Hemarthria uncinata	Mat Grass	Viro Tube	4/m²	1m	✓
Isolepis inundata	Water Club-rush	Viro Tube	4/m²	0.5m	✓
Juncus continuus	Rush	Viro Tube	4/m²	1m	✓
Juncus prismatocarpus	Branching Rush	Viro Tube	4/m²	0.6m	✓
Juncus usitatus	Common Rush	Viro Tube	4/m²	0.8m	✓
Laxmannia gracilis	Slender Wire Lily	Viro Tube	4/m²	0.3m	✓
Leptocarpus tenax		Viro Tube	4/m²	0.7m	✓
Lepyrodia scariosa		Viro Tube	4/m²	0.7m	✓
Microlaena stipoides	Weeping Grass, Meadow Rice-grass	Viro Tube	4/m²	0.7m	✓
Philydrum lanuginosum	Woolly Waterlily, Frogmouth	Viro Tube	4/m²	0.6m	✓
Schoenus apogon	Fluke Bog-rush, Common Bog-rush	Viro Tube	4/m²	0.3m	✓

WESTERN BUFFER PLANT SCHEDULE 6

BOTANICAL NAME	COMMON NAME	POT SIZE	DENSITY	EXPECTED MATURE HEIGHT	NATIVE	MIX
Trees						
Angophora floribunda	Rough-barked Apple	5L	As Shown	Up to 30m	✓	N/A
Eucalyptus crebra	Narrow-leaved Ironbark	5L	As Shown	Up to 30m	✓	N/A
Eucalyptus fibrosa	Red Ironbark	5L	As Shown	Up to 35m	✓	N/A
Eucalyptus longifolia	Woollybutt	5L	As Shown	Up to 35m	✓	N/A
Eucalyptus moluccana	Grey Box	5L	As Shown	Up to 25m	✓	N/A
Eucalyptus sclerophylla	Hard-leaved Scribbly Gum	5L	As Shown	Up to 15m	✓	N/A
Melaleuca decora	White Cloud Tree	5L	As Shown	Up to 10m	✓	N/A
Zelkova serrata 'Schmidlow' Wireless	Zelkova	100L	As Shown	Up to 9m		N/A
Shrubs						
Acacia brownii	Golden Prickly Moses	150mm	1	Up to 1m	✓	5%
Acacia falcata	Sickle Wattle	150mm	0.5	Up to 3m	✓	5%
Acacia parramattensis	Parramatta Green Wattle	150mm	0.5	Up to 6m	✓	5%
Banksia spinulosa	Hairpin Banksia	150mm	0.5	Up to 1.5m	✓	5%
Banksia oblongifilia	Fern-Leafed Banksia	150mm	1	Up to 1m	✓	5%
Callistemon linearis	Narrow-leaved Bottlebrush	150mm	0.5	Up to 2m	✓	10%
Dillwynia parvifolia		150mm	2	Up to 0.5m	✓	5%
Epacris micophylla	Coral Heath	150mm	1	Up to 1m	✓	10%
Hakea sericea	Needlebush, Silky Hakea	150mm	0.5	Up to 1.5m	✓	10%
Hakea teretifolia	Needlebush, Dagger Hakea	150mm	0.5	Up to 1.5m	✓	10%
Kunzea ambigua	Tick-bush	150mm	0.5	Up to 3m	✓	10%
Melaleuca nodosa	Ball Honey-myrtle	150mm	0.5	Up to 3m	✓	10%
Philotheca salsolifolia	Philotheca	150mm	1	Up to 1m	✓	5%
Pultenaea villosa	Hairy Bush-pea	150mm	0.5	Up to 2m	✓	5%
Groundcovers						
Austrodanthonia fulva	Wallaby Grass	Viro Tube	4/m²	0.5m	✓	10%
Billardiera scandens	Hairy Apple Berry	Viro Tube	2/m²	1.5m	✓	5%
Dampiera stricta	Blue Dampiera	Viro Tube	2/m²	0.3m	✓	5%
Dianella caerulea	Blue Flax-lily	Viro Tube	4/m²	0.8m	✓	10%
Dianella revoluta	Blue Flax-lily, Spreading Flax-lily	Viro Tube	4/m²	0.8m	✓	10%
Dichondra repens	Kidney-weed, Mercury Bay Weed	Viro Tube	4/m²	0.2m	✓	10%
Hardenbergia violacea	False Sarsaparilla	Viro Tube	2/m²	1m	✓	10%
Imperata cylindrica	Blady Grass	Viro Tube	4/m²	0.3m	✓	10%
Lomandra longifolia	Spiny-headed Mat-rush	Viro Tube	2/m²	1.5m	✓	10%
Microlaena stipoides	Weeping Grass, Meadow Rice-grass	Viro Tube	4/m²	0.7m	✓	10%
Themeda australis	Kangaroo Grass	Viro Tube	4/m²	0.5m	✓	10%

PLANT IMAGES

Eucalyptus tereticonis

Zelkova serrata 'Schmidlow'

Acacia parramattensis

Kunzea ambigua

Dianella caerulea

Dichondra repens

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Project
MOOREBANK PRECINCT EAST - STAGE 1
IMEX TERMINAL, Moorebank, NSW

Project Address
Moorebank Avenue, Moorebank, NSW

Date	Revision	Job Number	Drawing Number
16.05.2017	C C	20170305	LA02

Scale
1:200 @ A1 (1:400 @ A3)
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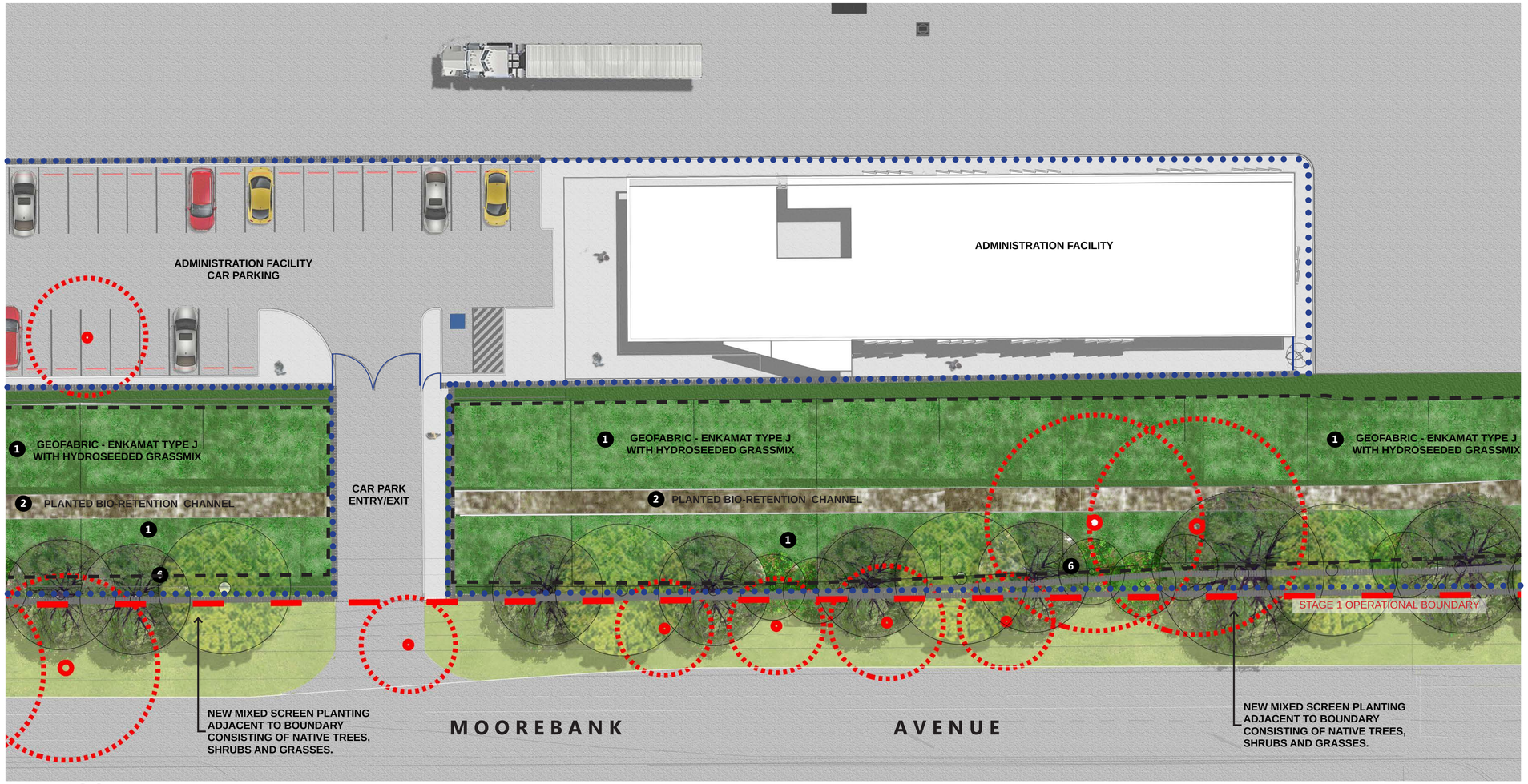
Drawing Name
MAIN ENTRANCE LANDSCAPE PLAN



LANDSCAPE PLAN

SCALE: 1:200 @ A1 (1:400 @ A3)

0 2 4 6 8 10 12 14 16 18 20M

KEY PLAN

LEGEND

- STAGE 1 OPERATIONAL BOUNDARY
- PROPOSED SECURITY FENCE
- EXTENT OF BIO-RETENTION CHANNEL
- EXISTING TREES TO BE REMOVED
- PROPOSED TREES
- BIO-RETENTION PLANTING MIX
- HYDROSEEDED GRASS MIX (REFER TO PLANTING KEY)

NOTE: EXISTING TREES WILL BE RETAINED WHERE REASONABLE, FEASIBLE AND PRACTICAL TO DO SO

PLANTING KEY

1. GEOFABRIC - ENKAMAT TYPE J WITH HYDROSEEDED GRASSMIX
2. BIO-RETENTION PLANTING MIX
6. NATIVE SCREEN PLANTING

PLANT IMAGES

Angophora floribunda

Eucalyptus sclerophylla

Acacia brownii

Banksia spinulosa

Lomandra longifolia

Microlaena stipoides

HYDROSEEDED GRASS MIX 1

BOTANICAL NAME	COMMON NAME	POT SIZE	MIX	EXPECTED MATURE HEIGHT	NATIVE
Groundcovers					
Aristida ramosa	*Wire Grass*	Seed	10%	1.2m	✓
Austrodanthonia fulva	*Wallaby Grass*	Seed	10%	0.5m	✓
Austrostipida pubescens	*Speargrass*	Seed	15%	1.2m	✓
Dianella revoluta	*Blue Flax-lily, Spreading Flax-lily*	Seed	5%	0.8m	✓
Dichondra repens	*Kidney-weed, Mercury Bay Weed*	Seed	10%	0.2m	✓
Eragrastis brownii	*Brown's Lovegrass*	Seed	5%	0.3m	✓
Goodenia hederacea	*Ivy Goodenia*	Seed	5%	0.5m	✓
Lomandra cylindrica	*Needle Mat-Rush*	Seed	10%	0.3m	✓
Lomandra longifolia	*Spiny-headed Mat-rush*	Seed	10%	1.5m	✓
Microlaena stipoides	*Weeping Grass, Meadow Rice-grass*	Seed	10%	0.7m	✓
Themeda australis	*Kangaroo Grass*	Seed	10%	0.5m	✓

BIO-RETENTION PLANT MIX 2

BOTANICAL NAME	COMMON NAME	POT SIZE	DENISTY	EXPECTED MATURE HEIGHT	NATIVE
Groundcovers					
Baumea articulata	Jointed Twig-rush	Viro Tube	4/m^2	1.5m	✓
Bolboschoenus fluviatilis	Club-rush	Viro Tube	4/m^2	1.5m	✓
Carex appressa	Tall Sedge	Viro Tube	4/m^2	1m	✓
Carex breviculmis		Viro Tube	4/m^2	0.4m	✓
Dampiera stricta	Blue Dampiera	Viro Tube	4/m^2	0.3m	✓
Dichondra repens	Kidney-weed, Mercury Bay Weed	Viro Tube	4/m^2	0.2m	✓
Gahnia clarkei	Tall Saw-sedge	Viro Tube	4/m^2	1.8m	✓
Goodenia hederacea	Ivy Goodenia	Viro Tube	4/m^2	0.5m	✓
Hemarthria uncinata	Mat Grass	Viro Tube	4/m^2	1m	✓
Isolepis inundata	Water Club-rush	Viro Tube	4/m^2	0.5m	✓
Juncus continuus	Rush	Viro Tube	4/m^2	1m	✓
Juncus prismatocarpus	Branching Rush	Viro Tube	4/m^2	0.6m	✓
Juncus usitatus	Common Rush	Viro Tube	4/m^2	0.8m	✓
Laxmannia gracilis	Slender Wire Lily	Viro Tube	4/m^2	0.3m	✓
Leptocarpus tenax		Viro Tube	4/m^2	0.7m	✓
Lepyrodia scariosa		Viro Tube	4/m^2	0.7m	✓
Microlaena stipoides	Weeping Grass, Meadow Rice-grass	Viro Tube	4/m^2	0.7m	✓
Philydrum lanuginosum	Woolly Waterlily, Frogmouth	Viro Tube	4/m^2	0.6m	✓
Schoenus apogon	Fluke Bog-rush, Common Bog-rush	Viro Tube	4/m^2	0.3m	✓

WESTERN BUFFER PLANT SCHEDULE 6

BOTANICAL NAME	COMMON NAME	POT SIZE	DENSITY	EXPECTED MATURE HEIGHT	NATIVE	MIX
Trees						
Angophora floribunda	Rough-barked Apple	5L	As Shown	Up to 30m	✓	N/A
Eucalyptus crebra	Narrow-leaved Ironbark	5L	As Shown	Up to 30m	✓	N/A
Eucalyptus fibrosa	Red Ironbark	5L	As Shown	Up to 35m	✓	N/A
Eucalyptus longifolia	Woollybutt	5L	As Shown	Up to 35m	✓	N/A
Eucalyptus moluccana	Grey Box	5L	As Shown	Up to 25m	✓	N/A
Eucalyptus sclerophylla	Hard-leaved Scribbly Gum	5L	As Shown	Up to 15m	✓	N/A
Melaleuca decora	White Cloud Tree	5L	As Shown	Up to 10m	✓	N/A
Zelkova serrata 'Schmidlow' Wireless	Zelkova	100L	As Shown	Up to 9m		N/A
Shrubs						
Acacia brownii	Golden Prickly Moses	150mm	1	Up to 1m	✓	5%
Acacia falcata	Sickle Wattle	150mm	0.5	Up to 3m	✓	5%
Acacia parramattensis	Parramatta Green Wattle	150mm	0.5	Up to 6m	✓	5%
Banksia spinulosa	Hairpin Banksia	150mm	0.5	Up to 1.5m	✓	5%
Banksia oblongifilia	Fern-Leafed Banksia	150mm	1	Up to 1m	✓	5%
Callistemon linearis	Narrow-leaved Bottlebrush	150mm	0.5	Up to 2m	✓	10%
Dillwynia parvifolia		150mm	2	Up to 0.5m	✓	5%
Epacris micophylla	Coral Heath	150mm	1	Up to 1m	✓	10%
Hakea sericea	Needlebush, Silky Hakea	150mm	0.5	Up to 1.5m	✓	10%
Hakea teretifolia	Needlebush, Dagger Hakea	150mm	0.5	Up to 1.5m	✓	10%
Kunzea ambigua	Tick-bush	150mm	0.5	Up to 3m	✓	10%
Melaleuca nodosa	Ball Honey-myrtle	150mm	0.5	Up to 3m	✓	10%
Philotheca salsolifolia	Philotheca	150mm	1	Up to 1m	✓	5%
Pultenaea villosa	Hairy Bush-pea	150mm	0.5	Up to 2m	✓	5%
Groundcovers						
Austrodanthonia fulva	Wallaby Grass	Viro Tube	4/m^2	0.5m	✓	10%
Billardiera scandens	Hairy Apple Berry	Viro Tube	2/m^2	1.5m	✓	5%
Dampiera stricta	Blue Dampiera	Viro Tube	2/m^2	0.3m	✓	5%
Dianella caerulea	Blue Flax-lily	Viro Tube	4/m^2	0.8m	✓	10%
Dianella revoluta	Blue Flax-lily, Spreading Flax-lily	Viro Tube	4/m^2	0.8m	✓	10%
Dichondra repens	Kidney-weed, Mercury Bay Weed	Viro Tube	4/m^2	0.2m	✓	10%
Hardenbergia violacea	False Sarsaparilla	Viro Tube	2/m^2	1m	✓	10%
Imperata cylindrica	Blady Grass	Viro Tube	4/m^2	0.3m	✓	10%
Lomandra longifolia	Spiny-headed Mat-rush	Viro Tube	2/m^2	1.5m	✓	10%
Microlaena stipoides	Weeping Grass, Meadow Rice-grass	Viro Tube	4/m^2	0.7m	✓	10%
Themeda australis	Kangaroo Grass	Viro Tube	4/m^2	0.5m	✓	10%

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DRAFT FOR REVIEW

Engineer: ARCADIS

Architect: REIDCAMPBELL

Project Manager: TACTICAL GROUP

Issue	Date	Description	Drawn	Checked
A	30.3.15	FOR DEVELOPMENT APPLICATION	KM	RL
B	21.4.17	UDLP REVIEW	BH	RL
C	16.5.17	UDLP REVIEW	CL	RL

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Project
MOOREBANK PRECINCT EAST - STAGE 1
IMEX TERMINAL, Moorebank, NSW

Project Address
Moorebank Avenue, Moorebank, NSW

Date	Revision	Job Number	Drawing Number
16.05.2017	C C	20170305	LA03

Scale
1:200 @ A1 (1:400 @ A3)
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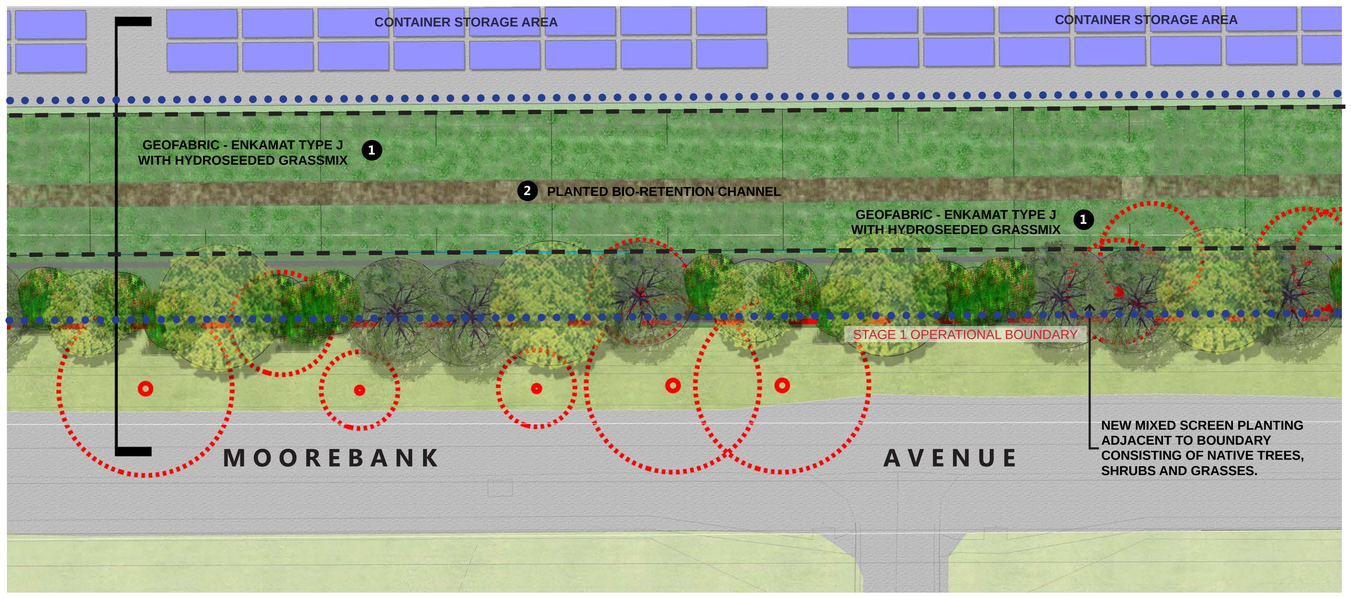
Drawing Name
ADMINISTRATION FACILITY LANDSCAPE PLAN



LANDSCAPE PLAN

SCALE: 1:200 @ A1 (1:400 @ A3)

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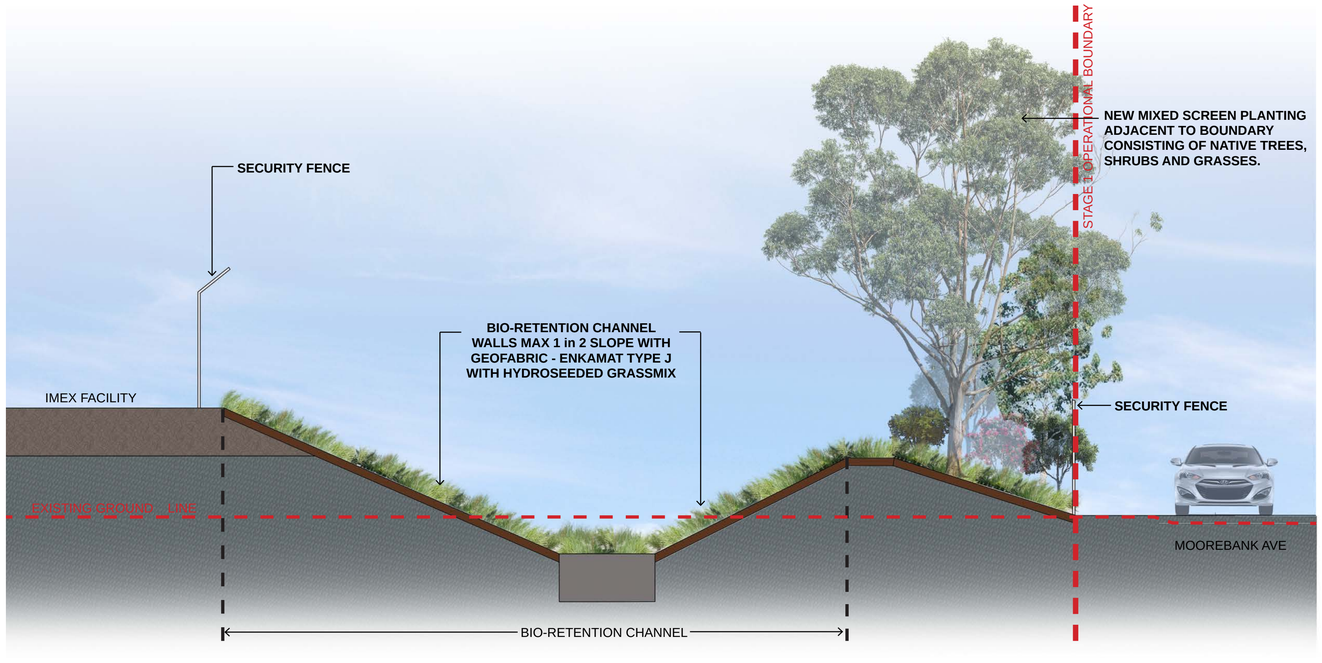


LANDSCAPE SECTION

SCALE: 1:50 @ A1 (1:100 @ A3)

HYDROSEEDED GRASS MIX 1

BOTANICAL NAME	COMMON NAME	POT SIZE	MIX	EXPECTED MATURE HEIGHT	NATIVE
Groundcovers					
Aristida ramosa	*Wire Grass*	Seed	10%	1.2m	✓
Austrodanthonia fulva	*Wallaby Grass*	Seed	10%	0.5m	✓
Austrostipida pubescens	*Speargrass*	Seed	15%	1.2m	✓
Dianella revoluta	*Blue Flax-lily, Spreading Flax-lily*	Seed	5%	0.8m	✓
Dichondra repens	*Kidney-weed, Mercury Bay Weed*	Seed	10%	0.2m	✓
Eragrastis brownii	*Brown's Lovegrass*	Seed	5%	0.3m	✓
Goodenia hederacea	*Ivy Goodenia*	Seed	5%	0.5m	✓
Lomandra cylindrica	*Needle Mat-Rush*	Seed	10%	0.3m	✓
Lomandra longifolia	*Spiny-headed Mat-rush*	Seed	10%	1.5m	✓
Microlaena stipoides	*Weeping Grass, Meadow Rice-grass*	Seed	10%	0.7m	✓
Themeda australis	*Kangaroo Grass*	Seed	10%	0.5m	✓

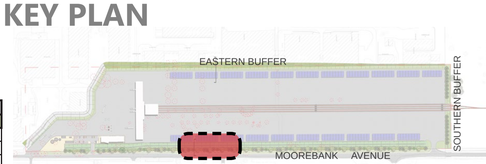
BIO-RETENTION PLANT MIX 2

BOTANICAL NAME	COMMON NAME	POT SIZE	DENISTY	EXPECTED MATURE HEIGHT	NATIVE
Groundcovers					
Baumea articulata	Jointed Twig-rush	Viro Tube	4/m^2	1.5m	✓
Bolboschoenus fluviatilis	Club-rush	Viro Tube	4/m^2	1.5m	✓
Carex appressa	Tall Sedge	Viro Tube	4/m^2	1m	✓
Carex breviculmis		Viro Tube	4/m^2	0.4m	✓
Dampiera stricta	Blue Dampiera	Viro Tube	4/m^2	0.3m	✓
Dichondra repens	Kidney-weed, Mercury Bay Weed	Viro Tube	4/m^2	0.2m	✓
Gahnia clarkei	Tall Saw-sedge	Viro Tube	4/m^2	1.8m	✓
Goodenia hederacea	Ivy Goodenia	Viro Tube	4/m^2	0.5m	✓
Hemarthria uncinata	Mat Grass	Viro Tube	4/m^2	1m	✓
Isolepis inundata	Water Club-rush	Viro Tube	4/m^2	0.5m	✓
Juncus continuus	Rush	Viro Tube	4/m^2	1m	✓
Juncus prismatocarpus	Branching Rush	Viro Tube	4/m^2	0.6m	✓
Juncus usitatus	Common Rush	Viro Tube	4/m^2	0.8m	✓
Laxmannia gracilis	Slender Wire Lily	Viro Tube	4/m^2	0.3m	✓
Leptocarpus tenax		Viro Tube	4/m^2	0.7m	✓
Lepyrodia scariosa		Viro Tube	4/m^2	0.7m	✓
Microlaena stipoides	Weeping Grass, Meadow Rice-grass	Viro Tube	4/m^2	0.7m	✓
Philydrum lanuginosum	Woolly Waterlily, Frogmouth	Viro Tube	4/m^2	0.6m	✓
Schoenus apogon	Fluke Bog-rush, Common Bog-rush	Viro Tube	4/m^2	0.3m	✓

WESTERN BUFFER PLANT SCHEDULE 6

BOTANICAL NAME	COMMON NAME	POT SIZE	DENSITY	EXPECTED MATURE HEIGHT	NATIVE	MIX
Trees						
Angophora floribunda	Rough-barked Apple	5L	As Shown	Up to 30m	✓	N/A
Eucalyptus crebra	Narrow-leaved Ironbark	5L	As Shown	Up to 30m	✓	N/A
Eucalyptus fibrosa	Red Ironbark	5L	As Shown	Up to 35m	✓	N/A
Eucalyptus longifolia	Woollybutt	5L	As Shown	Up to 35m	✓	N/A
Eucalyptus moluccana	Grey Box	5L	As Shown	Up to 25m	✓	N/A
Eucalyptus sclerophylla	Hard-leaved Scribbly Gum	5L	As Shown	Up to 15m	✓	N/A
Melaleuca decora	White Cloud Tree	5L	As Shown	Up to 10m	✓	N/A
Zelkova serrata 'Schmidlow' Wireless	Zelkova	100L	As Shown	Up to 9m		N/A
Shrubs						
Acacia brownii	Golden Prickly Moses	150mm	1	Up to 1m	✓	5%
Acacia falcata	Sickle Wattle	150mm	0.5	Up to 3m	✓	5%
Acacia parramattensis	Parramatta Green Wattle	150mm	0.5	Up to 6m	✓	5%
Banksia spinulosa	Hairpin Banksia	150mm	0.5	Up to 1.5m	✓	5%
Banksia oblongifilia	Fern-Leafed Banksia	150mm	1	Up to 1m	✓	5%
Callistemon linearis	Narrow-leaved Bottlebrush	150mm	0.5	Up to 2m	✓	10%
Dillwynia parvifolia		150mm	2	Up to 0.5m	✓	5%
Epacris micophylla	Coral Heath	150mm	1	Up to 1m	✓	10%
Hakea sericea	Needlebush, Silky Hakea	150mm	0.5	Up to 1.5m	✓	10%
Hakea teretifolia	Needlebush, Dagger Hakea	150mm	0.5	Up to 1.5m	✓	10%
Kunzea ambigua	Tick-bush	150mm	0.5	Up to 3m	✓	10%
Melaleuca nodosa	Ball Honey-myrtle	150mm	0.5	Up to 3m	✓	10%
Philotheca salsolifolia	Philotheca	150mm	1	Up to 1m	✓	5%
Pultenaea villosa	Hairy Bush-pea	150mm	0.5	Up to 2m	✓	5%
Groundcovers						
Austrodonthonia fulva	Wallaby Grass	Viro Tube	4/m^2	0.5m	✓	10%
Billardiera scandens	Hairy Apple Berry	Viro Tube	2/m^2	1.5m	✓	5%
Dampiera stricta	Blue Dampiera	Viro Tube	2/m^2	0.3m	✓	5%
Dianella caerulea	Blue Flax-lily	Viro Tube	4/m^2	0.8m	✓	10%
Dianella revoluta	Blue Flax-lily, Spreading Flax-lily	Viro Tube	4/m^2	0.8m	✓	10%
Dichondra repens	Kidney-weed, Mercury Bay Weed	Viro Tube	4/m^2	0.2m	✓	10%
Hardenbergia violacea	False Sarsaparilla	Viro Tube	2/m^2	1m	✓	10%
Imperata cylindrica	Blady Grass	Viro Tube	4/m^2	0.3m	✓	10%
Lomandra longifolia	Spiny-headed Mat-rush	Viro Tube	2/m^2	1.5m	✓	10%
Microlaena stipoides	Weeping Grass, Meadow Rice-grass	Viro Tube	4/m^2	0.7m	✓	10%
Themeda australis	Kangaroo Grass	Viro Tube	4/m^2	0.5m	✓	10%

KEY PLAN



LEGEND

- STAGE 1 OPERATIONAL BOUNDARY
- PROPOSED SECURITY FENCE
- EXTENT OF BIO-RETENTION CHANNEL
- EXISTING TREES TO BE REMOVED
- PROPOSED TREES
- BIO-RETENTION PLANTING MIX
- HYDROSEEDED GRASS MIX (REFER TO PLANTING KEY)
- CONTAINER STORAGE

NOTE: EXISTING TREES WILL BE RETAINED WHERE REASONABLE, FEASIBLE AND PRACTICAL TO DO SO

PLANTING KEY

1. GEOFABRIC - ENKAMAT TYPE J WITH HYDROSEEDED GRASSMIX
2. BIO-RETENTION PLANTING MIX
6. NATIVE SCREEN PLANTING

PLANT IMAGES

Eucalyptus fibrosa

Eucalyptus tereticonis

Acacia parramattensis

Melaleuca nodosa

Billardiera scandens

Hardenbergia violacea

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DRAFT FOR REVIEW

Engineer: ARCADIS

Architect: REIDCAMPBELL

Project Manager: TACTICAL GROUP

Issue	Date	Description	Drawn	Checked
A	30.3.15	FOR DEVELOPMENT APPLICATION	KM	RL
B	21.4.17	UDLP REVIEW	BH	RL
C	16.5.17	UDLP REVIEW	CL	RL

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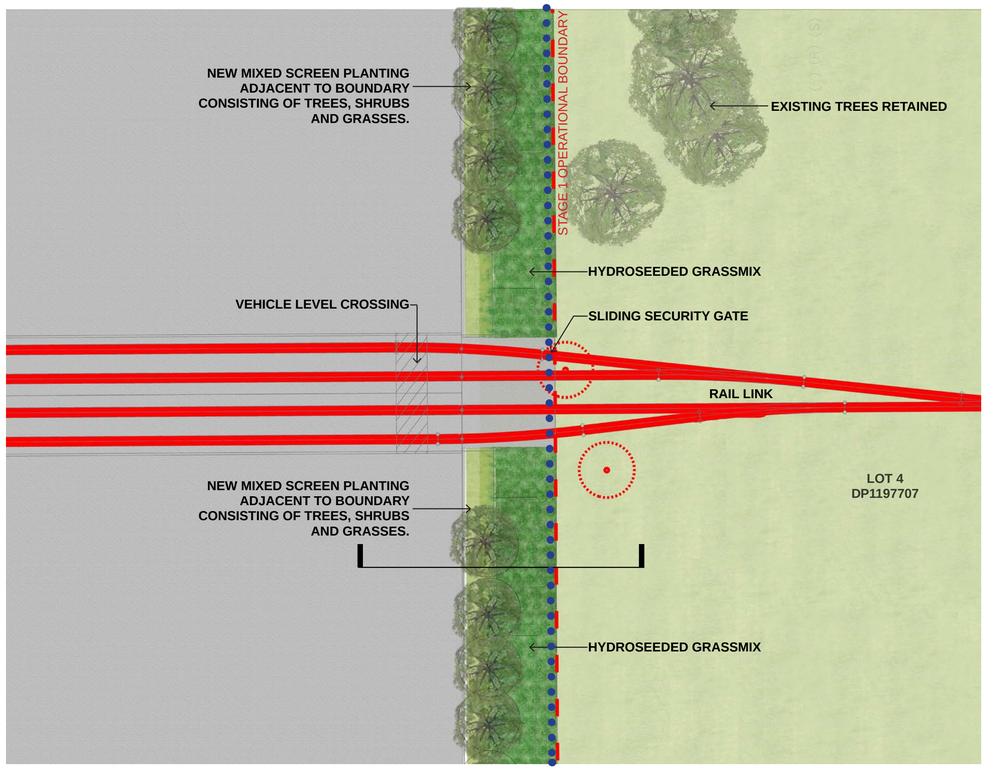
Project
MOOREBANK PRECINCT EAST - STAGE 1
IMEX TERMINAL, Moorebank, NSW

Project Address
Moorebank Avenue, Moorebank, NSW

Date	Revision	Job Number	Drawing Number
16.05.2017	**C C**	20170305	**LA04**

Scale: AS SHOWN

Drawing Name: **MOOREBANK AVENUE LANDSCAPE PLAN**



LANDSCAPE PLAN

SCALE: 1:400 @ A1 (1:800 @ A3)

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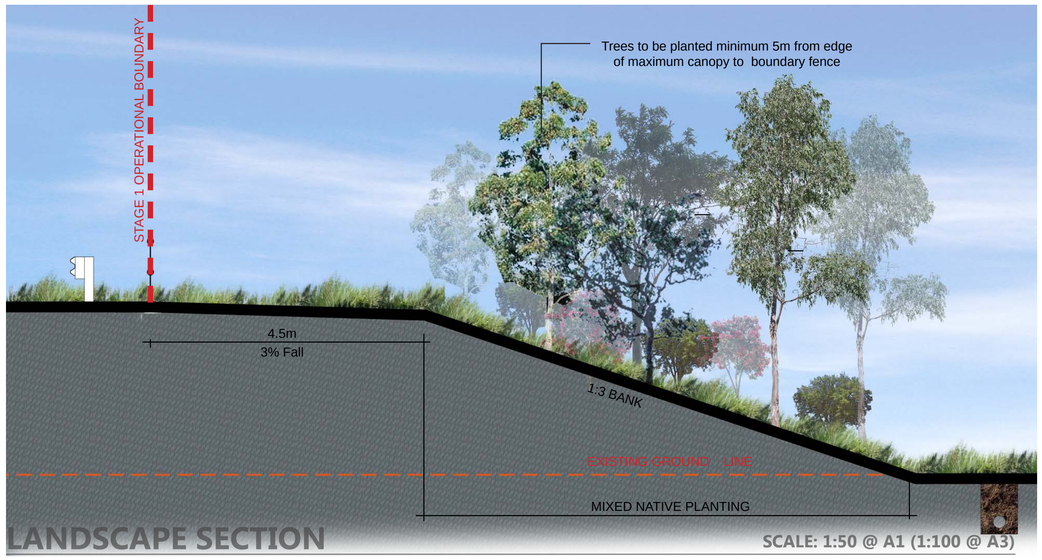

LANDSCAPE SECTION

SCALE: 1:50 @ A1 (1:100 @ A3)

HYDROSEEDED GRASS MIX

BOTANICAL NAME	COMMON NAME	POT SIZE	MIX	EXPECTED MATURE HEIGHT	NATIVE
Groundcovers					
Aristida ramosa	*Wire Grass*	Seed	10%	1.2m	✓
Austrodanthonia fulva	*Wallaby Grass*	Seed	10%	0.5m	✓
Austrostipida pubescens	*Speargrass*	Seed	15%	1.2m	✓
Dianella revoluta	*Blue Flax-lily, Spreading Flax-lily*	Seed	5%	0.8m	✓
Dichondra repens	*Kidney-weed, Mercury Bay Weed*	Seed	10%	0.2m	✓
Erograstis brownii	*Brown's Lovegrass*	Seed	5%	0.3m	✓
Goodenia hederacea	*Ivy Goodenia*	Seed	5%	0.5m	✓
Lomandra cylindrica	*Needle Mat-Rush*	Seed	10%	0.3m	✓
Lomandra longifolia	*Spiny-headed Mat-rush*	Seed	10%	1.5m	✓
Microlaena stipoides	*Weeping Grass, Meadow Rice-grass*	Seed	10%	0.7m	✓
Themeda australis	*Kangaroo Grass*	Seed	10%	0.5m	✓

SOUTHERN BUFFER PLANT SCHEDULE

BOTANICAL NAME	COMMON NAME	POT SIZE	DENSITY	EXPECTED MATURE HEIGHT	NATIVE	MIX
Trees						
Angophora bakeri	Narrow-leaved Apple	5L	As Shown	Up to 10m	✓	N/A
Eucalyptus crebra	Narrow-leaved Ironbark	5L	As Shown	Up to 30m	✓	N/A
Eucalyptus parramattensis	Parramatta Red Gum	5L	As Shown	Up to 15m	✓	N/A
Eucalyptus sclerophylla	Hard-leaved Scribbly Gum	5L	As Shown	Up to 15m	✓	N/A
Eucalyptus tereticornis	Forest Red Gum	5L	As Shown	Up to 25m	✓	N/A
Melaleuca decora	White Cloud Tree	5L	As Shown	Up to 10m	✓	N/A
Zelkova serrata 'Schmidlow' Wireless	Zelkova	100L	As Shown	Up to 9m		N/A
Shrubs						
Acacia brownii	Golden Prickly Moses	150mm	1	Up to 1m	✓	5%
Acacia falcata	Sickle Wattle	150mm	0.5	Up to 3m	✓	5%
Acacia parramattensis	Parramatta Green Wattle	150mm	0.5	Up to 4m	✓	5%
Callistemon linearis	Narrow-leaved Bottlebrush	150mm	0.5	Up to 2m	✓	10%
Dillwynia parvifolia		150mm	2	Up to 0.5m	✓	5%
Epacris micophylla	Coral Heath	150mm	1	Up to 1m	✓	10%
Hakea sericea	Needlebush, Silky Hakea	150mm	0.5	Up to 1.5m	✓	10%
Hakea teretifalia	Needlebush, Dagger Hakea	150mm	0.5	Up to 1.5m	✓	10%
Kunzea ambigua	Tick-bush	150mm	0.5	Up to 3m	✓	10%
Leptospermum polygalifolium	Tantoon	150mm	0.5	Up to 2m	✓	5%
Leptospermum trinervium	Slender Tea-tree	150mm	0.5	Up to 3m	✓	5%
Melaleuca nodosa	Ball Honey-myrtle	150mm	0.5	Up to 3m	✓	5%
Philotheca salsolifolia	Philotheca	150mm	1	Up to 1m	✓	5%
Pultenaea villosa	Hairy Bush-pea	150mm	0.5	Up to 2m	✓	10%
Groundcovers						
Austrodanthonia fulva	Wallaby Grass	Viro Tube	4/m^2	0.5m	✓	10%
Billardiera scandens	Hairy Apple Berry	Viro Tube	2/m^2	1.5m	✓	10%
Dampiera stricta	Blue Dampiera	Viro Tube	2/m^2	0.3m	✓	10%
Dianella caerulea	Blue Flax-lily	Viro Tube	4/m^2	0.8m	✓	10%
Dianella revoluta	Blue Flax-lily, Spreading Flax-lily	Viro Tube	4/m^2	0.8m	✓	10%
Dichondra repens	Kidney-weed, Mercury Bay Weed	Viro Tube	4/m^2	0.2m	✓	10%
Imperata cylindrica	Blady Grass	Viro Tube	4/m^2	0.3m	✓	10%
Lomandra longifolia	Spiny-headed Mat-rush	Viro Tube	2/m^2	1.5m	✓	10%
Microlaena stipoides	Weeping Grass, Meadow Rice-grass	Viro Tube	4/m^2	0.7m	✓	10%
Themeda australis	Kangaroo Grass	Viro Tube	4/m^2	0.5m	✓	10%

KEY PLAN

LEGEND

- STAGE 1 OPERATIONAL BOUNDARY
- PROPOSED SECURITY FENCE
- EXISTING TREES TO BE RETAINED
- EXISTING TREES TO BE REMOVED
- PROPOSED TREES
- HYDROSEEDED GRASS MIX (REFER TO PLANTING KEY)
- RAIL LINK

NOTE: EXISTING TREES WILL BE RETAINED WHERE REASONABLE, FEASIBLE AND PRACTICAL TO DO SO

PLANT IMAGES

Angophora bakeri

Callistemon linearis

Eucalyptus tereticonis

Melaleuca decora

Kunzea ambigua

Dianella caerulea

Eucalyptus crebra

Eucalyptus sclerophylla

Melaleuca nodosa

Acacia brownii

Leptospermum polygalifolium

Imperata Cylindrica

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DRAFT FOR REVIEW

Engineer: ARCADIS

Architect: REIDCAMPBELL

Project Manager: TACTICAL GROUP

Issue	Date	Description	Drawn	Checked
A	30.3.15	FOR DEVELOPMENT APPLICATION	KM	RL
B	21.4.17	UDLP REVIEW	BH	RL
C	16.5.17	UDLP REVIEW	CL	RL

Landscape Architect
groundink. landscape architecture + design visuals
ABN 55 163 025 45 ACN 163 025 456
Suite 201, 75 Archer St, Chatswood NSW 2067
Ph (02) 9411 3279 www.groundink.com.au

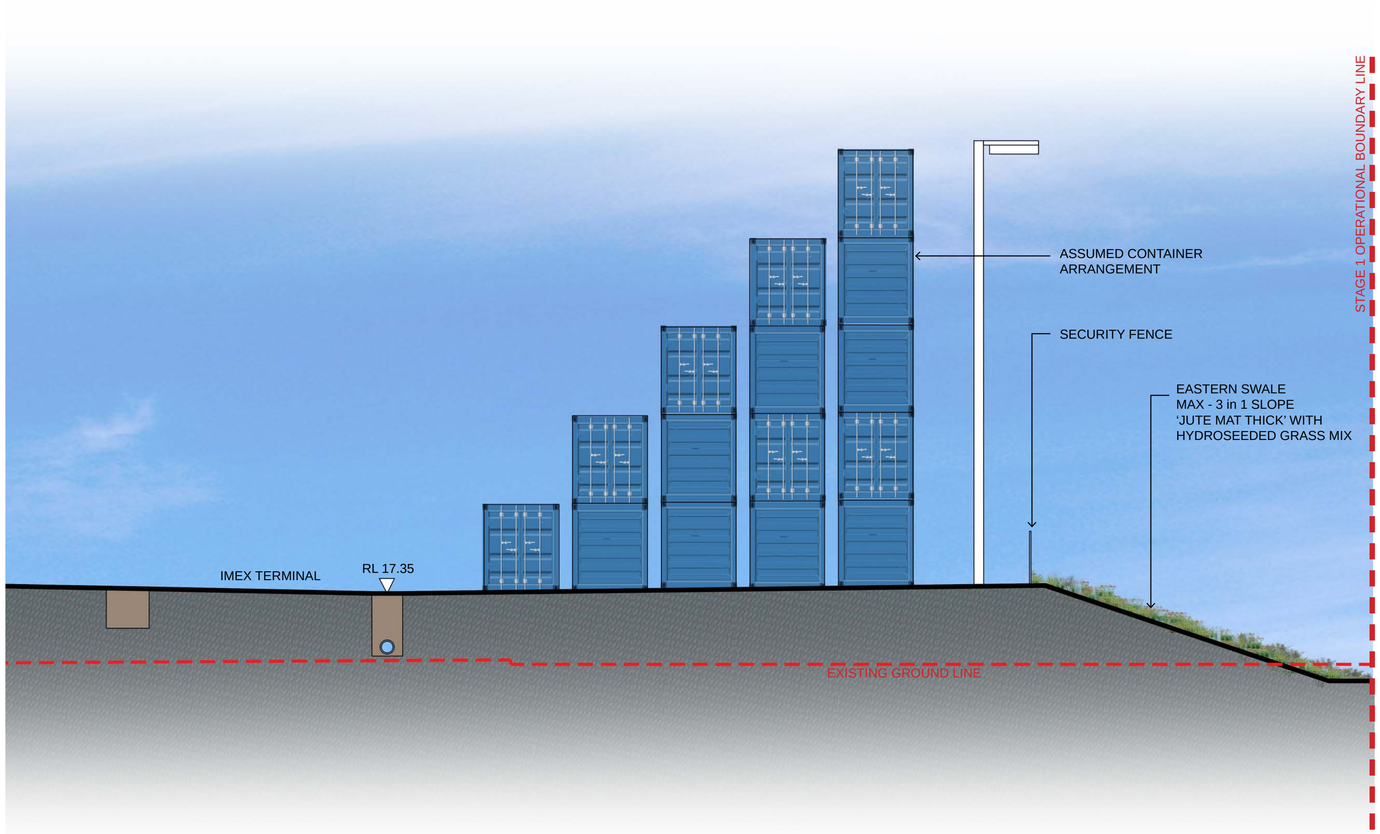
Project
MOOREBANK PRECINCT EAST - STAGE 1
IMEX TERMINAL, Moorebank, NSW

Project Address
Moorebank Avenue, Moorebank, NSW

Date	Revision	Job Number	Drawing Number
16.05.2017	**C C**	20170305	**LA05**

Scale: AS SHOWN

Drawing Name: **SOUTHERN BUFFER LANDSCAPE PLAN**



LANDSCAPE SECTION

SCALE: 1:100 @ A1 (1:200 @ A3)

HYDROSEEDED GRASS MIX

BOTANICAL NAME	COMMON NAME	POT SIZE	MIX	EXPECTED MATURE HEIGHT	NATIVE
Groundcovers					
Aristida ramosa	*Wire Grass*	Seed	10%	1.2m	✓
Austrodanthonia fulva	*Wallaby Grass*	Seed	10%	0.5m	✓
Austrostipida pubescens	*Speargrass*	Seed	15%	1.2m	✓
Dianella revoluta	*Blue Flax-lily, Spreading Flax-lily*	Seed	5%	0.8m	✓
Dichondra repens	*Kidney-weed, Mercury Bay Weed*	Seed	10%	0.2m	✓
Eragrostis brownii	*Brown's Lovegrass*	Seed	5%	0.3m	✓
Goodenia hederacea	*Ivy Goodenia*	Seed	5%	0.5m	✓
Lomandra cylindrica	*Needle Mat-Rush*	Seed	10%	0.3m	✓
Lomandra longifolia	*Spiny-headed Mat-rush*	Seed	10%	1.5m	✓
Microlaena stipoides	*Weeping Grass, Meadow Rice-grass*	Seed	10%	0.7m	✓
Themeda australis	*Kangaroo Grass*	Seed	10%	0.5m	✓

KEY PLAN

PLANT IMAGES

Aristida ramosa

Austrodanthonia fulva

Dianella revoluta

Dichondra repens

Lomandra cylindrica

Lomandra longifolia

Eragrostis brownii

Goodenia hederacea

Microlaena stipoides

Themeda australis

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DRAFT FOR REVIEW

Engineer: ARCADIS

Architect: REIDCAMPBELL

Project Manager: TACTICAL GROUP

Issue	Date	Description	Drawn	Checked
A	30.3.15	FOR DEVELOPMENT APPLICATION	KM	RL
B	21.4.17	UDLP REVIEW	BH	RL
C	16.5.17	UDLP REVIEW	CL	RL

Landscape Architect
groundink. landscape architecture - design visuals
ABN 55 163 025 45 ACN 163 025 456
Suite 201, 75 Archer St, Chatswood NSW 2067
Ph (02) 9411 3279 www.groundink.com.au

Project
MOOREBANK PRECINCT EAST - STAGE 1
IMEX TERMINAL, Moorebank, NSW

Project Address
Moorebank Avenue, Moorebank, NSW

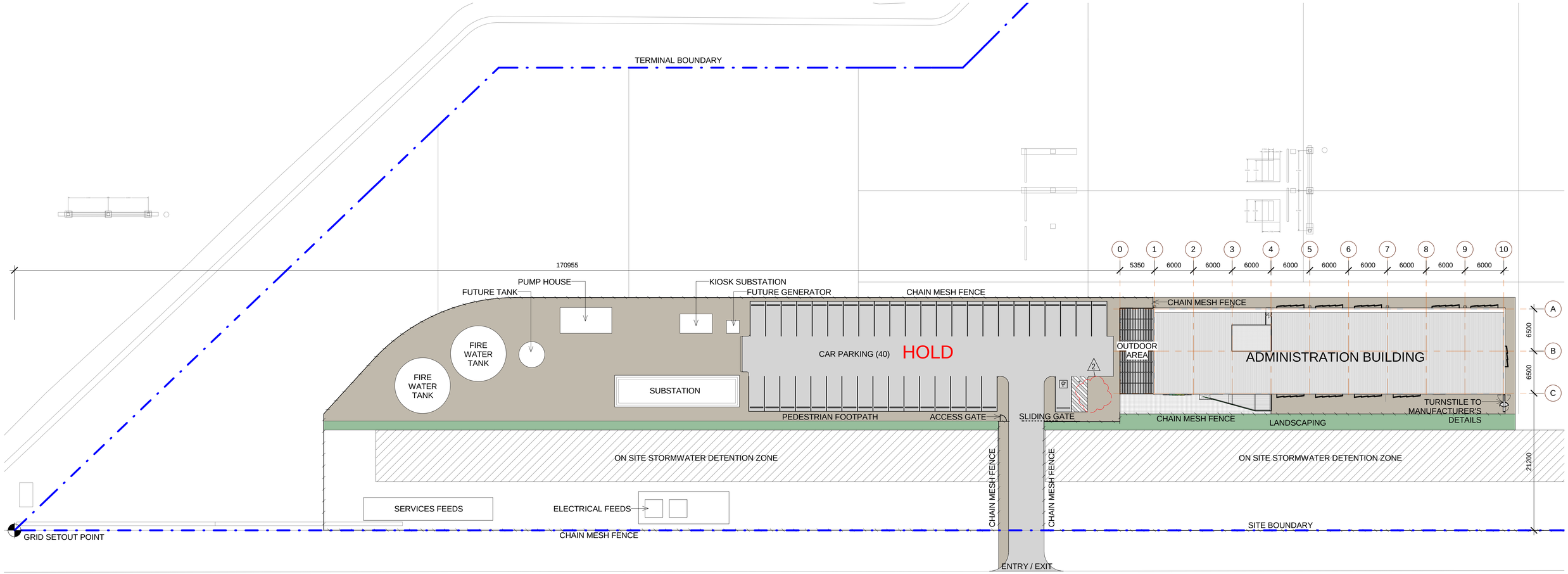
Date	Revision	Job Number	Drawing Number
16.05.2017	**C**	20170305	**LA06**
	C		

Scale: AS SHOWN

Drawing Name: **EASTERN BOUNDARY CHANNEL**

APPENDIX B

IMEX - Site Layout



0m 6m 12m 18m 24m 30m

SCALE 1:300 @ A1

LEGEND

SITE BOUNDARY

NOTES:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL CONSULTANT'S DOCUMENTATION INCLUDING SECTION J REPORT (AUTHOR ARCADIS) DATED 12/04/17 AND ACOUSTIC REPORT (AUTHOR WILKINSON MURRAY) DATED 26/04/17

Notes

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All work is to conform to relevant Australian Standards and other Codes as applicable, together with other Authorities' requirements and regulations.

Issue	Description	Date	Ver	Auth
1	CONSTRUCTION ISSUE	05/05/2017		
2	RESPONSE TO ACCESSIBILITY REPORT	13/06/2017		

REIDCAMPBELL
Architecture, Interiors, Planning
ACN 003 033 801 ABN 26 317 605 875
Level 15, 124 Walker Street
North Sydney NSW 2060 Australia
Tel: 61 02 9954 5011 Email: sydney@reidcampbell.com
Fax: 61 02 9954 4946 Web: www.reidcampbell.com

CONSTRUCTION DOCUMENTATION

Client: QUBE

Managing Consultant: TACTICAL GROUP

Project: **MOOREBANK INTERMODAL ADMINISTRATION BUILDING**
MOOREBANK AVENUE, MOOREBANK, NSW

Drawn: BF Checked: GP Print Date: 13-Jun-17 4:05:37 PM

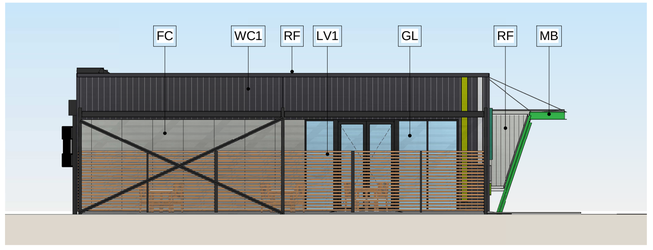
North Point

Drawing Title: SITE PLAN AND GRID SETOUT

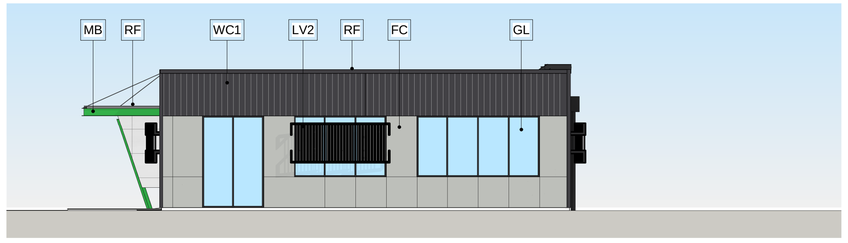
Drawing Number: 117101_A_CD_A100 Issue: 2

C:\Users\bfarah\Documents\115123_MB ADMIN BUILDING_CC_bfarah.rvt

IMEX - Administration Building

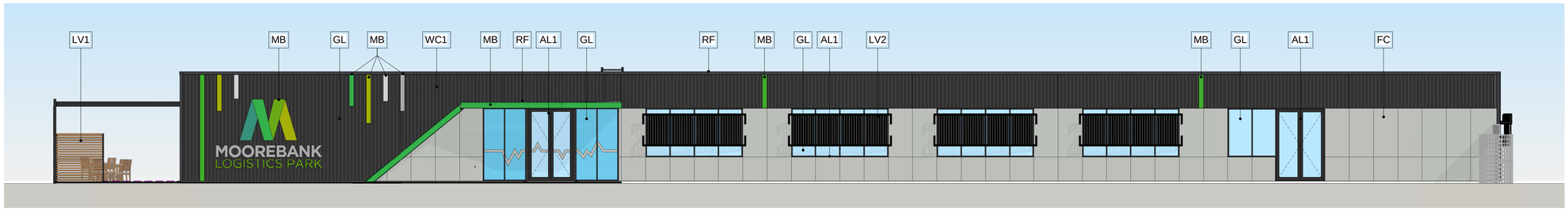


1 NORTH ELEVATION FINISHES
1 : 100

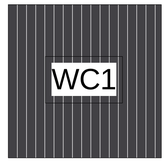


2 SOUTH ELEVATION FINISHES
1 : 100

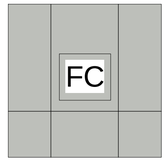
3 EAST ELEVATION FINISHES
1 : 100



4 WEST ELEVATION FINISHES
1 : 100



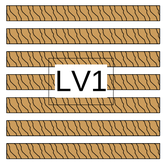
LYSAGHT CUSTOM ORB WALL SHEETING (VERTICAL)
COLORBOND "MONUMENT"



EXPRESSED JOINT FIBRECEMENT CLADDING
(EQUITONE OR EQUAL APPROVED. MIN. 10MM THICK)
PAINT TO MATCH DULUX "LYTTELTON"

METAL ROOF SHEETING
COLORBOND "SHALE GREY"

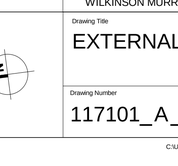
WINDOW AND DOOR FRAME
POWERCOAT FINISH
COLORBOND "MONUMENT"



TIMBER LOOK METAL PRIVACY SCREEN. STRATCO EZI-SLAT IN 'LIGHT OAK' OR EQUAL APPROVED.

METAL LOUVRES
TO MATCH COLORBOND "MONUMENT"

VISION GLASS



FEATURE PAINT TO MATCH MOOREBANK BRANDING COLORS

0m 2m 4m 6m 8m 10m

SCALE 1:100 @ A1

NOTES:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL CONSULTANT'S DOCUMENTATION INCLUDING SECTION J REPORT (AUTHOR ARCADIS) DATED 12/04/17 AND ACOUSTIC REPORT (AUTHOR WILKINSON MURRAY) DATED 26/04/17

Notes

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Figured dimensions to be taken in preference to scaled drawings.
All work is to conform to relevant Australian Standards and other Codes as applicable, together with other Authorities' requirements and regulations.

Issue	Description	Date	Ver	Auth
1	CONSTRUCTION ISSUE	05/05/2017		

REIDCAMPBELL
Architecture, Interiors, Planning
ACN 002 033 801 ABN 28 317 605 875
Level 15, 124 Walker Street
North Sydney NSW 2060 Australia
Tel: 61 02 9954 5011 Email: sydney@reidcampbell.com
Fax: 61 02 9954 4946 Web: www.reidcampbell.com

CONSTRUCTION DOCUMENTATION

Client: QUBE

Managing Consultant: TACTICAL GROUP

Project: **MOOREBANK INTERMODAL ADMINISTRATION BUILDING**
MOOREBANK AVENUE, MOOREBANK, NSW

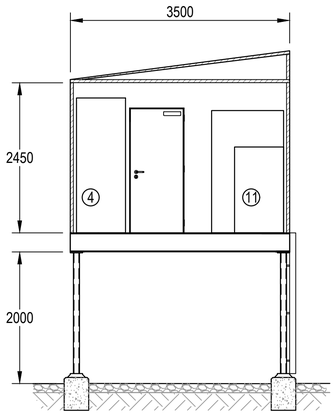
Drawn: BF Checked: PE Print Date: 08-May-17 9:09:44 AM

North Point

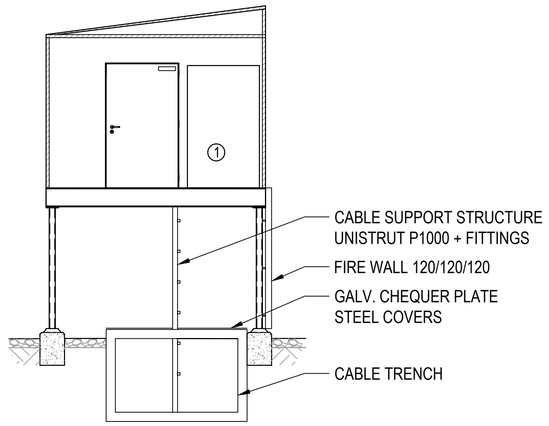
Drawing Title: EXTERNAL FINISHES

Drawing Number: 117101_A_CD_A320 Issue: 1

C:\Users\bfarid\Documents\115123_MB ADMIN BUILDING_CC_bfarid.rvt



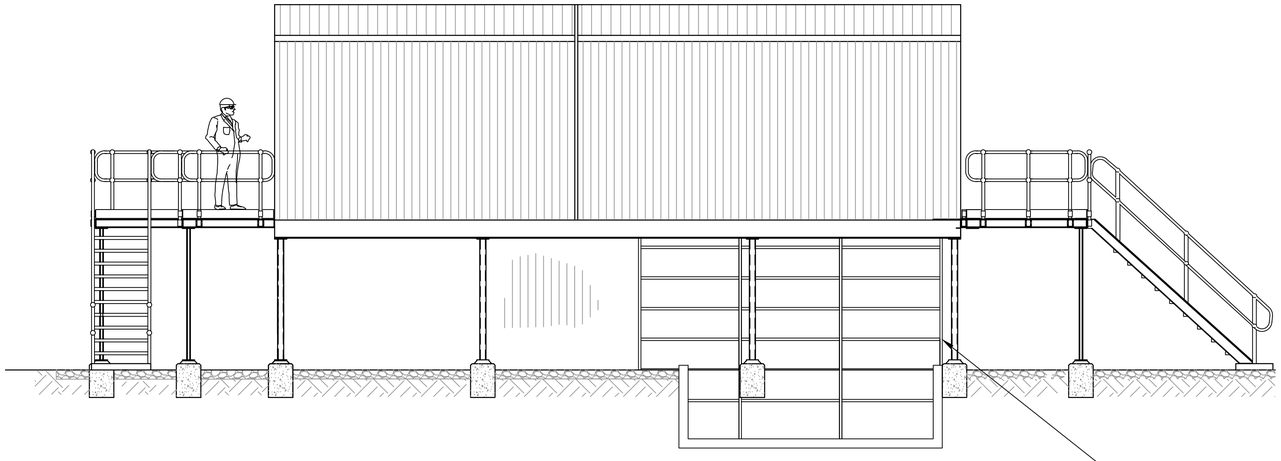
SECTION B
1:50



SECTION C
1:50

NOTES:

1. REFER DRAWING IMEX-ARC-EL-DWG-0020 FOR SWITCHROOM PLAN VIEW



SECTION D
1:50

1 0 1 2 3 4 5
SCALE OF METRES 1:50

Issue	Description	Date
04	ISSUED FOR CONSTRUCTION	28-04-17
03	ISSUED FOR CONSTRUCTION	28-04-17
02	DETAILED DESIGN UPDATE	21-04-17
01	DETAILED DESIGN	07-04-17

100mm on Original

Client
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE
TACTICAL GROUP

Status
ISSUED FOR CONSTRUCTION

Scales		Current Issue Signatures	
		Drawn	N.SINGH
Original Size	A1	Designed	A.NATHAN
Height Datum	N/A	Checked	B.LATHOURAS
Grid	N/A	Approved	P.HOGAN

Filename:

Project
MOOREBANK MPE STAGE 1
IMEX NUMBER 1

Title
ELECTRICAL
MANUAL OPERATION PHASE
NORTH SUBSTATION BUILDING
ELEVATIONS

ARCADIS
Arcadis Australia Pacific Pty Limited
Level 5, 141 Walker St
NORTH SYDNEY NSW 2060
ABN 76 104 485 289
Tel No: +61 2 8907 9000
Fax No: +61 2 8907 9001
arcadis.com

Volume No. M03
Project No. 10004975
Drawing No. IMEX -ARC-EL -DWG-0021 -
Issue 04

Rail Corridor - Signal Bungalow

EXISTING ARTC ROUTE TO GF17 LOC TO BE REMOVED. CABLES FROM GF17 TO BE RELOCATED TO PROPOSED ROUTE AND CONNECTED TO CORRESPONDING EQUIPMENT AS PER SIGNALLING DESIGN. REFER TO DRAWINGS N01031-PWD-DWG-UTL-0010 AND N01031-PWD-DWG-UTL-0011

Ø25mm ORANGE CONDUITS FOR 7/1.7 EARTH WIRE BURIED MIN 500mm DEEP

2mm ST. ST WIRE BURIED 300mm DEEP BETWEEN ALL EARTH STAKES

6x5m EARTH STAKES CONNECT 7/1.70 G/Y PVC CABLE AND 2mm ST. ST WIRE USING CAST COPPER CLAMPS

PIT 6

PIT 7

HANDRAIL

MIN 2m CLEARANCE

MAX 1500

ELD TEST EARTH STAKES 2m DEEP

224 EOL

222 EOL

TELEPHONE

EXISTING ELECTRODE TO BE REMOVED

EXISTING LOC GF17

EXISTING LOC GF17 POWER

BUILDING FOOTPRINT

4000

1000

3100

5160 NOM. SLAB

CONCRETE SLAB FOOTING

EXISTING PIT

RISER TO BE INSTALLED TO MATCH FINISHED GROUND LEVEL

DOOR TO OPEN ONTO EXISTING GF17 LOCATION

ALL EXISTING CABLES FROM EXISTING GF17 LOC AFFECTED BY THE REMOVAL OF EXISTING ARTC CONDUITS ARE TO BE RELOCATED TO PROPOSED CSR AND CONNECTED TO CORRESPONDING EQUIPMENT AS PER SIGNALLING DESIGN.

REFER TO DRAWINGS N01031-PWD-DWG-UTL-0010 AND N01031-PWD-DWG-UTL-0011

REDUNDANT SYDNEY TRAINS 33kV FEEDER 735 PIT AND ULX

GF16 SIGNAL AT CH39.590km

SOUTHERN

LEGEND

- S&C - PROPOSED SIGNALLING AND COMMS BURIED ROUTE
- 226 - EXISTING ARTC FIBRE CABLE ROUTE
- LR - LOCAL ROUTE
- SERVICES PIT
- EOL
- PHONE
- EXISTING FENCE TO BE REMOVED
- SYDNEY TRAINS BOUNDARY

PLAN
1:50

SCALE 1:50 (500 0 1000 2000mm)

NOTES

1. REPLACE EXISTING GF17 EARTH STAKES WITH NEW 5mm EARTH STAKES AND CONNECT EXISTING CABLES TO THE NEW EARTH STAKE.
2. SIGNALLING EARTH GRID TO BE INSTALLED TO THE REQUIREMENTS OF ESC-09-02.
3. ALL EARTH LEADS TO BE 7/1.7 GREEN AND YELLOW PVC INSULATED.
4. EARTH STAKES TO BE INSTALLED IN SUITABLE INSPECTION PIT (300mm x 300mm).

Plot Date: 13/6/2017 5:15:46 PM Office: AUSYD Filename: C:\PW_WORKING\ROSALIN.SAKSBANZ_PROD\D0309277\NN0031-PWD\DWG\UTL\0302.DWG

aurecon
www.aurecongroup.com

CLIENT: CPB CONTRACTORS | SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED

SCALE	SIZE
1:50	A1

DRAWN: M.BUCKLAND
DESIGNED: H.Y.LEUNG
CHECKED: A.SHAH

FOR CONSTRUCTION

APPROVED
DATE
A. O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

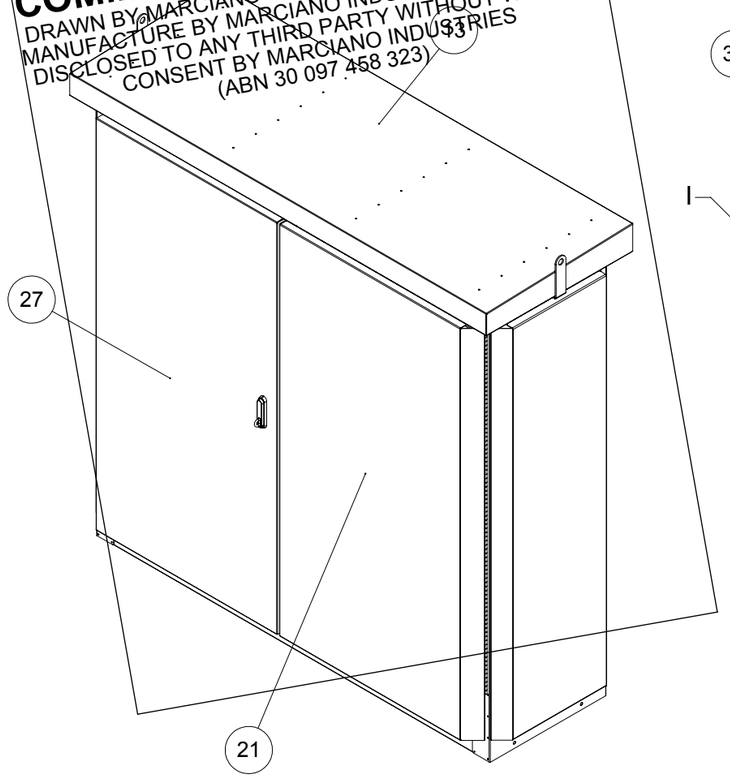
PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: SERVICES AND UTILITIES GF 16 GENERAL ARRANGEMENT

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	UTL	0302	

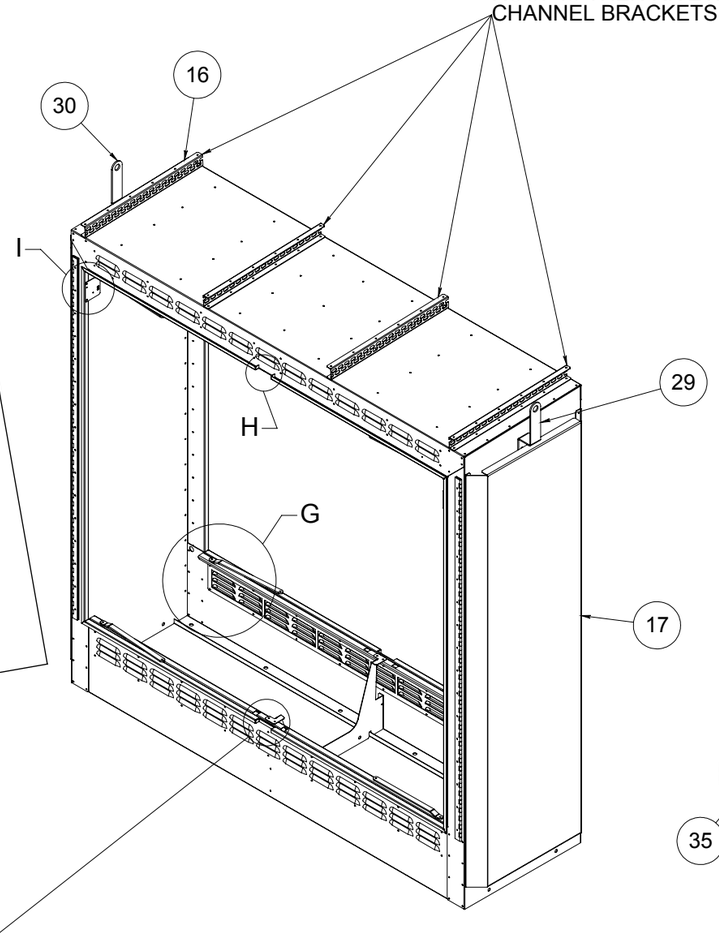
Rail Corridor - Location Case

COMMERCIAL IN CONFIDENCE
DRAWN BY MARCIANO INDUSTRIES FOR PURPOSE OF MANUFACTURE BY MARCIANO INDUSTRIES. NOT TO BE DISCLOSED TO ANY THIRD PARTY WITHOUT WRITTEN CONSENT BY MARCIANO INDUSTRIES (ABN 30 097 458 323)



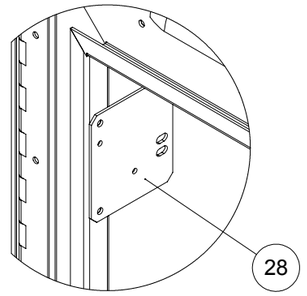
VIEW SHOWING COMPLETE ASSEMBLY

4 X CHANNEL BRACKETS RIVETED TO ENCLOSURE. ROOF IS THEN RIVETED TO CHANNEL BRACKETS.

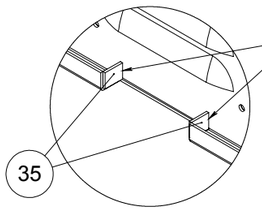


VIEW SHOWING DOORS AND ROOF REMOVED.

ITEM 28 TYPICAL IN ALL TOP CORNERS. RIVETED IN PLACE.

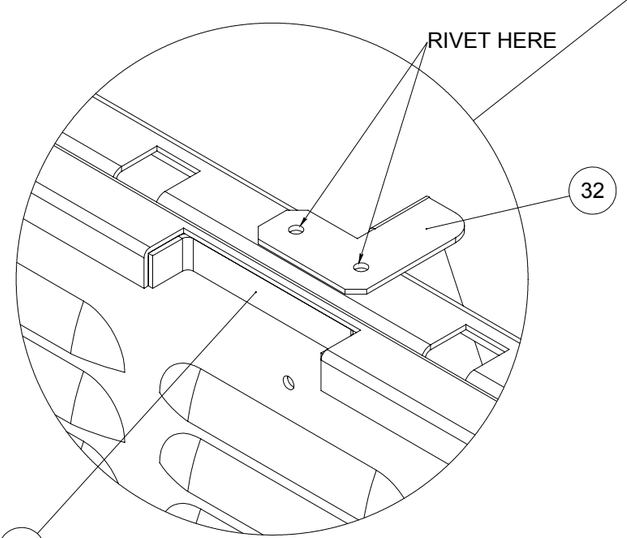


DETAIL I
SCALE 1 : 4



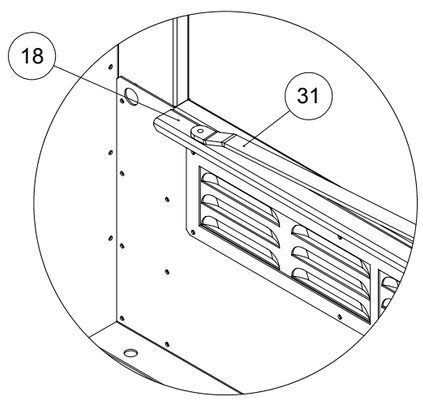
ITEM 35 FILL-IN PLATES WELDED INTO TOP FRAME SECTION.

DETAIL H
SCALE 1 : 4



ITEM 34 WELDED IN

DETAIL F
SCALE 1 : 2



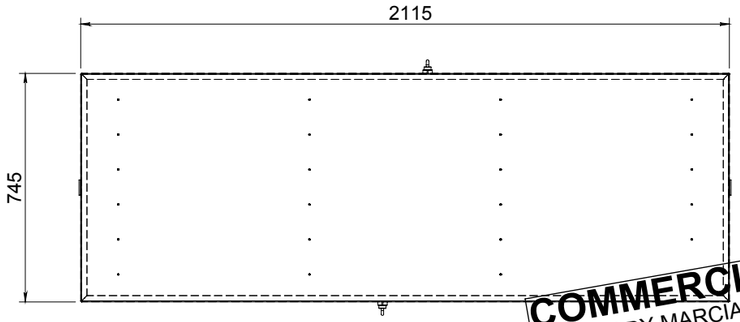
DETAIL G
SCALE 1 : 6.5

BOM Table					
ITEM NO.	PART No	REV	PART DESCRIPTION	MATERIAL	QTY.
1	50X15-SS-1586L-01		PIANO HINGE, 50 OPEN-SS-1586L-01	S.S	2
4	M6-20-SS		M6 X 20 STUD	S.S	4
5	1107-SS02-316		SWING HANDLE, PADLOCKABLE	S.S	2
6	----------		M10 HEX NUT	S.S	4
7	----------		M10 x 25-HEX HEAD	S.S	4
8	MAR-ARTC-D2001		MAR-ARTC-DBL-LHS-SHELL	AL5005-2.0	1
9	MAR-ARTC-D2002		MAR-ARTC-DBL-BOTTOM	AL5005-2.0	2
10	MAR-ARTC-D2003		MAR-ARTC-DBL-RHS-SHELL	AL5005-2.0	1
11	MAR-ARTC-D2004		MAR-ARTC-DBL-TOP	AL5005-2.0	1
12	MAR-ARTC-D2005		MAR-ARTC-DBL-LIGHT-BRACKET	AL5005-2.0	4
13	MAR-ARTC-D2006		MAR-ARTC-DBL-ROOF-SKIN1	AL5005-2.0	1
14	MAR-ARTC-D2007		MAR-ARTC-DBL-TOP-MESH-2	AL5005-2.0	1
15	MAR-ARTC-D2008		MAR-ARTC-DBL-TOP-MESH-1	AL5005-2.0	1
16	MAR-ARTC-D2017		MAR-ARTC-DBL-ROOF-BRKT	AL5005-2.0	4
17	MAR-ARTC-D2009		MAR-ARTC-DBL-SIDE-SKIN	AL5005-2.0	2
18	MAR-ARTC-D2010		MAR-ARTC-DBL-BOTTOM-MESH1	AL5005-2.0	2
19	MAR-ARTC-D2011		MAR-ARTC-DBL-DOOR_RH	AL5005-2.0	2
20	MAR-ARTC-D2012		MAR-ARTC-DBL-DOOR-MESH	AL5005-2.0	4
21	MAR-ARTC-D2013		MAR-ARTC-DBL-DOOR-SKIN_RH	AL5005-2.0	2
22	MAR-ARTC-D2014		MAR-ARTC-DBL-PAPER-HOLDER	AL5005-2.0	4
23	MAR-ARTC-D2015		MAR-ARTC-DBL-DOOR-STAY-A1	AL5005-3.0	4
24	MAR-ARTC-D2016		MAR-ARTC-DBL-DOOR-STAY-A	AL5005-3.0	4
25	SELECTRIX 9535		MAR-ARTC-DBL-SPRING BOLT BRKT		4
26	MAR-ARTC-D2022		MAR-ARTC-DBL-DOOR	AL5005-2.0	2
27	MAR-ARTC-D2023		MAR-ARTC-DBL-DOOR-SKIN	AL5005-2.0	2
28	MAR-ARTC-D2018		MAR-ARTC-DBL-SWITCH-PLATE	AL5005-2.0	4
29	MAR-ARTC-D2019		MAR-ARTC-DBL-LIFTING-LUG-2	SS3162B-5.0	1
30	MAR-ARTC-D2020		MAR-ARTC-DBL-LIFTING-LUG-1	SS3162B-5.0	1
31	MAR-ARTC-D2021		MAR-ARTC-DBL-LINK-BAR	SS3162B-5.0	8
32	MAR-ARTC-D2024		MAR-ARTC-DBL-RACK FRAME BOTT	AL5005-2.0	1
33	MAR-ARTC-D2025		MAR-ARTC-DBL-RACK FRAME TOP	AL5005-2.0	1
34	MAR-ARTC-D2026		MAR-ARTC-DBL-GUTTER-BRKT	AL5005-2.0	2
35	MAR-ARTC-D2027		MAR-ARTC-DBL-GUTTER-TOP-FILL-IN	AL5005-2.0	4

NOTES:

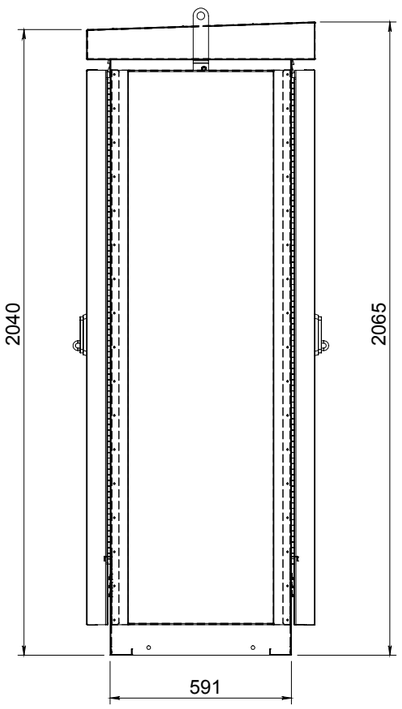
1. MATERIAL: 2mm ALUMINIUM GRADE 5052.
2. CONSTRUCTION: ENCLOSURE TO BE RIVETED TOGETHER.
3. ROOF TO HAVE CORNERS WELDED, DRESSED SMOOTH.
4. WELD CORNERS OF DOOR OPENING GUTTER RETURNS.
5. REMOVE ALL BURRS AND SHARP EDGES.
6. ALL HARDWARE IS TO BE SS 316.
7. HINGE: TO BE CONTINUOUS S.S PIANO HINGE
8. HANDLE: PADLOCKABLE S.S SWING HANDLE
9. THREE POINT LOCKING FITTED TO HANDLE
10. ALL LOUVRES TO HAVE MESH INTERNALLY FITTED BEHIND. MESH TO BE HELD IN BY FRAME RIVETED TO ENCLOSURE.
11. DOOR STAY BRACKETS TO BE S.S AND RIVETED TO DOORS
12. LIFTING BRACKETS TO BE BOLTED ON AND REMOVABLE IF NECESSARY.
13. PAPER HOLDER POCKETS RIVETED TO DOORS.
14. TOPHAT BRACKETS RIVETED TO UNDERSIDE AT TOP OF ENCLOSURE FOR FITTING LIGHTS. *(LIGHTS TO BE DONE BY OTHERS).*

COMMENTS:				JOB NUMBER:	THIRD ANGLE PROJECTION	MARCIANO INDUSTRIES — PH:- 02 4271 6777, FAX:- 02 4271 8089, 226 BERKELEY RD UNANDERRA
	NAME	SIGNATURE	DATE	FABRICATION TOLERANCES UNLESS OTHERWISE NOTED		USED FOR: ARTC SPECIFICATIONS
DRAWN	D.R.Bright		14/03/2013	UP TO 300mm	+ - 1.0mm	TITLE: LOCATION CASE DOUBLE WIDTH, DOUBLE SKIN
CHK'D				300mm TO 3000mm	+ - 2.0mm	
APPV'D				>3000mm	+ - 3.0mm	
MFG						
Q.A				MATERIAL: 2mm Aluminium 5052 U.N.O		DWG NO. MAR-ARTC-A2000 — A3 — REV: A
CLIENT:				WEIGHT:		SCALE:1:20 — SHEET 1 OF 5

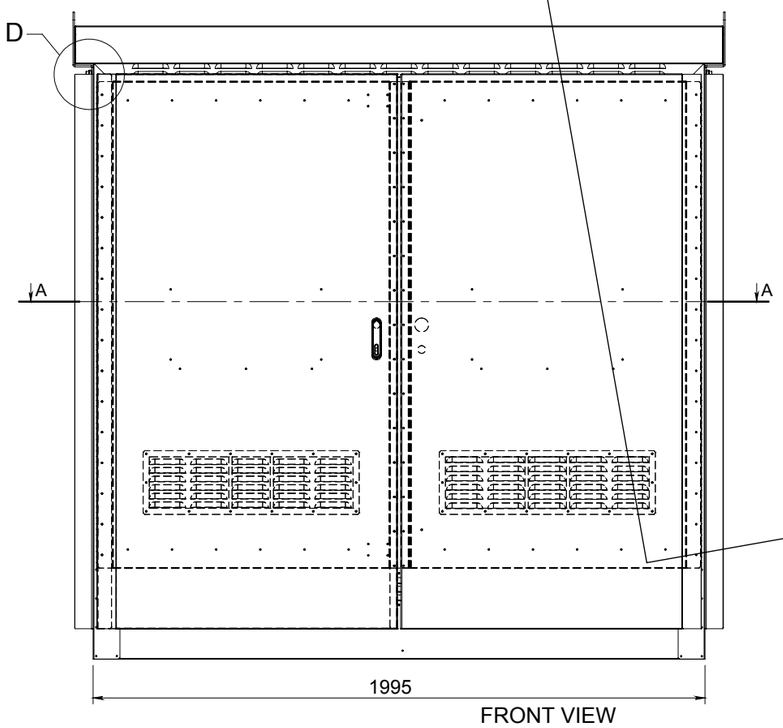


TOP VIEW

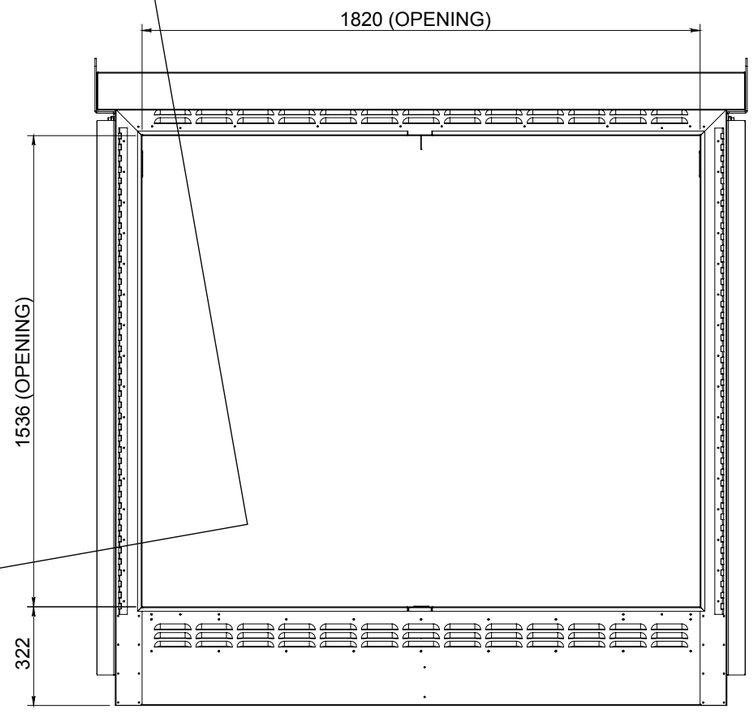
COMMERCIAL IN CONFIDENCE
DRAWN BY MARCIANO INDUSTRIES FOR PURPOSE OF MANUFACTURE BY MARCIANO INDUSTRIES. NOT TO BE DISCLOSED TO ANY THIRD PARTY WITHOUT WRITTEN CONSENT BY MARCIANO INDUSTRIES (ABN 30 097 458 323)



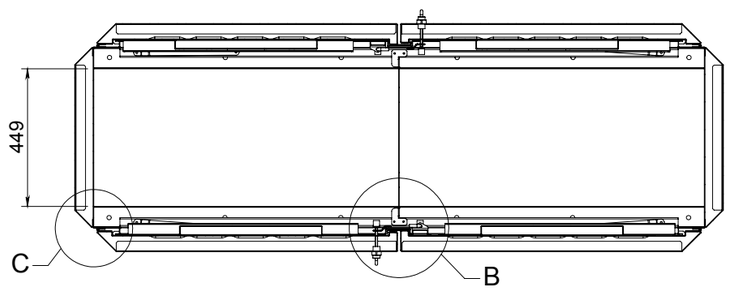
SIDE VIEW



FRONT VIEW



FRONT VIEW
DOORS REMOVED



SECTION A-A

COMMENTS:				JOB NUMBER:	THIRD ANGLE PROJECTION
	NAME	SIGNATURE	DATE	FABRICATION TOLERANCES UNLESS OTHERWISE NOTED	
DRAWN	D.R.Bright		14/03/2013	UP TO 300mm	+ - 1.0mm
CHK'D				300mm TO 3000mm	+ - 2.0mm
APPV'D				>3000mm	+ - 3.0mm
MFG					
Q.A				MATERIAL:	
CLIENT:				2mm Aluminium 5052 U.N.O	
				WEIGHT:	

MARCIANO INDUSTRIES
PH:- 02 4271 6777
FAX:- 02 4271 8089
226 BERKELEY RD
UNANDERRA

USED FOR: ARTC SPECIFICATIONS

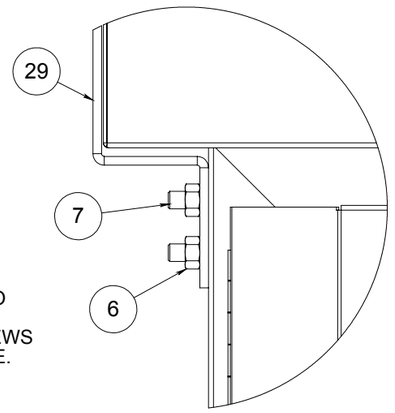
TITLE: LOCATION CASE
SINGLE WIDTH, DOUBLE SKIN

DWG NO. MAR-ARTC-A2000

A3

REV: A

SCALE:1:20

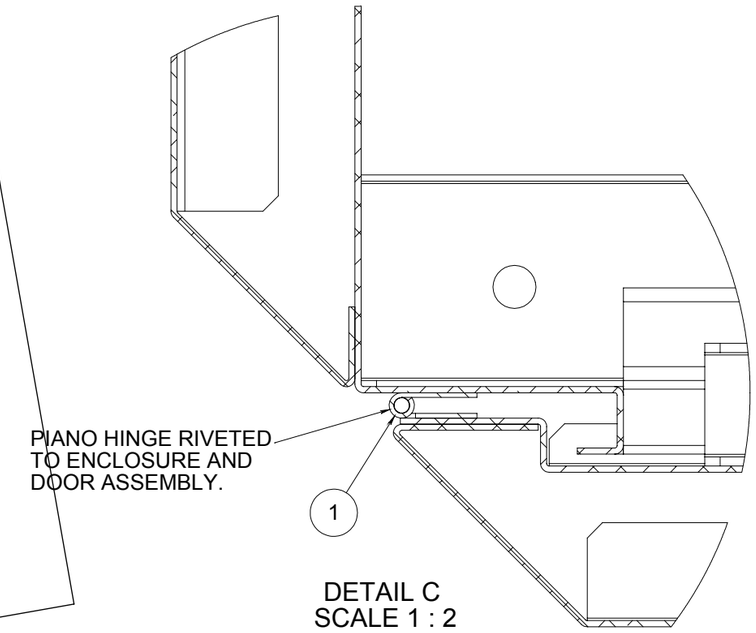


(DETAIL D)
WELD M10 NUTS TO
LIFTING BRACKET.
M10 X 25 SET SCREWS
FIXED FROM INSIDE.

SIDE SKIN REMOVED FOR CLARITY

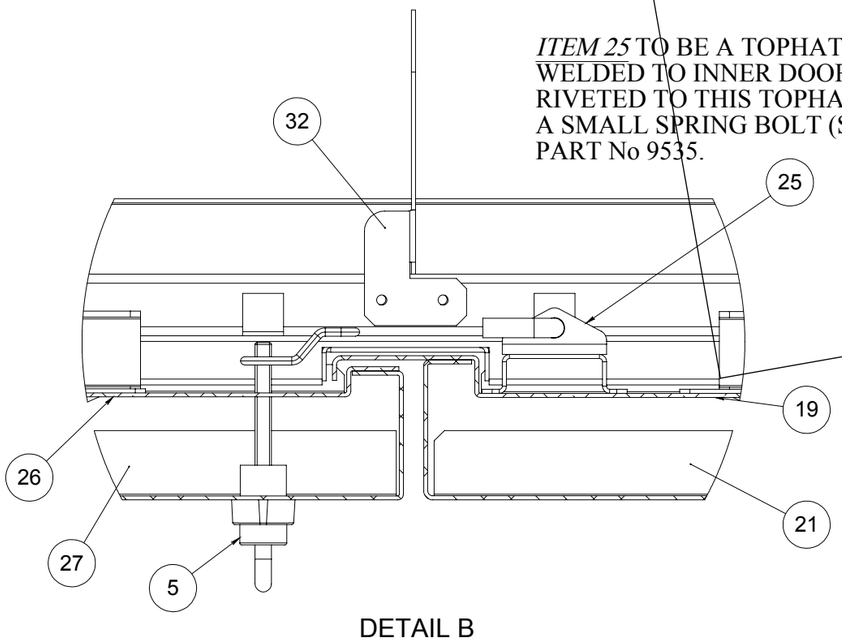
COMMERCIAL IN CONFIDENCE
DRAWN BY MARCIANO INDUSTRIES FOR PURPOSE OF MANUFACTURE BY MARCIANO INDUSTRIES. NOT TO BE DISCLOSED TO ANY THIRD PARTY WITHOUT WRITTEN CONSENT BY MARCIANO INDUSTRIES
(ABN 30 097 458 323)

DETAIL D
SCALE 1 : 3.5



DETAIL C
SCALE 1 : 2

ITEM 25 TO BE A TOPHAT BRACKET
WELDED TO INNER DOOR PANEL.
RIVETED TO THIS TOPHAT WILL BE
A SMALL SPRING BOLT (SELECTRIX
PART No 9535.



DETAIL B
SCALE 1 : 3

COMMENTS:				JOB NUMBER:	THIRD ANGLE PROJECTION
	NAME	SIGNATURE	DATE	FABRICATION TOLERANCES UNLESS OTHERWISE NOTED	
DRAWN	D.R.Bright		14/03/2013	UP TO 300mm	+ - 1.0mm
CHK'D				300mm TO 3000mm	+ - 2.0mm
APPV'D				>3000mm	+ - 3.0mm
MFG					
Q.A				MATERIAL: 2mm Aluminium 5052 U.N.O	
CLIENT:				WEIGHT:	

MARCIANO INDUSTRIES
PH:- 02 4271 6777
FAX:- 02 4271 8089
226 BERKELEY RD
UNANDERRA

USED FOR: ARTC SPECIFICATIONS

TITLE: LOCATION CASE
SINGLE WIDTH, DOUBLE SKIN

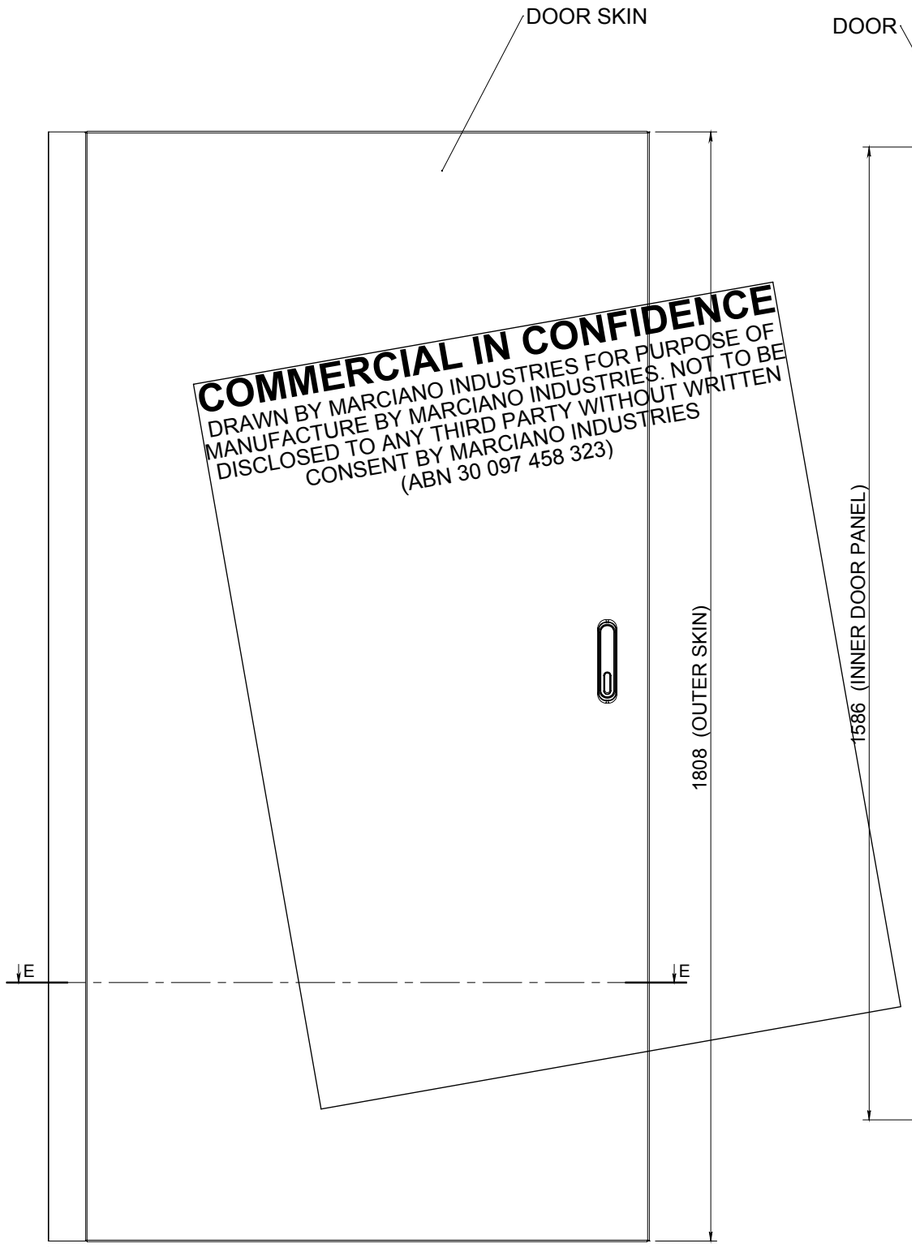
DWG NO. MAR-ARTC-A2000

A3

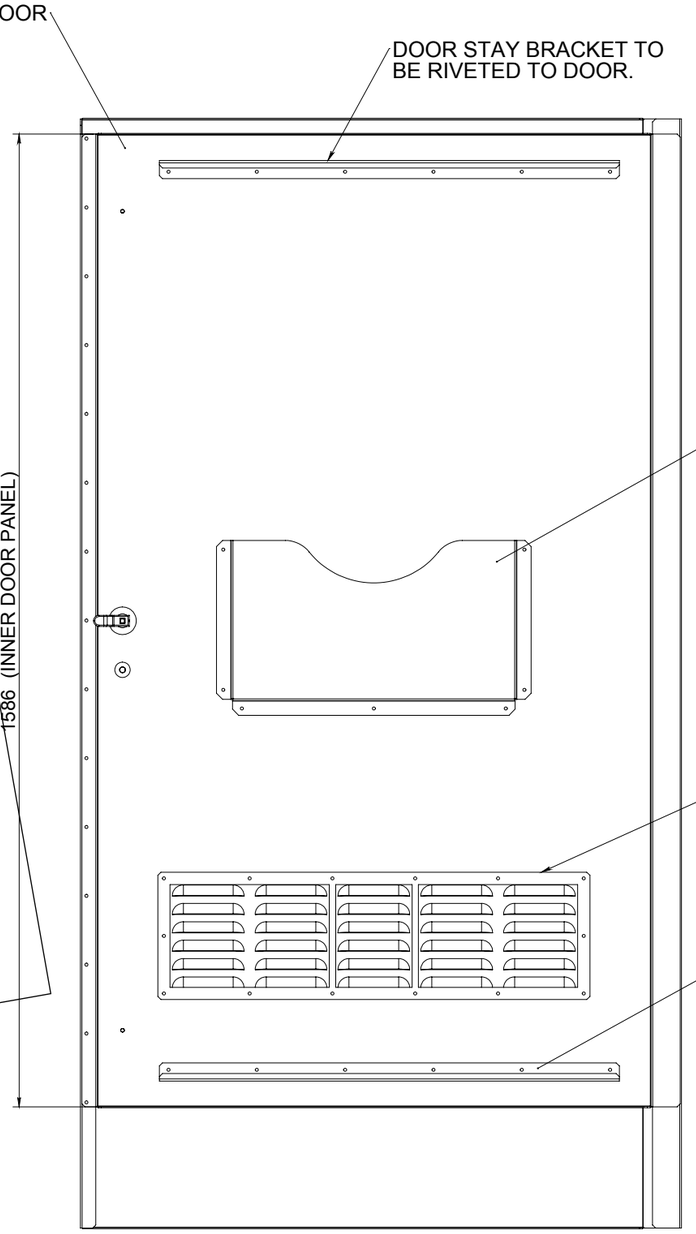
REV: A

SCALE:1:20

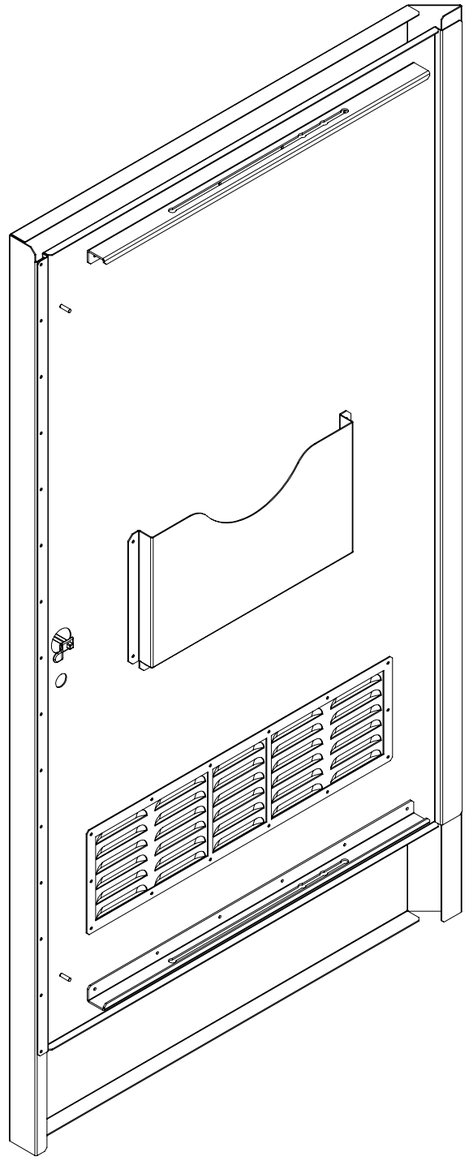
COMMERCIAL IN CONFIDENCE
DRAWN BY MARCIANO INDUSTRIES FOR PURPOSE OF MANUFACTURE BY MARCIANO INDUSTRIES. NOT TO BE DISCLOSED TO ANY THIRD PARTY WITHOUT WRITTEN CONSENT BY MARCIANO INDUSTRIES
(ABN 30 097 458 323)



FRONT VIEW

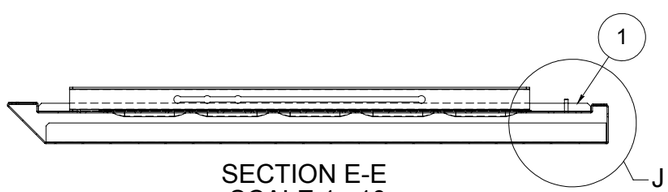


REAR VIEW

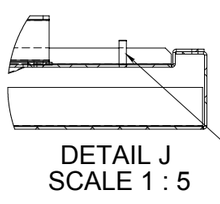


NOTE:

1. OUTER SKIN TO BE RIVETED TO INNER DOOR PANEL.



SECTION E-E
SCALE 1 : 10



DETAIL J
SCALE 1 : 5

M6 X 20 STUD PRESS FITTED TO INNER PANEL TO SECURE ROD GUIDE.

COMMENTS:				JOB NUMBER:	THIRD ANGLE PROJECTION
	NAME	SIGNATURE	DATE	FABRICATION TOLERANCES UNLESS OTHERWISE NOTED	
DRAWN	D.R.Bright		14/03/2013	UP TO 300mm	+ - 1.0mm
CHK'D				300mm TO 3000mm	+ - 2.0mm
APPV'D				>3000mm	+ - 3.0mm
MFG					
Q.A				MATERIAL: 2mm Aluminium 5052 U.N.O	
CLIENT:				WEIGHT:	

MARCIANO INDUSTRIES
PH:- 02 4271 6777
FAX:- 02 4271 8089
226 BERKELEY RD
UNANDERRA

USED FOR: ARTC SPECIFICATIONS

TITLE: LOCATION CASE
SINGLE WIDTH, DOUBLE SKIN

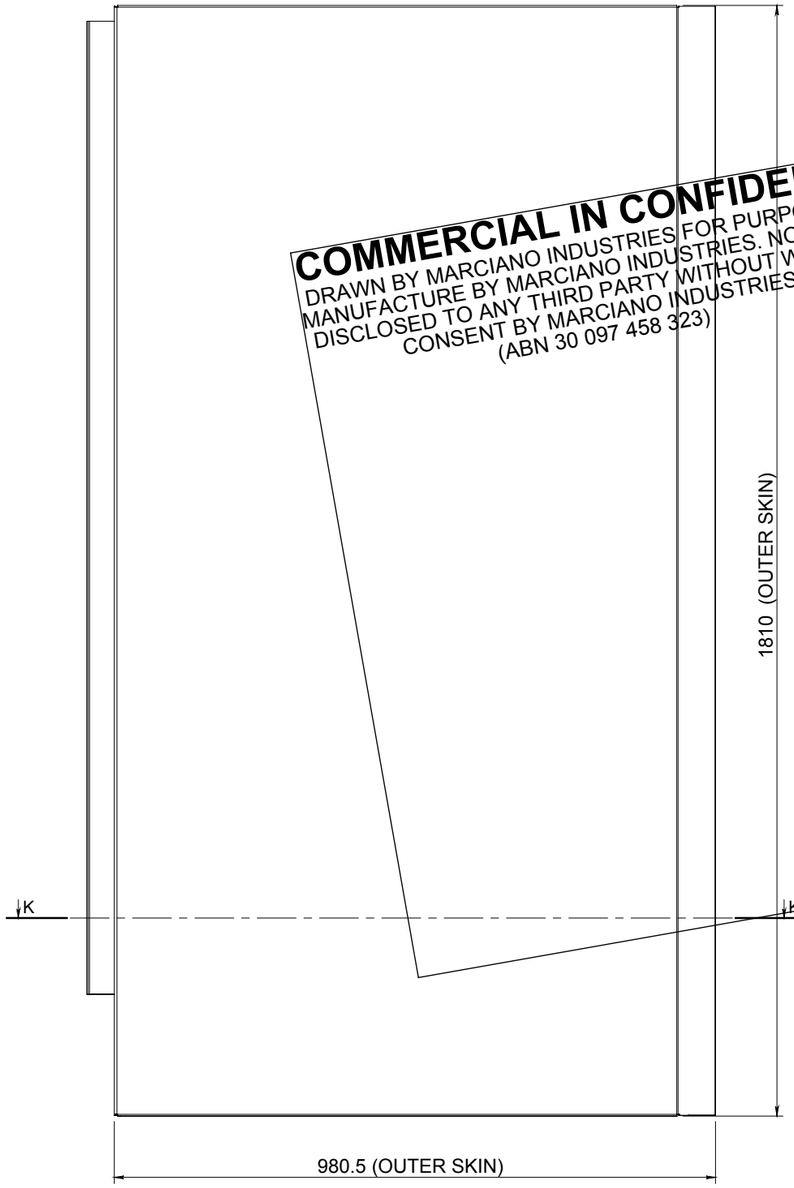
DWG NO. MAR-ARTC-A2300

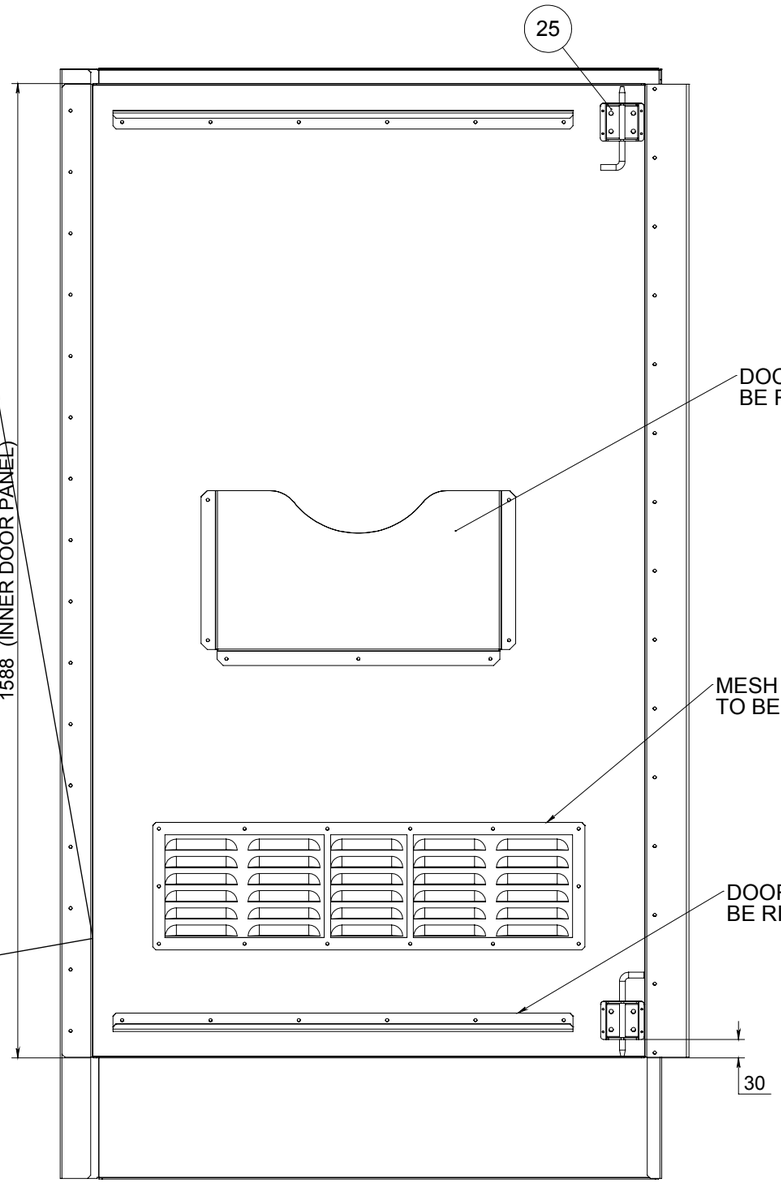
A3

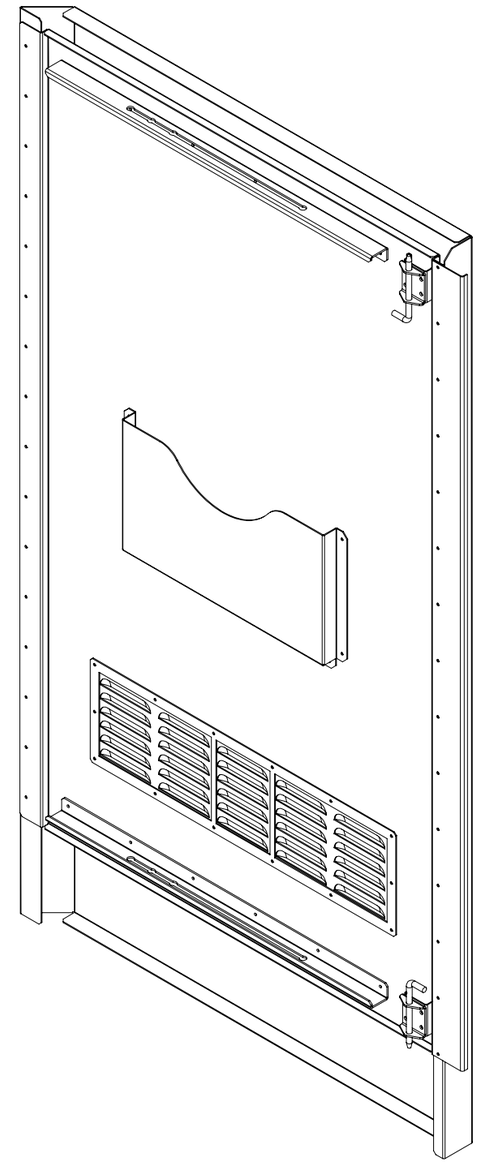
REV: A

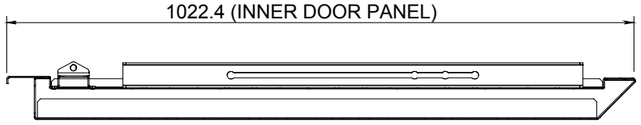
SCALE:1:20

COMMERCIAL IN CONFIDENCE
DRAWN BY MARCIANO INDUSTRIES FOR PURPOSE OF MANUFACTURE BY MARCIANO INDUSTRIES. NOT TO BE DISCLOSED TO ANY THIRD PARTY WITHOUT WRITTEN CONSENT BY MARCIANO INDUSTRIES
(ABN 30 097 458 323)









SECTION K-K
SCALE 1 : 10

NOTE:

1. OUTER SKIN TO BE RIVETED TO INNER DOOR PANEL.

COMMENTS:				JOB NUMBER:	THIRD ANGLE PROJECTION
	NAME	SIGNATURE	DATE	FABRICATION TOLERANCES UNLESS OTHERWISE NOTED	
DRAWN	D.R.Bright		14/03/2013	UP TO 300mm	+ - 1.0mm
CHK'D				300mm TO 3000mm	+ - 2.0mm
APPV'D				>3000mm	+ - 3.0mm
MFG					
Q.A				MATERIAL: 2mm Aluminium 5052 U.N.O	
CLIENT:				WEIGHT:	

MARCIANO INDUSTRIES
PH:- 02 4271 6777
FAX:- 02 4271 8089
226 BERKELEY RD
UNANDERRA

USED FOR: ARTC SPECIFICATIONS

TITLE: LOCATION CASE
SINGLE WIDTH, DOUBLE SKIN

DWG NO. MAR-ARTC-A2300

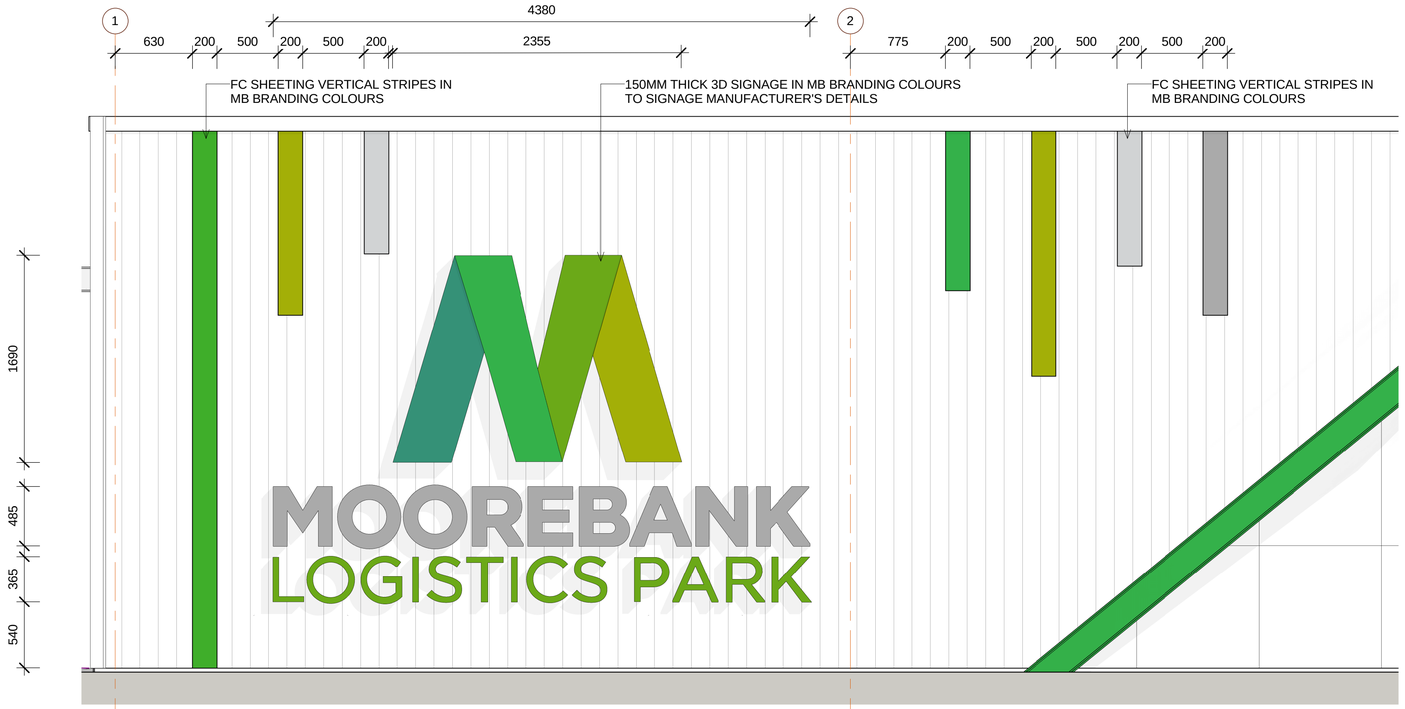
A3

REV: A

SCALE:1:20

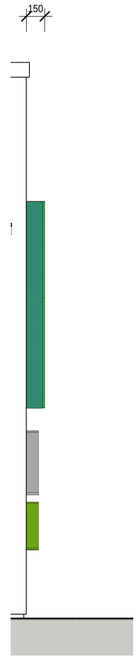
APPENDIX C

Fencing, Barriers and Gates



1 / A720 SIGNAGE ELEVATION

1 : 25



2 / A720 SIGNAGE SIDE VIEW

1 : 25

NOTES:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL CONSULTANT'S DOCUMENTATION INCLUDING SECTION J REPORT (AUTHOR ARCADIS) DATED 12/04/17 AND ACOUSTIC REPORT (AUTHOR WILKINSON MURRAY) DATED 26/04/17

Notes

This drawing and design is subject to Reid Campbell (NSW) Pty Ltd copyright and may not be reproduced without prior written consent.
Contractor to verify all dimensions on site before commencing work.
Report all discrepancies to project manager prior to construction.
Figured dimensions to be taken in preference to scaled drawings.
All work is to conform to relevant Australian Standards and other Codes as applicable, together with other Authorities' requirements and regulations.

Issue	Description	Date	Ver	Auth
1	CONSTRUCTION ISSUE	05/05/2017		

REIDCAMPBELL
Architecture, Interiors, Planning
ACN 002 033 901 ABN 28 317 605 875
Level 15, 124 Walker Street
North Sydney NSW 2060 Australia
Tel: 61 02 9954 5011 Email: sydney@reidcampbell.com
Fax: 61 02 9954 4946 Web: www.reidcampbell.com

CONSTRUCTION DOCUMENTATION

Client: QUBE

Managing Consultant: TACTICAL GROUP

Project: **MOOREBANK INTERMODAL ADMINISTRATION BUILDING**
MOOREBANK AVENUE, MOOREBANK, NSW

Drawn | Checked | Print Date
Author Approver 5-May-17 4:37:20 PM

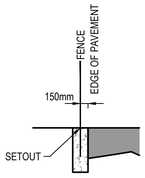
North Point: N/A

Drawing Title: EXTERNAL SIGNAGE

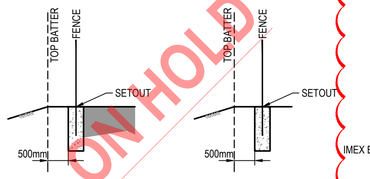
Drawing Number: 117101_A_CD_A720

Issue: 1

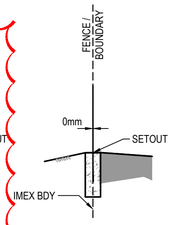
C:\Users\bfandi\Documents\115123_MB ADMIN BUILDING_CC_bfandi.rvt



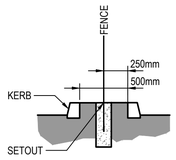
FENCE SETOUT DETAIL
(F-B)
N.T.S



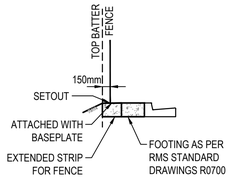
FENCE SETOUT DETAIL
(F-C)
N.T.S



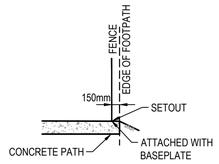
FENCE SETOUT DETAIL
(F-D)
N.T.S



FENCE SETOUT DETAIL
(F-E)
N.T.S



FENCE SETOUT DETAIL
(F-F)
N.T.S



FENCE SETOUT DETAIL
(F-G)
N.T.S

ON HOLD

FENCE SETOUT TABLE

POINT	EASTING	NORTHING
1	308153.946	6241187.484
2	INTERSECT WITH GUARD HOUSE	
3	INTERSECT WITH CAMCO EQUIPMENT	
4	308125.384	6241191.914
5	308128.049	6241212.782
6	308129.956	6241214.891
7	308130.974	6241222.863
8	INTERSECT WITH CAMCO EQUIPMENT	
9	INTERSECT WITH CAMCO EQUIPMENT	
10	308106.920	6241225.935
11	308102.212	6241188.925
12	INTERSECT WITH ADMIN BUILDING	
13	308108.798	6241269.794
14	308089.070	6241272.186
15	308092.912	6241294.012
16	308105.779	6241344.690
17	308074.894	6241155.115
18	INTERSECT WITH TURNSTILE	
19	307987.515	6240450.355
20	307974.062	6240452.075
21	307969.018	6240452.720
22	INTERSECT WITH BOUNDARY FENCE	
23	308085.258	6241327.219
24	308083.215	6241311.350
25	308081.206	6241295.491
26	307963.912	6240412.565

NOTE: SETOUT IS APPROXIMATE AND VERIFICATION WITH THE ABOVE SETOUT DETAILS AND SITE SERVICES SHALL BE UNDERTAKEN BY THE CONTRACTOR TO THE SATISFACTION OF THE SUPERINTENDENT.

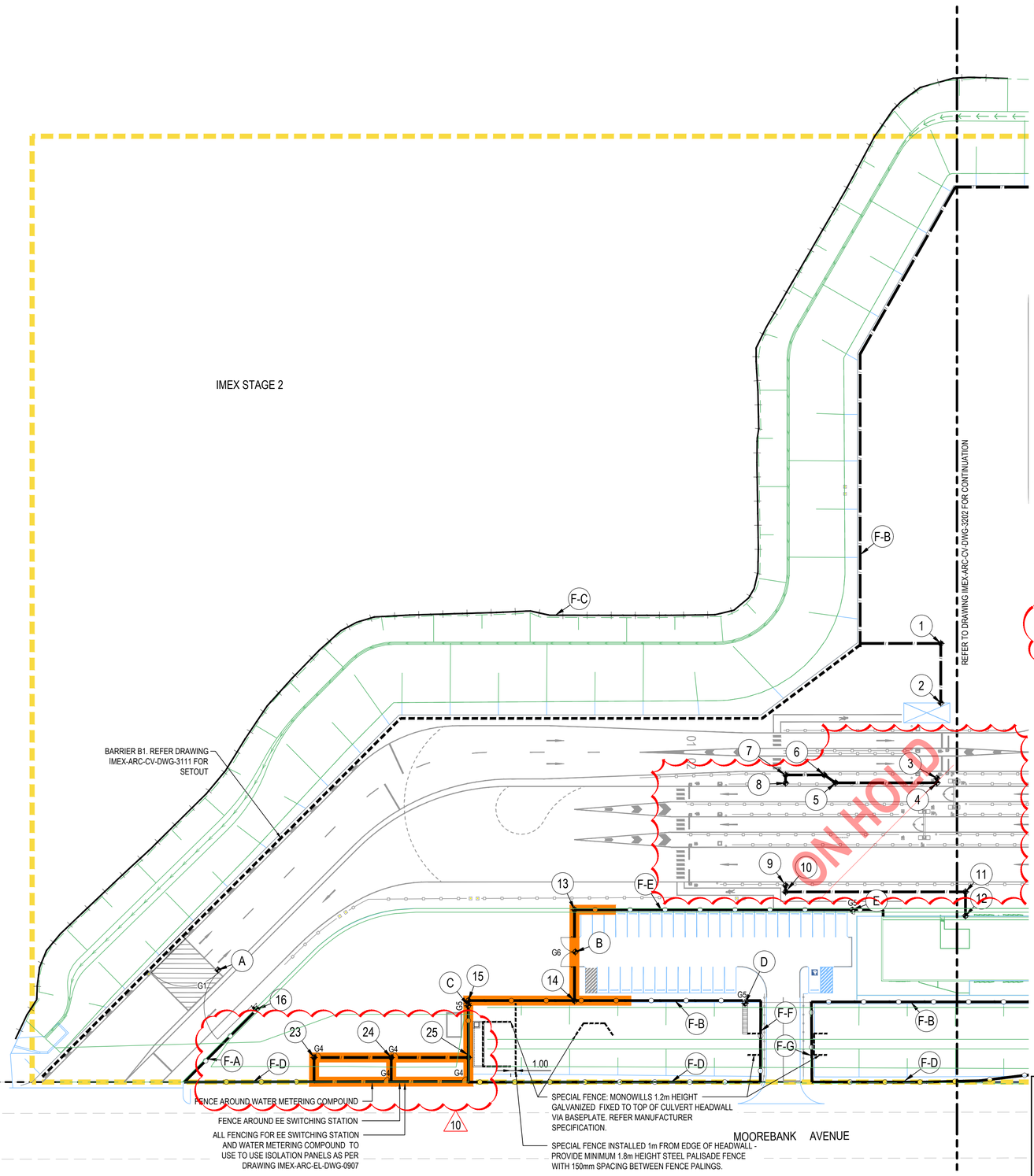
10

GATE SETOUT TABLE

POINT	EASTING	NORTHING
A	308096.734	6241337.726
B	308100.099	6241270.754
C	308091.866	6241294.146
D	308085.095	6241237.182
E	308101.478	6241212.677
F	308075.691	6241150.638
G	308033.680	6240814.425
H	307987.851	6240455.583
I	307967.428	6240440.103

10

NOTE: GATE SETOUT IS APPROXIMATE AND AT THE CENTRAL OPENING LOCATION (I.E. 6m WIDE GATE WILL BE SETOUT FROM CENTRE AT 3m IN FROM EACH EDGE). GATES SHALL BE LOCATED BY THE CONTRACTOR ON THE MAIN FENCE LINE AND IN CONSIDERATIONS OF OTHER STRUCTURES/ACCESS REQUIREMENTS TO THE SATISFACTION OF THE SUPERINTENDENT



LEGEND

- IMEX BOUNDARY
- TYPE 1 FENCE
- TYPE 2 FENCE
- TYPE 3 FENCE
- TYPE 4 FENCE
- VEHICLE SWING GATES
- VEHICLE SLIDING GATES
- PEDESTRIAN SWING GATE
- B1 BARRIER WITH FENCE. REFER DRAWING IMEX-ARC-CV-DWG-3111 FOR DETAILS
- SPECIAL FENCE. REFER NOTE ON PLAN.
- ISOLATION PANELS. REFER NOTE ON PLAN.
- GANTRY STEPS - REFER TO DRAWING IMEX-ARC-CV-DWG-3111 FOR DETAIL
- GX — GATE NUMBER - REFER TO DRAWING IMEX-ARC-CV-DWG-3001 FOR GATE SCHEDULE
- T1 — TURNSTILE

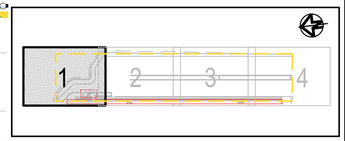
NOTES

1. UNLESS OTHERWISE INDICATED ON PLAN OR ON SETOUT DETAIL, ALL FENCES SHALL USE INDEPENDENT FOOTING. THE USE OF BRACKETS FOR DIRECT CONCRETE PAVEMENT CONNECTION WILL BE INDICATED.
2. REFER DRAWING IMEX-ARC-CV-DWG-3001 FOR FURTHER NOTES.
3. REFER DRAWING IMEX-ARC-CV-DWG-3201 FOR TYPICAL FENCE SETOUT DETAILS.
4. GANTRY STEPS TO BE GALVANISED STEEL WITH HANDRAIL IN ACCORDANCE WITH AS165.7 CONCRETE FOOTING AND GANTRY STEP IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION. REFER TO DRAWING IMEX-ARC-CV-DWG-3111 FOR TYPICAL DETAIL.

ON HOLD

1. EXACT LOCATION OF CAMCO PLUS OPERATIONAL REQUIREMENTS OF THE WEIGH-IN-MOTION / OCR TO BE CLARIFIED.

10



Issue	Description	Date
10	AFC UPDATE	07/07/2017
09	AFC UPDATE	06/06/2017
08	AFC UPDATE	05/06/2017
07	AFC UPDATE	22/05/2017
06	AFC UPDATE	19/05/2017
05	AFC UPDATE	17/05/2017
04	ISSUE FOR CONSTRUCTION	12/05/2017
03	ISSUE FOR COMMENTS	10/05/2017
02	REVIEWER COMMENTS INCORPORATED	07/04/2017

0 10 20 30 40 50m

1 : 500

Client: SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE — TACTICAL GROUP

Status: FOR CONSTRUCTION

Scales	1 : 500	Current Issue Signatures	
		Drawn J.RAMOS	
Original Size	A1	Designed L.CORSCADDEN	
Height Datum	AHD	Checked G.DE SILVA	
Grid	MGA	Approved M.KEFFORD	

Filename: IMEX-ARC-CV-DWG-3201-FencingPlanSheet1.dwg

Project: MOOREBANK MPE
STAGE 1
IMEX NUMBER 1

Title: FENCING AND GATE PLAN
SHEET 1

ARCADIS
Arcadis Australia Pacific Pty Limited
Level 5, 141 Walker St
NORTH SYDNEY NSW 2060
ABN 76 104 485 289
Tel No: +61 2 8907 9000
Fax No: +61 2 8907 9001
arcadis.com

Volume No. M06
Project No. 10004975
Drawing No. IMEX -ARC-CV-DWG- 3201- Issue 10

100mm on Original

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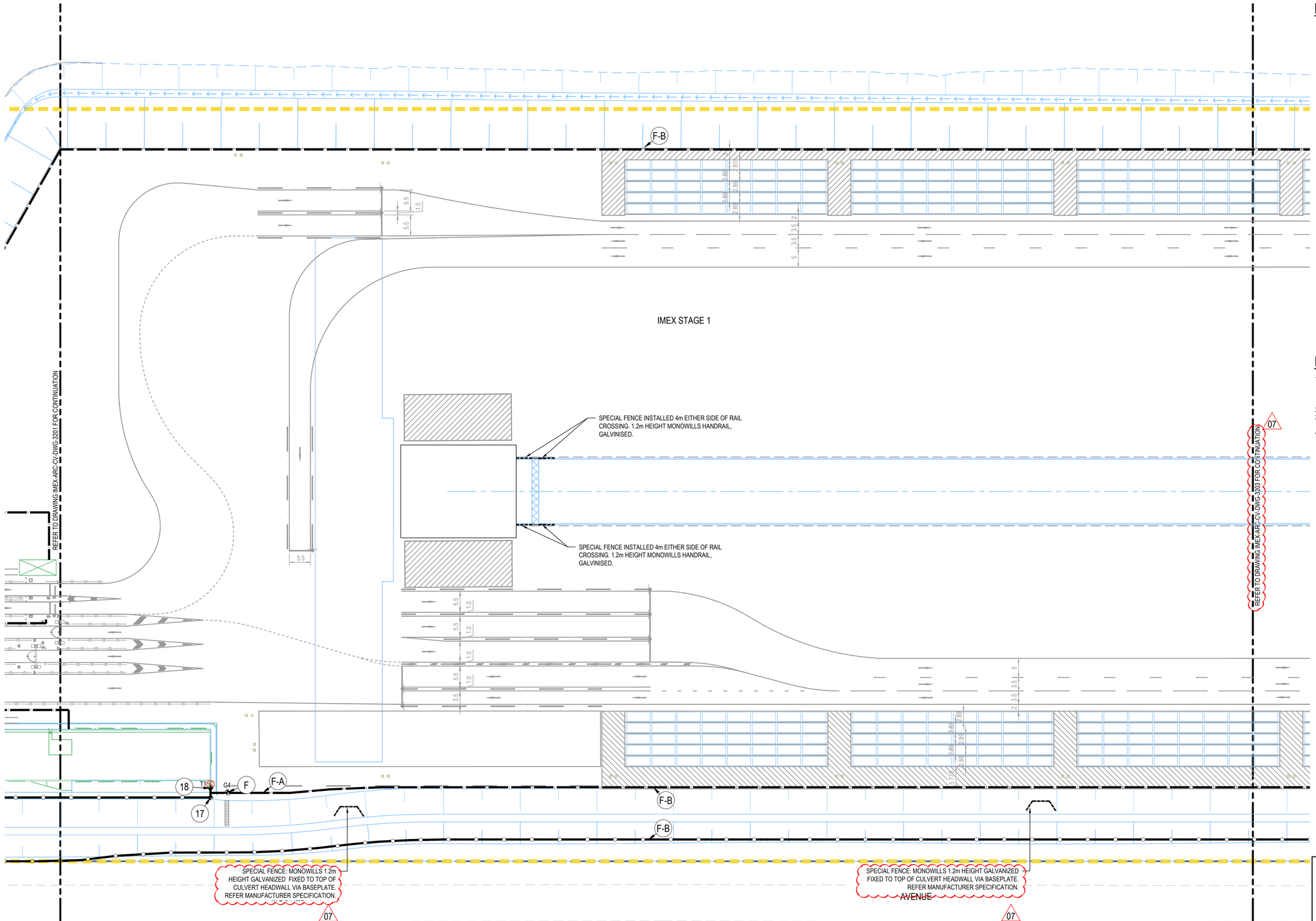


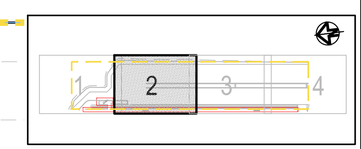
LEGEND

- IMEX BOUNDARY
- TYPE 1 FENCE
- TYPE 2 FENCE
- TYPE 3 FENCE
- TYPE 4 FENCE
- VEHICLE SWING GATES
- VEHICLE SLIDING GATES
- PEDESTRIAN SWING GATE
- B1 BARRIER WITH FENCE. REFER DRAWING IMEX-ARC-CV-DWG-3111 FOR DETAILS
- SPECIAL FENCE. REFER NOTE ON PLAN.
- ISOLATION PANELS. REFER NOTE ON PLAN.
- GANTRY STEPS - REFER TO DWG 3111 FOR DETAIL
- GX — GATE NUMBER - REFER TO DWG 3001 FOR GATE SCHEDULE
- T1 — TURNSTILE

NOTES

07

1. UNLESS OTHERWISE INDICATED ON PLAN OR ON SETOUT DETAIL, ALL FENCES SHALL USE INDEPENDENT FOOTING. THE USE OF BRACKETS FOR DIRECT CONCRETE PAVEMENT CONNECTION WILL BE INDICATED.
2. REFER DRAWING IMEX-ARC-CV-DWG-3001 FOR FURTHER NOTES.
3. REFER DRAWING IMEX-ARC-CV-DWG-3201 FOR TYPICAL FENCE SETOUT DETAILS.
4. GANTRY STEPS TO BE GALVANISED STEEL WITH HANDRAIL IN ACCORDANCE WITH AS165.7 CONCRETE FOOTING AND GANTRY STEP IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION. REFER TO DRAWING IMEX-ARC-CV-DWG-3111 FOR TYPICAL DETAIL.



Issue	Description	Date
07	AFC UPDATE	05/06/2017
06	AFC UPDATE	19/05/2017
05	AFC UPDATE	17/05/2017
04	ISSUE FOR CONSTRUCTION	12/05/2017
03	ISSUE FOR COMMENTS	10/05/2017
02	REVIEWER COMMENTS INCORPORATED	07/04/2017
01	DETAILED DESIGN	30/03/2017

0 10 20 30 40 50m

1 : 500

Client: SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE — TACTICAL GROUP

Status: FOR CONSTRUCTION

Scales	1 : 500	Current Issue Signatures	
		Drawn B.SHAW	
Original Size	A1	Designed L.CORSCADDEN	
Height Datum	AHD	Checked G.DE SILVA	
Grid	MGA	Approved M.KEFFORD	

Filename: IMEX-ARC-CV-DWG-3202-FencingPlanSheet2.dwg

Project: MOOREBANK MPE STAGE 1 IMEX NUMBER 1

Title: FENCING AND GATE PLAN SHEET 2

ARCADIS
Arcadis Australia Pacific Pty Limited
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Fax No: +61 2 8907 9001
arcadis.com

Volume No. M06

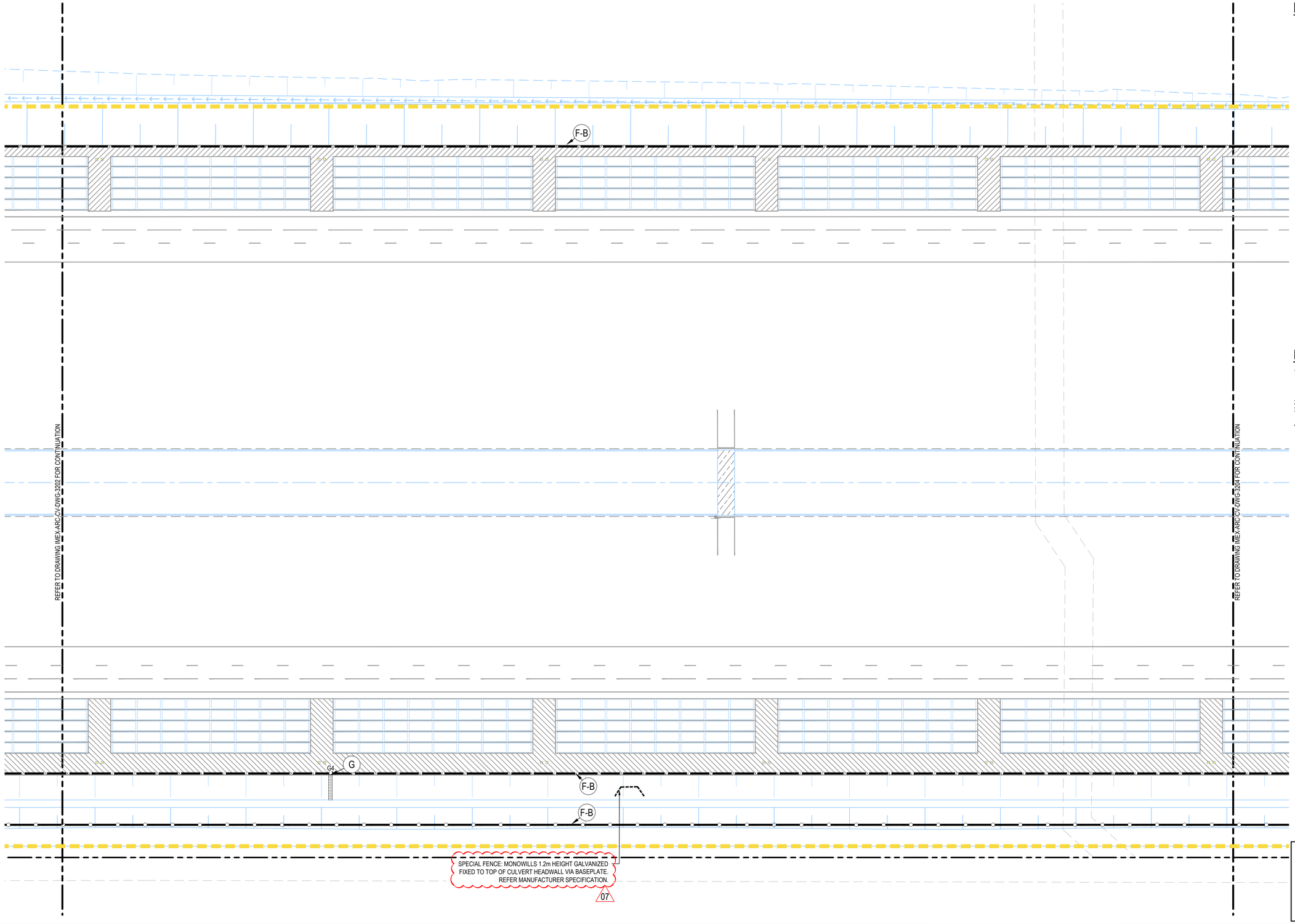
Project No. 10004975

Drawing No. IMEX -ARC-CV-DWG- 3202-

Issue 07

100mm on Original

Date Plotted: 5 Jun 2017 - 10:37AM File Name: F:\10004975\E-CAD\D-Drawings\CV\M06_Manual Phase Road Furniture\IMEX-ARC-CV-DWG-3202-FencingPlanSheet2.dwg



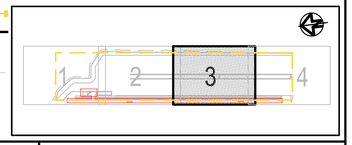
LEGEND

- IMEX BOUNDARY
- TYPE 1 FENCE
- TYPE 2 FENCE
- TYPE 3 FENCE
- TYPE 4 FENCE
- VEHICLE SWING GATES
- VEHICLE SLIDING GATES
- PEDESTRIAN SWING GATE
- B1 BARRIER WITH FENCE. REFER DRAWING IMEX-ARC-CV-DWG-3111 FOR DETAILS
- SPECIAL FENCE. REFER NOTE ON PLAN.
- ISOLATION PANELS. REFER NOTE ON PLAN.
- GANTRY STEPS - REFER TO DWG 3111 FOR DETAIL
- GX — GATE NUMBER - REFER TO DWG 3001 FOR GATE SCHEDULE
- T1 — TURNSTILE

NOTES

07

1. UNLESS OTHERWISE INDICATED ON PLAN OR ON SETOUT DETAIL, ALL FENCES SHALL USE INDEPENDENT FOOTING. THE USE OF BRACKETS FOR DIRECT CONCRETE PAVEMENT CONNECTION WILL BE INDICATED.
2. REFER DRAWING IMEX-ARC-CV-DWG-3001 FOR FURTHER NOTES.
3. REFER DRAWING IMEX-ARC-CV-DWG-3201 FOR TYPICAL FENCE SETOUT DETAILS.
4. GANTRY STEPS TO BE GALVANISED STEEL WITH HANDRAIL IN ACCORDANCE WITH AS165.7 CONCRETE FOOTING AND GANTRY STEP IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION. REFER TO DRAWING IMEX-ARC-CV-DWG-3111 FOR TYPICAL DETAIL.



Issue	Description	Date
07	AFC UPDATE	05/06/2017
06	AFC UPDATE	19/05/2017
05	AFC UPDATE	17/05/2017
04	ISSUE FOR CONSTRUCTION	12/05/2017
03	ISSUE FOR COMMENTS	10/05/2017
02	REVIEWER COMMENTS INCORPORATED	07/04/2017
01	DETAILED DESIGN	30/03/2017

0 10 20 30 40 50m

1 : 500

100mm on Original

Client: SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE — TACTICAL GROUP

Status: FOR CONSTRUCTION

		Current Issue Signatures	
Scales	1 : 500	Drawn B.SHAW	
Original Size	A1	Designed L.CORSCADDEN	
Height Datum	AHD	Checked G.DE SILVA	
Grid	MGA	Approved M.KEFFORD	
Filename:	IMEX-ARC-CV-DWG-3203-FencingPlanSheet3.dwg		

Project: MOOREBANK MPE STAGE 1 IMEX NUMBER 1

Title: FENCING AND GATE PLAN SHEET 3

ARCADIS
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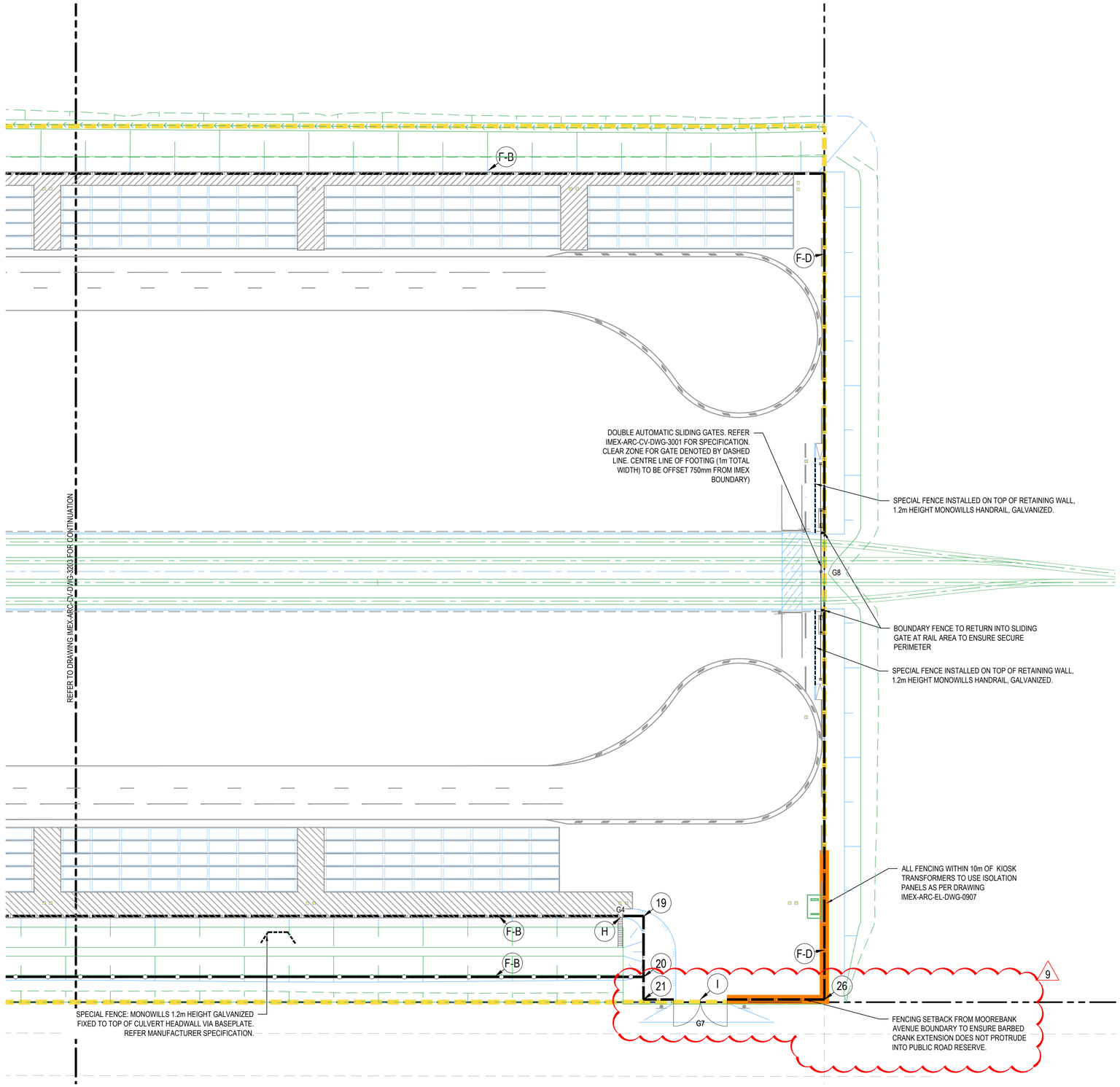
Volume No. M06

Project No. 10004975

Drawing No. IMEX -ARC-CV-DWG- 3203-

Issue 07

Date Plotted: 5 Jun 2017 - 10:37AM File Name: F:\10004975\E-CAD\D-Drawings\CV\M06_Manual Phase Road Furniture\IMEX-ARC-CV-DWG-3203-FencingPlanSheet3.dwg

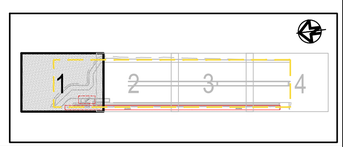


LEGEND

- IMEX BOUNDARY
- TYPE 1 FENCE
- TYPE 2 FENCE
- TYPE 3 FENCE
- TYPE 4 FENCE
- VEHICLE SWING GATES
- VEHICLE SLIDING GATES
- PEDESTRIAN SWING GATE
- B1 BARRIER WITH FENCE. REFER DRAWING IMEX-ARC-CV-DWG-3111 FOR DETAILS
- SPECIAL FENCE. REFER NOTE ON PLAN.
- ISOLATION PANELS. REFER NOTE ON PLAN.
- GANTRY STEPS - REFER TO DRAWING IMEX-ARC-CV-DWG-3111 FOR DETAIL
- GX — GATE NUMBER - REFER TO DRAWING IMEX-ARC-CV-DWG-3001 FOR GATE SCHEDULE
- T1 — TURNSTILE

NOTES

1. UNLESS OTHERWISE INDICATED ON PLAN OR ON SETOUT DETAIL, ALL FENCES SHALL USE INDEPENDENT FOOTING. THE USE OF BRACKETS FOR DIRECT CONCRETE PAVEMENT CONNECTION WILL BE INDICATED.
2. REFER DRAWING IMEX-ARC-CV-DWG-3001 FOR FURTHER NOTES.
3. REFER DRAWING IMEX-ARC-CV-DWG-3201 FOR TYPICAL FENCE SETOUT DETAILS.
4. GANTRY STEPS TO BE GALVANISED STEEL WITH HANDRAIL IN ACCORDANCE WITH AS165.7 CONCRETE FOOTING AND GANTRY STEP IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION. REFER TO DRAWING IMEX-ARC-CV-DWG-3111 FOR TYPICAL DETAIL.



Issue	Description	Date
09	AFC UPDATE	07/07/2017
08	AFC UPDATE	05/06/2017
07	AFC UPDATE	19/05/2017
06	AFC UPDATE	17/05/2017
05	ISSUE FOR CONSTRUCTION	12/05/2017
04	ISSUE FOR COMMENTS	10/05/2017
03	PROVIDED PRODUCT SPECIFICATION FOR RAIL GATE	03/05/2017
02	REVIEWER COMMENTS INCORPORATED	07/04/2017
01	DETAILED DESIGN	30/03/2017

0 10 20 30 40 50m

1 : 500

100mm on Original

Client: SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE — TACTICAL GROUP

Status: FOR CONSTRUCTION

		Current Issue Signatures	
Scales	1 : 500	Drawn J.RAMOS	
Original Size	A1	Designed L.CORSCADDEN	
Height Datum	AHD	Checked G.DE SILVA	
Grid	MGA	Approved M.KEFFORD	

Filename: IMEX-ARC-CV-DWG-3204-FencingPlanSheet4.dwg

Project: MOOREBANK MPE STAGE 1 IMEX NUMBER 1

Title: FENCING AND GATE PLAN SHEET 4

ARCADIS
Arcadis Australia Pacific Pty Limited
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Volume No. M06

Project No. 10004975

Drawing No. IMEX -ARC-CV-DWG- 3204-

Issue 09

Date Plotted: 7 Jul 2017 - 10:40AM File Name: F:\10004975\E-CAD\D-Drawings\CV\M06_Manual Phase Road Furniture\IMEX-ARC-CV-DWG-3204-FencingPlanSheet4.dwg

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. PROPOSED CHAIN WIRE FENCE TO BE IN ACCORDANCE WITH SYDNEY TRAINS DRAWING CV 0285934 WITH NO BARBED WIRE.
3. PROPOSED INSULATED CHAIN WIRE FENCE TO BE IN ACCORDANCE WITH SYDNEY TRAINS DRAWING CV 0285942 WITH NO BARBED WIRE.
4. PROPOSED CHAIN WIRE GATE TO BE IN ACCORDANCE WITH SYDNEY TRAINS DRAWING CV 0285938 AND CV 0285939 WITH NO BARBED WIRE.
5. INSULATION PANELS ARE TO BE INSTALLED EVERY 100 METRES BETWEEN CHAINAGE 40km950 AND 41km750 ON THE NORTHERN PERIMETERS.
6. ALL FENCE POSTS AND FOOTINGS TO BE COORDINATED ON SITE BY CONTRACTOR. POT HOLING REQUIRED PRIOR TO ANY EXCAVATION OR CONSTRUCTION TO IDENTIFY EXISTING INFRASTRUCTURE AND SERVICES.

INSULATION PANELS

1. INSULATION PANELS ARE TO BE A MINIMUM OF 2200mm IN LENGTH.
2. NON-METALLIC POSTS OF THE INSULATION PANELS ARE TO HAVE A MINIMUM CLEARANCE OF 50mm AND MAXIMUM CLEARANCE OF 100mm FROM THE ADJACENT METALLIC POST OF THE CONTINUOUS FENCING.
3. INSULATION PANEL NON-METALLIC FENCING MUST HAVE A WARNING SIGN ATTACHED AS SHOWN IN SYDNEY TRAINS STANDARD DRAWING CV0285942.

FENCING

1. CHAIN-LINK FABRIC FENCES ARE TO BE INSTALLED IN ACCORDANCE WITH SYDNEY TRAINS STANDARD DRAWINGS CV0285934, CV0285938, CV0285939 AND CV0285942.
2. EXISTING FENCES THAT ARE TO BE INCORPORATED INTO THIS DESIGN THAT DO NOT COMPLY WITH THE DESIGN REQUIREMENTS AS SET OUT IN ESC 510 ARE TO BE REPLACED WITH NEW FENCING AS SET OUT IN ESC 510.
3. WHERE EXISTING FENCE IS TO BE CUT AND TIED INTO PROPOSED FENCE, THEY ARE TO TERMINATE ON THEIR OWN END POST TO THE SATISFACTION OF THE OWNER. THE CONNECTION BETWEEN THE PRIVATE FENCE AND THE RAILWAY BOUNDARY FENCE IS TO BE ADEQUATE FOR STOCK OR TRESPASS CONTROL.
4. WHERE THE FENCE IS REQUIRED TO BE ERECTED ON AN EXISTING CURVED BOUNDARY, THE FENCE IS TO BE ERECTED AS A SERIES OF CHORDS OR TANGENTS WITH THE DISTANCE BETWEEN THE POSTS REDUCED, IN ACCORDANCE WITH ASA STANDARD (T HR CI 12160 ST).
5. URBAN FENCES ARE TO BE 1800mm HIGH, PLAIN TOP CHAIN-LINK FABRIC FENCE IN ACCORDANCE WITH AS1725.
6. ALL ACCESS GATES ARE TO HAVE THE STANDARD RAIL BOUNDARY GATE SIGN ATTACHED.

SIGNAGE

1. ALL W560 SIGNS ARE TO BE INSTALLED ON GATES TO ACCESS THE RAIL CORRIDOR FACING THE NON-RAIL CORRIDOR SIDE.
2. ALL SIGNS ARE TO BE INSTALLED 1500mm ABOVE THE FINISHED LEVEL AT THE LOCATION THAT THEY ARE INSTALLED.
3. ALL SIGN ARE TO BE INSTALLED IN ACCORDANCE WITH ARTC STANDARDS ETF-11-01 AND ETF-16-01.
4. ALL SIGNAGE TO BE PROVIDED IN ACCORDANCE WITH ARTC ENGINEERING STANDARD SPS 03.
5. LIMITED CLEARANCE SIGNS TO BE INSTALLED IN ACCORDANCE WITH T HR CI 12070 ST (SECTION 6.4). IN ACCORDANCE WITH T HR CI 12070 ST THE CENTRE OF THE SIGNS TO BE LOCATED APPROXIMATELY 1.5 METRES ABOVE THE GROUND. THE 'LIMITED CLEARANCE' SIGN TO BE ATTACHED ON THE HANDRAILS OR END OF THE WALL STRUCTURES AND POSITIONED SO THAT IT IS CLEARLY VISIBLE TO WORKERS APPROACHING THE WALL STRUCTURE.
6. NO SAFE PLACE SIGNS TO BE INSTALLED IN ACCORDANCE WITH T HR CI 12070 ST (SECTION 7.0) AND SHALL COMPLY WITH DRAWING CV 0282111. DETAILS OF FIXING BRACKETS, BOLTS, ETC. ARE DETAILED IN THE DRAWING CV 0282111. ALL SIGNS TO BE POST MOUNTED. THE CENTRE OF THE SIGN TO BE LOCATED APPROXIMATELY 1.5 METRES ABOVE THE GROUND. THE CLOSEST PART OF THE SIGN SHALL NOT BE ANY CLOSER TO THE GAUGE FACE OF THE NEAREST RUNNING RAIL THAN 1800 MM.
7. SIGNALLING SIGNAGE TO BE PROVIDED IN ACCORDANCE WITH SIGNALLING STANDARDS AND SPECIFICATIONS ANSG 604, SPS 03 AND SPG 1210.
8. LIMITED CLEARANCE SIGN, NETWORK CONTROL BOUNDARY SIGN, RMS R2-4, NO VEHICULAR ACCESS SIGN, ACCESS SYDNEY TRAIN CORRIDOR SIGN, ACCESS SIMTA RAIL CORRIDOR SIGN, RMS R6-11 SIGN AND RMS R6-11 SIGN TO BE MOUNTED ON POSTS 1.5m ABOVE THE NEAREST EDGE OF TRAVELLED WAY IN ACCORDANCE WITH AS 1742.2-2009 CLAUSE D2.3.4.
9. RX-2 ASSEMBLY SIGNS TO BE MOUNTED ON POSTS 1.5m ABOVE THE NEAREST EDGE OF TRAVELLED WAY IN ACCORDANCE WITH AS 1742.7:2016 CLAUSE B2.3.4.
10. KILOMETRE AND HALF KILOMETRE POSTS TO BE INSTALLED IN ACCORDANCE WITH RAILCORP ENGINEERING STANDARD ESC 210 SECTION 8.3 (KILOMETRE POSTS) AND MANUFACTURED IN ACCORDANCE WITH SPC 213. LATERAL PLACEMENT OF KILOMETRE POSTS IN ACCORDANCE WITH RAILCORP ENGINEERING STANDARD ESC 210 FIGURE 16.

BOLLARDS, STEEL CHAINS AND PADLOCKS

1. BOLLARDS TO MEET THE FOLLOWING REQUIREMENTS, ARTC-11-01 SECTION 16.4
   - BOLLARDS TO HAVE EYELETS FOR CONNECTING THE CHAIN TO THE EYELETS.
   - THE BOLLARDS TO BE CONSTRUCTED OF GREATER THAN OR EQUAL 100mm NOMINAL BORE HEAVY GALVANISED
   - STEEL PIPE TO AS1074 AND TO INCLUDE CAPS.
   - IN-GROUND BOLLARDS SHALL BE CONCRETED 1m INTO THE GROUND.
   - THE MINIMUM HEIGHT ABOVE GROUND LEVEL TO BE 1.5m AND THE BOLLARDS TO BE FINISHED IN GLOSS WHITE ENAMEL.
2. CHAIN TO BE HEAVY DUTY 6mm GALVANISED FINISH CHAIN WITH 22X35mm (OR SIMILAR) LINKS.
3. ALL PADLOCKS TO BE STANDARD BRASS PADLOCK.
4. FOR PADLOCK SCHEDULE, REFER TO DRAWING N01031-PWD-DRG-FEN-0041.

Plot Date: 16/6/2017 2:06:18 PM Office: AUSYD Filename: C:\PW_WORKDIR\2307\$M01031.PWD.DRG.FEN.0005.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	SIZE
N.T.S.	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 01.06.17
A. O'SHEA
A.O'SHEA

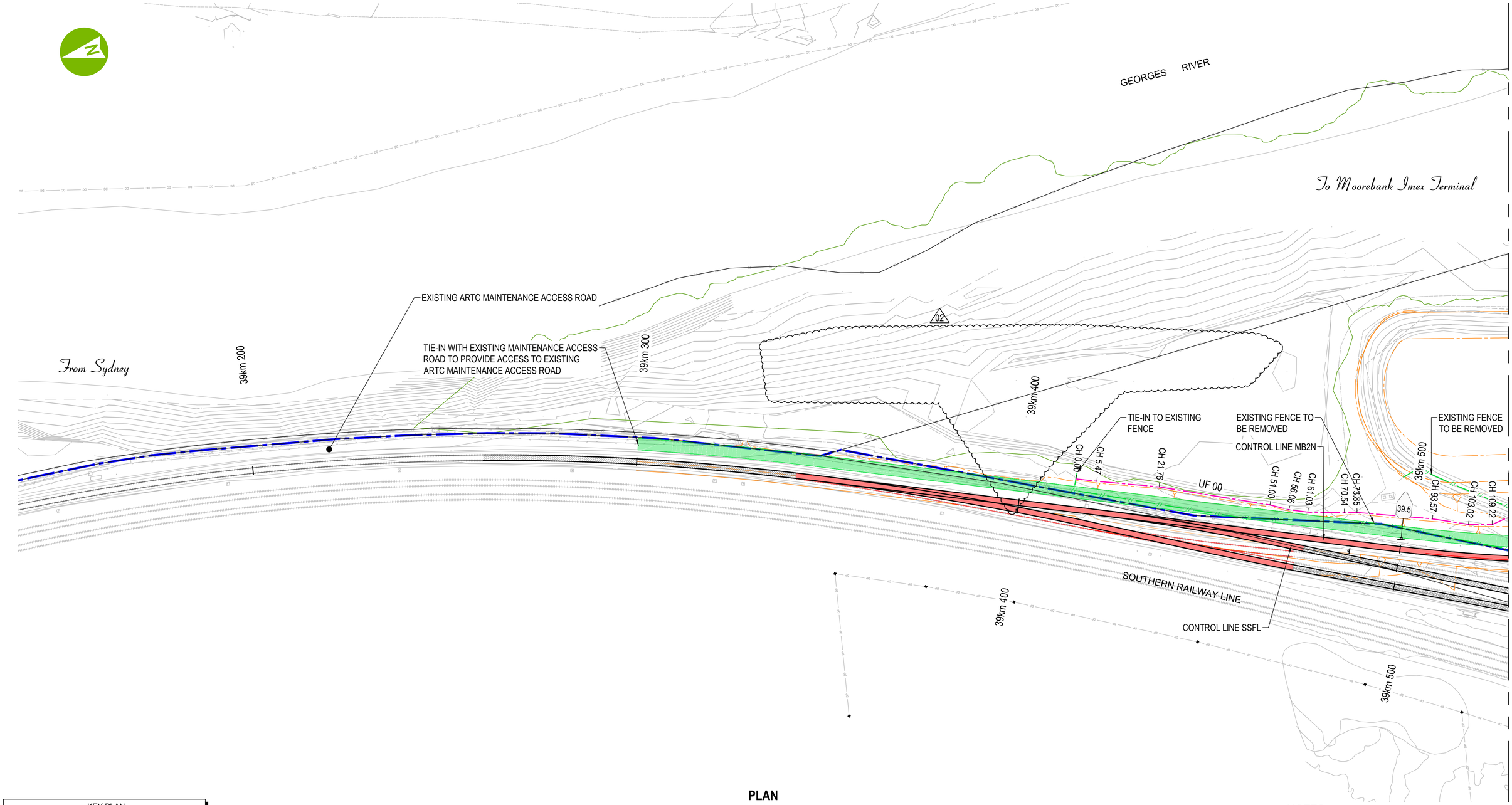
ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL NOTES

DRAWING No.

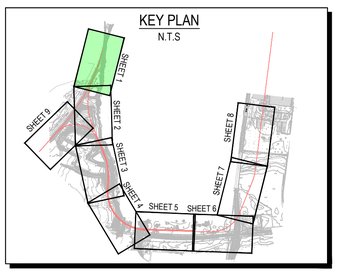
PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	FEN	0005	02



ADJOINS DRG N01031-PWD-DRG-FEN-0011

Plot Date: 18/4/2017 9:33:06 AM Office: AUSYD Filename: C:\PV_WORKASHLEY LITTLE\ANZ_PROD\20282758\N01031-PWD-DRG-FEN-0010.DWG

KEY PLAN
N.T.S



PLAN
1:500

LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- RIPARIAN VEGETATION MANAGEMENT PLAN BOUNDARIES
- SIGN LOCATION
- XX XX km SIGNS
- XX.X HALF km SIGNS

5 0 10 20m
SCALE 1:500

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA

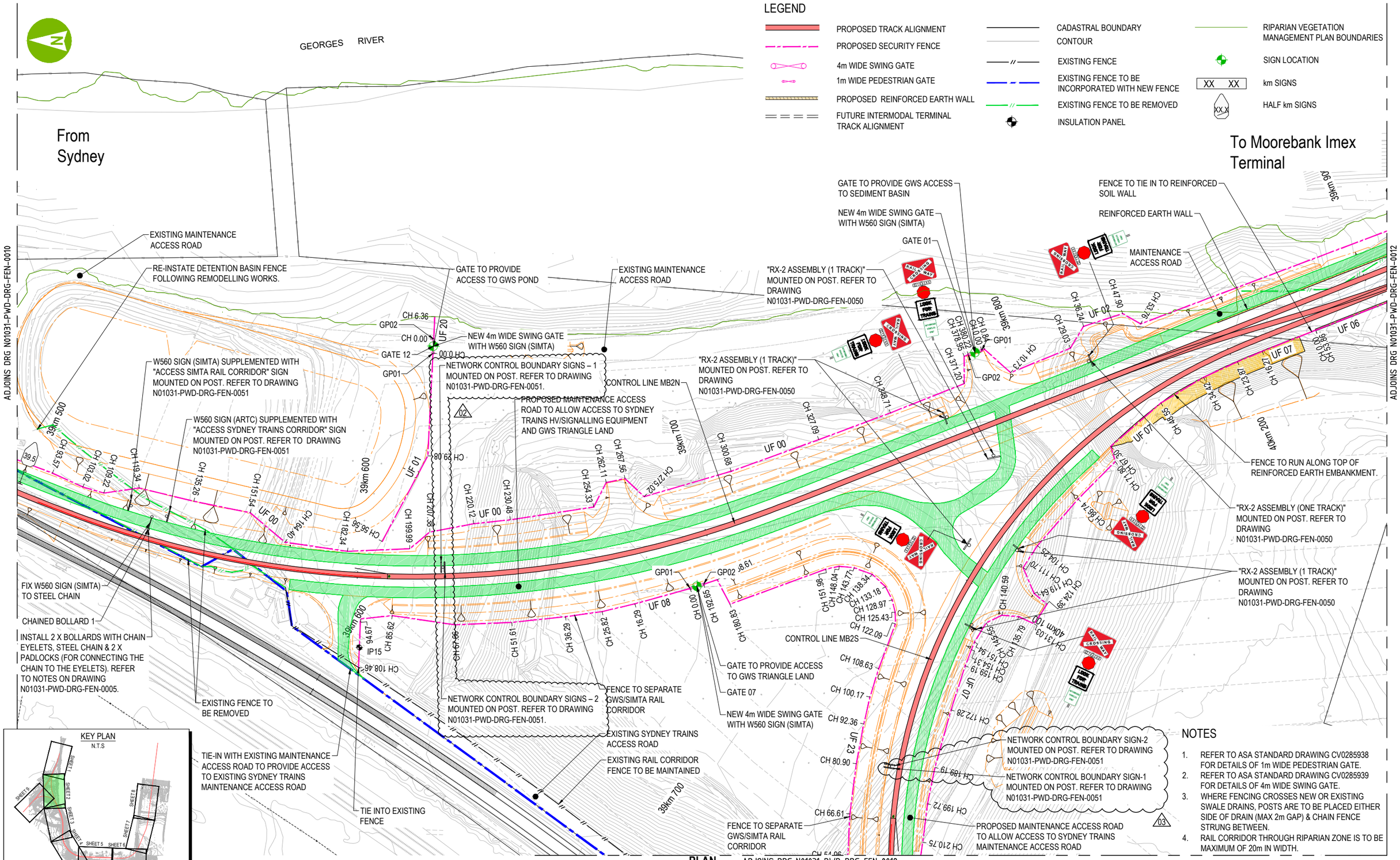
SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 08.03.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	FENCING GENERAL ARRANGEMENT PLAN SHEET 1 OF 9

DRAWING No. N01031 – PWD – DRG – FEN – 0010 – 02
(PROJECT No. – ZONE – TYPE – DISC – NUMBER – REV)



NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

PLAN
1:500

SCALE 1:500

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CLIENT
CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 01.06.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 2 OF 9

DRAWING No. PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC FEN – NUMBER 0011 – REV 03

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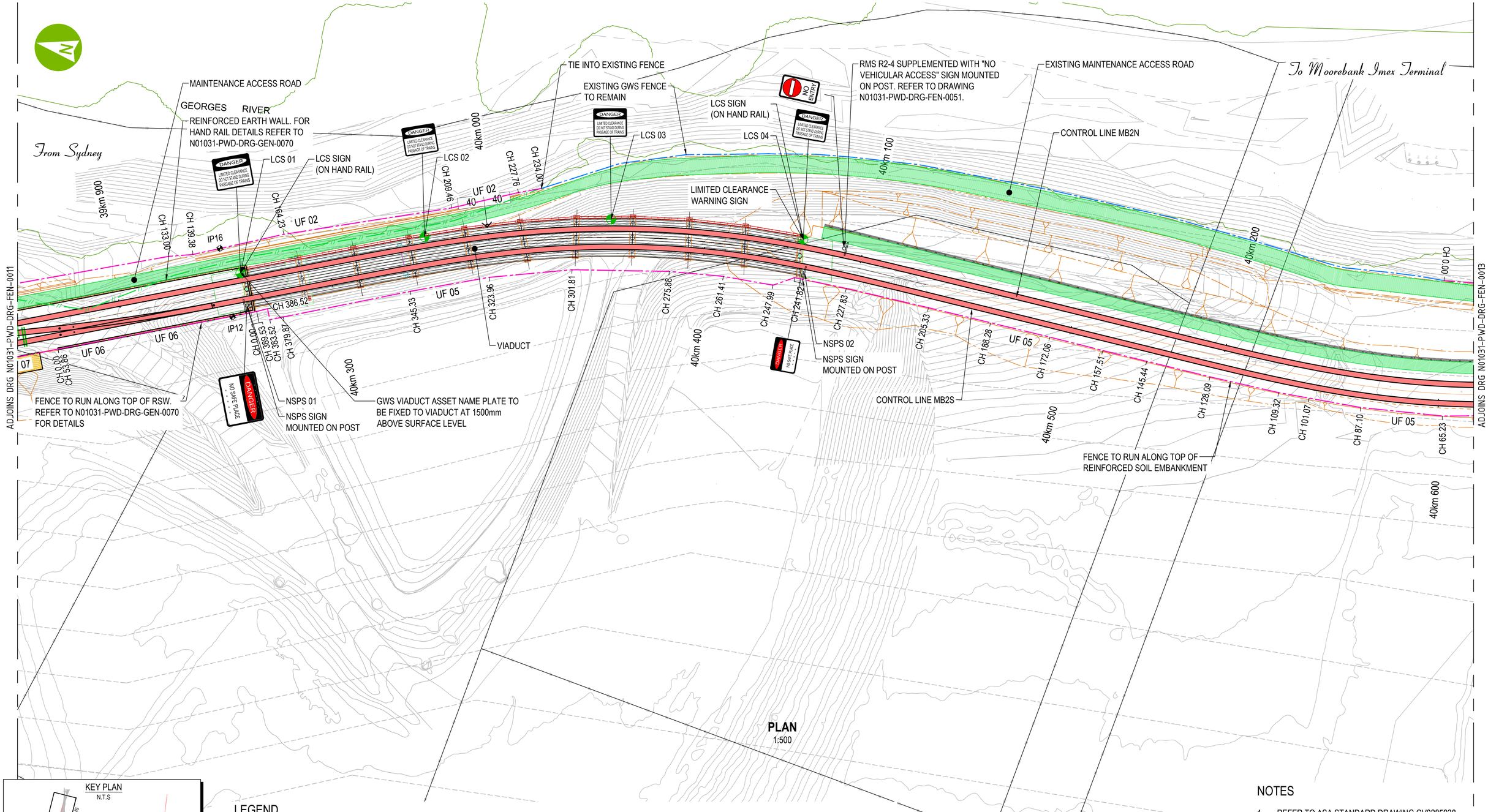
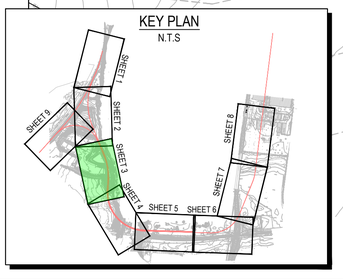


PLAN
1:500

SCALE 1:500 (5 0 10 20m)

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- RIPARIAN VEGETATION MANAGEMENT PLAN BOUNDARIES
- SIGN LOCATION
- XX XX km SIGNS
- XX.X HALF km SIGNS

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

Plot Date: 16/2/2017 4:47:07 PM Office: TMRKK Filename: C:\PW_WORK\LRA\MAINES\MANEP\ON\D0292073\BIM\0101-PWD.DRG.FEN.0012.DWG

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA

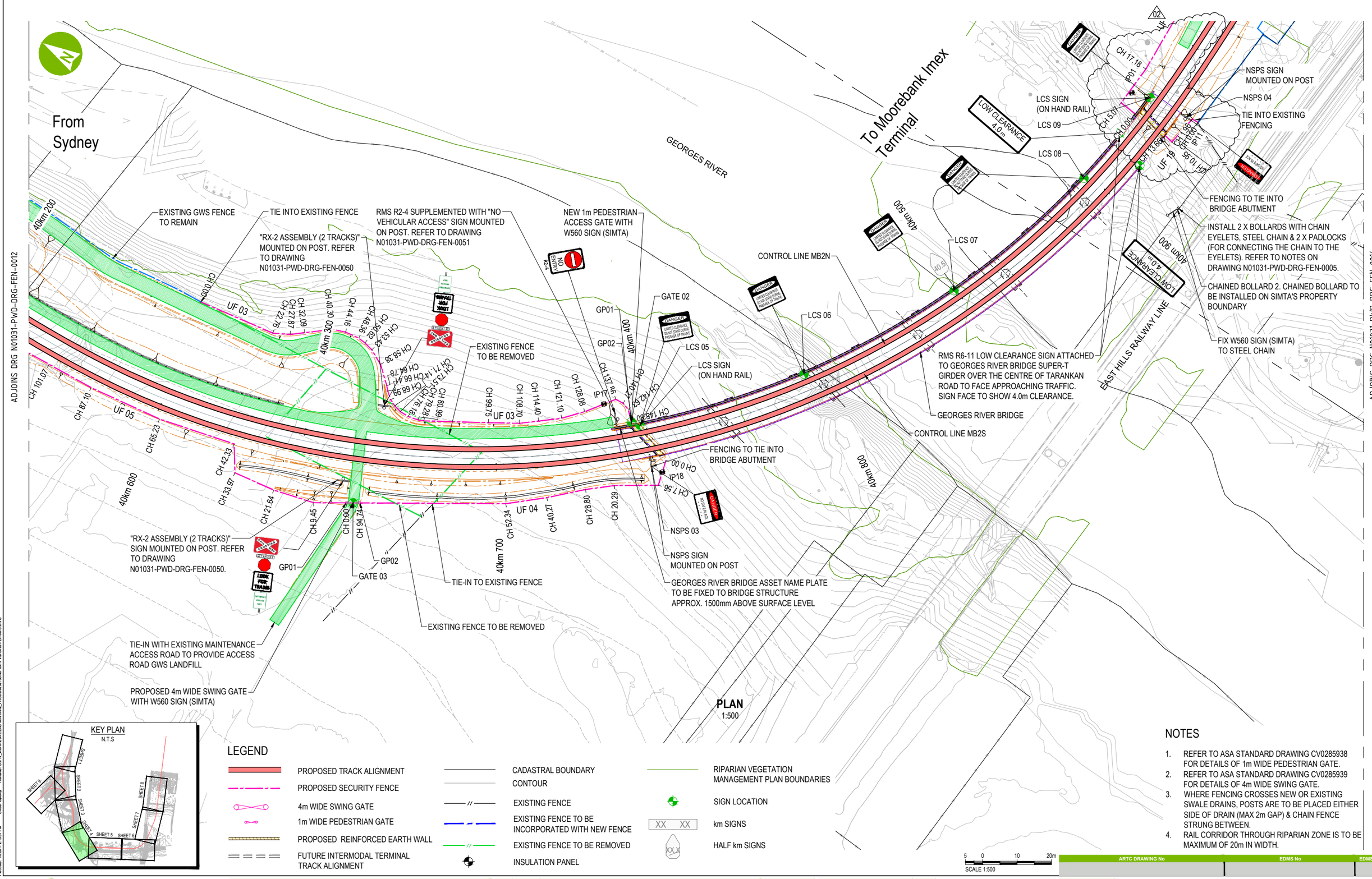
SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	P.NOONAN
CHECKED	M.SAKIB

FOR CONSTRUCTION

APPROVED
DATE 17.02.17
A.O'SHEA
A.O'SHEA

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	FENCING GENERAL ARRANGEMENT PLAN SHEET 3 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0012	01



PLAN
1:500

SCALE 1:500 (5 0 10 20m)

KEY PLAN
N.T.S

LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- RIPARIAN VEGETATION MANAGEMENT PLAN BOUNDARIES
- SIGN LOCATION
- XX XX km SIGNS
- XXX HALF km SIGNS

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

Plot Date: 16/2017 2:13:37 PM Filename: C:\PW_WORK\LIKEE\STMAN\ANZ_PROD\D2207\$\$\N01031-PWD\DRG-FEN-0013.DWG

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	S.MURPHY

FOR CONSTRUCTION

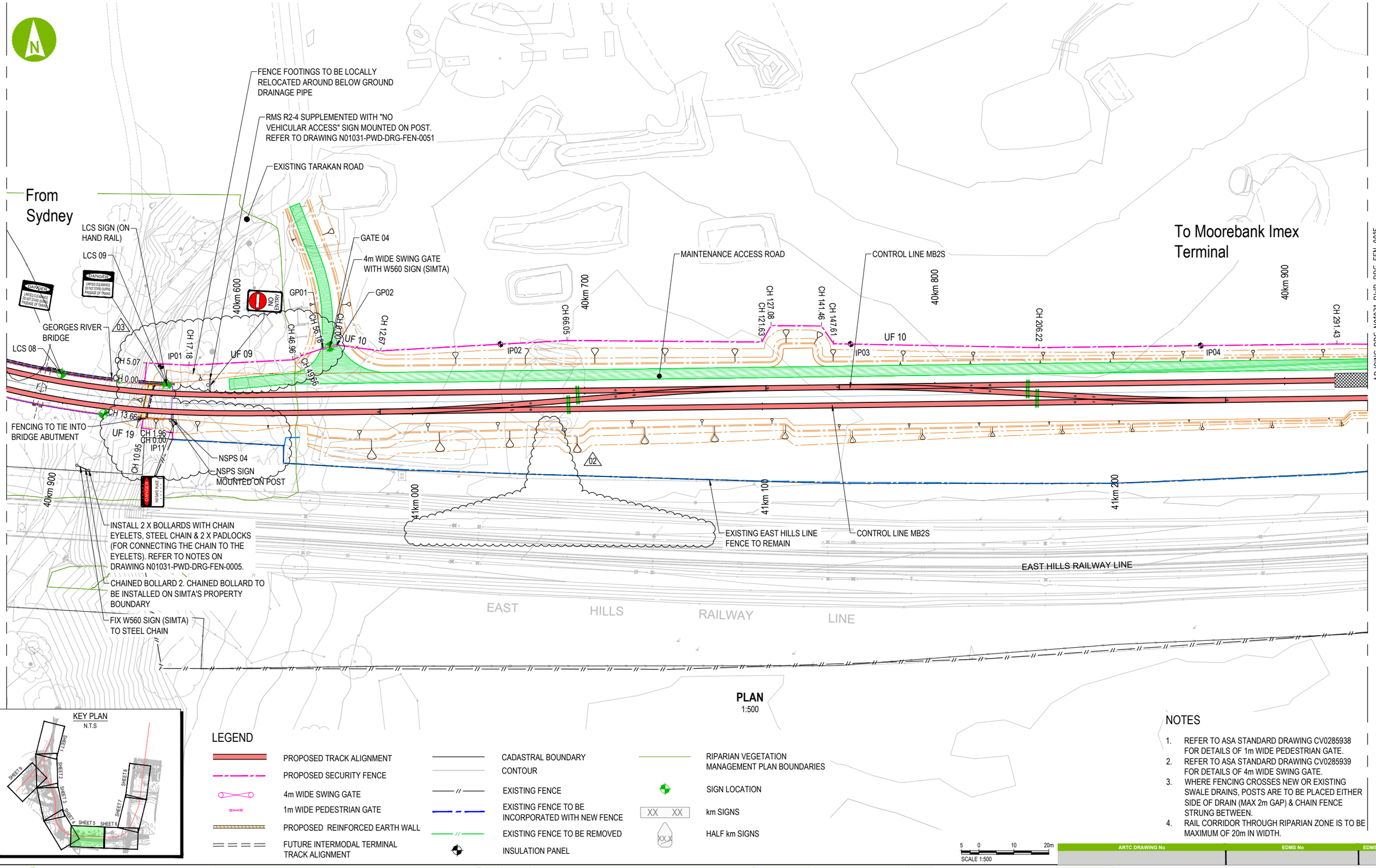
APPROVED
DATE 01.06.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 4 OF 9

DRAWING No.: PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC FEN – NUMBER 0013 – REV 02



PLAN
1:500

KEY PLAN
N.T.S

LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- RIPARIAN VEGETATION MANAGEMENT PLAN BOUNDARIES
- SIGN LOCATION
- km SIGNS (XX XX)
- HALF km SIGNS (XX.X)

SCALE 1:500 (5 0 10 20m)

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

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CLIENT: CPB CONTRACTORS | SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 01.06.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 5 OF 9

DRAWING No. | PROJECT No. N01031 | ZONE PWD | TYPE DRG | DISC FEN | NUMBER 0014 | REV 03

Rev Date: 1/6/2017 2:14:09 PM Office: AUSYD Filename: C:\PW_WORK\UK\EAST\MAN\ANZ_RKOD\D2307\$R\N01031-PWD\DRG\FEN\0014.DWG

ADJOINS DRG N01031-PWD-DRG-FEN-0014

ADJOINS DRG N01031-PWD-DRG-FEN-0016

From Sydney

To Moorebank Imex Terminal

MOOREBANK AVENUE OVERBRIDGE ASSET NAME PLATE FIXED TO PILES APPROX. 1500mm ABOVE SURFACE LEVEL

EXISTING MAINTENANCE ACCESS ROAD

4m WIDE SWING GATE WITH W560 SIGN (SIMTA)

TIE INTO EXISTING FENCE

MAINTENANCE ACCESS ROAD

1m WIDE PEDESTRIAN GATE TO TIE INTO SAFETY SCREEN WITH W560 SIGN (SIMTA)

MOOREBANK AVENUE BRIDGE

FENCE TO RUN ADJACENT TO THE PILES CAPS AND BUTT UP TO SAFETY SCREEN TO PREVENT ACCESS TO RAIL CORRIDOR

1m WIDE PEDESTRIAN GATE WITH W560 SIGN (SIMTA)

NSPS SIGN MOUNTED ON POST

RMS R2-4 SUPPLEMENTED WITH "NO VEHICULAR ACCESS" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

REFER TO DRAWING PWD-DRG-FEN-0060 FOR FENCE CROSSING OPEN DRAINAGE

1m WIDE PEDESTRIAN GATE WITH W560 SIGN (SIMTA)

CONTROL LINE MB2S

TIE INTO EXISTING FENCE

EXISTING EAST HILLS LINE FENCE TO REMAIN

41km 300

41km 400

41km 600

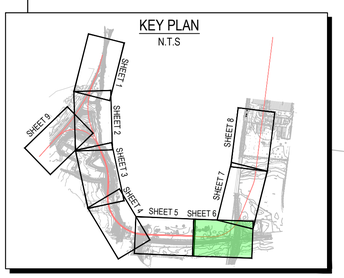
MOOREBANK AVENUE

EAST HILLS

PLAN
1:500

SCALE 1:500

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- RIPARIAN VEGETATION MANAGEMENT PLAN BOUNDARIES
- SIGN LOCATION
- XX XX km SIGNS
- XX.X HALF km SIGNS

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

Red Date: 17/2/2017 1:39:07 PM Office: AUSYD Filename: C:\PW_WORKSA\HLEY.LITTLE\ACAD_PROJ\D0285278\DRG\N1031-PWD-DRG-FEN-0015.DWG

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	P.NOONAN
CHECKED	M.SAKIB

FOR CONSTRUCTION

APPROVED
DATE 17.02.17
A.O'SHEA
A.O'SHEA

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	FENCING GENERAL ARRANGEMENT PLAN SHEET 6 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0015	01

ADJOINS DRG N01031-PWD-DRG-FEN-0015

ADJOINS DRG N01031-PWD-DRG-FEN-0017

From Sydney

To Moorebank Imex Terminal

MOOREBANK AVENUE

RMS R2-4 SUPPLEMENTED WITH "NO VEHICULAR ACCESS" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

"RX-2 ASSEMBLY (1 TRACK)" MOUNTED ON POST REFER TO DRAWING N01031-PWD-DRG-FEN-0050

4m WIDE SWING GATE AT LEVEL CROSSING WITH W560 SIGN (SIMTA) AND CUSTOM SIGN 1

1m WIDE PEDESTRIAN GATE TO TIE INTO SAFETY SCREEN WITH W560 SIGN (SIMTA)

EXISTING FENCE TIES INTO EXISTING GUARD RAIL ON MOOREBANK AVENUE

EXISTING MAINTENANCE ACCESS ROAD

RMS R2-4 SUPPLEMENTED WITH "NO VEHICULAR ACCESS" AND NSPS SIGN MOUNTED ON POST. REFER TO DRAWINGS N01031-PWD-DRG-FEN-0050 AND N01031-PWD-DRG-FEN-0051

NSPS 11

NSPS SIGN MOUNTED ON POST

GATE 13

GATE 14

GATE 11

GATE 08

GATE 09

NSPS 07

NSPS 06

NSPS 08

NSPS SIGN MOUNTED ON POST

EXISTING FENCE TO BE REMOVED

TIE INTO EXISTING FENCE

MAINTENANCE ACCESS ROAD

4m WIDE SWING GATE WITH W560 SIGN (SIMTA)

41km 600

41km 700

41km 800

41km 900

UF 22

UF 12

UF 13

UF 24

UF 18

IP19

IP20

IP21

IP22

IP23

IP24

GP01

GP02

CH 0.00

CH 9.77

CH 25.61

CH 32.07

CH 41.53

CH 8.23

CH 33.23

CH 79.24

CH 100.24

CH 135.74

CH 166.24

CH 177.52

CH 188.26

CH 203.17

CH 210.35

CH 226.47

CH 231.51

CH 242.56

CH 10.00

CH 6.12

CH 13.72

CH 21.08

CH 28.45

CH 40.00

CH 40.08

CH 18.26

CH 10.24

CH 50.49

CH 39.29

CH 34.79

CH 18.54

CH 0.00

CH 279.74

CH 217.97

CH 154.22

CH 113.46

CH 100.04

CH 90.04

CH 80.04

CH 70.05

CH 79.49

CH 79.24

CH 0.00

CH 47.89

CH 34.28

CH 1.95

CH 0.00

CH 1.05

CH 2.15

41.5

02

1m WIDE PEDESTRIAN GATE TO TIE INTO SAFETY SCREEN WITH W560 SIGN (SIMTA)

EXISTING SYDNEY TRAINS MAINTENANCE ACCESS ROAD

FENCE TO RUN ALONG OUTSIDE OF PILES TO PREVENT ACCESS TO SIMTA RAIL CORRIDOR

4m WIDE SWING GATE AT LEVEL CROSSING WITH W560 SIGN (SIMTA) AND CUSTOM SIGN 1

"RX-2 ASSEMBLY (1 TRACK)" MOUNTED ON POST REFER TO DRAWING N01031-PWD-DRG-FEN-0050

CONTROL LINE MB2S

FENCING TO TIE INTO CULVERT WING WALLS

LOOK FOR TRAINS

RAIL CROSSING WAY

LOOK FOR TRAINS

DANGER MORPHLAKE

NO ENTRY

KEY PLAN
N.T.S

SHEET 1
SHEET 2
SHEET 3
SHEET 4
SHEET 5
SHEET 6
SHEET 7
SHEET 8
SHEET 9

PLAN
1:500

LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- RIPARIAN VEGETATION MANAGEMENT PLAN BOUNDARIES
- SIGN LOCATION
- XX XX km SIGNS
- XX.X HALF km SIGNS

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

5 0 10 20m
SCALE 1:500

RevDate: 18/2017 2:15:19 PM Office: AUSYD Filename: C:\PW_WORK\LIKEASTMANJAZ_RKODOD2\D738\N01031.PWD.DRG.FEN0016.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 01.06.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 7 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0016	02

ADJOINS DRG N01031-PWD-DRG-FEN-0016

MOOREBANK AVENUE

From Sydney

To Moorebank Imex Terminal

ANZAC CREEK CULVERT ASSET NAME PLATE TO BE FIXED TO CULVERT STRUCTURE APPROX. 1500mm ABOVE SURFACE LEVEL

NSPS 09

RMS R2-4 SUPPLEMENTED WITH "NO VEHICULAR ACCESS" AND NSPS SIGN MOUNTED ON POST. REFER TO DRAWINGS N01031-PWD-DRG-FEN-0050 AND N01031-PWD-DRG-FEN-0051

4m WIDE SWING GATE WITH W560 SIGN (SIMTA)

SIMTA RAIL ALIGNMENT FENCING TO BUTT UP TO IMEX TERMINAL FENCE VIA A POST AGAINST THE IMEX TERMINAL FENCE.

FENCING TO TIE INTO CULVERT WING WALLS

CONTROL LINE MB2S

MAINTENANCE ACCESS ROAD

GATE 10

GATE 16

GP01

GP02

UF 15

UF 16

UF 17

CH 0.00

CH 8.09

CH 21.38

CH 40.15

CH 50.38

CH 59.24

CH 62.02

CH 66.00

CH 72.91

CH 76.05

CH 83.98

CH 41.08

CH 44.64

CH 48.20

CH 63.61

CH 68.70

CH 72.04

CH 78.62

CH 89.16

CH 101.82

CH 115.42

CH 118.55

CH 120.34

CH 122.90

CH 37.77

CH 28.43

CH 186.25

CH 180.85

CH 178.15

CH 144.97

CH 123.47

CH 116.21

CH 106.45

CH 86.95

CH 75.84

CH 67.13

CH 53.04

CH 30.10

CH 15.63

CH 8.00

NSPS 10

NSPS SIGN MOUNTED ON POST

TIE INTO EXISTING FENCE

PLAN
1:500

42km 200

42km 300

KEY PLAN
N.T.S

SHEET 1
SHEET 2
SHEET 3
SHEET 4
SHEET 5
SHEET 6
SHEET 7
SHEET 8
SHEET 9

LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- RIPARIAN VEGETATION MANAGEMENT PLAN BOUNDARIES
- SIGN LOCATION
- km SIGNS (XX XX)
- HALF km SIGNS (XX.X)

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

SCALE 1:500

ARTC DRAWING No	EDMS No	EDMS REV

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www.aurecongroup.com

CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
04	14.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

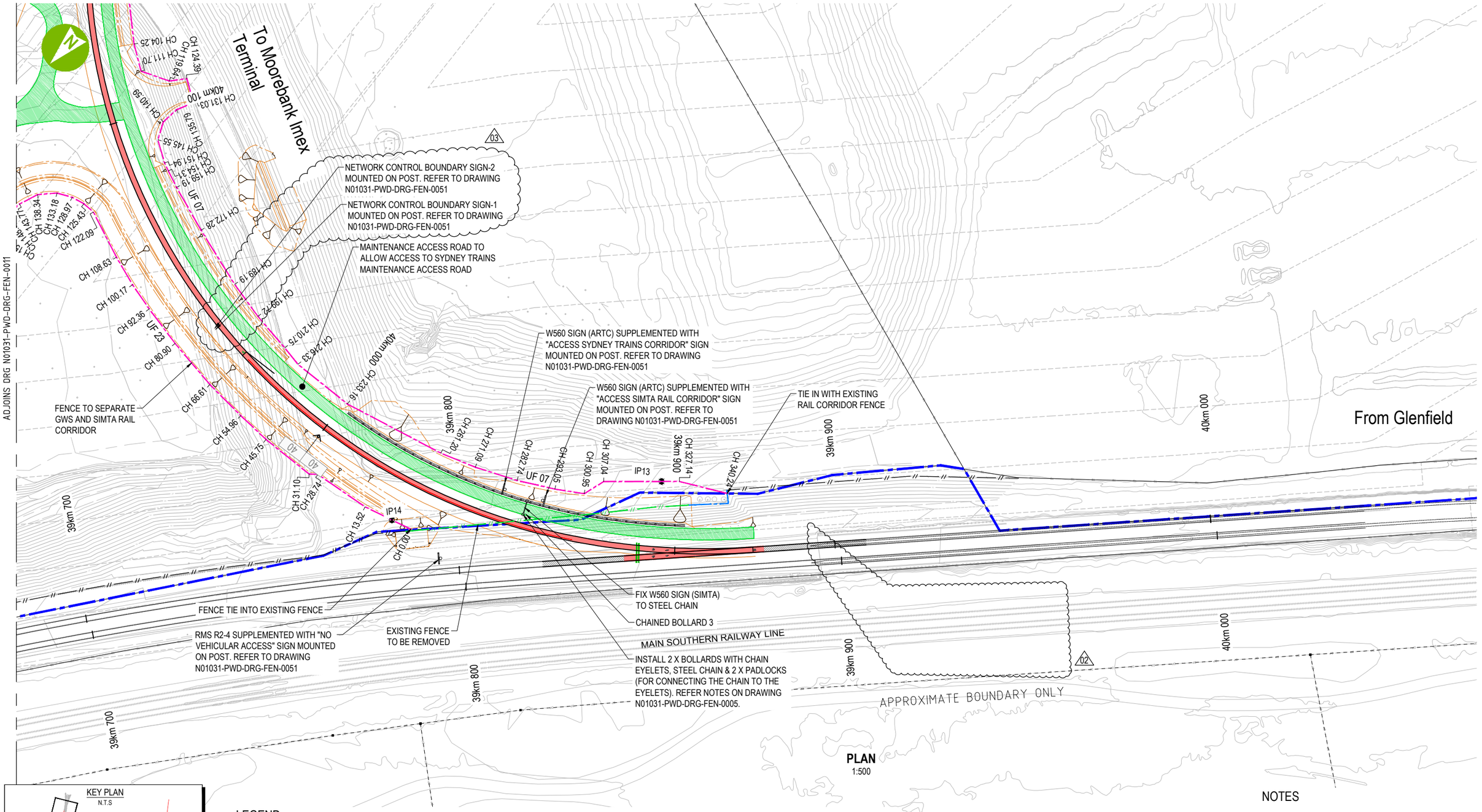
APPROVED
DATE 14.06.17
A. O'SHEA
A.O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 8 OF 9

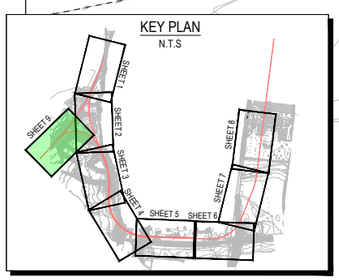
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0017	04

Rev Date: 16/01/17 2:44:08 PM Office: AUSYD Filename: C:\PW_WORKDIR\28738\N01031-PWD-DRG-FEN-0017.DWG



PLAN
1:500

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- RIPARIAN VEGETATION MANAGEMENT PLAN BOUNDARIES
- SIGN LOCATION
- XX XX km SIGNS
- XX.X HALF km SIGNS

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

SCALE 1:500 (5 0 10 20m)

ADJOINS DRG N01031-PWD-DRG-FEN-0011

Plot Date: 16/2017 2:16:27 PM Office: AUSYD Filename: C:\PW_WORK\LIKE.EASTMAN\NZ_PROD\D0292\d\N01031-PWD\DRG-FEN-0018.DWG

aurecon
www.aurecongroup.com

CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 01.06.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	FENCING GENERAL ARRANGEMENT PLAN SHEET 9 OF 9

DRAWING No. PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC FEN – NUMBER 0018 – REV 03

UF 00		
CHAINAGE	EASTING	NORTHING
0.00	306983.799	6240792.451
5.47	306981.846	6240787.337
21.76	306976.425	6240771.980
51.00	306964.767	6240745.168
56.06	306962.336	6240740.725
61.03	306960.507	6240736.105
70.54	306958.025	6240726.926
73.85	306957.261	6240723.704
93.57	306950.805	6240705.071
103.02	306947.098	6240696.378
109.22	306945.540	6240690.377
119.34	306947.242	6240680.407
135.26	306943.884	6240664.840
151.54	306941.058	6240648.804
164.40	306933.011	6240638.780
182.34	306930.867	6240620.970
199.99	306932.073	6240603.354
207.38	306936.957	6240597.814
220.12	306939.639	6240585.354
230.48	306941.012	6240575.089
254.33	306945.253	6240551.623
262.11	306952.257	6240548.238
267.56	306953.554	6240542.942
275.02	306948.570	6240537.390
300.68	306956.390	6240512.953
327.09	306966.022	6240488.361
348.71	306974.123	6240468.317
371.20	306982.952	6240447.627
378.95	306990.692	6240447.850
380.22	306991.148	6240446.663

UF 01		
CHAINAGE	EASTING	NORTHING
0.00	306987.581	6240598.243
29.08	306958.514	6240598.945
56.56	306933.923	6240611.215

UF 02		
CHAINAGE	EASTING	NORTHING
0.00	306992.538	6240442.912
0.84	306992.816	6240442.117
10.73	306986.411	6240434.582
29.03	306993.779	6240417.837
36.24	307000.061	6240414.288
47.90	307003.985	6240403.308
53.76	307001.192	6240398.154
133.00	307031.078	6240324.767
139.38	307032.891	6240318.650
164.23	307043.215	6240296.055
209.46	307059.418	6240253.825
227.76	307067.165	6240237.242
234.00	307069.507	6240231.462

UF 03		
CHAINAGE	EASTING	NORTHING
0.00	307095.711	6239991.147
22.76	307098.616	6239968.568
27.87	307100.898	6239964.000
32.09	307103.458	6239960.650
40.30	307108.491	6239954.165
44.16	307109.695	6239950.491
48.36	307110.148	6239946.320
50.62	307109.873	6239944.079
53.43	307109.165	6239941.358
58.38	307106.835	6239936.989
64.78	307102.474	6239932.302
66.41	307101.251	6239931.230
68.99	307099.562	6239929.274
71.14	307098.610	6239927.353
73.51	307097.993	6239925.061
76.18	307097.919	6239922.393
79.28	307098.536	6239919.356
80.99	307099.174	6239917.772
99.75	307108.306	6239901.374
108.70	307112.731	6239893.594
114.40	307116.192	6239889.071
121.10	307120.302	6239883.780
128.08	307125.359	6239878.966
137.86	307133.117	6239873.016
140.27	307133.183	6239870.607
142.63	307132.369	6239868.391
145.80	307130.117	6239866.162

UF 04		
CHAINAGE	EASTING	NORTHING
0.00	307125.287	6239851.440
7.56	307117.943	6239849.654
20.29	307111.365	6239860.551
28.80	307106.058	6239867.207
40.27	307098.290	6239875.651
52.34	307090.667	6239885.000
94.74	307069.177	6239921.555

UF 05		
CHAINAGE	EASTING	NORTHING
0.00	307067.141	6239924.998
9.45	307062.347	6239933.146
21.64	307059.571	6239945.008
33.97	307058.120	6239957.262
42.33	307065.194	6239961.709
65.23	307060.323	6239984.088
87.10	307057.993	6240005.829
101.07	307057.570	6240019.792
109.32	307057.310	6240028.041
128.09	307057.597	6240046.805
145.44	307058.113	6240064.151
157.51	307058.493	6240076.212
172.06	307059.053	6240090.752
188.28	307059.481	6240106.971
205.33	307059.952	6240124.008
227.83	307060.408	6240146.503
241.82	307060.356	6240160.499
247.99	307057.169	6240165.780
261.41	307056.712	6240179.187
275.88	307054.991	6240193.561
301.81	307050.016	6240219.011
323.96	307043.431	6240240.150
345.33	307035.396	6240259.952
383.52	307020.166	6240294.976
386.52	307022.917	6240296.173
389.53	307021.569	6240298.868

UF 06		
CHAINAGE	EASTING	NORTHING
0.00	307021.569	6240298.868
53.86	307000.717	6240348.522

UF 07		
CHAINAGE	EASTING	NORTHING
0.00	307000.718	6240348.520
16.27	306994.325	6240363.485
23.87	306991.208	6240370.418
34.42	306986.546	6240379.881
48.55	306978.955	6240391.795
67.30	306966.320	6240405.646
71.80	306962.028	6240404.281
86.74	306951.147	6240414.515
104.25	306937.652	6240425.670
111.70	306931.311	6240429.585
119.64	306924.094	6240426.266
124.39	306921.152	6240422.549
131.03	306915.479	6240426.010
135.79	306917.376	6240430.375
140.59	306917.685	6240435.165
145.55	306915.432	6240439.583
151.94	306909.894	6240442.766
154.31	306907.675	6240443.604
159.19	306903.073	6240445.230
172.28	306890.508	6240448.910
189.19	306874.107	6240453.035
199.72	306863.744	6240454.878
210.75	306852.764	6240455.936
216.33	306847.229	6240456.643
233.16	306830.474	6240455.112
261.20	306803.551	6240447.256
271.09	306794.368	6240443.593
282.74	306783.928	6240438.412
293.05	306775.102	6240433.084
300.95	306768.633	6240428.546
307.04	306767.168	6240422.644
327.14	306752.725	6240408.654
340.24	306741.368	6240402.136

UF 08		
CHAINAGE	EASTING	NORTHING
0.00	306922.925	6240523.647
16.29	306918.163	6240539.221
25.82	306915.727	6240548.440
36.29	306913.999	6240558.769
51.61	306911.981	6240573.952
67.66	306910.876	6240589.964
85.62	306913.006	6240607.795
94.67	306911.839	6240616.776
108.46	306898.050	6240616.973

UF 09		
CHAINAGE	EASTING	NORTHING
0.00	307281.554	6239785.884
5.07	307282.271	6239790.903
10.00	307287.179	6239790.436
17.18	307294.327	6239789.756
20.00	307297.147	6239789.778
30.00	307307.146	6239789.858
40.00	307317.146	6239789.937
46.96	307324.106	6239789.992
49.66	307326.581	6239791.072
50.00	307326.908	6239791.165
56.18	307332.849	6239792.859

UF 10		
CHAINAGE	EASTING	NORTHING
0.00	307336.783	6239793.584
12.67	307349.265	6239791.406
66.05	307402.637	6239792.069
121.63	307458.141	6239789.194
127.08	307461.087	6239793.783
141.46	307475.447	6239793.022
147.61	307478.716	6239787.815
206.22	307537.215	6239784.154
291.43	307622.383	6239781.454
334.90	307665.810	6239779.503
397.11	307727.456	6239771.177
423.65	307753.997	6239771.265
438.64	307768.901	6239772.911
448.19	307778.099	6239775.480
463.57	307793.147	6239778.648
487.11	307815.145	6239787.010
494.22	307822.087	6239788.555
518.63	307842.934	6239801.259
525.82	307849.160	6239804.863
543.78	307862.204	6239817.209
559.78	307874.550	6239827.375

UF 11		
CHAINAGE	EASTING	NORTHING
0.00	307893.430	6239825.592
3.41	307892.165	6239822.430
19.00	307881.396	6239811.152
25.63	307876.511	6239806.676
27.78	307874.379	6239806.992
39.00	307865.631	6239799.960
53.90	307863.696	6239785.187

UF 12		
CHAINAGE	EASTING	NORTHING
0.00	307923.570	6239900.760
9.77	307927.307	6239909.786
32.07	307934.428	6239930.924
41.53	307937.597	6239939.836

UF 13		
CHAINAGE	EASTING	NORTHING
0.00	307938.938	6239943.605
8.23	307942.108	6239951.201
10.00	307942.755	6239952.847
20.00	307946.409	6239962.156
30.00	307950.063	6239971.464
33.23	307951.244	6239974.474
40.00	307953.703	6239980.778
50.00	307957.337	6239990.094
60.00	307960.972	6239999.411
67.24	307963.601	6240006.152
70.00	307964.692	6240008.691
79.49	307968.436	6240017.410
80.00	307968.622	6240017.886
90.00	307972.259	6240027.202
100.00	307975.896	6240036.517
100.24	307975.983	6240036.741
110.00	307979.550	6240045.825
120.00	307983.205	6240055.134
130.00	307986.859	6240064.442
135.74	307988.958	6240069.788
140.00	307990.537	6240073.741
150.00	307994.246	6240083.028
160.00	307997.956	6240092.314
166.24	308000.271	6240098.112
170.00	308001.660	6240101.603
177.52	308004.442	6240108.592
180.00	308005.132	6240110.972
188.26	308007.431	6240118.906
190.00	308007.796	6240120.606
200.00	308009.891	6240130.384
203.17	308010.554	6240133.479
210.00	308011.667	6240140.223
210.35	308011.725	6240140.571
220.00	308012.769	6240150.161
226.47	308013.469	6240156.590
230.00	308013.998	6240160.084
231.51	308014.224	6240161.576
240.00	308014.951	6240170.035
242.56	308015.170	6240172.584

UF 14		
CHAINAGE	EASTING	NORTHING
0.00	308015.732	6240176.545
6.12	308015.931	6240182.659
10.00	308016.426	6240186.510
13.72	308016.899	6240190.197
20.00	308020.671	6240195.221
21.07	308021.315	6240196.078
28.45	308028.194	6240198.741

UF 15		
CHAINAGE	EASTING	NORTHING
0.00	308030.084	6240219.473
8.09	308023.649	6240224.368
10.00	308023.898	6240226.266
20.00	308025.203	6240236.181
21.38	308025.383	6240237.544
30.00	308026.048	6240246.143
40.00	308026.819	6240256.114
40.15	308026.830	6240256.262
50.00	308027.878	6240266.057
50.38	308027.918	6240266.436
59.24	308028.995	6240275.233
60.00	308029.104	6240275.982
64.02	308029.689	6240279.963

UF 16		
CHAINAGE	EASTING	NORTHING
0.00	308030.240	6240283.925
2.91	308030.461	6240286.822
6.05	308030.738	6240289.954
10.00	308031.302	6240293.864
13.98	308031.870	6240297.803
20.00	308032.661	6240303.771
30.00	308033.977	6240313.685
37.77	308034.998	6240321.384
40.00	308032.908	6240322.171
41.08	308031.893	6240322.553
44.64	308029.780	6240325.408
48.20	308029.675	6240328.972
50.00	308029.955	6240330.748
60.00	308031.513	6240340.626
63.61	308032.075	6240344.191
68.70	308035.796	6240347.660
70.00	308037.095	6240347.539
72.04	308039.125	6240347.351
78.62	308039.865	6240353.886
80.00	308039.988	6240355.265
89.16	308040.802	6240364.392
90.00	308040.831	6240365.228
100.00	308041.181	6240375.222
101.82	308041.245	6240377.043
110.00	308041.826	6240385.200
115.42	308042.211	6240390.610
118.55	308042.044	6240393.734
120.00	308041.299	6240394.976
120.33	308041.127	6240395.263
122.90	308041.725	6240397.762

UF 17		
CHAINAGE	EASTING	NORTHING
0.00	308071.921	6240398.808
10.00	308069.936	6240389.007
15.63	308068.818	6240383.490
20.00	308067.896	6240379.218
30.00	308065.786	6240369.443
30.10	308065.764	6240369.344
40.00	308063.547	6240359.697
50.00	308061.307	6240349.951
53.04	308060.625	6240346.984
60.00	308059.100	6240340.198
67.13	308057.537	6240333.242
70.00	308056.862	6240330.451
75.84	308055.488	6240324.771
80.00	308054.721	6240320.687
86.95	308053.439	6240313.855
90.00	308053.112	6240310.824
100.00	308052.038	6240300.881
106.45	308051.345	6240294.464
110.00	308050.964	6240290.939
116.21	308050.297	6240284.769
120.00	308049.621	6240281.036
123.47	308049.003	6240277.625
130.00	308048.235	6240271.137
140.00	308047.061	6240261.206
144.97	308046.478	6240256.273
150.00	308045.844	6240251.280
160.00	308044.584	6240241.360
170.00	308043.324	6240231.440
178.15	308042.297	6240223.355
180.00	308042.098	6240221.515
180.85	308042.007	6240220.673
186.25	308037.027	6240218.587

04

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
04	14.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	SIZE
NTS	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 14.06.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING SET-OUT POINTS - FENCING SHEET 1 OF 2

DRAWING No. N01031 – PWD – DRG – FEN – 0030 – 04
(PROJECT No. – ZONE – TYPE – DISC – NUMBER – REV)

UF 18		
CHAINAGE	EASTING	NORTHING
0.00	308034.322	6240197.352
4.09	308037.689	6240195.028
10.00	308036.935	6240189.168
10.24	308036.904	6240188.930
18.26	308035.861	6240180.981
20.00	308035.720	6240179.244
30.00	308034.913	6240169.276
40.00	308034.106	6240159.309
40.04	308034.103	6240159.269
50.00	308032.612	6240149.421
60.00	308031.115	6240139.534
70.00	308029.618	6240129.646
70.05	308029.611	6240129.602
80.00	308027.379	6240119.900
80.04	308027.370	6240119.857
90.00	308024.649	6240110.281
90.04	308024.637	6240110.239
100.00	308021.337	6240100.845
100.04	308021.323	6240100.807
110.00	308017.582	6240091.577
113.46	308016.282	6240088.369
120.00	308013.692	6240082.365
130.00	308009.733	6240073.182
140.00	308005.773	6240063.999
150.00	308001.813	6240054.817
154.22	308000.142	6240050.941
160.00	307997.962	6240045.589
170.00	307994.189	6240036.328
180.00	307990.416	6240027.067
190.00	307986.643	6240017.806
200.00	307982.870	6240008.545
210.00	307979.097	6239999.284
217.97	307976.090	6239991.903
220.00	307975.281	6239990.041
230.00	307971.296	6239980.870
240.00	307967.311	6239971.698
250.00	307963.325	6239962.527
260.00	307959.340	6239953.355
270.00	307955.354	6239944.184
279.74	307951.474	6239935.255

UF 19		
CHAINAGE	EASTING	NORTHING
0.00	307288.747	6239768.726
1.96	307288.801	6239770.687
10.00	307280.915	6239772.245
10.95	307279.983	6239772.429
13.66	307280.645	6239775.057

02

UF 20		
CHAINAGE	EASTING	NORTHING
0.00	306991.580	6240598.147
6.36	306997.941	6240597.977

UF 21		
CHAINAGE	EASTING	NORTHING
0.00	307877.565	6239830.003
16.32	307890.007	6239840.561
23.97	307895.271	6239846.122
34.26	307901.122	6239854.583

UF 22		
CHAINAGE	EASTING	NORTHING
0.00	307917.096	6239858.554
2.15	307915.994	6239856.713
25.61	307915.023	6239880.156
47.92	307923.570	6239900.760

UF 23		
CHAINAGE	EASTING	NORTHING
0.00	306795.242	6240467.330
13.52	306808.114	6240471.485
28.74	306823.115	6240473.997
31.10	306824.886	6240475.559
45.75	306839.484	6240476.891
54.96	306848.686	6240476.994
66.61	306860.334	6240476.769
80.90	306874.553	6240475.321
92.36	306885.868	6240473.504
100.17	306893.521	6240471.959
108.63	306901.667	6240469.678
122.09	306914.402	6240465.303
125.43	306917.734	6240465.457
128.97	306921.154	6240466.381
133.18	306924.861	6240468.364
138.34	306928.275	6240472.236
143.77	306930.002	6240477.385
148.04	306930.341	6240481.643
151.98	306929.385	6240485.462
180.83	306918.781	6240512.295
188.61	306925.592	6240516.062
192.65	306924.252	6240519.873

UF 24		
CHAINAGE	EASTING	NORTHING
0.00	307949.887	6239931.583
18.54	307944.021	6239913.994
34.79	307937.997	6239898.904
39.29	307935.929	6239894.907
50.49	307930.405	6239885.165
79.24	307917.599	6239859.418

UF 25		
CHAINAGE	EASTING	NORTHING
0.00	307863.565	6239784.195
17.16	307861.316	6239767.183

UF 26		
CHAINAGE	EASTING	NORTHING
0.00	307901.637	6239855.440
1.96	307902.645	6239857.116
19.79	307904.256	6239839.356
36.35	307893.803	6239826.521

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	SIZE
NTS	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 01.06.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING SET-OUT POINTS - FENCING SHEET 2 OF 2

DRAWING No. N01031 – PWD – DRG – FEN – 0031 – 02

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	FEN	0031	02

GATE 01					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	306992.538	6240442.912	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	306991.148	6240446.663			

GATE 02					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	307130.117	6239866.162	1m WIDE	PEDESTRIAN ACCESS GATE	CV0285938
GP02	307129.406	6239865.459			

GATE 03					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	307067.141	6239924.998	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	307069.177	6239921.555			

GATE 04					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	307332.849	6239792.859	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	307336.783	6239793.584			

GATE 05					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	307877.565	6239830.004	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	307874.556	6239827.369			

GATE 06					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	307863.696	6239785.187	1m WIDE	PEDESTRIAN ACCESS GATE	CV0285938
GP02	307863.565	6239784.195			

GATE 07					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	306922.925	6240523.647	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	306924.252	6240519.873			

GATE 08					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	307937.597	6239939.836	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	307938.938	6239943.605			

GATE 09					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	308015.170	6240172.584	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	308015.732	6240176.545			

02

GATE 10					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	308029.689	6240279.963	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	308030.240	6240283.925			

02

GATE 11					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	307949.887	6239931.583	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	307951.474	6239935.255			

GATE 12					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	306987.581	6240598.243	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	306991.580	6240598.147			

GATE 13					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	307901.122	6239854.583	1m WIDE	PEDESTRIAN ACCESS GATE	CV0285938
GP02	307901.637	6239855.440			

GATE 14					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	307917.599	6239859.418	1m WIDE	PEDESTRIAN ACCESS GATE	CV0285938
GP02	307917.096	6239858.554			

GATE 15					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	307892.450	6239823.142	1m WIDE	PEDESTRIAN ACCESS GATE	CV0285938
GP02	307892.828	6239824.069			

GATE 16					
POINT	EASTING	NORTHING	SIZE	OPERATION	DRAWING REF
GP01	308041.787	6240398.095	4m WIDE	VEHICLE ACCESS GATE	CV0285939
GP02	308042.339	6240402.057			

02

INSULATION PANELS		
POINT	EASTING	NORTHING
IP01	307286.312	6239789.757
IP02	307383.548	6239791.848
IP03	307483.531	6239787.513
IP04	307583.508	6239782.687
IP05	307693.138	6239775.858
IP06	307782.896	6239776.490
IP07	307867.841	6239821.619
IP08	307892.301	6239842.804
IP09	307889.302	6239819.432
IP10	307862.740	6239777.855
IP11	307283.766	6239770.082
IP12	307018.837	6240304.856
IP13	306756.112	6240411.935
IP14	306800.534	6240469.038
IP15	306903.754	6240616.891
IP16	307035.961	6240311.929
IP17	307130.157	6239875.286
IP18	307121.808	6239850.594
IP19	307924.930	6239904.045
IP20	307927.808	6239879.489
IP21	307965.780	6240011.114
IP22	307970.781	6240023.473
IP23	307985.053	6240014.784
IP24	307980.901	6240004.220

Rev Date: 16/2017 2:16:9 PM Office: AUSYD Filename: C:\PW_WORK\LIKE.EAST.MAN\AHNZ_KRO\D0\23237\$R\N01031.PWD\DRG\FEN\0040.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	SIZE
NTS	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 01.06.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING SET-OUT POINTS - GATES AND INSULATION PANELS

DRAWING No. N01031 – PWD – DRG – FEN – 0040 – 02

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV.
N01031	PWD	DRG	FEN	0040	02

NAME/NO.	QTY.	COMMENTS
W560	17	POSTED AT SITE ENTRANCE
NO SAFE PLACE SIGN	13	POSTED WHERE ACCESS IS NOT PERMITTED DURING NORMAL OPERATING CONDITIONS
LIMITED CLEARANCE WARNING SIGN	9	
NETWORK CONTROL BOUNDARY SIGN-1	2	
NETWORK CONTROL BOUNDARY SIGN-2	2	
		02
RX-2 ASSEMBLY (1 TRACK)	8	
RX-2 ASSEMBLY (2 TRACKS)	2	
RMS R2-4	7	
NO VEHICULAR ACCESS SIGN	7	
ACCESS SYDNEY TRAIN CORRIDOR SIGN	1	
ACCESS SIMTA TRAIN CORRIDOR SIGN	1	
RMS R6-11	2	

SIGNAGE SCHEDULE

REFERENCE	SIGN	EASTING	NORTHING	COMMENTS
GATE 01	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 1
GATE 02	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2
GATE 03	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 3
GATE 04	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2
GATE 05	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2
GATE 06	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2
GATE 07	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 1
GATE 08	W560 (SIMTA) AND CUSTOM SIGN 1	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 5
GATE 09	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2
GATE 10	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2
GATE 11	W560 (SIMTA) AND CUSTOM SIGN 1	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 5
GATE 12	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 1
GATE 13	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2
GATE 14	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2
GATE 15	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2
GATE 16	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2 03
CHAINED BOLLARD 1	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 4
CHAINED BOLLARD 2	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 2
CHAINED BOLLARD 3	W560 (SIMTA)	CENTRALLY AFFIXED TO GATE		PADLOCK TYPE 4
ACCESS SIMTA RAIL CORRIDOR	W560 (SIMTA)	306942.155	6240682.558	
ACCESS SYDNEY RAIL CORRIDOR	W560 (SIMTA)	306939.477	6240672.462	
NETWORK CONTROL BOUNDARY	SIGN -1	306927.105	6240593.858	
NETWORK CONTROL BOUNDARY	SIGN -1	306988.554	6240378.589	
NETWORK CONTROL BOUNDARY	SIGN -2	306927.105	6240593.858	
NETWORK CONTROL BOUNDARY	SIGN -2	306988.554	6240378.589	
				02
LCS 01	LOW CLEARANCE SIGN	307036.094	6240311.990	
LCS 02	LOW CLEARANCE SIGN	307050.352	6240259.255	
LCS 03	LOW CLEARANCE SIGN	307065.345	6240211.627	
LCS 04	LOW CLEARANCE SIGN	307070.769	6240160.432	
LCS 05	LOW CLEARANCE SIGN	307130.260	6239863.161	
LCS 06	LOW CLEARANCE SIGN	307167.329	6239829.777	
LCS 07	LOW CLEARANCE SIGN	307210.478	6239804.690	
LCS 08	LOW CLEARANCE SIGN	307257.849	6239788.968	
LCS 09	LOW CLEARANCE SIGN	307281.933	6239785.004	
NSPS 12	LOW CLEARANCE SIGN	307897.182	6239843.913	
NSPS 11	LOW CLEARANCE SIGN	307926.266	6239899.791	
NSPS 01	NO SAFE PLACE SIGN	307018.784	6240304.856	
NSPS 02	NO SAFE PLACE SIGN	307062.080	6240158.872	
NSPS 03	NO SAFE PLACE SIGN	307127.120	6239852.403	
NSPS 04	NO SAFE PLACE SIGN	307279.327	6239776.039	
NSPS 05	NO SAFE PLACE SIGN	307892.692	6239827.538	
NSPS 06	NO SAFE PLACE SIGN	307921.398	6239873.540	
NSPS 07	NO SAFE PLACE SIGN	308026.895	6240194.506	
NSPS 08	NO SAFE PLACE SIGN	308033.857	6240193.277	
NSPS 09	NO SAFE PLACE SIGN	307287.874	6239784.468	
NSPS 10	NO SAFE PLACE SIGN	308037.604	6240223.099	
NSPS 11	NO SAFE PLACE SIGN	307925.096	6239900.274	
NSPS 12	NO SAFE PLACE SIGN	307897.497	6239844.400	

SIGNAGE SCHEDULE

REFERENCE	SIGN	EASTING	NORTHING	COMMENTS
ASSEMBLY (1 TRACK)	RX-2	306914.726	6240443.726	
ASSEMBLY (1 TRACK)	RX-2	306937.269	6240445.038	
ASSEMBLY (1 TRACK)	RX-2	306936.164	6240431.405	
ASSEMBLY (1 TRACK)	RX-2	306962.817	6240438.809	
ASSEMBLY (1 TRACK)	RX-2	306973.327	6240452.298	
ASSEMBLY (1 TRACK)	RX-2	306990.257	6240412.557	
ASSEMBLY (2 TRACKS)	RX-2	307096.530	6239929.660	
ASSEMBLY (2 TRACKS)	RX-2	307072.746	6239929.293	
ASSEMBLY (1 TRACK)	RX-2	307934.151	6239934.267	
ASSEMBLY (1 TRACK)	RX-2	307954.927	6239937.643	
NO VEHICULAR ACCESS SIGN	R2-4	307933.257	6239919.462	
NO VEHICULAR ACCESS SIGN	R2-4	307128.419	6239869.669	
NO VEHICULAR ACCESS SIGN	R2-4	308026.895	6240194.506	
NO VEHICULAR ACCESS SIGN	R2-4	307888.358	6239834.749	
NO VEHICULAR ACCESS SIGN	R2-4	307299.542	6239783.836	
NO VEHICULAR ACCESS SIGN	R2-4	307288.449	6239774.297	
NO VEHICULAR ACCESS SIGN	R2-4	307070.705	6240149.268	
NO VEHICULAR ACCESS SIGN	R2-4	306716.873	6240394.180	

NOTES

1. PADLOCKS ARE TO BE PROVIDED WITH DIFFERENT KEYS BASED ON THE FOLLOW ACCESS AUTHORITY:

- PADLOCK TYPE 1 - GWS ACCESS ONLY
- PADLOCK TYPE 2 - SIMTA ACCESS ONLY
- PADLOCK TYPE 3 - GWS AND SIMTA ACCESS ONLY
- PADLOCK TYPE 4 - SYDNEY TRAINS AND ARTC ACCESS ONLY
- PADLOCK TYPE 5 - SYDNEY TRAINS AND SIMTA ACCESS ONLY

20 0 40 80mm
SCALE 1:2

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	14.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 01.06.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No | EDMS No | EDMS REV

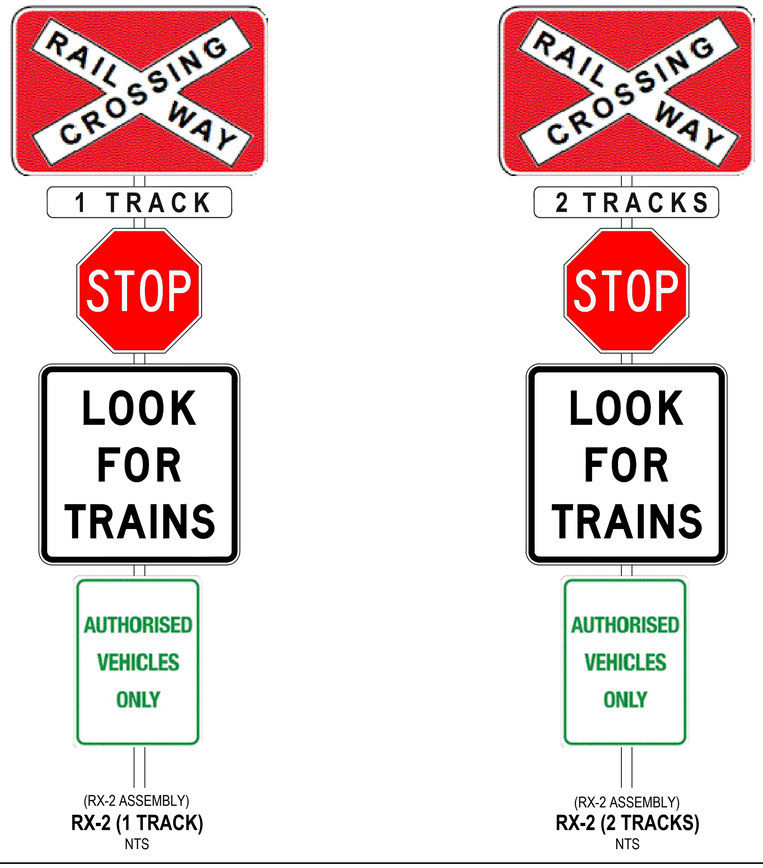
PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING SIGNAGE SCHEDULE

DRAWING No. N01031 – PWD – DRG – FEN – 0041 – 03
(PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV)

LIMITED CLEARANCE - WARNING SIGN
1:2

NO SAFE PLACE SIGN
NTS



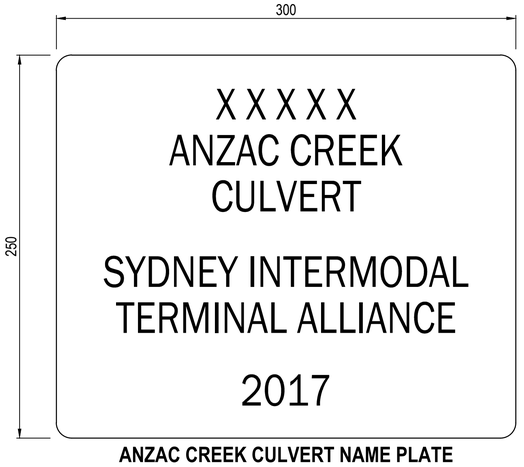
(RX-2 ASSEMBLY)
RX-2 (1 TRACK)
NTS

(RX-2 ASSEMBLY)
RX-2 (2 TRACKS)
NTS

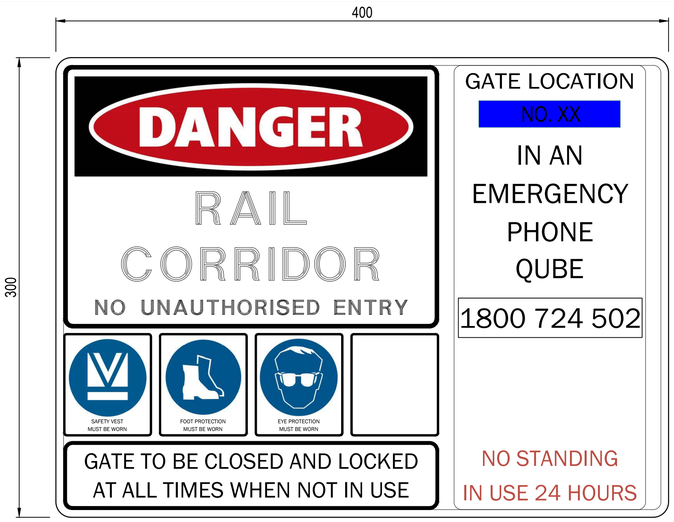
GEORGES RIVER BRIDGE NAME PLATE
1:2

GWS VIADUCT NAME PLATE
1:2

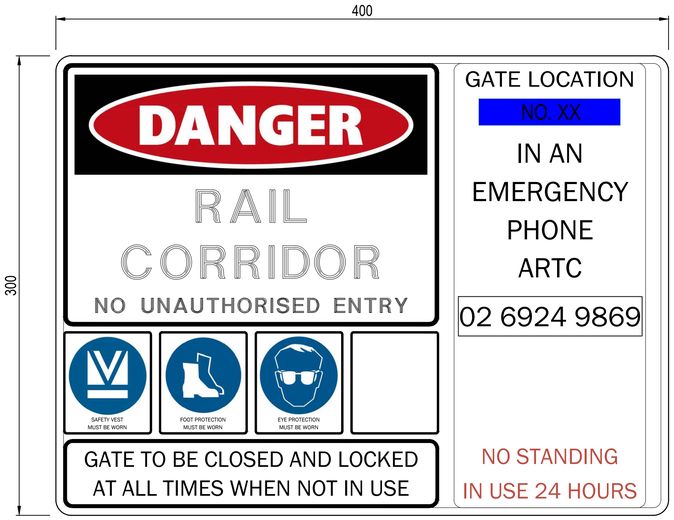
MOOREBANK AVE UNDERBRIDGE NAME PLATE
1:2



ANZAC CREEK CULVERT NAME PLATE
1:2



BOUNDARY GATE SIGN W560-SIMTA
1:2



BOUNDARY GATE SIGN W560-ARTC
1:2

NOTES

1. ALL SIGNS TO BE IN ACCORDANCE WITH RELEVANT ASA STANDARDS.
2. R2-4 SIGN TO BE IN ACCORDANCE WITH RMS DRAWING REGULATORY SIGN R2-4.
3. R6-11 SIGN TO BE IN ACCORDANCE WITH RMS DRAWING R6-11.
4. DRAWINGS TO BE IN CONJUNCTION WITH DESIGN REPORT.
5. REFER TO DWG. NO 1031-PWD-DRG-FEN-0010 TO NO 1031-PWD-DRG-FEN-0018 FOR SIGNAGE LAYOUT PLANS.
6. STANDARD DANGER SIGN "NO SAFE PLACE" TO BE PROCURED IN ACCORDANCE WITH CV0282111.
7. ASSET NUMBER, SHOWN AS XXXXX ON THE NAME PLATE, SHALL BE SUPPLIED BY SIMTA PRIOR TO CASTING OF THE NAME PLATE.

20 0 40 80mm
SCALE 1:2

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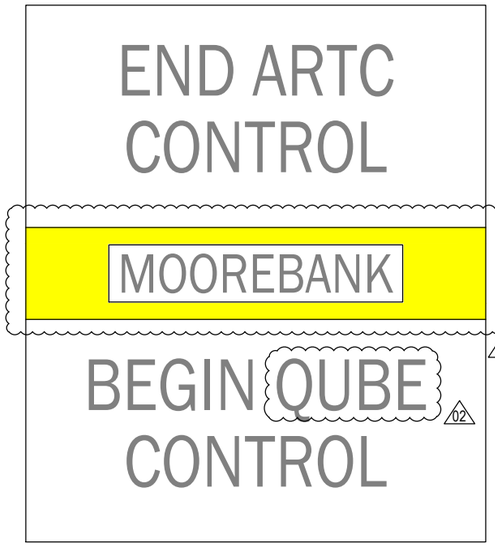
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA

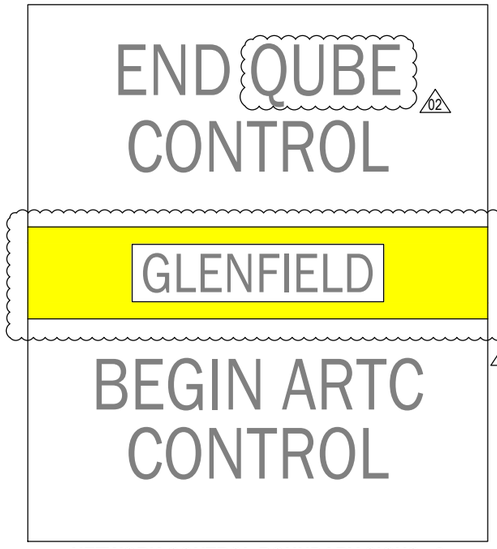
SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	P.NOONAN
CHECKED	M.SAKIB
APPROVED	A.O'SHEA
DATE	17.02.17

FOR CONSTRUCTION

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	FENCING SIGNAGE DETAILS SHEET 1 OF 2
DRAWING No.	PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC FEN – NUMBER 0050 – REV 01

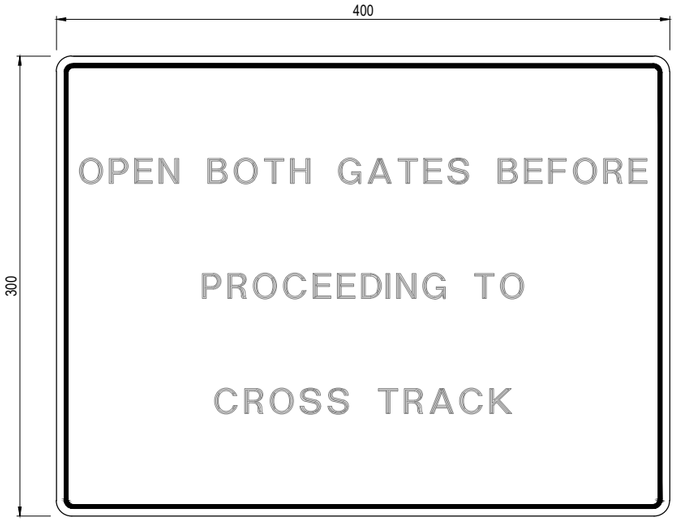


NETWORK CONTROL BOUNDARY SIGNS - 1
NTS



NETWORK CONTROL BOUNDARY SIGNS - 2
NTS

SYDNEY TRAINS CORRIDOR SIGN
1:2



CUSTOM SIGN 1
1:2

SIMTA RAIL CORRIDOR SIGN
1:2

NO VEHICULAR ACCESS SIGN
NTS

R2-4
NTS

NOTES

1. NETWORK CONTROL BOUNDARY SIGNS ARE BASED ON ARTC STANDARD ANSG 604 (INDICATORS AND SIGNS) FIGURE ANSG 604-32 AND ARTC STANDARD ANSG 606.
2. SIGNAGE DIMENSION AND FONT SHOULD BE AS PER ARTC STANDARD SPS 03 SECTION 1.3.

02

20 0 40 80mm
SCALE 1:2

Plot Date: 18/2017 2:17:13 PM Office: AUSYD Filename: C:\PW_WORKLIVE:EASTMAN\ANZ_PROD\D0028\08\N1031-PWD-DRG-FEN-0051.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	14.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

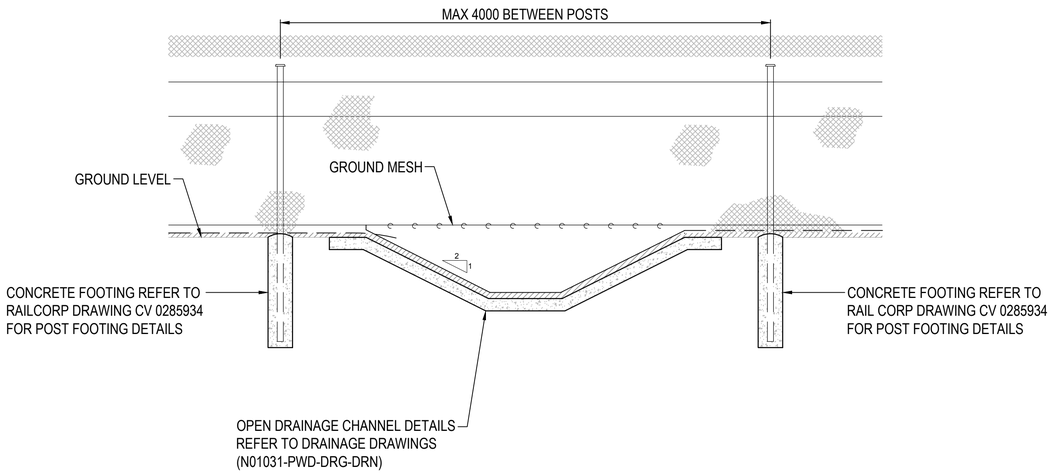
APPROVED
DATE 01.06.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

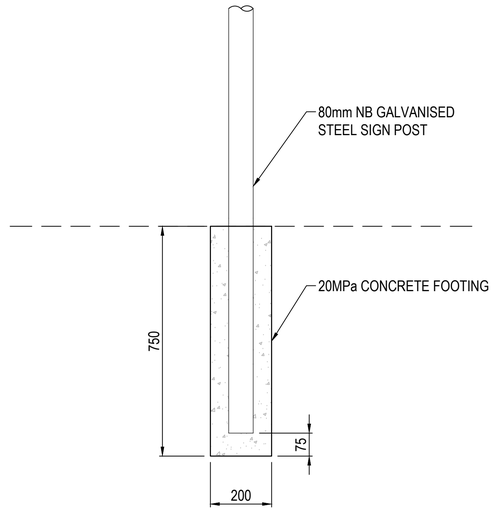
PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING SIGNAGE DETAILS SHEET 2 OF 2

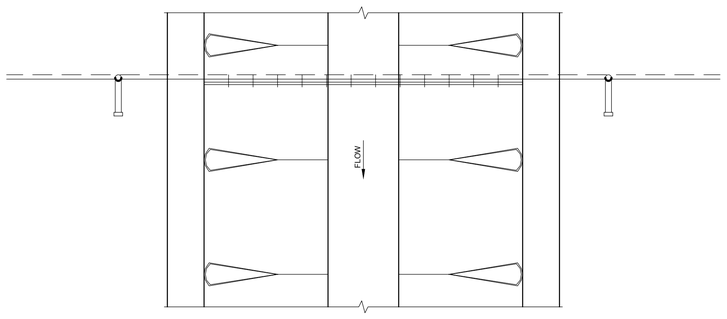
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0051	03



FENCE ELEVATION
1:25



SIGN FOOTING DETAIL
1:10



FENCE ELEVATION
1:25

SCALE 1:10 (100 0 200 400mm)

SCALE 1:25 (250 0 500 1000mm)

ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA

SCALE	SIZE
AS SHOWN	A1

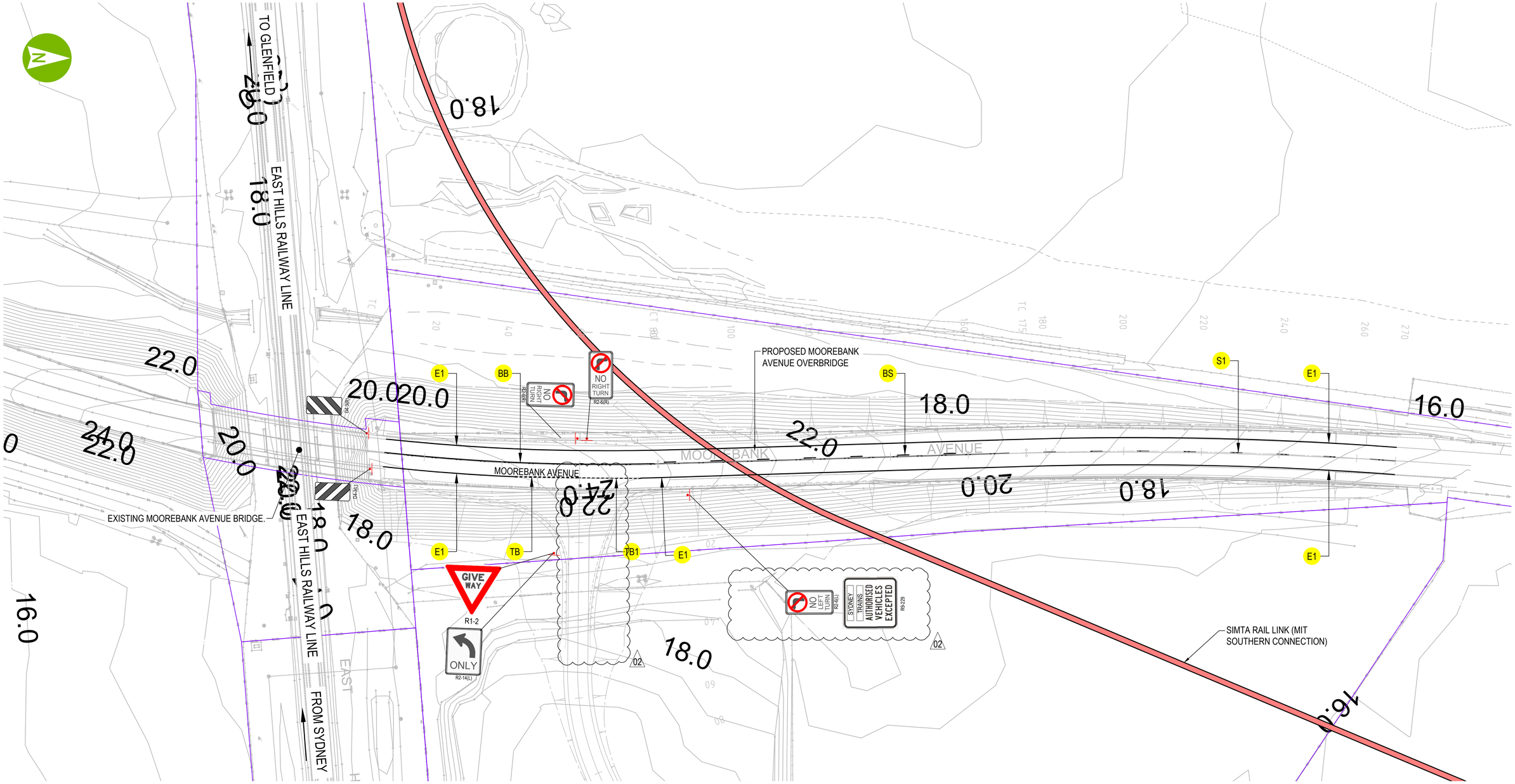
DRAWN: A.LITTLE
DESIGNED: P.NOONAN
CHECKED: M.SAKIB

FOR CONSTRUCTION

APPROVED
DATE 17.02.17
A.O'SHEA
A.O'SHEA

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	FENCING FENCING DETAIL - CROSSING OPEN DRAIN TYPICAL DETAILS

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0060	01



PLAN
1:500

NOTES

1. REFER RMS MANUAL DELINEATION SECTION 4 LONGITUDINAL MARKINGS FOR MORE DETAILS ON PATTERNS AND DIMENSIONS.
2. SIGNS RELATING TO ROADWORKS AND CONSTRUCTION TRAFFIC MANAGEMENT TO BE INCLUDED IN CPB CONSTRUCTION TRAFFIC MANAGEMENT PLAN.
3. PAVEMENT MARKINGS TO BE PROVIDED IN ACCORDANCE WITH ROADS AND MARITIME QA SPECIFICATION R141. TEMPORARY DELINEATION PAVEMENT MARKINGS TO BE PROVIDED AS WATERBORNE PAINT ON ASPHALT SURFACES.
4. RETRO - REFLECTIVE RAISED PAVEMENT MARKERS (RRPMs) SHALL BE USED TO AUGMENT PAVEMENT MARKINGS. FOR TYPE AND COLOUR OF RRPMs TO AUGMENT MARKINGS REFER RMS DELINEATION SECTION 15 - RAISED PAVEMENT MARKERS (TABLE) 15.1)
5. RETRO - REFLECTIVE RAISED PAVEMENT MARKERS MUST COMPLY WITH THE RMS QA SPECIFICATION R142 RETRO - REFLECTIVE RAISED PAVEMENT ,MARKERS WITH THE REQUIREMENTS OF AS 1906.3 AND HAVE THE DIMENSION SHOWN IN RMS DELINEATION SECTION 15 - RAISED PAVEMENT MARKERS (FIGURE 15.5)
6. INSTALLATION, PLACEMENT AND POSITIONING OF RRPMs SHALL BE IN ACCORDANCE WITH RMS DELINEATION SECTION 15 - RAISED PAVEMENT MARKERS (SECTION 15.7)

LEGEND - KERB TYPE

S1	DIVIDING (SEPARATIONS) LINE ON 2 LANE ROAD
E1	LEFT HAND EDGE ON GENERAL PURPOSE ROAD
BS	DIVIDING (BARRIER) LINES (RESTRICTED OVERTAKING IN ONE DIRECTION)
BB	DIVIDING (BARRIER) LINES
L3	LANE LINE ON A MULTI LANE ROAD
TB	GIVE WAY LINE (USED WITH SIGNS)
TB1	GIVE WAY LINE (USED ON RIGHT SIDE OF ROAD)

REFER RMS MANUAL DELINEATION SECTION 4 LONGITUDINAL MARKINGS FOR MORE DETAILS ON PATTERNS AND DIMENSIONS.

SCALE 1:500 (5 0 10 20m)

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	21.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	26.06.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	MS

SCALE	AS SHOWN
SIZE	A1
DRAWN	M.AHMAD
DESIGNED	M.SAKIB
CHECKED	D.EGITTO

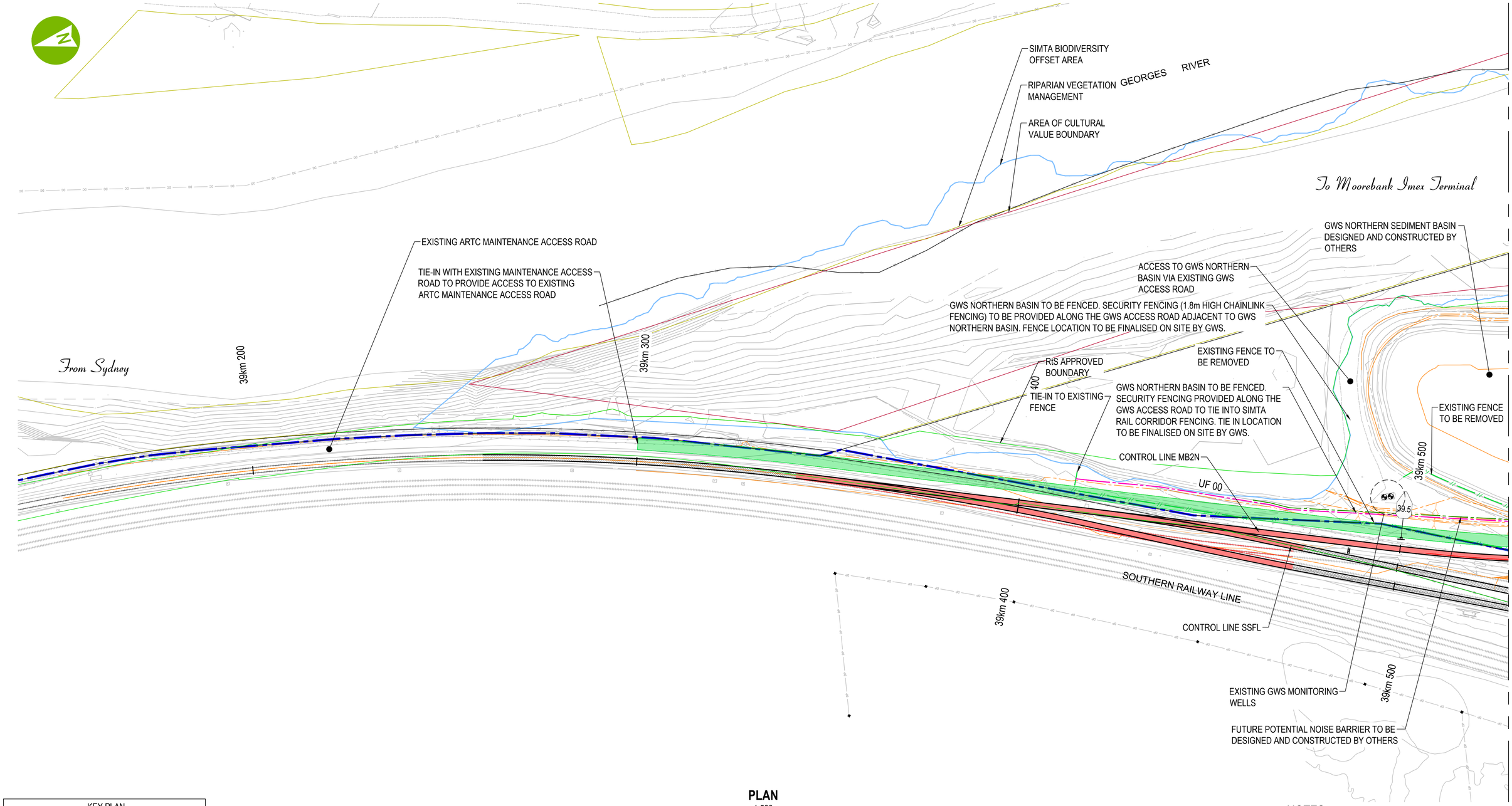
FOR CONSTRUCTION

APPROVED
DATE 26.06.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	MOOREBANK AVENUE OVERBRIDGE PERMANENT ROAD LINEMARKING AND SIGNAGE PLAN

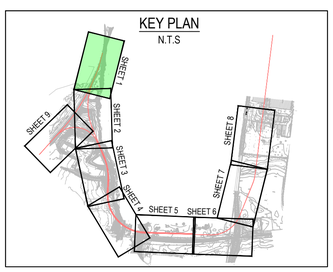
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	CIV	0090	02

Plot Date: 9/9/2018 11:23:12 AM Office: AUSYD Filename: C:\PV_WORK\MOREBANK\SAKIBAN2_PROD\D0028297\N01031-PWD-DRG-CIV-0090.DWG



PLAN
1:500

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE (1.8m HIGH CHAINLINK FENCE)
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- PROPOSED GWS LANDFILL RUBBISH CATCH FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- GWS LANDFILL RUBBISH CATCH STRAINER POST
- SIGN LOCATION
- XX XX km SIGNS
- XX.X HALF km SIGNS
- FUTURE NOISE WALL
- EXTENT OF EARTHWORKS
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD

5 0 10 20m
SCALE 1:500

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
03	14.07.17	90% ARTC DESIGN ISSUE	A. O'SHEA
04	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	13.06.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN	
E1	23.07.18	GWS RE-DESIGN - 100% FINAL DESIGN	
05	29.08.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB
06	05.10.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 29.08.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 1 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0010	06

Plot Date: 15/10/2018 1:35:05 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ARZ_PROD\30028328\N01031-PWD\DRG-FEN-0010.DWG

LEGEND

PROPOSED TRACK ALIGNMENT
PROPOSED SECURITY FENCE (1.8m HIGH CHAINLINK FENCE)
4m WIDE SWING GATE
1m WIDE PEDESTRIAN GATE
PROPOSED REINFORCED EARTH WALL
FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
CADASTRAL BOUNDARY
CONTOUR
EXISTING FENCE
PROPOSED GWS LANDFILL RUBBISH CATCH FENCE
EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
EXISTING FENCE TO BE REMOVED
INSULATION PANEL
GWS LANDFILL RUBBISH CATCH STRAINER POST
SIGN LOCATION
km SIGNS
HALF km SIGNS
FUTURE NOISE WALL
EXTENT OF EARTHWORKS
AREA OF CULTURAL VALUE BOUNDARY
RtS APPROVED CONSTRUCTION BOUNDARY
SIMTA BIODIVERSITY OFFSET AREA
RIPARIAN VEGETATION MANAGEMENT
VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
RALP ACCESS ROAD
GWS ACCESS ROAD
PROPOSED RALP AND GWS SHARED ACCESS ROAD

GEORGES RIVER

From Sydney

To Moorebank Imex Terminal

ADJOINS DRG N01031-PWD-DRG-FEN-0010

ADJOINS DRG N01031-PWD-DRG-FEN-0012

GWS NORTHERN BASIN TO BE FENCED. SECURITY FENCING (1.8m HIGH CHAINLINK FENCING) TO BE PROVIDED ALONG THE GWS ACCESS ROAD ADJACENT TO GWS NORTHERN BASIN. FENCE LOCATION TO BE FINALISED ON SITE BY GWS.

PRESERVE EXISTING GWS MAINTENANCE ACCESS TRACK TO FACILITATE GWS BASIN, SIMTA DRAINAGE MAINTENANCE AND ACCESS TO EXISTING GWS MONITORING WELLS

GWS NORTHERN SEDIMENT BASIN DESIGNED AND CONSTRUCTED BY OTHERS

AREA OF CULTURAL VALUE BOUNDARY

"RX-2 ASSEMBLY (2 TRACKS)" MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0050

GATE TO PROVIDE GWS ACCESS TO SEDIMENT BASIN

NEW 4m WIDE SWING GATE WITH W560 SIGN (SIMTA)

SECURITY FENCING PROVIDED ALONG THE GWS ACCESS ROAD TO TIE INTO SIMTA RAIL CORRIDOR FENCING

VPA BOUNDARY

RtS APPROVED BOUNDARY

REINFORCED EARTH WALL

RALP AND GWS SHARED MAINTENANCE ACCESS ROAD

GATE 01

W560 SIGN (SIMTA) SUPPLEMENTED WITH "ACCESS SIMTA RAIL CORRIDOR" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

W560 SIGN (ARTC) SUPPLEMENTED WITH "ACCESS SYDNEY TRAINS CORRIDOR" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

NETWORK CONTROL BOUNDARY SIGNS – 1 MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051.

CONTROL LINE MB2N

PROPOSED MAINTENANCE ACCESS ROAD TO ALLOW ACCESS TO SYDNEY TRAINS HV/ARTC SIGNALLING EQUIPMENT AND GWS TRIANGLE LAND

"RX-2 ASSEMBLY (1 TRACK)" MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0050

PROVISION FOR FUTURE NOISE WALL (DESIGN AND CONSTRUCTION BY OTHERS)

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

GWS ACCESS ROAD

KEYSTONE RETAINING WALL TO LIMIT ENCROACHMENT INTO VPA BOUNDARY.

FENCING TO TIE INTO RETAINING WALL

"RX-2 ASSEMBLY (2 TRACKS)" MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0050

GWS LANDFILL RUBBISH CATCH FENCE TO BE PLACED ALONG SIMTA RAIL CORRIDOR FENCE LINE. REFER TO DRAWING N01031-PWD-DRG-FEN-0061 FOR DETAILS

"RX-2 ASSEMBLY (2 TRACKS)" MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0050

EXISTING GWS MONITORING WELLS

FIX W560 SIGN (SIMTA) TO STEEL CHAIN

CHAINED BOLLARD 1

INSTALL 2 X BOLLARDS WITH CHAIN EYELETS, STEEL CHAIN & 2 X PADLOCKS (FOR CONNECTING THE CHAIN TO THE EYELETS). REFER TO NOTES ON DRAWING N01031-PWD-DRG-FEN-0005.

EXISTING FENCE TO BE REMOVED

NETWORK CONTROL BOUNDARY SIGNS – 2 MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051.

FOLLOWING THE CONSTRUCTION OF FUTURE NOISE WALL, FENCING TO TIE INTO NOISE WALL (BY OTHERS)

MAINTENANCE ACCESS TRACK TO FACILITATE GWS LEACHATE POND MAINTENANCE

GATE TO PROVIDE ACCESS TO GWS TRIANGLE LAND

NEW 4m WIDE SWING GATE WITH W560 SIGN (SIMTA)

FOLLOWING THE CONSTRUCTION OF FUTURE NOISE WALL, FENCING TO TIE INTO NOISE WALL (BY OTHERS)

GWS LEACHATE POND (DESIGNED AND CONSTRUCTED BY OTHERS)

FENCE TO SEPARATE GWS/SIMTA RAIL CORRIDOR

TIE-IN WITH EXISTING MAINTENANCE ACCESS ROAD TO PROVIDE ACCESS TO EXISTING SYDNEY TRAINS MAINTENANCE ACCESS ROAD

TIE INTO EXISTING FENCE

EXISTING SYDNEY TRAINS MAINTENANCE ACCESS ROAD

EXISTING SYDNEY TRAINS ACCESS ROAD

EXISTING RAIL CORRIDOR FENCE TO BE MAINTAINED

CONTROL LINE MB2S

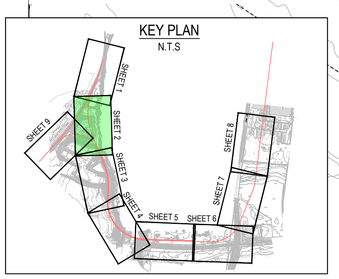
PROVISION FOR FUTURE NOISE WALL (DESIGN AND CONSTRUCTION BY OTHERS)

NETWORK CONTROL BOUNDARY SIGN-2 MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

NETWORK CONTROL BOUNDARY SIGN-1 MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

PROPOSED MAINTENANCE ACCESS ROAD TO ALLOW ACCESS TO SYDNEY TRAINS MAINTENANCE ACCESS ROAD

KEY PLAN
N.T.S



NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

PLAN
1:500

ADJOINS DRG N01031-PWD-DRG-FEN-0018

5 0 10 20m
SCALE 1:500

Plot Date: 15/10/2018 1:26:43 PM Office: AUSYD Filename: CVPK_WORKASHLEY LITTLE&NZ_PROD\0028292\BIM\01031-PWD\DRG\FEN\0011.DWG

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CLIENT
CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
04	14.07.17	90% ARTC DESIGN ISSUE	A. O'SHEA
05	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	13.06.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN	
E1	23.07.18	GWS RE-DESIGN - 100% FINAL DESIGN	
06	29.08.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB
07	05.10.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE: AS SHOWN
SIZE: A1
DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE: 29.08.18
M.SAKIB
M.SAKIB

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING
GENERAL ARRANGEMENT PLAN
SHEET 2 OF 9

DRAWING No. N01031 – PWD – DRG – FEN – 0011 – 07
(PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV)

EXISTING GWS MONITORING WELLS
GEORGES RIVER
RALP AND GWS SHARED MAINTENANCE ACCESS ROAD
RtS APPROVED BOUNDARY
FENCING TO TIE INTO RETAINING WALL
EXISTING GWS FENCE TO REMAIN
EXISTING GWS ACCESS ROAD TO BE MAINTAINED TO PROVIDE ACCESS TO EXISTING GWS MONITORING WELLS
FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS
RIPARIAN VEGETATION MANAGEMENT
CONTROL LINE MB2N
EXISTING GWS MONITORING WELL
ACCESS TO GWS MONITORING WELLS ON FOOT FROM EXISTING GWS ACCESS ROAD
VPA BOUNDARY
From Sydney
To Moorebank Imex Terminal
39km 900
40km 000
40km 100
40km 200
40km 300
40km 400
40km 500
40km 600
UF 05
SP08
IP12
SP09
SP10
0.6:1 SOIL NAIL EMBANKMENT
REINFORCED EARTH WALL
CONTROL LINE MB2S
GWS LANDFILL RUBBISH CATCH FENCE TO BE PLACED ALONG SIMTA RAIL CORRIDOR FENCE LINE. REFER TO DRAWING N01031-PWD-DRG-FEN-0061 FOR DETAILS
FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS
GWS MAINTENANCE ACCESS ROAD
REFER TO DRAWING N01031-PWD-DRG-FEN-0061 FOR INSULATION PANEL DETAILS
ADJOINS DRG N01031-PWD-DRG-FEN-0011
ADJOINS DRG N01031-PWD-DRG-FEN-0013

PLAN
1:500

KEY PLAN
N.T.S
SHEET 1 SHEET 2 SHEET 3 SHEET 4 SHEET 5 SHEET 6 SHEET 7 SHEET 8 SHEET 9

LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE (1.8m HIGH CHAINLINK FENCE)
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- PROPOSED GWS LANDFILL RUBBISH CATCH FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- GWS LANDFILL RUBBISH CATCH STRAINER POST
- SIGN LOCATION
- XX XX km SIGNS
- XX.X HALF km SIGNS
- FUTURE NOISE WALL
- EXTENT OF EARTHWORKS
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD

SCALE 1:500 (5 0 10 20m)

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

Plot Date: 15/12/2018 1:36:15 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ.PROD\D0028258\N01031-PWD-DRG-FEN-0012.DWG

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CLIENT
CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
D1	13.06.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN	
E1	23.07.18	GWS RE-DESIGN - 100% FINAL DESIGN	
02	29.08.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB
03	05.10.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 29.08.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 3 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0012	03

ADJOINS DRG N01031-PWD-DRG-FEN-0012

ADJOINS DRG N01031-PWD-DRG-FEN-0014

From Sydney

To Moorebank Imex Terminal

GEORGES RIVER

EXISTING GWS ACCESS ROAD TO BE MAINTAINED TO PROVIDE ACCESS TO EXISTING GWS MONITORING WELLS

ACCESS TO GWS MONITORING WELLS ON FOOT FROM EXISTING GWS ACCESS ROAD

EXISTING GWS MONITORING WELLS

EXISTING GWS FENCE TO REMAIN

TIE INTO EXISTING FENCE

"RX-2 ASSEMBLY (2 TRACKS)" MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0050

RMS R2-4 SUPPLEMENTED WITH "NO VEHICULAR ACCESS" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

RIPARIAN VEGETATION BOUNDARY

AREA OF CULTURAL VALUE BOUNDARY

VPA BOUNDARY

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

NEW 1m PEDESTRIAN ACCESS GATE WITH W560 SIGN (SIMTA)

RtS APPROVED BOUNDARY

CONTROL LINE MB2N

CONTROL LINE MB2S

GATE 02

GATE 17

GP01

GP02

MAINTENANCE ACCESS ROAD

EXISTING FENCE TO BE REMOVED

LCS 05

LCS 06

LCS 07

LCS SIGN (ON HAND RAIL)

LCS 08

LCS 09

RMS R6-11 LOW CLEARANCE SIGN ATTACHED TO GEORGES RIVER BRIDGE SUPER-T GIRDER OVER THE CENTRE OF TARANKAN ROAD TO FACE APPROACHING TRAFFIC. SIGN FACE TO SHOW 4.0m CLEARANCE.

GEORGES RIVER BRIDGE

EAST HILLS RAILWAY LINE

FENCING TO TIE INTO BRIDGE ABUTMENT

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

NSPS SIGN MOUNTED ON POST

NSPS 04

TIE INTO EXISTING FENCING

FENCING TO TIE INTO BRIDGE ABUTMENT

INSTALL 2 X BOLLARDS WITH CHAIN EYELETS, STEEL CHAIN & 2 X PADLOCKS (FOR CONNECTING THE CHAIN TO THE EYELETS). REFER TO NOTES ON DRAWING N01031-PWD-DRG-FEN-0005.

CHAINED BOLLARD 2. CHAINED BOLLARD TO BE INSTALLED ON SIMTA'S PROPERTY BOUNDARY

FIX W560 SIGN (SIMTA) TO STEEL CHAIN

GWS LANDFILL RUBBISH CATCH FENCE TO BE PLACED ALONG SIMTA RAIL CORRIDOR FENCE LINE. REFER TO DRAWING N01031-PWD-DRG-FEN-0061 FOR DETAILS

PROPOSED 4m WIDE SWING GATE WITH W560 SIGN (SIMTA)

"RX-2 ASSEMBLY (2 TRACKS)" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0050.

TIE-IN WITH EXISTING GWS LANDFILL MAINTENANCE ACCESS ROAD

PROPOSED 4m WIDE SWING GATE WITH W560 SIGN (SIMTA)

NSPS 03

EXISTING GWS MONITORING WELLS

NSPS SIGN MOUNTED ON POST

GEORGES RIVER BRIDGE ASSET NAME PLATE TO BE FIXED TO BRIDGE STRUCTURE APPROX. 1500mm ABOVE SURFACE LEVEL

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

UF 03

UF 04

UF 05

UF 19

SP10

SP11

IP01

IP11

IP17

IP18

40km 200

40km 300

40km 400

40km 500

40km 600

40km 700

40km 800

40km 900

CH 0.00

CH 33.68

CH 96.19

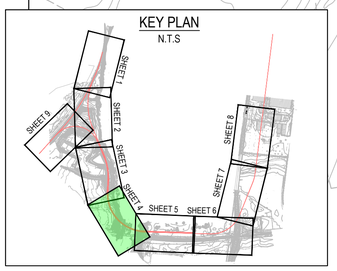
CH 100.00

40.5

LOW CLEARANCE 4.0m

PLAN
1:500

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE (1.8m HIGH CHAINLINK FENCE)
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- PROPOSED GWS LANDFILL RUBBISH CATCH FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- GWS LANDFILL RUBBISH CATCH STRAINER POST
- SIGN LOCATION
- XX XX km SIGNS
- XX.X HALF km SIGNS
- FUTURE NOISE WALL
- EXTENT OF EARTHWORKS
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD

5 0 10 20m
SCALE 1:500

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

Rel Date: 15/10/2018 11:12:31 PM Office: Sydney Filename: C:\PW_WORKSMORSALIN.SAKIB\ANZ_PROD\2022938\N01031-PWD-DRG-FEN-0013.DWG

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
D1	13.06.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN	
E1	23.07.18	GWS RE-DESIGN - 100% FINAL DESIGN	
03	29.08.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB
04	05.10.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	S.MURPHY

FOR CONSTRUCTION

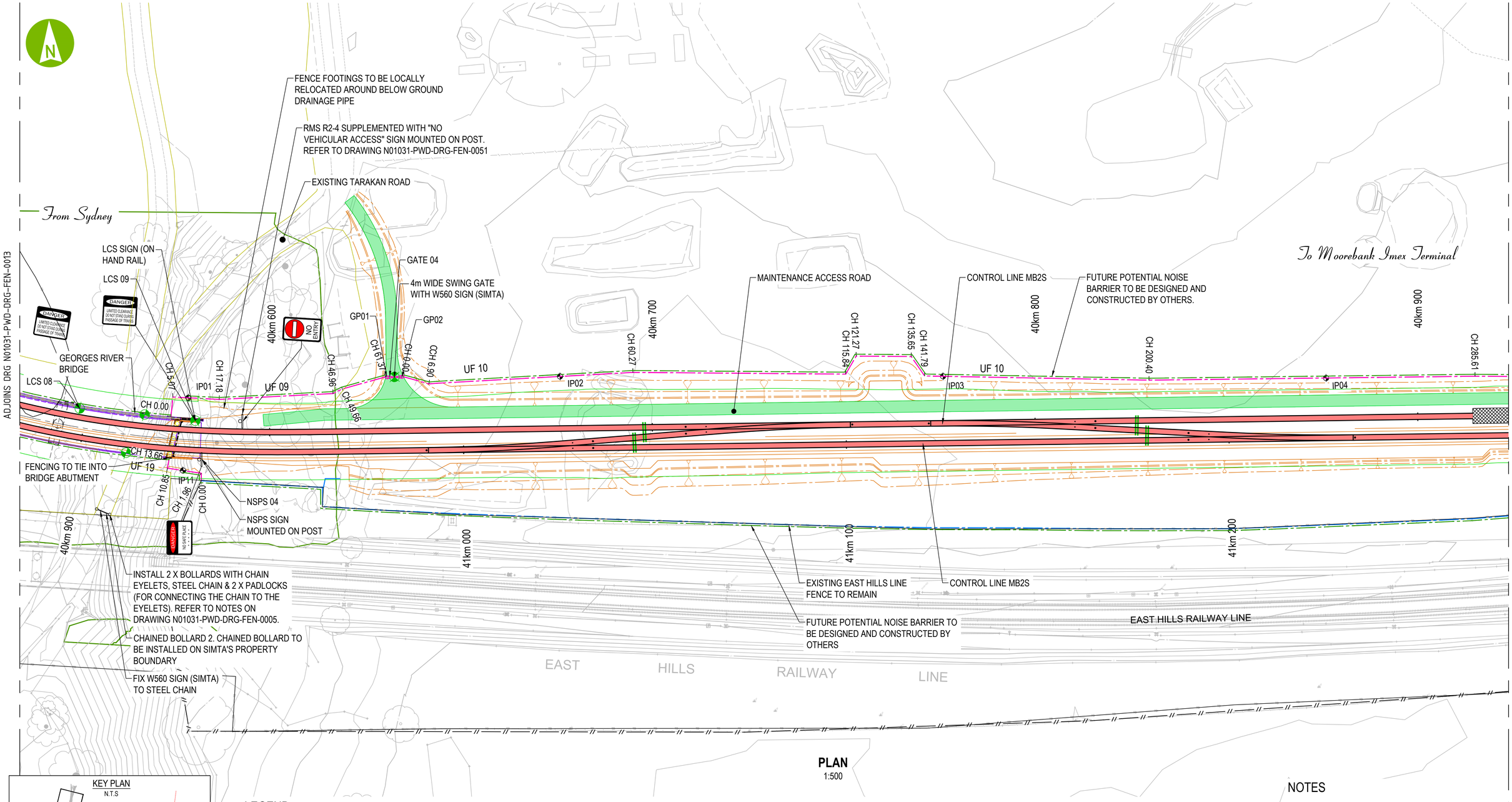
APPROVED
DATE 29.08.18
M.SAKIB
M.SAKIB

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

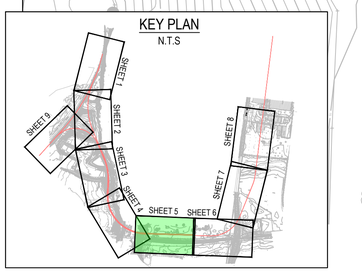
TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 4 OF 9

DRAWING No. PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC FEN – NUMBER 0013 – REV 04



PLAN
1:500

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE (1.8m HIGH CHAINLINK FENCE)
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- PROPOSED GWS LANDFILL RUBBISH CATCH FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- GWS LANDFILL RUBBISH CATCH STRAINER POST
- SIGN LOCATION
- XX XX km SIGNS
- XX.X HALF km SIGNS
- FUTURE NOISE WALL
- EXTENT OF EARTHWORKS
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD

5 0 10 20m
SCALE 1:500

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

Red Date: 15/10/2018 1:37:35 PM Office: AUSYD Filename: C:\PW_WORKSHARE\EY-LITTLEANZ_PROJ\D0028378\M0103-PWD-DRG-FEN-0014.DWG

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CLIENT
CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
04	05.10.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 17.02.17
A. O'SHEA
A.O'SHEA

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	FENCING GENERAL ARRANGEMENT PLAN SHEET 5 OF 9

DRAWING No. N01031 – PWD – DRG – FEN – 0014 – 04
(PROJECT No. – ZONE – TYPE – DISC – NUMBER – REV)

ADJOINS DRG N01031-PWD-DRG-FEN-0014

ADJOINS DRG N01031-PWD-DRG-FEN-0016

From Sydney

To Moorebank Imex Terminal

MOOREBANK AVENUE OVERBRIDGE ASSET NAME PLATE FIXED TO PILES APPROX. 1500mm ABOVE SURFACE LEVEL

EXISTING MAINTENANCE ACCESS ROAD

4m WIDE SWING GATE WITH W560 SIGN (SIMTA)

TIE INTO EXISTING FENCE

MAINTENANCE ACCESS ROAD

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

CONTROL LINE MB2S

TIE INTO EXISTING FENCE

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

EXISTING EAST HILLS LINE FENCE TO REMAIN

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

1m WIDE PEDESTRIAN GATE TO TIE INTO SAFETY SCREEN WITH W560 SIGN (SIMTA)

MOOREBANK AVENUE BRIDGE

FENCE TO RUN ADJACENT TO THE PILES CAPS AND BUTT UP TO SAFETY SCREEN TO PREVENT ACCESS TO RAIL CORRIDOR

1m WIDE PEDESTRIAN GATE WITH W560 SIGN (SIMTA)

NSPS SIGN MOUNTED ON POST

RMS R2-4 SUPPLEMENTED WITH "NO VEHICULAR ACCESS" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

REFER TO DRAWING PWD-DRG-FEN-0060 FOR FENCE CROSSING OPEN DRAINAGE

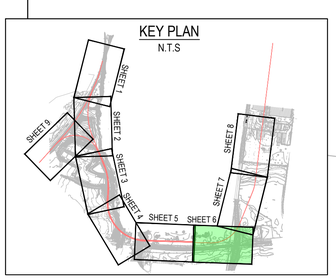
1m WIDE PEDESTRIAN GATE WITH W560 SIGN (SIMTA)

MOOREBANK AVENUE

EAST HILLS

PLAN
1:500

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE (1.8m HIGH CHAINLINK FENCE)
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- PROPOSED GWS LANDFILL RUBBISH CATCH FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- GWS LANDFILL RUBBISH CATCH STRAINER POST
- SIGN LOCATION
- km SIGNS (XX XX)
- HALF km SIGNS (XX.X)
- FUTURE NOISE WALL
- EXTENT OF EARTHWORKS
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD

SCALE 1:500 (5 0 10 20m)

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	05.10.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 17.02.17
A. O'SHEA
A.O'SHEA

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	FENCING GENERAL ARRANGEMENT PLAN SHEET 6 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0015	02

Plot Date: 18/10/2018 1:37:59 PM Office: AUSYD Filename: C:\PW_WORKA\DLE\EX LITTLEA\NZ_PROD\D0035758\N0103\PWD\DRG\FEN\0015.DWG

ADJOINS DRG N01031-PWD-DRG-FEN-0015

ADJOINS DRG N01031-PWD-DRG-FEN-0017

RMS R2-4 SUPPLEMENTED WITH "NO VEHICULAR ACCESS" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

From Sydney

1m WIDE PEDESTRIAN GATE TO TIE INTO SAFETY SCREEN WITH W560 SIGN (SIMTA)

GP01

GATE 13

GP02

NSPS SIGN MOUNTED ON POST

NSPS 11

EXISTING FENCE TIES INTO EXISTING GUARD RAIL ON MOOREBANK AVENUE

MOOREBANK AVENUE

MOOREBANK AVENUE

To Moorebank Imex Terminal

EXISTING MAINTENANCE ACCESS ROAD

RMS R2-4 SUPPLEMENTED WITH "NO VEHICULAR ACCESS" AND NSPS SIGN MOUNTED ON POST. REFER TO DRAWINGS N01031-PWD-DRG-FEN-0050 AND N01031-PWD-DRG-FEN-0051

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

EXISTING FENCE TO BE REMOVED

CONTROL LINE MB2S

MAINTENANCE ACCESS ROAD

4m WIDE SWING GATE WITH W560 SIGN (SIMTA)

NSPS 07

GP02

GP01

GATE 14

NSPS SIGN MOUNTED ON POST

NSPS 06

1m WIDE PEDESTRIAN GATE TO TIE INTO SAFETY SCREEN WITH W560 SIGN (SIMTA)

FENCE TO RUN ALONG OUTSIDE OF PILES TO PREVENT ACCESS TO SIMTA RAIL CORRIDOR

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

TIE INTO EXISTING FENCE

GATE 09

GP01

GP02

NSPS SIGN MOUNTED ON POST

NSPS 08

FENCING TO TIE INTO

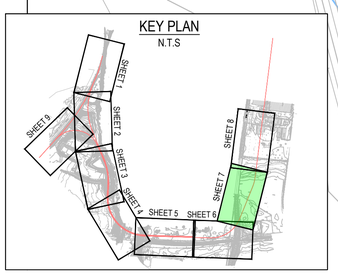
UF 22 UF 12 UF 13 UF 24 UF 18 UF 14

IP19 IP20 IP21 IP22 IP23 IP24

41km 600 41km 700 41km 800 41km 900

PLAN
1:500

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE (1.8m HIGH CHAINLINK FENCE)
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- PROPOSED GWS LANDFILL RUBBISH CATCH FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- GWS LANDFILL RUBBISH CATCH STRAINER POST
- SIGN LOCATION
- km SIGNS
- HALF km SIGNS
- FUTURE NOISE WALL
- EXTENT OF EARTHWORKS
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD

SCALE 1:500

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.
5. REFER TO DRAWING N01031-PWD-DRG-CIV-1020 FOR FENCING GATES AND SIGNAGE FOR SYDNEY TRAINS ACCESS ROAD.

ARTC DRAWING No	EDMS No	EDMS REV

Rev Date: 15/10/2018 1:38:14 PM Office: AUSYD Filename: C:\PW_WORKS\ASHLEY.LITTLE\AZ_PROD\D0029378\$\N01031-PWD-DRG-FEN-0016.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
E1	23.07.18	GWS RE-DESIGN - 100% FINAL DESIGN	
03	29.08.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB
04	05.10.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 29.08.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 7 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0016	04

ADJOINS DRG N01031-PWD-DRG-FEN-0016

MOOREBANK AVENUE

RMS R2-4 SUPPLEMENTED WITH "NO VEHICULAR ACCESS" AND NSPS SIGN MOUNTED ON POST. REFER TO DRAWINGS N01031-PWD-DRG-FEN-0050 AND N01031-PWD-DRG-FEN-0051

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

From Sydney

ANZAC CREEK CULVERT ASSET NAME PLATE TO BE FIXED TO CULVERT STRUCTURE APPROX. 1500mm ABOVE SURFACE LEVEL

NSPS 09

4m WIDE SWING GATE WITH W560 SIGN (SIMTA)

FENCING TO TIE INTO CULVERT WING WALLS

CONTROL LINE MB2S

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

SIMTA RAIL ALIGNMENT FENCING TO BUTT UP TO IMEX TERMINAL FENCE VIA A POST AGAINST THE IMEX TERMINAL FENCE.

To Moorebank Imex Terminal

GP02

GATE 16

GP01

GATE 10

UF 15

UF 16

UF 17

CH 0.00

CH 8.09

CH 21.38

CH 40.15

CH 64.02

CH 0.00

CH 12.97

CH 6.05

CH 13.98

CH 19.84

CH 23.62

CH 25.49

CH 16.68

CH 71.07

CH 62.64

CH 67.73

CH 77.65

CH 88.19

CH 100.85

CH 114.45

CH 117.58

CH 119.34

CH 121.95

CH 28.42

CH 0.00

CH 186.25

CH 0.00

CH 4.00

NSPS 10

CH 180.85

CH 178.15

CH 144.97

CH 123.47

CH 116.22

CH 106.45

CH 86.95

CH 75.84

CH 67.13

CH 53.04

CH 30.10

CH 15.63

CH 0.00

TIE INTO EXISTING FENCE

MAINTENANCE ACCESS ROAD

NSPS SIGN MOUNTED ON POST

SIMTA RAIL ALIGNMENT FENCING TO BUTT UP TO IMEX TERMINAL FENCE VIA A POST AGAINST THE IMEX TERMINAL FENCE.

42km 200

42km 300

BITUMEN

COMMS PIT

TRANSGRID SUBSTATION

CULVERT

PLAN
1:500

KEY PLAN
N.T.S

SHEET 1 SHEET 2 SHEET 3 SHEET 4 SHEET 5 SHEET 6 SHEET 7 SHEET 8 SHEET 9

LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE (1.8m HIGH CHAINLINK FENCE)
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- PROPOSED GWS LANDFILL RUBBISH CATCH FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- GWS LANDFILL RUBBISH CATCH STRAINER POST
- SIGN LOCATION
- km SIGNS (XX XX)
- HALF km SIGNS (XX.X)
- FUTURE NOISE WALL
- EXTENT OF EARTHWORKS
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD

5 0 10 20m
SCALE 1:500

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

ARTC DRAWING No	EDMS No	EDMS REV

Plot Date: 15/10/2018 | 09:05 PM Office: AUSYD Filename: C:\PW_WORKSHARE\BY LITTLE\ANZ_PROD\D0028280\N01031-PWD-DRG-FEN-0017.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	17.02.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
04	14.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
05	29.08.18	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	M.SAKIB
06	05.10.18	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 29.08.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 8 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0017	06

ADJOINS DRG N01031-PWD-DRG-FEN-0011

To Moorebank Intermodal Terminal

From Glenfield

NETWORK CONTROL BOUNDARY SIGN-2 MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

NETWORK CONTROL BOUNDARY SIGN-1 MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

FUTURE POTENTIAL NOISE BARRIER TO BE DESIGNED AND CONSTRUCTED BY OTHERS

MAINTENANCE ACCESS ROAD TO ALLOW ACCESS TO SYDNEY TRAINS MAINTENANCE ACCESS ROAD

W560 SIGN (ARTC) SUPPLEMENTED WITH "ACCESS SYDNEY TRAINS CORRIDOR" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

GWS LANDFILL RUBBISH CATCH FENCE TO BE PLACED ALONG SIMTA RAIL CORRIDOR FENCE LINE. REFER TO DRAWING N01031-PWD-DRG-FEN-0061 FOR DETAILS

W560 SIGN (ARTC) SUPPLEMENTED WITH "ACCESS SIMTA RAIL CORRIDOR" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

1.8m CHAINLINK INSULATION PANEL (2200mm LONG) IN ACCORDANCE WITH CV 0978385

EXISTING GWS MONITORING WELLS

TIE IN WITH EXISTING RAIL CORRIDOR FENCE

TIE INTO EXISTING FENCING

ACCESS ROAD TO FACILITATE GWS LEACHATE POND MAINTENANCE

FENCE TO SEPARATE GWS AND SIMTA RAIL CORRIDOR

PROVISION FOR FUTURE GWS NOISE WALL (DESIGN AND CONSTRUCTION BY OTHERS)

GWS LEACHATE POND (DESIGNED AND CONSTRUCTED BY OTHERS)

FOLLOWING CONSTRUCTION OF FUTURE NOISE WALL, FENCING TO TIE INTO NOISE WALL (BY OTHERS)

FENCE TIE INTO EXISTING FENCE

RMS R2-4 SUPPLEMENTED WITH "NO VEHICULAR ACCESS" SIGN MOUNTED ON POST. REFER TO DRAWING N01031-PWD-DRG-FEN-0051

EXISTING FENCE TO BE REMOVED

RtS APPROVED BOUNDARY

TIE-IN WITH EXISTING SYDNEY TRAINS MAINTENANCE ACCESS ROAD

FIX W560 SIGN (SIMTA) TO STEEL CHAIN

CHAINED BOLLARD 3

MAIN SOUTHERN RAILWAY LINE

INSTALL 2 X BOLLARDS WITH CHAIN EYELETS, STEEL CHAIN & 2 X PADLOCKS (FOR CONNECTING THE CHAIN TO THE EYELETS). REFER NOTES ON DRAWING N01031-PWD-DRG-FEN-0005.

APPROXIMATE BOUNDARY ONLY

SP01 SP02 SP03 SP04 SP05 SP06

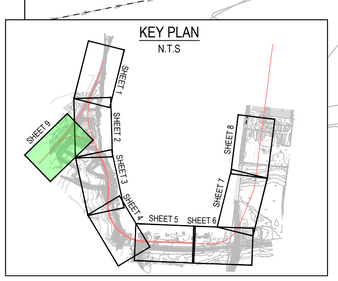
UF 05 UF 23

IP13 IP14

40km 100 40km 000 39km 900 39km 800 39km 700

PLAN
1:500

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- PROPOSED SECURITY FENCE (1.8m HIGH CHAINLINK FENCE)
- 4m WIDE SWING GATE
- 1m WIDE PEDESTRIAN GATE
- PROPOSED REINFORCED EARTH WALL
- FUTURE INTERMODAL TERMINAL TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- EXISTING FENCE
- PROPOSED GWS LANDFILL RUBBISH CATCH FENCE
- EXISTING FENCE TO BE INCORPORATED WITH NEW FENCE
- EXISTING FENCE TO BE REMOVED
- INSULATION PANEL
- GWS LANDFILL RUBBISH CATCH STRAINER POST
- SIGN LOCATION
- XX XX km SIGNS
- XX.X HALF km SIGNS
- FUTURE NOISE WALL
- EXTENT OF EARTHWORKS
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD

5 0 10 20m
SCALE 1:500

NOTES

1. REFER TO ASA STANDARD DRAWING CV0285938 FOR DETAILS OF 1m WIDE PEDESTRIAN GATE.
2. REFER TO ASA STANDARD DRAWING CV0285939 FOR DETAILS OF 4m WIDE SWING GATE.
3. WHERE FENCING CROSSES NEW OR EXISTING SWALE DRAINS, POSTS ARE TO BE PLACED EITHER SIDE OF DRAIN (MAX 2m GAP) & CHAIN FENCE STRUNG BETWEEN.
4. RAIL CORRIDOR THROUGH RIPARIAN ZONE IS TO BE MAXIMUM OF 20m IN WIDTH.

ARTC DRAWING No	EDMS No	EDMS REV

aurecon
www.aurecongroup.com

CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
02	13.04.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	
03	01.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
04	14.07.17	90% ARTC DESIGN ISSUE	A.O'SHEA
05	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	A.O'SHEA
D1	13.06.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN	M.SAKIB
E1	23.07.18	GWS RE-DESIGN - 100% FINAL DESIGN	
06	29.08.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB
07	05.10.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: S.MURPHY

FOR CONSTRUCTION

APPROVED
DATE 29.08.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: FENCING GENERAL ARRANGEMENT PLAN SHEET 9 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	FEN	0018	07

Plot Date: 16/10/2018 1:39:42 PM Office: AUSYD Filename: C:\PW_WORKS\ACTIVE\LITTLEA\NZ_PROJ\D0035758\N0103\-PWD-DRG-FEN-0018.DWG

APPENDIX D

Erosion and Sediment Control Plan

Site area	Site						Remarks
	1	2	3	4	5		
Total catchment area (ha)	8.7	2.52	4.13	4.83	4.65		
Disturbed catchment area (ha)	3.66	2.52	4.13	4.83	4.65		

Soil analysis

% sand (faction 0.02 to 2.00 mm	20	20	20	20	20		Soil texture should be assessed through mechanical dispersion only. Dispersing agents (e.g. Calgon) should not be used
% silt (fraction 0.002 to 0.02 mm)	40	40	40	40	40		
% clay (fraction finer than 0.002 mm)	40	40	40	40	40		
Dispersion percentage							E.g. enter 10 for dispersion of 10%
% of whole soil dispersible							See Section 6.3.3(e)
Soil Texture Group	F	F	F	F	F		See Section 6.3.3(c), (d) and (e)

Rainfall data

Design rainfall depth (days)	5	5	5	5	5		See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)	75	75	75	75	75		See Sections 6.3.4 (f) and (g)
x-day, y-percentile rainfall event	19.2	19.2	19.2	19.2	19.2		See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm	10.8	10.8	10.8	10.8	10.8		See IFD chart for the site

RUSLE Factors

Rainfall erosivity (R-factor)	2540	2540	2540	2540	2540		Automatic calculation from above data
Soil erodibility (K-factor)	0.075	0.075	0.075	0.075	0.075		
Slope length (m)	100	125	100	50	150		
Slope gradient (%)	1	1	1	1	1		RUSLE data can be obtained from Appendixes A, B and C
Length/gradient (LS-factor)	0.2	0.22	0.2	0.17	0.23		
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	

Calculations

Soil loss (t/ha/yr)	50	54	50	42	57		
Soil Loss Class	1	1	1	1	1		See Section 4.4.2(b)
Soil loss (m3/ha/yr)	38	42	38	32	44		
Sediment basin storage volume, m3	24	18	27	27	35		See Sections 6.3.4(i) and 6.3.5 (e)

07

Total Basin Volume

Site	Cv	Rx-day, y-%ile	Total catchment area (ha)	Settling zone volume (m3)	Sediment storage volume (m3)	Total basin volume (m3)
1	0.50	19.2	8.7	835.2	24	859.2
2	0.50	19.2	2.52	241.92	18	259.92
3	0.50	19.2	4.13	396.48	27	423.48
4	0.50	19.2	4.83	463.68	27	490.68
5	0.50	19.2	4.65	446.4	35	481.4

07

NOTES

1. EROSION AND SEDIMENT CONTROL MEASURES ARE FOR TOP OF FILL LAYER SURFACE. THESE MEASURES ARE INDICATIVE ONLY AND SHOWN FOR ILLUSTRATIVE PURPOSES. REFER DRAWING IMEX-ARC-CV-DWG-1131 FOR EARTHWORKS DETAILS OF THE TOP OF FILL LAYER.
2. ANY EROSION AND SEDIMENT CONTROL MEASURES ADOPTED BY THE DEMOLITION CONTRACTOR (DEMOLITION BY OTHERS), LEFT IN PLACE ARE TO BE EVALUATED AND CAN BE UTILISED BY THE CONTRACTOR IF DEEMED SATISFACTORY TO BE INCORPORATED AS PART OF EROSION AND SEDIMENT CONTROL MEASURES FOR THE BOTTOM OF FILL LAYER, REFER DRAWING IMEX-ARC-CV-DWG-1121 FOR EARTHWORKS DETAILS OF THE BOTTOM OF FILL LAYER.
3. THE CONTRACTOR IS TO PREPARE A SOIL AND WATER MANAGEMENT PLAN (SWMP) AND EROSION AND SEDIMENT CONTROL PLAN (ESCP) IN ACCORDANCE WITH THE PRINCIPLES AND REQUIREMENTS OF MANAGING URBAN STORMWATER - SOILS & CONSTRUCTION VOLUME 1 ('BLUE BOOK')(LANDCOM, 2004) AND VOLUME 2 (DEC 2008). THE CONTROL MEASURES IN THE SWMP AND ESCP ARE TO BE IMPLEMENTED BY THE CONTRACTOR FOR THE DURATION OF THE EARTHWORKS AS REQUIRED.

ON HOLD:

MOOREBANK AVENUE TEMPORARY DRAINAGE TO BE CONSTRUCTED ACCORDINGLY TO ALLOW FOR IMEX SITE CONSTRUCTION AND ELIMINATE NUISANCE FLOODING ON MOOREBANK AVENUE DESIGN TO BE FINALISED.

LEGEND

- IMEX SITE BOUNDARY
- SEDIMENT BASIN CATCHMENT BOUNDARY
- BATTER FORMATION
- SURFACE FALL LINES AT 1%
- FLOW PATHS & CHECK DAMS @ 100m SPACING
- DETENTION BASIN OUTLINE
- STABILISED SITE ACCESS
- STORMWATER PIPE AND SCOUR PROTECTION
- BATTER CHUTE
- SEDIMENT FENCE (SD6-7)
- SEDIMENT BASIN
- INDICATIVE STOCKPILE LOCATION
- EXISTING BUILDING STRUCTURES TO BE RETAINED
- ROCK SCOUR PROTECTION
- CONSTRUCTION AREA
- BULK EARTHWORKS NOMINAL PAD LEVEL RL 16.45, REFER DRAWING IMEX-ARC-CV-DWG-1131. EARTHWORK PADS ARE TO BE GRADED TO SUIT TO AVOID PONDING OF WATER AND TO ALLOW THE CORRECT MINIMUM DEPTH OF PAVEMENT LAYERS TO BE CONSTRUCTED DOCUMENTED IN PACKAGE M02.
- BULK EARTHWORKS NOMINAL PAD LEVEL RL 17.50, REFER DRAWING IMEX-ARC-CV-DWG-1131. EARTHWORK PADS ARE TO BE GRADED TO SUIT TO AVOID PONDING OF WATER AND TO ALLOW THE CORRECT MINIMUM DEPTH OF PAVEMENT LAYERS TO BE CONSTRUCTED DOCUMENTED IN PACKAGE M02.
- BULK EARTHWORKS NOMINAL PAD LEVEL RL 16.75, REFER DRAWING IMEX-ARC-CV-DWG-1131.EARTHWORK PADS ARE TO BE GRADED TO SUIT TO AVOID PONDING OF WATER AND TO ALLOW THE CORRECT MINIMUM DEPTH OF PAVEMENT LAYERS TO BE CONSTRUCTED DOCUMENTED IN PACKAGE M02.

APPROXIMATE AREA DESIGNATED FOR STOCKPILING TOPSOIL 13300m²

APPROXIMATE AREA DESIGNATED FOR STOCKPILING OF IMPORTED SANDSTONE MATERIAL 18000m²

BASINS IN THIS AREA TO BE SIZED ACCORDINGLY FOR THE AREA DISTURBED FOR STOCKPILING

EASTERN DIVERSION CHANNEL TO BE CONSTRUCTED PRIOR TO DECOMMISSIONING ANY STORMWATER INFRASTRUCTURE WITHIN THE IMEX SITE. IF THE EASTERN DIVERSION CHANNEL IS FORMED PROGRESSIVELY, TEMPORARY DIVERSION CHANNELS WITH EQUIVALENT CAPACITY IS TO BE ESTABLISHED WITHIN THE IMEX CONSTRUCTION SITE AND MANAGED APPROPRIATELY.

AREA DESIGNATED FOR STOCKPILING DEMOLISHED CONCRETE SLABS FROM THE SITE (BY OTHERS)

BASINS IN THIS AREA TO BE SIZED ACCORDINGLY FOR THE AREA DISTURBED FOR STOCKPILING

MOOREBANK PRECINCT EAST - STAGE 2 (MPE STAGE 2)

8.70 Ha

IMEX STAGE 1

IMEX STAGE 2

4.13 Ha

4.83 Ha

4.65 Ha

2.52 Ha

CREST

CREST

MOOREBANK

ON HOLD

AVENUE

EXISTING CONCRETE DRAIN

SEDIMENT BASIN 1

REFER PACKAGE M02 FOR STORMWATER BASIN OUTLET PIPE AND PIT DETAILS. THE STORMWATER OUTLET AND PIT IS TO BE CONSTRUCTED WITH THE FORMATION OF THE BASIN DURING THE BULK EARTHWORKS PHASE

SEDIMENT BASIN 2

SEDIMENT BASIN 3

SEDIMENT BASIN 4

SEDIMENT BASIN 5

INDICATIVE ONLY

Issue	Description	Date
07	AFC UPDATE	19/05/2017
06	AFC UPDATE	17/05/2017
05	REVIEWER COMMENTS INCORPORATED	07/04/2017
04	ISSUE FOR CONSTRUCTION	27/03/2017
03	INDEPENDENT VERIFIERS COMMENTS INCORPORATED	24/02/2017
02	CLIENT COMMENTS INCORPORATED	21/02/2017
01	DETAILED DESIGN	17/02/2017

0 30 60 90 120 150m

1 : 1500

100mm on Original

Client: SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE; TACTICAL GROUP

Status: FOR CONSTRUCTION
TO BE USED FOR CONSTRUCTION

Scales	1:1500	Current Issue Signatures	
		Drawn A.ZHAO	
Original Size	A1	Designed L.CORSCADDEN	
Height Datum	AHD	Checked G.DE SILVA	
Grid	MGA	Approved M.KEFFORD	

Filename: IMEX-ARC-CV-DWG-1101-ErosionAndSedimentControlPlan.dwg

Project: MOOREBANK MPE STAGE 1 IMEX NUMBER 1

Title: EROSION AND SEDIMENT CONTROL PLAN

ARCADIS
Arcadis Australia Pacific Pty Limited
Level 5, 141 Walker St
NORTH SYDNEY NSW 2060
ABN 76 104 485 289
Tel No: +61 2 8907 9000
Fax No: +61 2 8907 9001
arcadis.com

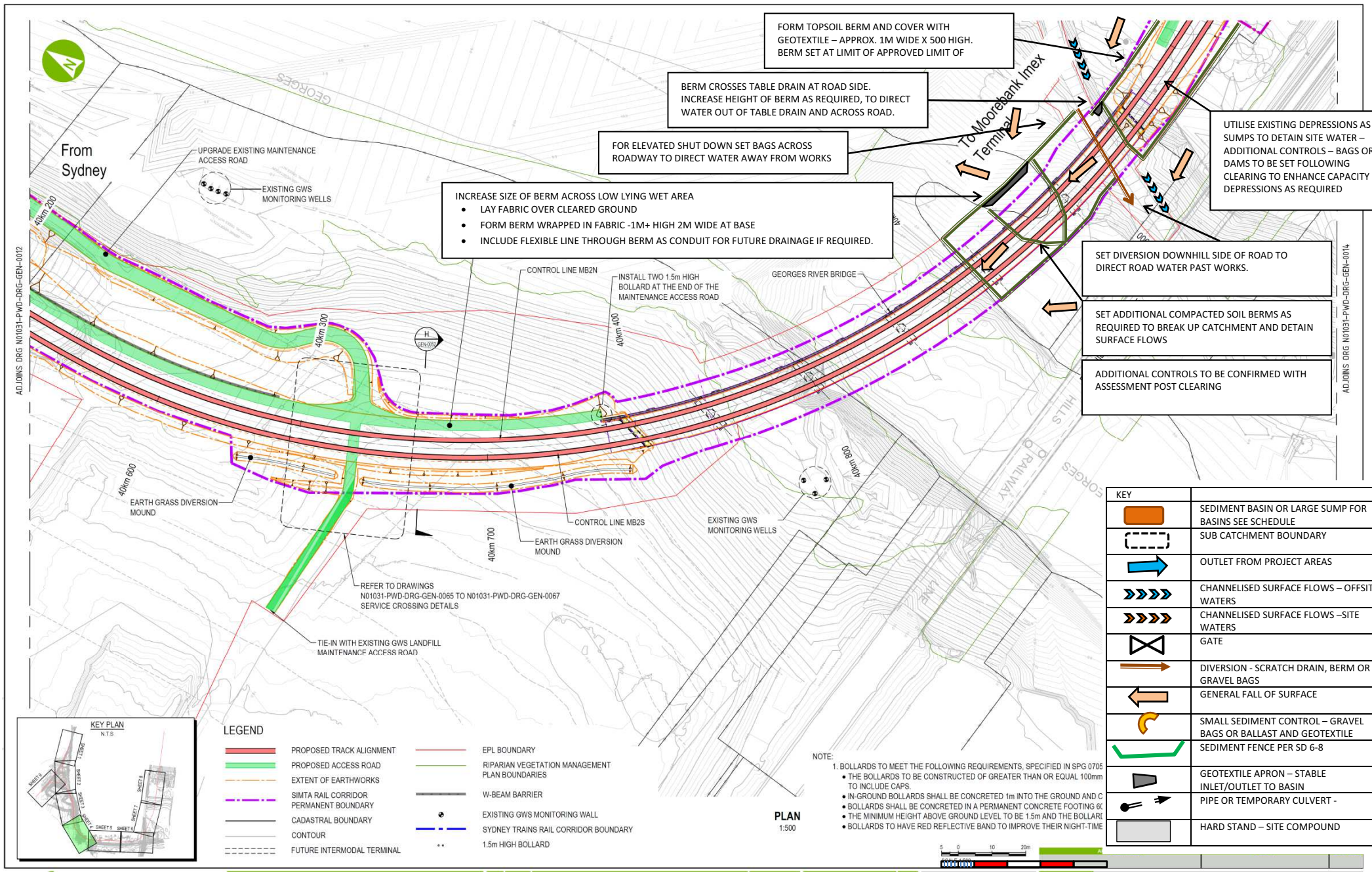
Volume No. M01

Project No. 10004975

Drawing No. IMEX -ARC-CV-DWG-1101-

Issue 07

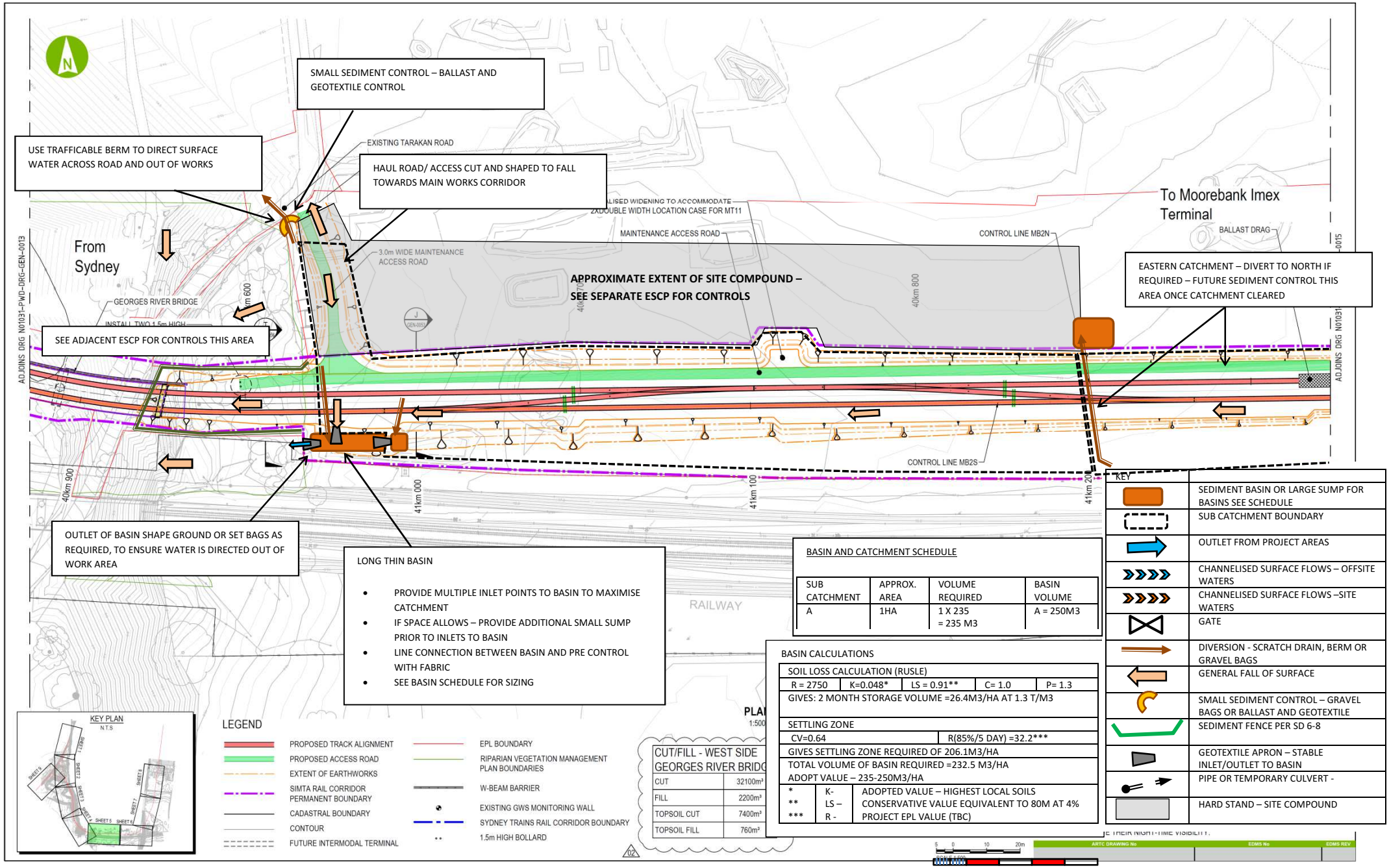
Date Plotted: 19 May 2017 - 08:27AM File Name: F:\10004975\E-CAD\D-Drawings\CV\M01_Bulk_Earthworks\IMEX-ARC-CV-DWG-1101-ErosionAndSedimentControlPlan.dwg V1



ErSed Environmental Pty Ltd
PO Box 1124 Leichhardt 2040

M. 0424 203 046
E.info@ersed.com.au

SHEETS IN THIS PLAN SET	ERSED REF:	16006	**PROGRESSIVE EROSION AND SEDIMENT CONTROL PLAN**
1. GENERAL ARRANGEMENT – STAGE 2 EARTHWORKS	DRAWN	CV	GENERAL ARRANGEMENT- STAGE 2 EARTHWORKS
	CREATED	SEPT 2017	
	DATE THIS AMDT	10 SEPT 17	CL 0013 1 of 1 0
CLIENT BASE PLAN: N01031-PWD-DRG-GEN-0013(REV2)	CLIENT	CPB	PREFIX NUMBER SHEET AMDT



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SHEETS IN THIS PLAN SET	ERSED REF:	16006	**PROGRESSIVE EROSION AND SEDIMENT CONTROL PLAN**
1. GENERAL ARRANGEMENT – STAGE 2 EARTHWORKS	DRAWN	CV	GENERAL ARRANGEMENT- STAGE 2 EARTHWORKS
	CREATED	SEPT 2017	
	DATE THIS AMDT	10 SEPT 17	CL 0014 1 of 1 0
CLIENT BASE PLAN: N01031-PWD-DRG-GEN-0014(REV2)	CLIENT	CPB	PREFIX NUMBER SHEET AMDT

APPENDIX E

Lighting Plan and Lighting Layouts

ARCADIS Design & Consultancy for natural and built assets

BASIS OF DESIGN REPORT

MOOREBANK MPE STAGE 1 IMEX NUMBER 1

10 JANUARY 2018

EXTRACT

Incorporating Hyder

2 IMEX TERMINAL DESIGN CRITERIA

2.1 Design Codes and Standards

The latest version of the following design codes, standards and guidelines have been referenced for the project design and where relevant, incorporated as a requirement for construction:

2.1.1 Australian Standards

AS 1049 – 2003	Telecommunication Cables Insulation and Sheath Polyethylene
AS 1085 – 2002	Railway Track Materials
AS/NZS 1158 – 2010	Set - Access Lighting / Carparks / Roadways
AS/NZS 1170.0 – 2002	Structural design actions – general principles
AS/NZS 1170.1 – 2002	Structural design actions – permanent, imposed and other actions
AS/NZS 1170.2 – 2011	Structural design actions – Part 2, Wind actions
AS 1170.4 – 2007	Earthquake Loads
AS 1289 (set)	Methods of testing soils for engineering purposes
AS/NZS 1477 – 2006	PVC Pipes and Fitting for Pressure Application
AS 1554 – 2010	Set - Structural Steel Welding
AS 1597	Precast reinforced concrete box culverts
AS 1657 – 2013	Fixed platform, walkway, stairways and ladders
AS 1670.1 – 2015	Fire Detection, warning, control and intercom systems – System design, installation and commissioning
AS/NZS 1680.1	General Lighting
AS 1725.1 – 2010	Chain link fabric fencing Part 1: Security Fences and Gates – General Requirements
AS/NZS 2033 – 2008	Installation of Polyethylene Pipe Systems
AS/NZS 2053	Non-metallic conduits and fittings
AS 2067 – 2016	Substation and High Voltage Installations exceeding 1KVa - a.c.
AS 2159 – 2009	Piling – Design and installation
AS 2200 – 2006	Design Charts for Water Supply and Sewerage
AS/NZS 2293.1	Emergency Lighting
AS 2419.1 – 2005	Fire Hydrant Installations
AS/NZS 2439	Perforated plastic drainage and effluent pipe and associated fittings
AS 2441 – 2005	Installation of Fire Hose Reels
AS 2444 – 2001	Fire Extinguishers
AS 2566.1 – 1998	Buried Flexible Pipelines – Structural Design
AS 2601 – 2001	The Demolition of Structures
AS/NZS 2638 – 2011	Gate Valves for Waterworks Purposes
AS 2756 – 1991	(R2016) Low-voltage switchgear and control gear - Mounting rails for mechanical support of electrical equipment
AS 2890 – 2009	Parking Facilities
AS 2941 – 2013	Fixed Pump set installations
AS/NZS 3000	Electrical Wiring Rules

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AS/NZS 3080	Telecommunications Installation – Generic cabling for commercial premises.
AS/NZS 3084	Telecommunication Installations – Telecommunication Pathways and Spaces for Commercial Buildings
AS/NZS 3500 – 2015	Plumbing and Drainage
AS 3600 – 2009	Concrete structures
AS 3725 – 2007	Design for Installation of Buried Concrete Pipes
AS 3735 – 2001	Concrete Structures Retaining Liquids
AS 3798 – 2007	Guidelines on earthworks for commercial and residential developments
AS 3996 – 2006	Access covers and grates
AS/NZS 4058	Precast concrete pipes (pressure and non-pressure)
AS 4100 – 1998	Steel structures
AS/NZS 4129 – 2008	Fittings for Polyethylene Pipes for Pressure Purposes
AS/NZS 4130 – 2009	Polyethylene Pipes for Pressure Purposes
AS 4282 – 1997	Control of the obtrusive effects of outdoor lighting
AS 4600 – 2005	Cold-formed steel structures
AS 4678 – 2002	Earth-retaining structures
AS 4680 – 2006	Hot-dip Galvanized (Zinc) Coatings on Fabricated Ferrous Articles
AS 4795 – 2006	Butterfly Valves for Waterworks Purposes
AS 4997 – 2005	Guidelines for the design of maritime structures
AS 5100 – 2007	Bridge Design Code Set
AS 5200.000 – 2006	Plumbing and Drainage Products
BCA 2016	Building Code of Australia
WSA 01 – 2004	Water Supply Code of Australia
WSA 02 – 2014	Gravity Sewerage Code of Australia
WSA 03 – 2011	Water Supply Code of Australia
WSA 04 – 2005	Sewage Pumping Station Code of Australia

Relevant Building Surveyor

NSW Fire & Rescue (NSWFR) requirements

Liverpool City Council Development Design Specification D5 – Stormwater Drainage Design

2.1.2 International Standards

ISO 14763-3	Telecommunications installations – Generic cabling systems – Specification for the testing of optical fibre communication cabling
ISO 12488-1	Cranes – Tolerances for wheels and travel and traversing tracks – Part 1: General, 2nd Edition
BS EN 15011:2011	Cranes – Bridge and gantry cranes
FEM 1.001(10.1998)	Rules for the design of hoisting appliances
FEM 1.004(07.2000)	Recommendation for the calculation of wind loads on crane structures

EXTRACT

2.1.3 **Guidelines**

Australian Rainfall & Runoff

Austroads Guide to Pavement Technology Part 2: Pavement Structural Design

The Structural Design of Heavy Duty Pavements for Ports and Other Industries (Edition. 4) December 2007 published by Interpave.

Austroads Guide to Road Design - Set

Austroads Guide to Pavement Technology - Set

Austroads Guide to Bridge Technology - Set

Austroads Guide to Traffic Engineering Management - Set

Austroads Guide to Transport Planning

Austroads Guide to Road Safety - Set

Austroads Design Vehicles and Turning Path Templates

Austroads Waterway design. A Guide to Hydraulic design of Bridges Culverts and Floodways

RMS Supplements to the Austroads Guide to Pavement Technology

RMS Supplements to the Austroads Guide to Bridge Technology

RMS Supplements to the Austroads Guide to Traffic Engineering Management

RMS Supplements to the Austroads Guide to Transport Planning

RMS Supplements to the Austroads Guide to Road Safety

RMS Traffic Signal Operation Specification

RMS Supplement to AS 1742

RMS Supplement to AS 1743

RMS Procedures for use in the Preparation of a Traffic Management Plan (TMP)

RMS Roads and Maritime Services Guidelines for Road Safety Audit Practices

RMS Supplement to AS 2890

The Structural Design of Heavy Duty Pavements for Port and Other Industries (Interpave, 2008)

Guide to Industrial Floors and Pavements (Cement Concrete & Aggregates Australia, 2009)

2.1.4 **RMS Specifications**

RMS 3051 RMS QA Specification 3051 - Granular Base and Subbase Materials for Surfaced Road Pavements

RMS 3071 RMS QA Specification 3071 – Selected Material in Formation Layers

RMS 3222 RMS QA Specification 3222 – No-Fines Concrete (For Subsurface Drainage)

RMS 3252 RMS QA Specification 3252 – Polymer Modified Binder for Pavements

RMS 3552 Subsurface Drainage Pipe (Corrugated Perforated and Non-Perforated Plastic)

RMS 3557 RMS QA Specification 3557 - Flexible Strip Filter Drains

RMS 3580 RMS QA Specification 3580 - Aggregate Filter Materials for Subsurface Drainage

RMS B110 RMS QA Specification B110 - Supply of Pretensioned Precast Concrete Members

RMS B113 RMS QA Specification B113 - Post-Tensioning of Concrete

RMS B114 RMS QA Specification B114 - Ground anchors

RMS B115 RMS QA Specification B115 - Precast Concrete Members (Not Pretensioned)

RMS B150 RMS QA Specification B150 - Erection of Pretensioned Precast Concrete Members

EXTRACT

RMS B153 RMS QA Specification B153 - Erection of Precast Concrete Members (Not Pretensioned)

RMS B200 RMS QA Specification B200 - Fabrication of Major Steel Structural Members

RMS B204 RMS QA Specification B204 - Welding of Bridges and Other Road Structures

RMS B220 RMS QA Specification B220 - Protective Treatment of Bridge Steelwork

RMS B240 RMS QA Specification B240 - Supply of Bolts, Nuts, Screws and Washers

RMS B260 RMS QA Specification B260 - Erection of Structural Steelwork

RMS B264 RMS QA Specification B264 - Erection of Barrier Railings and Minor Components

RMS B280 RMS QA Specification B280 - Unreinforced Elastomeric Bearing Pads and Strips

RMS B281 RMS QA Specification B281 - Laminated Elastomeric Bearings

RMS B282 RMS QA Specification B282 - Pot Bearings – Structural Steel

RMS B283 RMS QA Specification B283 - Pot Bearings – Stainless Steel

RMS B284 RMS QA Specification B284 - Installation of Bridge Bearings

RMS B30 RMS QA Specification B30 - Excavation and Backfill for Bridgeworks

RMS B341 RMS QA Specification B341 - Demolition of Existing Structure

RMS B349 RMS QA Specification B349 - Supply of Precast Concrete Noise Walls (Not Pretensioned)

RMS B57 RMS QA Specification B57 - Driven Cast-in-Place Concrete Piles

RMS B58 RMS QA Specification B58 - Permanently Cased Cast-in-Place Reinforced Concrete Piles

RMS B59 RMS QA Specification B59 - Bored Cast-in-Place Reinforced Concrete piles (without Permanent Casing)

RMS B61 RMS QA Specification B61 - Driven Composite Piles

RMS B63 RMS QA Specification B63 - Concrete Injected (CFA) Piling

RMS B80 RMS QA Specification B80 - Concrete Work for Bridges

RMS B82 RMS QA Specification B82 - Shotcrete Work

RMS GTD 2012/001 Roads & Maritime Services - GTD 2012/001 - Technical Direction Geotechnology

RMS Pub 13.184 Traffic Modelling Guidelines. (Issued Feb 2013)

RMS Q6 RMS Specification D&C Q6 - Quality Management System

RMS R11 RMS QA Specification R11 - Stormwater Drainage

RMS R15 RMS QA Specification R15 - Kerbs and Gutters

RMS R83 RMS QA Specification R83 - Jointed Concrete Base

RMS R132 RMS QA Specification R132 - Safety Barrier Systems

RMS R271 RMS QA Specification R271 - Design and Construction of Noise Walls

RMS R44 RMS QA Specification R44 - Earthworks

RMS R50 RMS QA Specification R50 - Stabilisation of Earthworks

RMS R53 RMS QA Specification R53 - Concrete (for General Use), Mortar and Grout

RMS R55 RMS QA Specification R55 - Rock Filled Gabions and Mattresses

RMS R57 RMS QA Specification R57 - Design of Reinforced Soil Walls

RMS R58 RMS QA Specification R58 - Construction of Reinforced Soil Walls (Contractor's Design)

RMS R63 RMS QA Specification R63 - Geotextiles (Separation and Filtration)

RMS R64 RMS QA Specification R64 - Soil Nailing

RMS R68 RMS QA Specification R68 - Shotcrete work without steel fibres

EXTRACT

RMS R73 RMS QA Specification R73 – Construction of Plant Mixed Heavily Bound Pavement Course

RMS R116 RMS QA Specification R116 – Heavy Duty Dense Graded Asphalt

RMS R132 RMS QA Specification R132 - Safety Barrier Systems

RMS R173 RMS QA Specification R173 – General Concrete Paving

RMS Soil Testing Methods

2.1.5 Additional Requirements to RMS Specifications

Additional specification requirements to RMS R83 are provided in section 12 of this report.

2.2 Reference Documents

The design has been based on the following documents:

- The SIMTA Principal's Project Requirements document;
- The AECOM Basis of Design document, number 60492251, dated 24 November 2016;
- AECOM Drawings included in *Laing O'Rourke Final Offer*, received via Aconex reference number LORAC-GCOR-000197, dated 02 August 2016

2.3 Durability and Design Life

The Design Life of Assets and Sub Assets are to be set out in a separate Durability Report for the project, at Appendix B, and included in the final detailed design package.

The Arcadis design for durability is based on the following;

- on relevant Industry standards, guidelines and good industry practice in following normal maintenance and replacement of maintenance spares,
- to provide a service life which is falls within the range of conditions contemplated by the manufacturer in deducing the design life of the asset.

The design life of proprietary equipment and other assets designed by suppliers will need to be referenced to the suppliers to ascertain the service life of these proprietary goods based on the supplier's experience and its assessment of the maintainability and reliability of its products

EXTRACT

16 LIGHTING

16.1 Design Strategy

The lighting design for the Moorebank IMEX terminal takes into account the eventual transition from Manual Phase to Automatic Phase that forms part of the operational strategy of the site. As such, the lighting design covers the both of the following phases:

- Manual Operation Phase;
- Automatic Operation Phase.

Taking into account the above planned transition, the design strategy aims to achieve the following:

- Provide sufficient lighting to the Manual Operation Phase in accordance with relevant Australian Standards.
- Minimise the impact of operation during Manual Operation Phase;
- Minimise the impact of transition from Manual Operation Phase to Automatic Operation Phase
- Minimise the impact of the automatic phase transition by maximising the reusability of the lighting design proposed for the manual operation.

16.2 Design Criteria

The following table shows the lighting levels designed for the Manual Operation Phase

Manual Phase Area	Lighting Level
Overall Site	General Storage – Pedestrian Access with Through Traffic E_{av} 20 lx, E_{min} 2.5lx,
Local Driveways	P4 as per AS1158.3
Carpark	P11b as per AS1158.3
Pedestrian Crossing	PX3 as per AS1158.4
Fencing	5 lux average illuminance

The following table shows the lighting levels designed for the Automatic Operation Phase

Manual Phase Area	Lighting Level
Site – Loading / Drive-in Area	General Storage – Pedestrian Access with Through Traffic E_{av} 20 lx, E_{min} 2.5lx,
Local Driveways	P4 as per AS1158.3
Carpark	P11b as per AS1158.3
Pedestrian Crossing	PX3 as per AS1158.4
Fencing	5 lux average illuminance

The lighting design have been undertaken in accordance to the above standards. The design calculations have been completed using the lighting software AGI32. The design calculations are provided within the Appendix.

16.2.1 Manual Phase - Lighting Design

16.2.1.1 Lighting Design

Overall Terminal Site

The lighting design features 18m high mast poles, mounted with high powered LED floodlights, as the main source to illuminate most of the site area.

Within the rail cargo area, 18m high mast poles have been positioned at less than 50m spacing's along the rail corridor, between the second and third track. Each pole is mounted with four high power LED floodlights, angled 90^{o} apart, with a tilt of 8^{o} to allow wider illumination.

18m poles have been chosen, taking into consideration the transition phase from Manual to Automatic Operation. Keeping all the high mast poles at no more than 18m height, the light poles situated within the rail corridor can continue to operate even during the installation of the new crane for automatic phase.

For the reminder of the site, 18m high mast poles with one or two high power LED floodlights are used to cover the majority of the drive-in area.

A combination of 12m and 9m poles is used to provide the additional required lighting in the more restricted areas.

The perimeter fencing is illuminated mainly by the 12m height pole. These fences are illuminated at a level which allow the perimeter CCTVs to operate effectively.

Local Driveway / Carpark

The local driveways and the carpark are illuminated by a combination of the 18m high mast poles and the 12m light poles. The 12m light poles have been used to illuminate the areas which are difficult to reach from the 18m high mast poles.

Pedestrian Crossing

A number of 9m poles have been allocated near the pedestrian crossing given its higher point vertical illuminance light level requirement as required by AS1158.

Emergency/Maintenance lighting

SIMTA have not advised to provide any emergency/maintenance lighting.

SIMTA have advised that all planned maintenance will be performed during daylight hours. For emergency, overnight maintenance, if the permanently installed lighting is not adequate to perform detailed tasks in a specific location, then SIMTA have advised that portable flood light plant will be used to supplement the installed lighting.

16.2.1.2 Lighting Power Supply

Each light pole within the terminal site is powered by one of the distribution boards provided throughout the site. Generally light poles shall be powered by the closest distribution boards, minimizing the wiring distance and cable sizes required.

Unless otherwise stated in the distribution board and circuit schedule, each light pole is typically wired by a single phase 2c x 16mm^2 + earth XLPE cable. Adjacent light poles are alternately wired in different circuits through the three-phase supply, reducing the chance of two adjacent poles failing together due to any one circuit failing.

EXTRACT

16.2.2 Automated Phase:

16.2.2.1 Lighting Design

Automated Rail Cargo Area

Given the site will be transitioned into full automation with no manual labours, SIMTA advised there is no requirement for lighting. Some illumination is anticipated from the automated crane that is to be installed for the automatic phase.

The 18m high mast poles along the rail corridor shall be decommissioned as part of the transition from manual to automated phase.

The 12m light poles provided for the perimeter/security fencing lighting will remain and serve the same purpose as the manual operation phase. Both the eastern and western fencelines will be shifted outward as part of the transition from manual to automatic phase, generating more space within the rail cargo area. As such, the perimeter poles will correspondingly shift with the new fence lines to keep the illuminance the same as manual operation phase.

Local Driveway / Carpark

The local driveway and the carpark will be kept generally the same as for manual phase. As the front of house, drive in area of the automated phase is greater than the manual phase, additional 18m high mast poles shall be provided to illuminate the additional area.

Pedestrian Crossing

The pedestrian crossing will be removed during the transition from manual to automated phase. Therefore the lighting will not be required during Automatic phase.

Emergency/Maintenance lighting

No additional emergency / maintenance lighting will be provided as per manual phase.

16.2.2.2 Lighting Power Supply

The lighting power supply will follow the same topology as the manual phase wiring.

16.2.3 Luminaires

LED luminaires is used in the design given the advantages LED technology has over other luminaire technologies such as the following:

- Energy efficiency;
- Increased life time;
- Colour rendering;
- No warm up period.

Luminaires are constructed as full cut off type, with all lights sitting flat (zero-degree tilt) except the luminaires within the rail corridor.

The luminaires can be controlled via photoelectric cell which can be mounted at the top of each pole/luminaire.

Luminaires are minimum IP66 grade which are suitable for outdoor application.

The colour temperature for all luminaires used in the design are 4000K standard.

16.2.4 Light Poles

The design features three types of poles, 18m, 12m and 9m height. The 18m high mast poles shall be minimum HD grade given some of it being positioned within the rail corridor.

The luminaires are typically mounted at the top of the poles with a typical outreach of 2m. In addition to luminaires, some of the poles are used to mount CCTVs and WAPs in order to reduce the number of dedicated CCTV security poles needed for the design.

EXTRACT

For all 18m high mast poles, 1 x 80mm orange HD uPVC conduit shall be used as the underground entry pathway for the electrical cabling to the luminaires. For all other light poles, 1 x 50mm orange HD uPVC shall be used.

For all the light poles mounted with communications equipment such as CCTVs or WAPs, an additional 1 x 50mm white HD uPVC conduit is used as a dedicated pathway to maintain the required segregation between ELV and LV cables in accordance with AS/CF S009

EXTRACT

The EIS contains new visual impact assessment (by Reid Campbell 2015) and a new light spill assessment (AECOM 2015). This new light spill assessment was required for a new arrangement to be considered after the 2013 EIS.

19.1.3 Revised Statement of Commitments

1. The principles of Crime Prevention Through Environmental Design have been considered and incorporated into the design
2. The proponent shall encourage walking and cycling by the inclusion of appropriate facilities including under cover bike storage, showers and change facilities.
3. Appropriate areas have been provided for the storage of waste and recyclable material

19.1.4 CoA Compliance

1. Condition B1: Access for people with disabilities has been allowed for in offices and amenities in accordance with the Disability Discrimination Act 1992 (Commonwealth).
2. Condition B4: Site layout and access. The design of the main access gate precludes heavy road freight vehicles from using Moorebank Avenue south. There is no left turn from the site onto Moorebank Avenue, and no right turn from Moorebank Avenue into the terminal site.
3. Condition B5: The conditions stipulated in condition B5 have been included within the design to ensure access for heavy vehicles and minimise disruption to Moorebank Avenue. Such measures include:
    a. internal roads, driveways and parking have been designed in accordance with the latest versions of AS 2890.1 – 2004, AS 2890.6-2009 and AS 2890.2 – 2002 for heavy vehicle usage;
    b. the swept path of the longest vehicle entering and exiting the subject as well as manoeuvrability through the site is in accordance with AUSTROADS
    c. The layout of the site has been designed to ensure heavy vehicles associated with the operation of the intermodal terminal can be accommodated on site in the event of an incident blocking access to the M5 Motorway/ Moorebank Avenue to avoid queuing on public roads.
    d. The layout of the site has been designed so that heavy vehicles are not required to select reverse gear.
    e. the design ensures that all vehicles are wholly contained on site before being required to stop;
4. Condition B6: Emergency access provision has been included.
5. Condition B7: A lighting plan will be prepared and submitted by Arcadis based on the illumination strategy and lighting drawings and specifications by the Designer. The Developed Design complies with B7.

   The Stage 1 EIS states that the light pole heights will vary between 13.55m and 21m, these heights have been adhered to. This is further emphasised by the EPBC approval stating that light poles must not exceed the height of warehouses; the building heights permitted under the Concept Plan Approval included allowances for 32 m high materials handling equipment, a 30 m high control tower, 21 m high warehouse and 15 m high “other” buildings.

   The effects of light spill are discussed in Section 17.3.2 of the EIS, which assessed the lighting arrangement for the Proposal

   The assessment demonstrated that the proposed arrangement would be consistent with AS4282-1997 and no further mitigation measures were deemed necessary, in addition to the commitments included under the Concept Plan Approval.”

6. Condition B8: The design does not preclude the ability to install a bus stop on Moorebank Avenue.

EXTRACT

MANUAL PHASE OPERATION - LIGHTING CALCULATION

EXTRACT

Issue	Description	Date

100mm on Original

Client

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

TACTICAL GROUP

Project

MOOREBANK PRECINCT EAST (MPE)
IMPORT/EXPORT TERMINAL ELECTRICAL

Title

ARCADIS

Arcadis Australia Pacific Pty Limited
Level 5, 141 Walker St
NORTH SYDNEY NSW 2060
ABN 76 104 485 289

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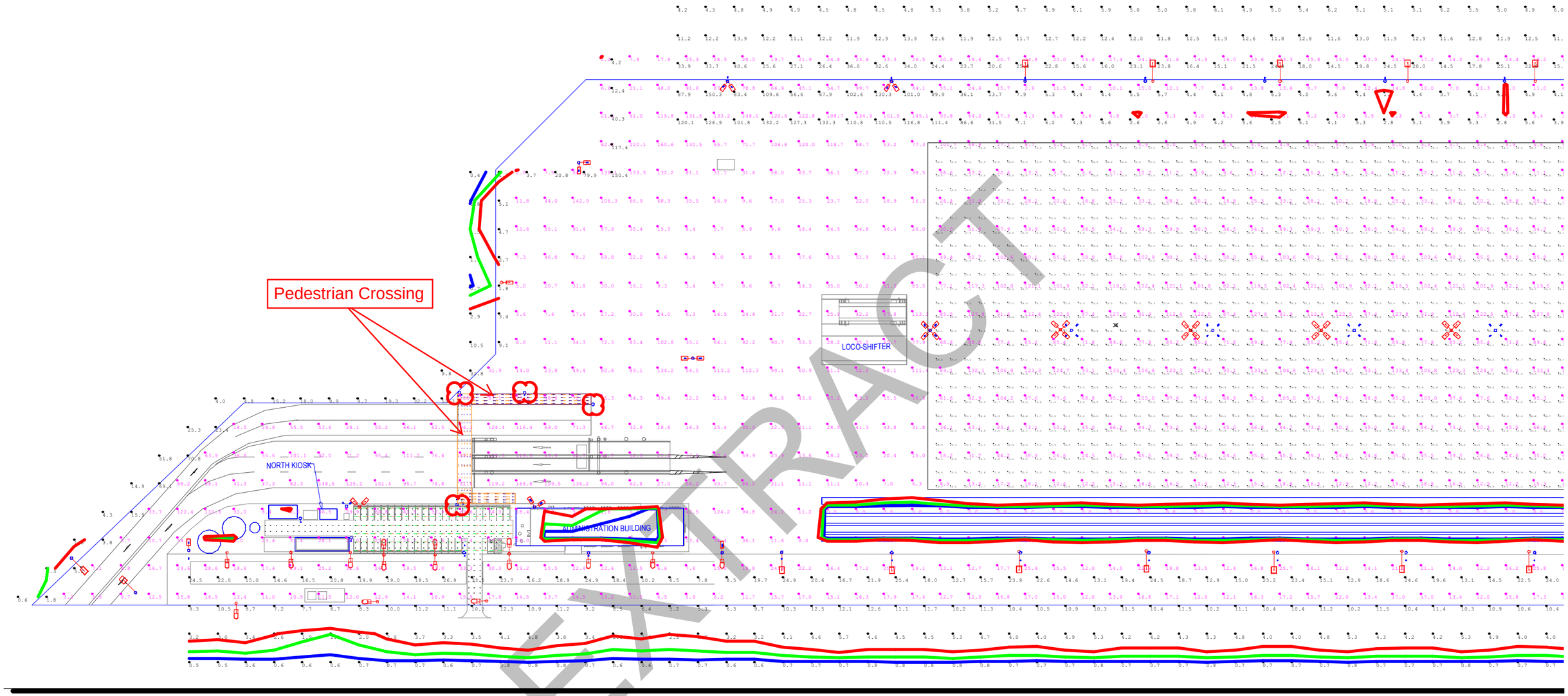
Volume No.
-

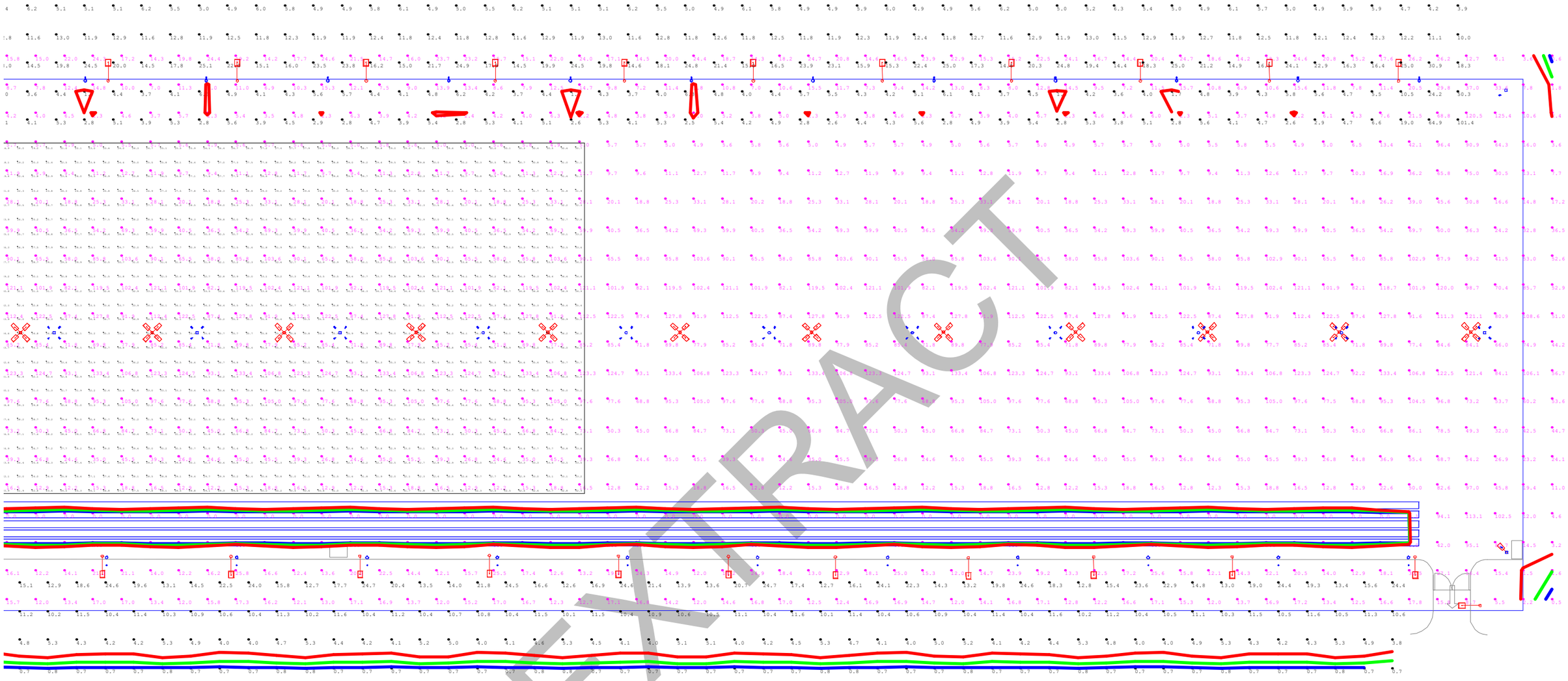
Project No.
10004975



Isoline Legend	
Illuminance (Lux)	
Color	Value
	0.85
	1.5
	2.5

Pedestrian Crossing Lights

EXTRACT



Isoline Legend	
Illuminance (Lux)	
Color	Value
	0.85
	1.5
	2.5

EXTRACT

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	LLF
	72	SR4H757A2 Raptor 1270W NB gla	SINGLE	0.750
	45	ATB2_60BLEDE13_XXXXX_R3	SINGLE	0.750
	2	StreetLED 37W 4K Aeroscreen 2	SINGLE	0.750

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Max/Min
Carpark Horizontal	Illuminance	Lux	36.18	77.8	10.6	7.34
Carpark Vertical	Illuminance	Lux	23.17	48.3	9.1	N.A.
Carpark Vertical_1	Illuminance	Lux	32.79	74.2	10.8	N.A.
Fence	Illuminance	Lux	8.46	33.5	0.5	67.00
Fence_1	Illuminance	Lux	16.24	150.3	1.6	93.94
Fence_2	Illuminance	Lux	20.70	150.4	0.4	376.00
Glare in Rail Cargo_1	Illuminance	Lux	64.18	142.9	5.7	25.07
Glare in Rail Cargo_1	Glare Rating	N.A.	26.08	36.2	10.0	3.62
ObtrusiveLight_1_Cd_Seg1	Obtrusive Light - Cd	N.A.	601.22	1513	490	3.09
ObtrusiveLight_1_Cd_Seg2	Obtrusive Light - Cd	N.A.	685.04	956	509	1.88
ObtrusiveLight_1_Cd_Seg3	Obtrusive Light - Cd	N.A.	859.79	1867	561	3.33
ObtrusiveLight_1_Cd_Seg4	Obtrusive Light - Cd	N.A.	570.48	1048	466	2.25
ObtrusiveLight_1_Ill_Seg1	Obtrusive Light - Ill	Lux	0.14	0.2	0.1	2.00
ObtrusiveLight_1_Ill_Seg2	Obtrusive Light - Ill	Lux	0.50	0.9	0.0	N.A.
ObtrusiveLight_1_Ill_Seg3	Obtrusive Light - Ill	Lux	0.33	0.7	0.1	7.00
ObtrusiveLight_1_Ill_Seg4	Obtrusive Light - Ill	Lux	0.18	0.3	0.1	3.00
PedX Vert1Left	Illuminance	Lux	52.76	90.1	29.4	N.A.
PedX Vert1Right	Illuminance	Lux	52.78	80.9	16.1	5.02
PedX Vert2Down	Illuminance	Lux	71.81	117.4	20.0	N.A.
PedX Vert2Up	Illuminance	Lux	48.50	103.4	18.4	5.62
PedX Vert3Left	Illuminance	Lux	44.30	61.4	18.2	N.A.
PedX Vert3Right	Illuminance	Lux	50.84	75.8	38.0	N.A.
Site	Illuminance	Lux	43.97	168.8	0.0	N.A.

EXTRACT

Obtrusive Light - Compliance Report

AS 4282-1997, Pre-Curfew, Commercial
Filename: 2017-04-06 - Moorebank IMEX Manual Phase
11/04/2017 11:47:22 AM

Illuminance

Maximum Allowable Value: 25 Lux

Calculations Tested (4):

Calculation Label	Test Results	Max. Illum.	
ObtrusiveLight_1_Ill_Seg1		**PASS**	0.2
ObtrusiveLight_1_Ill_Seg2		**PASS**	0.9
ObtrusiveLight_1_Ill_Seg3		**PASS**	0.7
ObtrusiveLight_1_Ill_Seg4		**PASS**	0.3

Luminous Intensity (Cd) Per Luminaire

Maximum Allowable Value: 7500 Cd
Control Angle: 83 Degrees

Luminaire Locations Tested (119)
Test Results: **PASS**

EXTRA

Obtrusive Light - Compliance Report

AS 4282-1997, Post-Curfew, Commercial
Filename: 2017-04-06 - Moorebank IMEX Manual Phase
11/04/2017 11:46:16 AM

Illuminance

Maximum Allowable Value: 4 Lux

Calculations Tested (4):

Calculation Label	Test Results	Max. Illum.	
ObtrusiveLight_1_Ill_Seg1		**PASS**	0.2
ObtrusiveLight_1_Ill_Seg2		**PASS**	0.9
ObtrusiveLight_1_Ill_Seg3		**PASS**	0.7
ObtrusiveLight_1_Ill_Seg4		**PASS**	0.3

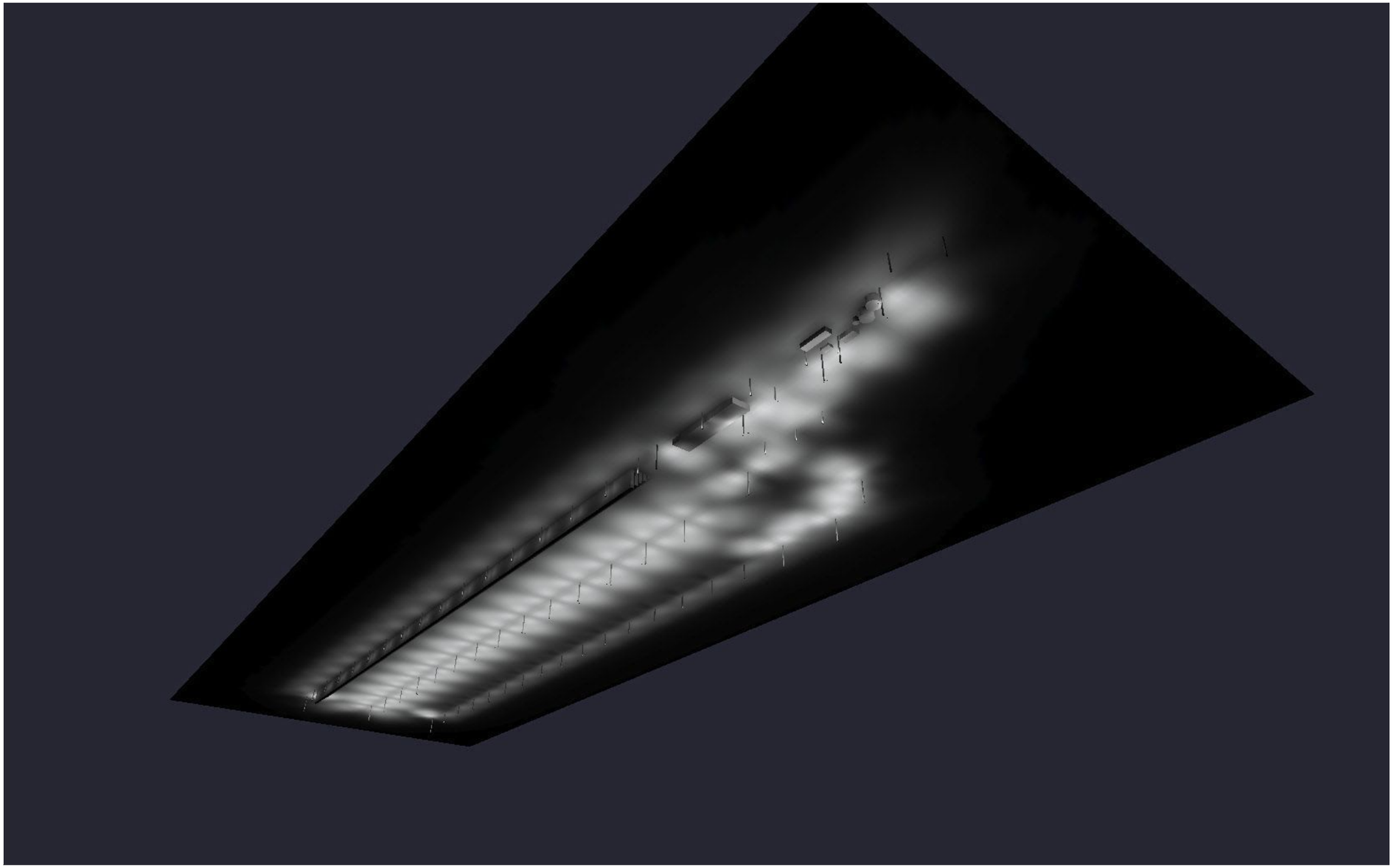
Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 2500 Cd

Calculations Tested (4):

Calculation Label	Test Results
ObtrusiveLight_1_Cd_Seg1	**PASS**
ObtrusiveLight_1_Cd_Seg2	**PASS**
ObtrusiveLight_1_Cd_Seg3	**PASS**
ObtrusiveLight_1_Cd_Seg4	**PASS**

EXTR



AUTO PHASE OPERATION - LIGHTING CALCULATION

EXTRACT

Issue	Description	Date

100mm on Original

Client

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

TACTICAL GROUP

Project

MOOREBANK PRECINCT EAST (MPE)
IMPORT/EXPORT TERMINAL ELECTRICAL

Title

ARCADIS

Arcadis Australia Pacific Pty Limited
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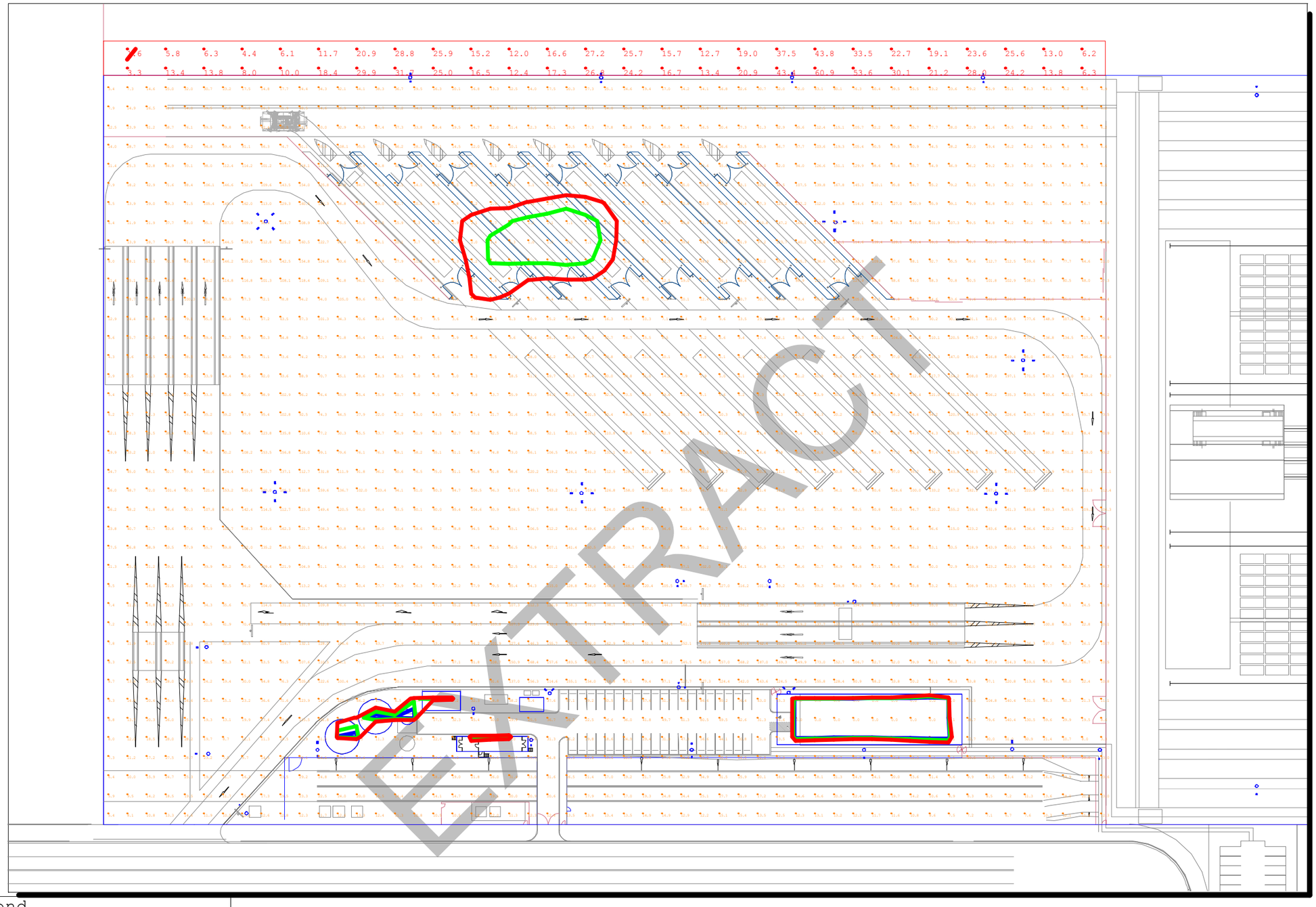
Volume No.
-

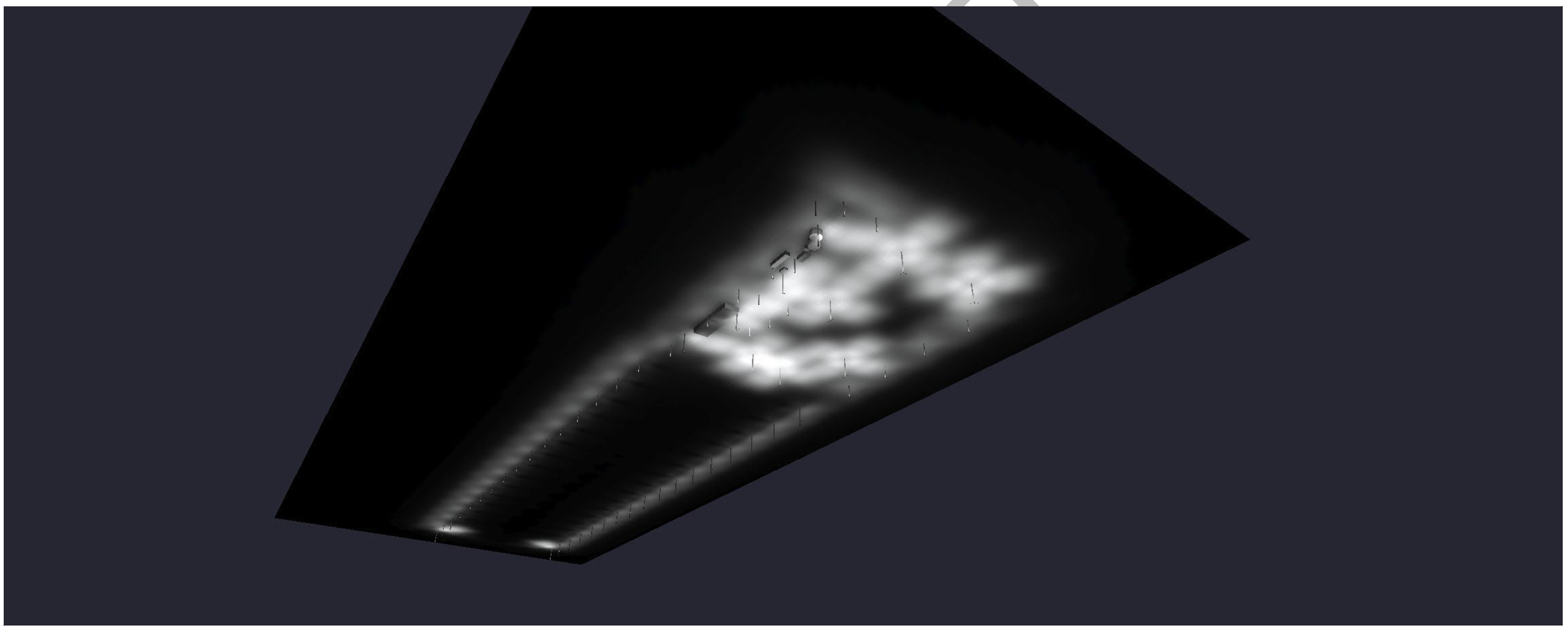
Project No.
10004975



Isoline Legend	
Illuminance (Lux)	
Color	Value
	0.85
	1.5
	2.5

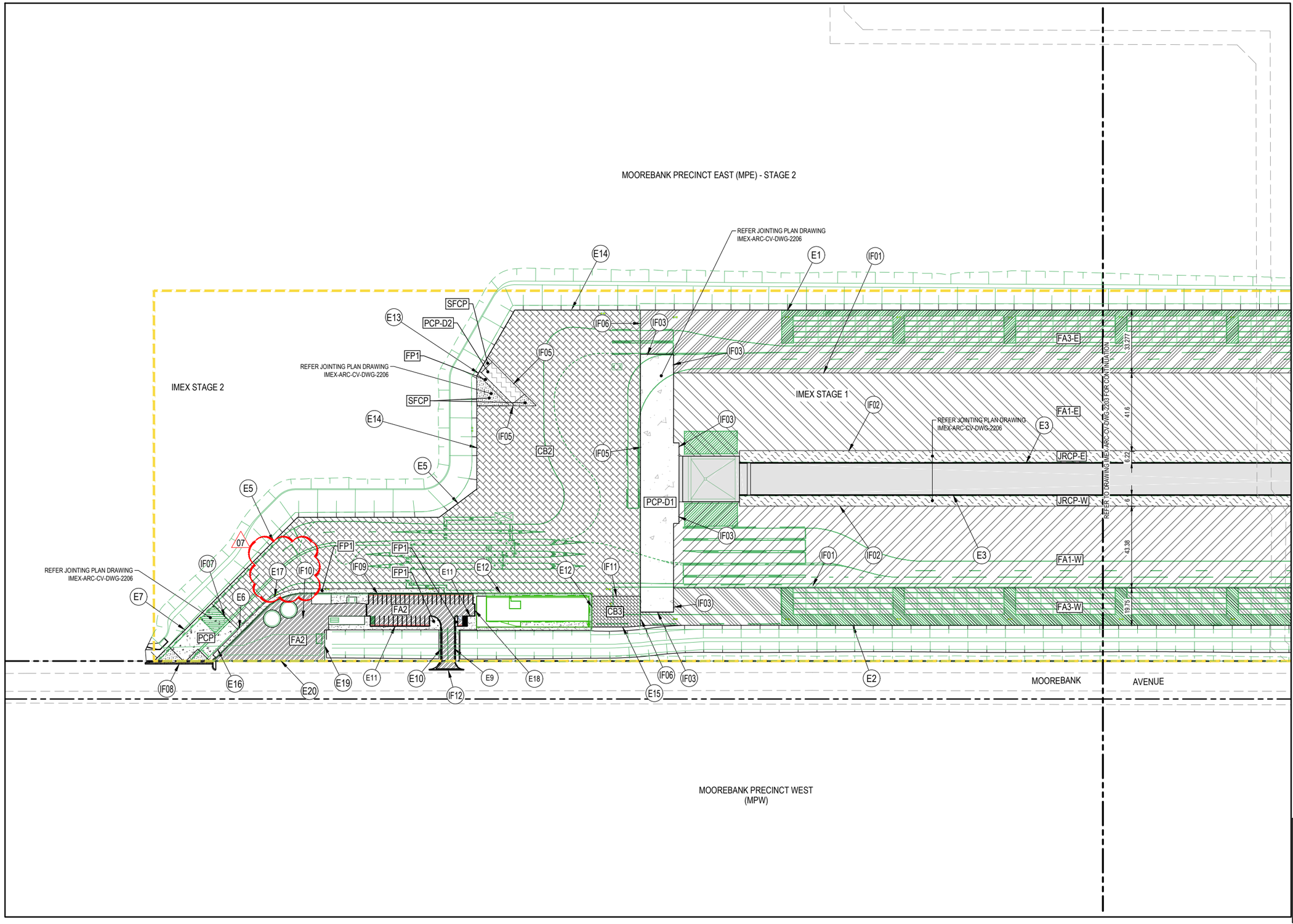
Luminaire Schedule				
Symbol	Qty	Label	Arrangement	LLF
	32	SR4H757A2 Raptor 1270W NB gla	SINGLE	0.750
	54	ATB2_60BLEDE13_XXXXX_R3	SINGLE	0.750
	1	StreetLED 37W 4K Aeroscreen 2	SINGLE	0.750

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Max/Min
FENCE	Illuminance	Lux	20.46	60.9	1.6	38.06
Front Area	Illuminance	Lux	62.12	259.5	0.0	N.A.



APPENDIX F

Car Park – Pavement Materials



LEGEND

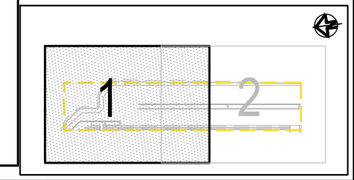
PAVEMENT TYPES:

- CB2 (BLOCK PAVING ON BOUND BASE)
- CB3 (BLOCK PAVING ON BOUND BASE)
- FA1-E (ASPHALT ON BOUND SUBBASE)
- FA1-W (ASPHALT ON BOUND SUBBASE)
- FA2 (ASPHALT ON GRANULAR BASE)
- FA3-E (ASPHALT ON BOUND SUBBASE)
- FA3-W (ASPHALT ON BOUND SUBBASE)
- FP1 (CONCRETE FOOTPATH)
- JRCP-E/W (JRCP ON LMC SUBBASE)
- PCP (PCP ON LMC SUBBASE)
- PCP-D1 (DOWELLED PCP ON LMC SUBBASE)
- PCP-D2 (DOWELLED PCP ON LMC SUBBASE)
- SFCP (SFCP ON LMC SUBBASE)
- REFER RAIL PACKAGE M05
- ASSUMED 20ft / 40ft CONTAINER ARRANGEMENT
- DESIGN BY OTHERS
- IMEX BOUNDARY
- CADASTRAL PROPERTY BOUNDARY
- PCP — PAVEMENT TYPE TAG
- IF — PAVEMENT INTERFACE, DETAIL TAG
- E — PAVEMENT EDGE DETAIL TAG
- WEIGH IN MOTION FOUNDATION UNITS

NOTES

07

1. FOR PAVEMENT GENERAL NOTES REFER DRAWING IMEX-ARC-CV-DWG-2013.
2. FOR PAVEMENT PROFILES REFER DRAWING IMEX-ARC-CV-DWG-2211.
3. FOR EDGE AND INTERFACE DETAILS REFER DRAWING IMEX-ARC-CV-DWG-2206 TO 2219.
4. FOR CONCRETE JOINT PLANS REFER DRAWINGS IMEX-ARC-CV-DWG-2206 AND 2208.
5. REFER TO VOLUME M06 FOR ROAD FURNITURE AND TEMPORARY SAFETY BARRIERS.



Issue	Description	Date
07	AFC UPDATE	07/07/2017
06	AFC UPDATE	22/05/2017
05	AFC UPDATE	19/05/2017
04	AFC UPDATE	17/05/2017
03	ISSUE FOR CONSTRUCTION	27/04/2017
02	REVIEWER COMMENTS INCORPORATED	07/04/2017
01	DETAILED DESIGN	31/03/2017

0 20 40 60 80 100m

1 : 1000

100mm on Original

Client: SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE; TACTICAL GROUP

Status: FOR CONSTRUCTION
TO BE USED FOR CONSTRUCTION

		Current Issue Signatures	
Scales	1 : 1000	Drawn J.YAZDANI	
Original Size	A1	Designed L.CORSCADDEN	
Height Datum	AHD	Checked G.DE SILVA	
Grid	MGA	Approved M.KEFFORD	

Filename: IMEX-ARC-CV-DWG-2202-PavementPlanSheet1.dwg

Project: MOOREBANK MPE
STAGE 1
IMEX NUMBER 1

Title: PAVEMENT PLAN
SHEET 1

ARCADIS
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Volume No. M02
Project No. 10004975
Drawing No. IMEX -ARC-CV-DWG- 2202- Issue 07

Date Plotted: 7 Jul 2017 - 11:30AM File Name: F:\10004975\E-CAD\D-Drawings\CV\M02_Manual Phase Civil And Lead In Services\IMEX-ARC-CV-DWG-2202-PavementPlanSheet1.dwg

APPENDIX G

Depot Licence Application Guidelines

Australian Government
Department of Immigration and Border Protection

Applying for a Depot Licence – Application Guidelines

NOTE: Identity documents must be either originals or certified copies. A certified copy is a copy of an original document that has been certified as a true and correct copy by a person who is authorised to witness a statutory declaration. These copies should be annotated with **"certified true copy of the original, which I have sighted"** and the signature, date, full name and appointment/qualifications of the person certifying. Refer to the document *100 Point Identification Guidelines* for more details on document certification.

This guide provides information on the application process for a licence to operate a Depot under Part IVA of the *Customs Act 1901* (the Act). Applications are to be made to the Department of Immigration and Border Protection (the Department). Successful applications will be granted a licence to operate the premises as a Depot under Section 77G of the Act and in accordance with Customs-related laws[1].

The Department requires the business and personal information outlined in this application guide and any other information requested as part of the application process to assess applications against the requirements of Customs-related laws. Any information provided will be used only for that purpose for which is it collected. Failure to provide the required information may result in the application for a Depot Licence being rejected.

[1] Customs-related laws, as defined in Section 4B of the Act, includes:
(c) any other Act, or any Regulations made under any other Act, in so far as the *Customs Act 1901* or *Customs Regulation 2015* relate to the importation or exportation of goods, where the importation or exportation is subject to compliance with any condition or restriction or is subject to any tax, duty, levy or charge (however described).

Table of Contents

1. General Information 4

1.1 Customs Control 4

1.2 Integrated Cargo System (ICS) 4

1.3 Licensing 5

1.4 Types of licences 5

1.5 Depot Activities 6

1.6 Licence Conditions 6

1.7 Licence Fees 6

1.8 Department of Agriculture and Water Resources (DAWR) 7

1.9 Application Process 7

1.10 Review of Decisions 8

2. How to Complete the Application Form 9

1. Contact Details for Application 9

2. Client Name 9

3. Australian Business Number (ABN) 9

4. Establishment (Depot) Name 9

5. Physical Site Address 9

6. Location of the Depot Relative to Australian Border Force Offices 10

7. After Hours Contact 10

8. Address of Head Office 10

9. ICS Client Registration 10

10. Communicating Electronically with the Department 10

11. Company membership and persons who participate in the management or control of the depot 10

12. Prior Experience 11

13. Depot Activities 11
14. Depot Categories 12
15. Use of Premises for Purposes other than Depot Activities 12
16. Customs section 79 Warehouses 12
17. Quality Management System 12
18. Standard Operating Procedures (SOPs) 13
Attachments to be included in your Application 13
19. Constitutional Documents 13
20. Management and Control – MANDATORY 13
21. Corporate Membership Structure – MANDATORY 14
22. Company Extract – MANDATORY 15
23. Financial Information – MANDATORY 15
24. Depot Site Plans – MANDATORY 15
25. Construction of Premises – MANDATORY 16
26. Physical Security of the Premises – MANDATORY 17
27. Examination Facilities for ABF Officers – MANDATORY 17
28. Physical Separation of Premises 18
29. Ownership/Lease Verification – MANDATORY 19
30. Depot Procedures and Recording Systems – MANDATORY 19
3. Submitting the Application 21
Appendix 1 22
Your legal responsibilities 22
Appendix 2 23
Physical Security Standards 23

1. General Information

1.1 Customs Control

The Department, which incorporates the Australian Border Force (ABF), protects Australia's border and manages the movement of people and goods across it. In terms of goods, management means facilitating legitimate trade and cross-border movement; and protection means monitoring for prohibited exports and imports, breaches of customs-related laws and threats to the revenue. Section 30 of the Act establishes customs control of goods from the time of their importation until they are entered into home consumption or re-exported to a place outside Australia; and for goods intended for export, from the time of receival at a customs place until their exportation to a place outside Australia. Goods under customs control may be inspected at a Depot or other customs place.

A range of provisions in the Act also applies to goods under customs control. For example, goods under customs control must:

- Not be moved/tampered with unless under authority (section 33)
- Be kept safely and/or accounted for (sections 36, 37)
- Be accessible to officers for inspection etc. (section 77N(6))
- Only be dealt with under authority (sections 71E, 119AA, 119AB. 119AC)
- Not be received by a Depot the licence for which has been suspended (section 77VA)
- Have appropriate commercial documentation (section 77N(8))

The movement of goods under customs control (for example between licensed premises) requires permission. A number of reporting obligations also fall upon licensees in relation to both goods and business operations.

To help licensed and registered operators at customs places comply with obligations under Customs-related laws, the Department manages an Infringement Notice Scheme. While statutory penalties exist, the Department's preference is to work cooperatively with industry, in the first instance, to increase compliance (ACN2014/07 and ACN 2013/67).

1.2 Integrated Cargo System (ICS)

The ICS is an electronic system used to facilitate and record the movement of goods into and out of Australia.

All applicants are required to register as a client in the ICS and purchase a digital certificate in order to communicate electronically with the Department. The ICS registration must be completed using the ABN under which the Depot application has been made.

For information on how to register in and access the ICS and any related matters please see the Department website at www.border.gov.au then proceed to the Cargo Support page. There are a number of useful fact sheets and step-by-step processes, however if you are still having difficulty please contact Cargo Support on 1300 558 099 or by email at cargosupport@border.gov.au.

Note: The National Depot and Warehouse Licensing section is unable to assist with ICS registration or digital certificates.

Licence applications are unable to be processed if client registration has not been completed.

1.3 Licensing

The Department administers a number of licensing and registration regimes under the Act. These regimes are designed to allow industry to work with Government to facilitate the achievement of legitimate business goals while maintaining border security. Section IVA sets out the legislative framework for the licensing of Depots. Even though licences are issued to individuals, companies or partnerships, each licence is issued for a specific place and licensees with more than one Depot require a licence for each of their premises.

Language

In some international publications, warehouses are referred to as bonds or bonded warehouses. This is a legacy from the use of bonds as security for licensed premises and does not have a meaning under Australia's current legislative regime. However, the term underbond movement is still used administratively to refer to the movement of goods subject to customs control.

1.4 Types of licences

Depots

A Depot is a place that is operated under licence to hold and/or unpack imported goods, hold and/or unpack goods for export and for the examination of goods by officers of the Department. Because a person may hold several licences to conduct distinct activities at distinct places, each licence must be maintained separately.

Goods for export remain under customs control until their export and imported goods remain under customs control until they are entered for domestic consumption or re-exported. This means that goods can only leave a Licensed Depot under permission.

Storage of goods subject to customs control in a Licensed Depot is permitted until the end of the month after the month of receipt in the Depot. The Depot may seek an extension under section 77P the Act to hold the goods for a further 30 days. If legislative import requirements have not been met and this period has elapsed, the goods must be transferred to a Licensed Warehouse (if possible) or arrangements be made for the disposal/destruction of the goods.

Customs Brokers

The statutory scheme for the licensing of customs brokers operates to protect the Commonwealth Revenue and to protect the community by giving assurance that customs reporting and payment of duty are undertaken in a professional and ethical manner. Licensed Brokers are expected to understand a range of import and export policies.

Warehouses

Licensed Warehouses allow long-term storage of goods that are subject to customs control and subsequently, deferral of any payable duties and taxes. Special classes of

warehouse exist including duty free shops, catering bonds, providores and specialist warehouses that deal in Excise Equivalent Goods (EEGs).

Activities permitted in warehouses are limited to ensure the security of the goods and the revenue payable to the Commonwealth is protected. Apart from approved storage, blending, unpacking, repacking and packaging of certain types of goods, any activities that involve "value adding" are not permitted.

Ship and aircraft stores are also managed via the warehouse licensing regime. Companies managing stores are commonly called providores or catering bonds. There are a range of special reporting requirements for ship and aircraft stores.

1.5 Depot Activities

Persons may only be licensed to conduct the following activities at Depots:

- Holding of imported goods subject to customs control
- Unpacking of imported goods subject to customs control
- Holding of goods for export subject to customs control and/or
- Packing of goods for export subject to customs control into containers etc.

The licence may be issued in relation to goods generally, or only in relation to goods of specific classes. Licence holders may only use the premises for the purposes specified in the licence. Activities permitted in warehouses are limited to ensure the security of the goods and the revenue payable to the Commonwealth is protected. Authorised officers may conduct cargo examinations and/or audits at all Licensed Depots.

Note: Goods that are not currently under customs control may also be packed for export at places other than a licensed Depot.

1.6 Licence Conditions

Depot operators are subject to a range of obligations, including compliance with conditions of the licence (see ACN 2013/56), reporting obligations and maintenance of systems to ensure accountability. One such condition of a licence is to provide adequate training to make staff aware of their obligations in dealing with goods subject to customs control. This means that all employees working in the management and control of a Depot or of customs controlled goods are expected to understand their obligations under Customs-related laws.

A breach of a Depot licence condition is an offence and non-compliance with the conditions of a licence may lead to administrative action, including the issuing of an Infringement Notice, prosecution for the offence, and suspension or even cancellation of the licence if deemed necessary.

1.7 Licence Fees

Depot licence fees are imposed by operation of the Act and *Customs Depot Licensing Charges Act 1997*. For initial applications, a fee of $3000 must be paid before processing of the application can commence. An invoice will be issued once the application has been received.

An annual $4000 fee is payable for every Depot Licence. This fee is applied pro rata in the first year and must be paid within 30 days of the approval of the licence. It is also applied pro rata for the last year, so operators intending to surrender a licence are encouraged to contact the Warehouse and Depot Licensing team as early as possible to ensure that the appropriate refund can be processed.

Fees are paid annually and are based on a standard financial year (1 July to 30 June).

If a Depot has handled less than 300 transactions or lines of cargo in the previous 12 months they may be eligible for a reduced renewal fee of $1500. To qualify for the reduced licence fee operators need to contact Warehouse and Depot Licensing in writing prior to May each year.

Note that the reduced fee of $1500 does not apply to the initial year.

1.8 Department of Agriculture and Water Resources (DAWR)

DAWR separately approves places for the provision of biosecurity activities through Approved Arrangements (AA). AA sites, formerly known as Quarantine Approved Premises (QAP), are not managed through the Department. Depending on the type of cargo being handled at a Licensed Depot, biosecurity requirements may apply. Licence holders should contact their nearest DAWR regional office or visit the DAWR website at www.agriculture.gov.au for information regarding AA requirements.

1.9 Application Process

All applications are assessed against the criteria laid out in customs legislation and associated policies. The applicant and all persons in positions of 'management or control' are required to be 'fit and proper'. Not all premises are appropriate to be operated as a Licensed Warehouse. The application process includes a site visit, to determine the adequacy of the premises to deal with goods subject to customs control and the viability of the business model and operating systems.

On receipt of an application an invoice is issued for the application fee. Assessment and processing of an application commences once the application fee has been paid; and any additional or missing information/supporting documentation will be requested at this stage. The application process can take up to 60 days from the date that all information and documentation required to complete the application assessment has been received.

Note: a Depot licence cannot be held by a Trust**.** While licences are usually held by natural persons, partnerships or companies, a licence may also be granted to the Trustee of a Trust upon presentation of a "Deed of Trusteeship" but the licence cannot be issued to the Trust itself.

Important Note: Under Section 234(1)(d) of the Act, it is an offence to intentionally make a false or misleading statement to an officer, or intentionally omit information from a statement made to an officer without which the statement is false or misleading.

A false or misleading statement made in an application for a Depot licence may result in a decision not to grant a Depot licence and/or the person may be convicted of an offence under section 234(2)(b) of the Act.

1.10 Review of Decisions

Applicants who feel that a decision is injudicious can contact the Department to request internal review. Whether or not an applicant initially requests an internal review, some decisions are appealable to the Administrative Appeals Tribunal.

A decision not to grant a Depot Licence is a reviewable decision, under section 273GA(aaq) of the Act. A decision not to extend the time given to produce further information in relation to an application (when requested to do so in writing by the applicant) is also a reviewable decision.

In order to have a decision reviewed by the Administrative Appeals Tribunal, an applicant must apply to the Tribunal within 28 days of the decision being made, or any such further time as allowed in accordance with section 29 of the *Administrative Appeals Tribunal Act, 1975*.

2. How to Complete the Application Form

You must complete each section of the application form unless otherwise stated. The paragraphs below are numbered to correspond with the questions on the application form.

1. Contact Details for Application

A contact for the application process needs to be nominated. This person must be the person who lodges the application and also must have knowledge of all aspects of the application. This usually means that they should know all relevant details of the business case for the operation of the proposed site.

This section is for the details of the contact and may be different to the details in the rest of the application. The contact must remain the same throughout the application process. Where this is not possible, complete details of a new contact must be provided.

2. Client Name

The client name is the name of the person, partnership or company applying for the Depot licence. **A Depot licence cannot be held by a Trust**; however a licence may be issued to the Trustee of a Trust upon presentation of a "Deed of Trusteeship".

3. Australian Business Number (ABN)

The ABN of the person, partnership or company applying for the Depot licence must be used on the application. Depot applications must be completed using the ABN under which the ICS registration has been made (see part 1.2 of this document).

4. Establishment (Depot) Name

The Establishment name is the name by which the Depot is to be known. This name does not have to be the same as the client name or even a name registered with the Australian Business Register (ABR).

5. Physical Site Address

The physical site address is the address of the premises where the proposed Depot is situated.

Although a Depot licence may be issued to a person, company or partnership, the licence is for a single specified place only. Licensees operating multiple Depots will need a licence for each premises.

Once issued, any intended variation to a licensed premises, including a change of address, must be approved by the Department **before** the Depot site is changed or operations are moved to another premises. The application to vary a licence may take up to 60 days from receipt of a completed application and so sufficient time must be allowed for business planning to move a licensed Depot to a different site.

6. Location of the Depot Relative to Australian Border Force Offices

Will the proposed Depot will be located more than 40 km from the nearest ABF office?

Depots located more than 40 km from a place where ABF officers conduct their normal business are liable to pay the travelling expenses of authorised officers performing their duties at such Depots in accordance with the *Customs Regulation 2015*.

Note: Under the Act, an application may be refused if the premises to be licensed is considered to be too remote from the nearest ABF office.

7. After Hours Contact

You must provide the name and phone number of a person who can be contacted after hours in regards to the Depot, for example, a night manager.

8. Address of Head Office

The following addresses where applicable:

- The street and/or postal address of the registered company office in the State or Territory in which the application for a licence is made or
- The street and/or postal address of the company head office of the applicant if not in the State or Territory where the application for a licence is made.

9. ICS Client Registration

You are required to be registered as a client in the ICS (see part 1.2 of this document). The registration must be completed using the ABN under which the Depot application has been made. Please indicate on the form if the registration has been completed.

10. Communicating Electronically with the Department

All Depots must maintain electronic communication with the Department via the ICS.

Please indicate the method that you will use to access the ICS:

- Customs Interactive (CI) or
- Electronic Data Interchange (EDI).

If you will be accessing the ICS via EDI, you must provide details of the software that you will be using.

11. Company membership and persons who participate in the management or control of the depot

Each person in a position of Management or Control (ACN2014/23 refers) of the proposed Depot or of goods subject to customs control that would be dealt with by the proposed Depot must be identified as part of the application process. Applicants must provide a list of the following persons:

- The applicant (where the applicant is an individual natural person)

- All partners (where the applicant is a partnership) and
- All persons who will participate in a position of management or control of the Depot including all company directors, officers, shareholders, managers, supervisors, employees who cover for supervisors and managers leave, any staff who have control over the recording and movement of goods when they enter and leave the Depot, and any staff that have afterhours access to the Depot (regardless of whether swipe access, key or alarm code holders).

All persons nominated in response to this question will be the subject of police records and other background checks. A separate B301 form must be attached for each person in a position of Management or Control. The information is used to satisfy the requirement that the nominees are "fit and proper" persons for the purposes of section 77K of the Act. Each person must ensure that the full 10 years of address history is completed on the form.

If the form is submitted incomplete or if any information is missing from the form, the Department may be unable to process the request and/or may be unable to determine if the person is a fit and proper person. If a person chooses not to submit a consent form, the Department must consider this when assessing the application. The failure of an individual to give consent or provide all required information may result in the rejection of the application as the Department may be unable to determine whether that individual is a fit and proper person.

Additionally, those people nominated as being involved in the management and/or control of the Depot will be required to establish their identity by providing **certified** copies of identification documents, which total **100 points** or more

It is a condition of a Depot licence that the licence holder provides details to the Department within 30 days of a new staff member commencing in a position of management or control. These persons will be subject to the same "fit and proper person" requirements as staff nominated during the application process.

Note: If you run out of space on the form, please attach a separate piece of paper.

12. Prior Experience

Do you or any of the persons nominated as being in management or control of the Depot have prior experience in the operation of a Licensed Depot? If any person nominated as being in management or control of the Depot currently holds or has ever held another customs licence of any kind, this should be noted here.

If you have ticked yes, please provide a brief outline of the experience and/or other licences held in the space provided on the form.

Note: If you run out of space on the form, please attach a separate piece of paper.

13. Depot Activities

Please include the activities that you propose to conduct in the Depot. The following are the only activities that may be undertaken in a Depot by the licence holder:

- Holding of imported goods subject to customs control;

- Unpacking of imported goods subject to customs control;
- Holding of goods for export subject to customs control; and
- Packing of goods for export subject to customs control into containers etc.

14. Depot Categories

Please include the type of Depot/s that you are proposing to operate. All Depot activities as listed in point 13 may be conducted in any of the following Depot categories:

- Air Cargo – CTO functions
- Air Cargo - General
- Sea Cargo – Containerised general cargo (LCL and FAK)
- Personal effects – Sea
- Personal effects – Air
- Postal articles only

Activities that can be carried out at the following categories of Depots are restricted:

- Sea Cargo – FCL container park – hold imported goods subject to customs control only
- Sea Cargo – Non-containerised general cargo – hold imported goods subject to customs control and hold goods for export subject to customs control only.

"FCL" means a full container load	"LCL" means less than full container load
"FAK" means freight all kinds	"CTO" means Cargo Terminal Operator

15. Use of Premises for Purposes other than Depot Activities

Do you propose to use the premises for any activities other than those outlined in question 13 (Depot Activities)? If yes, please provide a brief explanation in the space provided. For example, if a section of the premises will not be part of the licensed Depot and will be used for other purposes.

16. Customs section 79 Warehouses

Is any part of the premises where the proposed Depot is located currently licensed as a section 79 warehouse or proposed to be licensed as a section 79 warehouse?

17. Quality Management System

Do you have a certified Quality Management System? If yes, please indicate the standard you are using.

Although a certified QMS is not mandatory, it is expected that Licensed Depots conduct Quality Assurance (QA) on consignments received each month. In particular, 'time-up' cargo must be accounted for. Any discrepancy identified through QA activities must be notified to the Department. This forms the bare

minimum of QA and licence applications for high-volume operators are expected to demonstrate an appropriately rigorous audit and stocktake schedule as well as an effective QMS.

18. Standard Operating Procedures (SOPs)

You are required to have documented SOPs for the operations to take place within the Depot. These documents will need to be made available upon request by the Department.

As a part of our assessment of your application you must indicate if you have developed SOPs for your proposed operation.

Attachments to be included in your Application

While some of the following information and documentation is mandatory and must accompany the application, other documents and information should only be submitted on request by the Licensing Officer who is processing your application.

19. Constitutional Documents

You **may** be required to provide a copy of one or more of the following documents to establish the arrangements under which the company operates:

- Articles of Association
- Constitution
- Replaceable Rules
- Partnership Agreement
- Certificate of Registration of a Foreign Company

20. Management and Control – MANDATORY

A Department pro-forma consent form (B301) **must** be completed by each nominated person including the applicant (if an individual natural person), partners (if applicable) and any director, shareholder or employee who will be involved in the management and/or control of the Depot.

Personnel who will have control of, or are responsible for delivery of cargo, have afterhours access or provide absence cover for supervisors and managers should also be included in this list.

Such persons will be subject to police record and other background checks, which are required in order to determine eligibility requirements for granting a Depot licence as per section 77K of the Act.

Each person ensure that the full 10 years of address history is completed on the form.

If the form is submitted incomplete or if any information is missing from the form, the Department may be unable to process the request and/or may be unable to determine if the person is a “fit and proper person” and/or the application may be refused.

If a person chooses not to submit a consent form, the Department must consider this when assessing the application. The failure of an individual to give consent

may result in the rejection of your application as the Department may be unable to determine whether that individual is a “fit and proper person”.

Additionally, those people nominated as being involved in the management and/or control of the Depot will be required to establish their identity by providing **certified** copies of identification documents, which total **100 points** or more.

A copy of the *B301 ‘Consent to Obtain Personal Information’ form* and a *100 Points of Identification Guideline* can be found on the Licensing page of the Department’s website at www.border.gov.au.

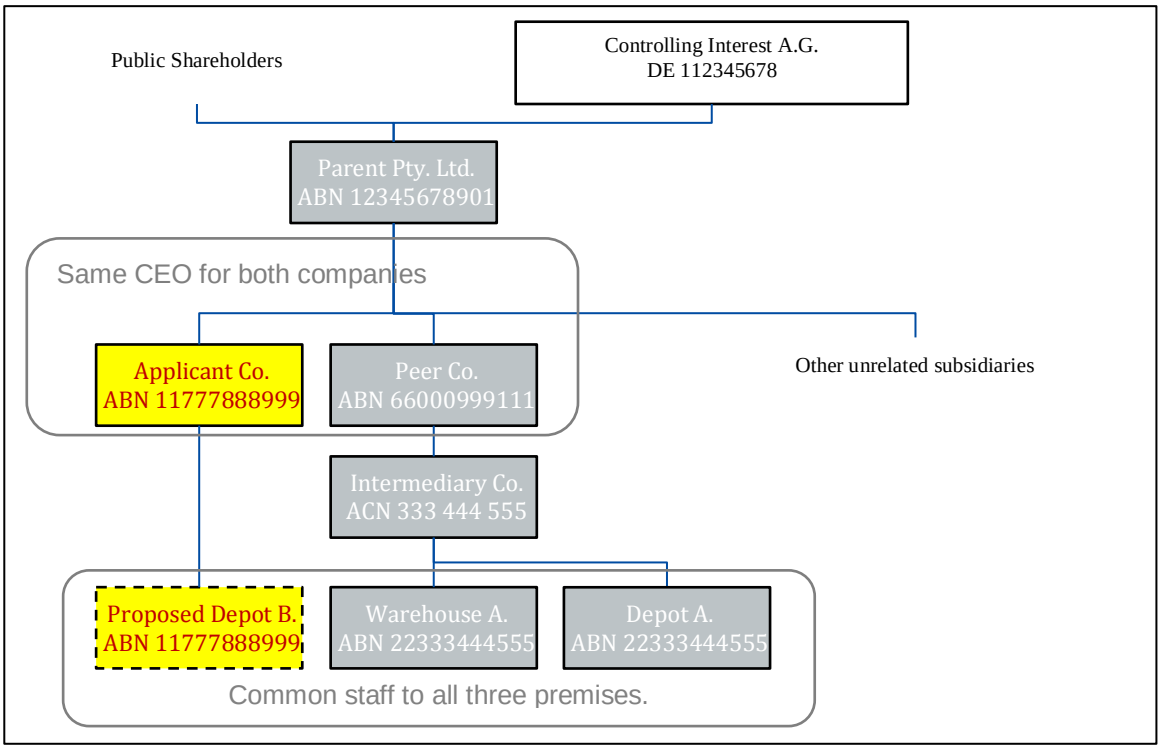
Any details about individuals contained within the Depot application form, associated information or information obtained as a result of police record and other background checks is personal information and will remain confidential in accordance with the Australian Privacy Principles of the *Privacy Act 1988* and the requirements of Part 6 of the *Australian Border Force Act 2015*.

21. Corporate Membership Structure – MANDATORY

This information **must** be provided. For small businesses, this may be as brief as a statement that no other corporate structures exist beyond the owner and any directors listed in the Depot Management section. However, large operators are expected to set out the organisational relationships comprehensively. Where relationships exist with other businesses unconnected with the proposed Depot, these can be summarised.

All other licensed premises must be included in this information and their relationships explained.

A diagram is often useful in addition to the full explanation to help with visualisation. The following example shows a simple diagram for a company structure of moderate complexity:



The information provided will be used by the Department to risk assess the company, companies and individuals associated with the applicants.

22. Company Extract – MANDATORY

If the application relates to a registered company, a 'Company Extract' **must** accompany the application. This document is available for purchase from the Australian Securities and Investment Commission (ASIC) website at www.asic.gov.au/search.

ASIC may also be contacted via:

Phone: 03 5177 3988

Email: info.enquiries@asic.gov.au

Company search documents must include full details of company registration, registered addresses, share details and company administration including directors.

23. Financial Information – MANDATORY

You **must** provide a copy of the last audited financial statements, that is:

- Balance Sheet
- Trading and Profit and Loss Accounts

If an audited statement is not available, you must provide the most current profit and loss statement and balance sheet or any financial statements showing the present trading position of the company.

If the application relates to a new company and no financial records are available, you must provide a comprehensive business plan including, but not limited to:

- Sales projections
- Estimated expenses
- Assessment of strengths and weaknesses
- Assessment of opportunities and threats
- Estimated profit / loss figures
- Estimated number of transactions

The information provided will be used by the Department to assess the company in relation to its financial viability and risk to the revenue of the Commonwealth.

24. Depot Site Plans – MANDATORY

You **must** provide three certified copies of the plan (no larger than A3) of the proposed Depot premises outlining **ALL** of the following details:

- The area to be licensed must be outlined in **RED**
- The location of access points including doors, windows, roller shutters, vehicular access, lifts and staircases
- The location of a secure storage area (deadhouse) for customs purposes

- The location of electronic security system movement sensors and reed switches
- The location of where activities will occur within the Depot, for example, storage of cargo, unpacking of containers and export consolidation
- The location of the area set aside for ABF officers to conduct cargo examinations
- The location of facilities for ABF officers to conduct compliance checks including, but not limited to, office space, desk, chair, access to Depot records and telephone
- If the premises include a section 79 warehouse, indicate the location of this on the plan
- The location of a car park specifically designated for use by ABF officers
- If the proposed licensed area only forms part of a building, the remaining areas of the building and usage/tenants must be noted.
- If the proposed licensed area is a whole building, surrounding features should be noted (secure complex, fencing, public roads, other buildings, etc).

Note: Office space and amenities should be excluded from the proposed licensed area.

The site plan does not have to be professionally drafted; however, if you choose to draft the site plan yourself, either using a computer or by hand-drawing it on graph paper, it must be neat, legible, use the appropriate colour coding detailed above and be reasonably to scale. The site plan forms an important part of the Depot licence as it is used by ABF officers to identify approved physical layout and security measures, and so it must be functional.

Each copy must include the following endorsement on the plan, and must be signed by an authorised official of the company.

"I hereby certify that this is a correct plan of the premises at (insert street address) operated by (insert name of business) and referred to in the application for a new/amended Depot licence dated --/--/--. I also certify that the area/areas bound in red is/are the area/areas of the proposed licensed Depot."

Name: ……

Signature: ……..

Date: …….

25. Construction of Premises – MANDATORY

You **must** describe the construction and layout of the proposed Depot premises. For example, two storey building, double brick walls, reinforced concrete floors, tile roof, two doorways secured by steel doors, a vehicular entrance.

You must also provide written evidence from the relevant state authority of compliance with WH&S Regulations with regard to asbestos, including written evidence of the risk assessment if asbestos is present in the proposed premises.

By this requirement a competent person (defined in the WHS Regulation) must identify the presence and location of asbestos and assess the risks in accordance with the code of practice. The information must then be recorded in an asbestos register to be kept on the premises.

The Department has a duty of care not to place staff at risk of injury from asbestos; however, the primary duty of care obligation for controlling asbestos in licensed premises sits with the building owner. Where the licence applicant leases the premises the applicant must apply to the building owner for this information.

Note: Where asbestos is identified in the premises and the licensing officer has deemed the risk low enough to allow the granting of a licence that licence will be conditioned to require ongoing assessments by the relevant authority. The frequency of ongoing assessments must be in accordance with the relevant State or Territory legislation or Asbestos Management Plan. Reassessment is required sooner than scheduled if there is any disturbance of the asbestos.

Failure to comply with this requirement may lead to the rejection of the application or, where a licence has been granted, cancellation of the licence.

26. Physical Security of the Premises – MANDATORY

The physical security of the Depot must be at a minimum equal to commercial security standards having regard to the nature of the place and the procedures and methods that are put in place to ensure the security of goods.

Details of existing and/or proposed security arrangements for the Depot including, but not limited to, the following:

- Alarm systems
- CCTV / IPTV
- Window and door security
- Fencing
- Dead house construction
- Security patrols
- Name and address of the security company used
- Details about access to the Depot by personnel including names and positions of key holders and other staff who have unfettered access the controlled area.

As previously stated, if electronic security systems have been installed, you should clearly mark the location of all the movement sensors and reed switches on the certified plans.

See Appendix 2 for guidelines relating to physical security requirements for Depots.

Note: An authorised officer can visit the proposed Depot location to discuss physical security provisions during the licence application process.

27. Examination Facilities for ABF Officers – MANDATORY

It is a condition of a Depot licence for you as the licence holder to provide **adequate space and facilities** for the examination of goods by ABF officers.

Minimum requirements of such facilities, include, but are not limited to:

- Access to the proposed premises for ABF vehicles including Mobile X-ray Units (MXUs) and operating space which is not exposed to the elements. The minimum operating space required for the MXU is 8m x 8m.
- Access to single phase flat pin 10 amp plug for MXUs (standard 240 volt plug).
- High visibility bollard/barriers or equivalent protection from mobile plant/vehicles for ABF work areas.
- Adequate lighting levels (minimum 400 lux in examination area and office accommodation as prescribed by performance standard: AS1680.2 Interior lighting - Industrial tasks and processes).
- ABF examination work bench with a **stainless steel** bench top and **minimum dimensions** of 1.8m length by 750mm width and 900mm high, with power source access. An additional stainless steel bench with a minimum height of 700mm may also be required – **ABF officers will advise applicants of the bench dimension requirements during the application process.**
- S77G Depot staff to present cargo for inspection and to remove upon completion of examination.

The examination area is to be located a safe distance from areas where fumigant activity and biosecurity inspection would be taking place and protected from natural elements, artificially produced temperature devices and vehicle emissions.

It is the responsibility of the licence holder to maintain the ABF examination area and keep it clear when not in use by ABF officers.

The ABF examination facilities **cannot** be shared with those used by other government officers conducting biosecurity inspections due to cross-contamination concerns.

Goods should be stacked in such a way as to allow reasonable access for authorised officers to examine the goods and, unless otherwise authorised by the Department, import and export cargo must be separated.

It is a condition of all Depot licences that any goods **not** subject to customs control ('free goods') must be stored in a separate and distinct area from goods subject to customs control.

28. Physical Separation of Premises

If the place to be licensed is a section or part of a building as opposed to the whole building, please provide details as to how the area to be licensed will be physically separated from the rest of the building. For example, internal fencing or by clearly delineating the area by painted lines, dependant on the outcome of a risk assessment by the regional ABF officers.

If the building is shared with another tenant or company, the proposed licensed area can only be under the control of the applicant company and must not include any area under the control of another tenant. The area must be separated by a floor to ceiling wall or strong metal fencing and a higher level of security may be required in this instance.

If the proposed premises is shared with another entity, you must provide details of the other tenants and nature of their business.

29. Ownership/Lease Verification – MANDATORY

You must provide evidence of ownership of the land/property where the Depot will be situated.

If the land/property is leased, you must provide a signed copy of the lease document.

30. Depot Procedures and Recording Systems – MANDATORY

It is a requirement that all Depots are registered in the ICS and that all cargo movements are communicated electronically to the Department via the ICS. Records must be maintained and they must provide a clear audit trail of all incoming and outgoing goods. The Depot licence holder is responsible for all goods in the Depot and is liable for the duty on any goods that cannot be accounted for.

Relevant commercial documents must be kept for a minimum period of five years; however, it is essential that the Depot licence holder also maintain permanent records to allow the history of the movement of all goods into and out of the Depot to be readily traced.

The types of records to be kept include, but are not limited to:

- The date and time of receipt of goods
- The date and time of unpack of containers/cargo (if applicable)
- Details of surplus or short landed goods, pillages etc.
- Details of the release of goods including the date and time.

Note: These records may be manual or computer based and must be made available to authorised officers upon request.

Manual Based Recording Systems

If your recording system is manual, you must provide the Department with the following detailed information:

- The location of the documents and the designation of the person/s who process them
- Copies of registers, forms or other documents used or proposed to be used in connection with the Depot operations

Computer Based Recording Systems

If you will be using commercially available software, please provide the name of the software and company.

If you are using non-commercially available software, please provide specific details about the system and include screen prints of receipt and delivery screens.

Irrespective of whether you are using commercially or non-commercially available software:

- Does the software interface with the ICS?
- Are cargo receipt and release reports available?
- Is a stock list report available?
- Does the software generate a ‘delivery notice’ for releasing cargo? If yes, is the generation of the notice linked to the ICS consolidated status of the cargo?
- Are all computer records accessible from on-site? If no, please provide details regarding the location of computer records.

Note: Customs will evaluate such procedures and systems and will either accept their adequacy for Customs purposes or indicate the nature of any inadequacies.

Depot Procedures

All standard operating procedures or other procedural documents relating to the operation of the Depot must be provided in the application supporting documentation.

It is a condition of all Depot licences that the holder must provide adequate training to make staff aware of their obligations in dealing with goods subject to customs control.

3. Submitting the Application

When the application form and requested attachments have been completed, please submit your application to:

Department of Immigration and Border Protection
National Depot and Warehouse Licensing
GPO Box 9984
Sydney NSW 2001
Email: licensing@border.gov.au

Receipt of your application will be acknowledged by a Licensing officer and you will be invoiced for the $3,000 application fee.

Processing of your application will not begin until the $3000 application fee has been paid.

On receipt of payment the Licensing officer will assess your application and advise you of any outstanding information.

Provided that all the required information and accompanying documentation has been submitted, and pending the status of access to the Integrated Cargo System, your application will take up to 60 days to process.

If you do not provide all information, including any outstanding information advised at the time of initial assessment of your application, processing of the application may be delayed or refused. If an application is refused, you will be required to submit a new application. Where administrative processing work and a site inspection have been conducted as part of an application, the application fee will not be refunded if the application is withdrawn or refused.

Appendix 1

Your legal responsibilities

It is your responsibility to be aware of all your legislative responsibilities. When granted your licence will contain a number of conditions. It is important that you read and understand these conditions. A breach of a licence condition is a strict liability offence and may result in the issuance of an Infringement Notice, prosecution under the Act and ultimately suspension and/or cancellation of your licence.

Please visit the Federal Register of Legislation website at https://www.legislation.gov.au/ to review Depot and warehouse legislation, including but not limited to:

- Sections 77G to 77ZA of the Act (Depots)
- Sections 79 to 102A of the Act (warehouses including duty free stores)
- Sections 33 and 34 of the Regulation
- Sections 35 to 71 of the Regulation and
- *The Customs Licensing Charges Act 1997*

Below is an extract from the Customs Act 1901 outlining the role of a Licensed Depot

Customs Act 1901 Section 77G - Depot licences

1) Subject to this Part, the Comptroller-General of Customs may, on an application made by a person or partnership in accordance with section 77H, grant the person or partnership a licence in writing, to be known as a Depot licence, to use a place described in the licence for any one or more of the following purposes:
   a) the holding of imported goods that are subject to customs control section 30;
   b) the unpacking of goods referred to in paragraph (a) from receptacles;
   c) the holding of goods for export that are subject to customs control under section 30;
   d) the packing of goods referred to in paragraph (c) into receptacles;
   e) the examination of goods referred to in paragraph (a) or (c) by authorised officers.
2) A Depot licence may be granted:
   a) in relation to all the purposes referred to in subsection (1) or only to a particular purpose or purposes referred to in subsection (1) as specified in the licence; and
   b) in relation to goods generally or to goods of a specified class or classes as specified in the licence.

Appendix 2

Physical Security Standards

The physical security standards that are required in order for premises to be licensed to operate as a Depot are designed to protect the security of goods subject to customs control; and in turn are an important factor in the Department's role of protecting the Australian community and the revenue of the Commonwealth.

Individual site inspections are conducted for all Depot licence applications as well as applications to vary an existing Depot licence. The security measures required in order for a licence application to be approved will vary between premises.

Physical security assessments consider the threats and the risks and take into account the location and construction of the premises; the type, value and volume of the goods that will be stored at the premises; the activities that will be conducted at the premises; and any other relevant risk factors, such as the compliance history of the company.

Threats range from petty crime, such as incidental theft, to major crimes such as criminal infiltration. While no security system is infallible, by using a collective number of security measures the risk is minimised. The physical security measures required of a licensed Depot work on the principle of deter, detect, delay and control.

The following details **some** of the considerations and measures that may be applied when risk assessing a proposed Depot premises.

The Building(s)

1. Internal Size – will be dependent on the proposed operation and should take into account the capacity to accommodate the relevant cargo transport mode (e.g. trailers with shipping containers), type and volume of cargo, sufficient space for unpacking/packing, the need for a deadhouse, a requirement for a 'free goods' area, storage requirements, and ABF office and inspection area requirements for cargo examination. **Essentially, the premises must be fit for purpose**.
2. Entry Doors and Locks – entrance/external doors must be of solid construction and be fitted with deadlock type devices/keypad code locks/electronic locks except for those that are prohibited by state or local authority legislation (that is, safety or fire exit restrictions). In those instances, there will be a type of lock that is approved. Entry doors to the licensed area must **not** be kept in the open position, even during business hours.
3. Freight Doors – receiving/delivery freight doors must be of robust material and access via the doors is to be monitored. Doors may include a separate lockable pedestrian access, which should be used when doors are not being used by trucks. Depending on the environment some freight doors may be fitted with sensors to open/close the door automatically during business hours.
4. Windows – should be constructed of material to prevent illegal entry or be fitted with barriers (steel mesh or bars) which will be fixed to resist removal.
5. Alarms and/or intrusion detection devices – must be configured to cover doors, windows, walls, floor, roof and manholes. This system should be connected to a security monitoring point such as a security company or the police.
6. Internal Fencing – if applicable, areas set aside within the secure perimeter for the storage of un-entered cargo in shipping containers are to be fenced to a total

minimum height of 3 meters. The area is to be separate to those used for storage of 'free goods', export and deconsolidation space. Mesh should be chain link to Australian Standards that is minimum thickness of 3.15mm and in the 5 cm gauge range. Fences are to be topped with security wire to deter intrusion. Shipping containers must be stored door-to-door Note: Internal fencing is not required for all Depots.

7. Secure Area (Deadhouse) Requirements – All Depots (excluding FCL container parks and those handling break-bulk cargo) **must** have a secure area known as a deadhouse. The deadhouse must be a fully enclosed cage (including a roof) and should be bolted to the floor and building walls if the walls form part of the deadhouse. The mesh used must meet Australian Standards – chain link type in 5cm range with minimum thickness of 3.15mm. If the building walls are tin or stud wall, the mesh is to extend to all sides.

   The **MINIMUM** size of the deadhouse must be:

   - General – 2.4m long x 2.4m wide x 2.4m high
   - HVSO (High Volume Special Operator) – 1.2m long x 1.2m wide x 2.4m high

   The deadhouse must be locked and in a highly secure condition **at all times**. The chain and padlock should be of sufficient thickness and strength, and secured tightly with as little 'slack' as possible in the chain, so that it is not easily defeated. Padlocks that meet the Australian Standard for padlocks (AS4145.4) should be utilised for both the deadhouse and any internal gates into the licensed area.

   The types of goods to be secured in the deadhouse are high-risk or high value goods, for example, firearms, prohibited imports, damaged cargo or packages that have become opened during transport or there is evidence of possible pillage.

   The issuing of keys for the deadhouse must be controlled and suitable records maintained (see Access to Controlled Areas). A specific employee should be in charge of the deadhouse and be responsible for the safekeeping of the goods and relevant recordkeeping.

   The deadhouse must be kept accessible and not be used for any purpose other than that for which it is intended. Nothing should be stored on top of or above the deadhouse.

Perimeter Fencing

Buildings used for the consolidation/deconsolidation, packing/unpacking, storage and examination of goods subject to customs control are generally required to be encircled by perimeter fencing constructed of materials that discourage illegal entry.

Perimeter fencing for Depots should be either palisade or heavy-duty chain link in 5-10 cm gauge range with a thickness of no less than 3.15mm, and be of sufficient height to prevent illegal entry through, over or under. Depending on the assessed risk, perimeter fences total height minimum requirements range from 2.4m to 3m

Where chain link fencing is used, the base of the fence should be secured where practicable and must be topped with fixed security wire. There should be no overhanging trees, which could facilitate a breach of the perimeter and fences must be maintained in good condition at all times.

Gates

External and/or internal perimeter gates should be constructed of materials robust enough to prevent entry, be of similar height to fences and topped with security wire that is at least the total height of the corresponding fence. Entry and exit points should be controlled and access restricted. All gates are to be fitted with security locks and, where possible, alarms to a central control point.

Lighting

Exterior security lighting must be installed at certain points including all entries and exits to the licensed premises, container storage areas, vehicle parking and holding areas. Lighting should be sufficient to ensure every part of the area is sufficiently illuminated to enable identification of persons at a distance of 10 metres.

Access to Controlled Areas

The issuing of keys / combinations / cards for access to buildings, doors, gates and high security areas must be controlled including the maintenance of suitable records. For example, a register that includes details such as key/pass number, date of issue, name and date returned.

Rail Access (if applicable)

Rail gates are to be manned when rail operations are in progress. Gates are to be constructed to prevent vehicle access and are to be as robust as the fencing, securely locked when not in use.

Signage

ABF signs are to be posted at all entrances and in public areas advising of conditions of entry, including that goods and vehicles may be searched. The ABF will provide the required number of signs if/when the licence application is approved. It is a condition of a Depot licence that ABF signage **must not be removed** without prior authorisation.

Security Patrols

After normal working hours, security patrols should be engaged to make random inspections to ensure the safekeeping of the cargo in the Depot.

Vehicle Parking

Parking for employer/employee (non-customs) vehicles is to be a noticeable distance from the doors leading to cargo storage/unpacking areas. If space permits, the parking area should be outside the perimeter fencing.

Operating Procedures in respect to Physical Security

Operating procedures are to be such that cargo, containers, vehicles or other equipment are not placed near fences in such a manner as to facilitate unauthorised access to freight stored inside. In addition:

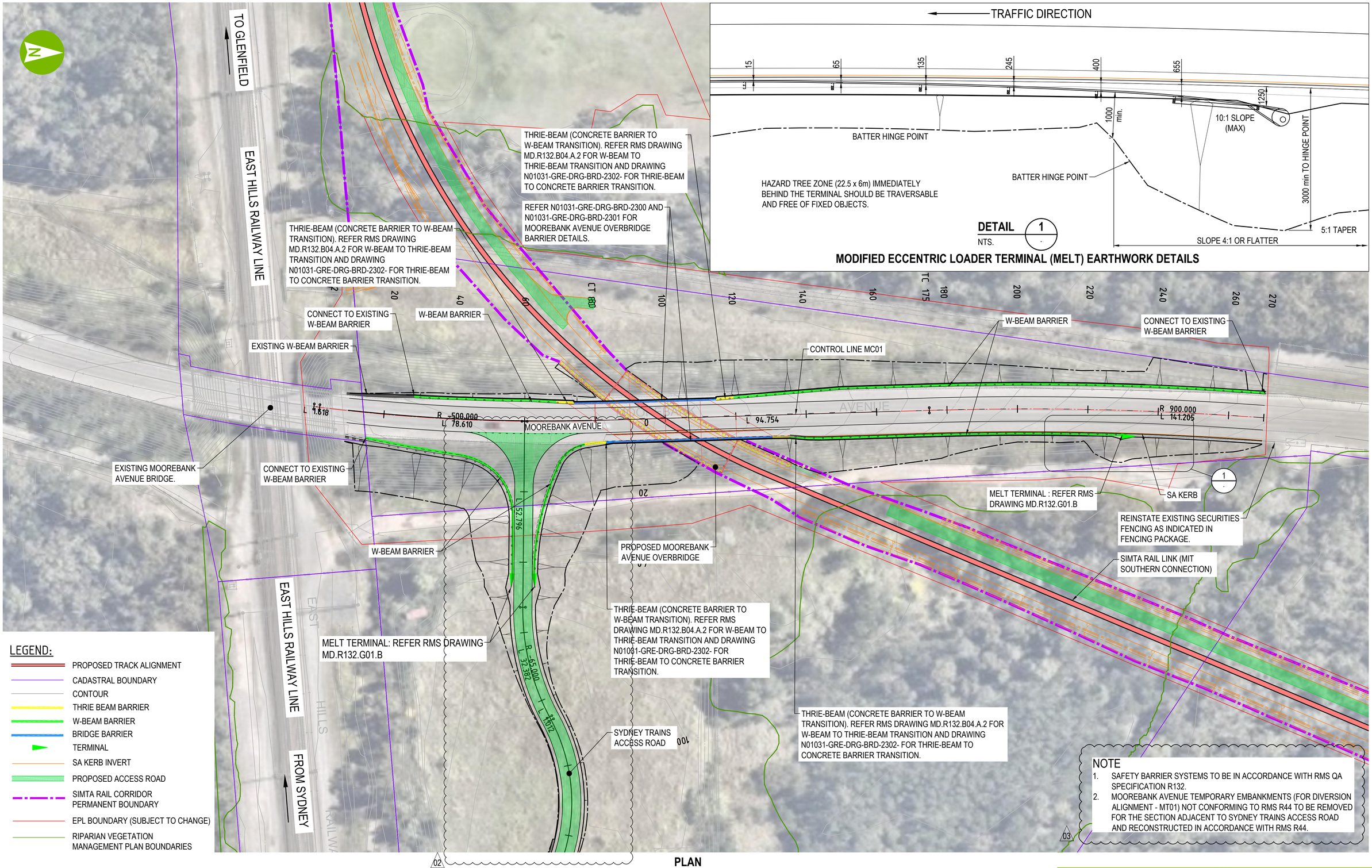
- Machinery and vehicles must be immobilised when the Depot is closed

- Containers must be stacked door to door with separate areas for full and empty containers
- All containers and pallets where unpacking has started but not finished are to be stored inside the building when the Depot is closed
- Lost or stolen keys, access passes or attempts to illegally enter the area are to be reported to the Department without delay
- Keys and passes are to be returned to Depot management prior to an employee ceasing employment with the company. The Department is to be informed immediately of failures to comply

Issue of Licence

When a Depot licence is granted, a hard copy of that licence is forwarded to the Depot. It is a requirement that the licence, which sets out the conditions under which the Depot is licensed must remain at the premises. Upon renewal a Certificate of Renewal will be forwarded; however the original licence must be retained, until such time as a new licence is issued. The licence must be surrendered if the licence is cancelled for any reason, including voluntary surrender.

APPENDIX G RAILCORP MAINTENANCE ACCESS ROAD



DETAIL 1 NTS.

MODIFIED ECCENTRIC LOADER TERMINAL (MELT) EARTHWORK DETAILS

LEGEND:

- PROPOSED TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- THRIE BEAM BARRIER
- W-BEAM BARRIER
- BRIDGE BARRIER
- TERMINAL
- SA KERB INVERT
- PROPOSED ACCESS ROAD
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- EPL BOUNDARY (SUBJECT TO CHANGE)
- RIPARIAN VEGETATION MANAGEMENT PLAN BOUNDARIES

PLAN
1:500

SCALE 1:500

NOTE
1. SAFETY BARRIER SYSTEMS TO BE IN ACCORDANCE WITH RMS QA SPECIFICATION R132.
2. MOOREBANK AVENUE TEMPORARY EMBANKMENTS (FOR DIVERSION ALIGNMENT - MT01) NOT CONFORMING TO RMS R44 TO BE REMOVED FOR THE SECTION ADJACENT TO SYDNEY TRAINS ACCESS ROAD AND RECONSTRUCTED IN ACCORDANCE WITH RMS R44.

Rel Date: 3/9/2018 2:26:53 PM Office: AUSYD Filename: C:\PW_WORKING\SALIN.SAKIB\ACE_R\SD\2020275\N01031-PWD-DRG-CIV-0010.DWG

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	21.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	26.06.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	MS
03	03.09.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	MS

SCALE	AS SHOWN
SIZE	A1
DRAWN	M.AHMAD
DESIGNED	M.SAKIB
CHECKED	D.EGITTO

FOR CONSTRUCTION

APPROVED
DATE 03.09.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	MOOREBANK AVENUE OVERBRIDGE PERMANENT ROAD GENERAL ARRANGEMENT PLAN

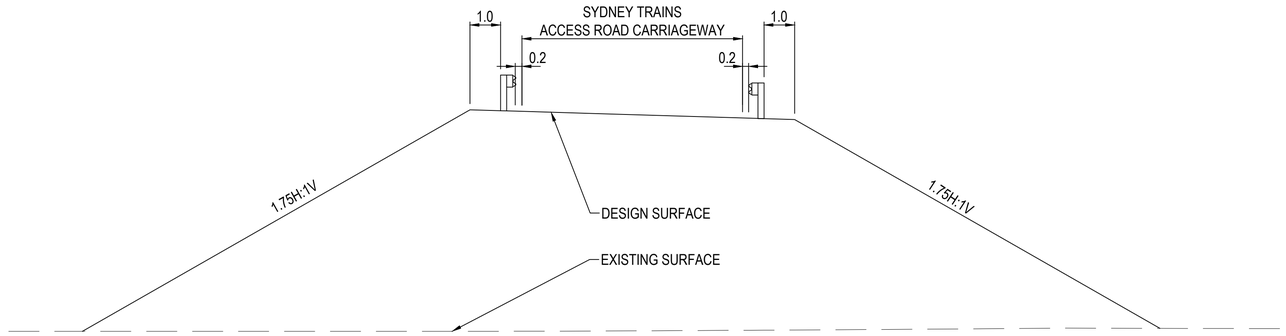
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	CIV	0010	03

LEGEND

DESIGN SURFACE

EXISTING SURFACE

W-BEAM



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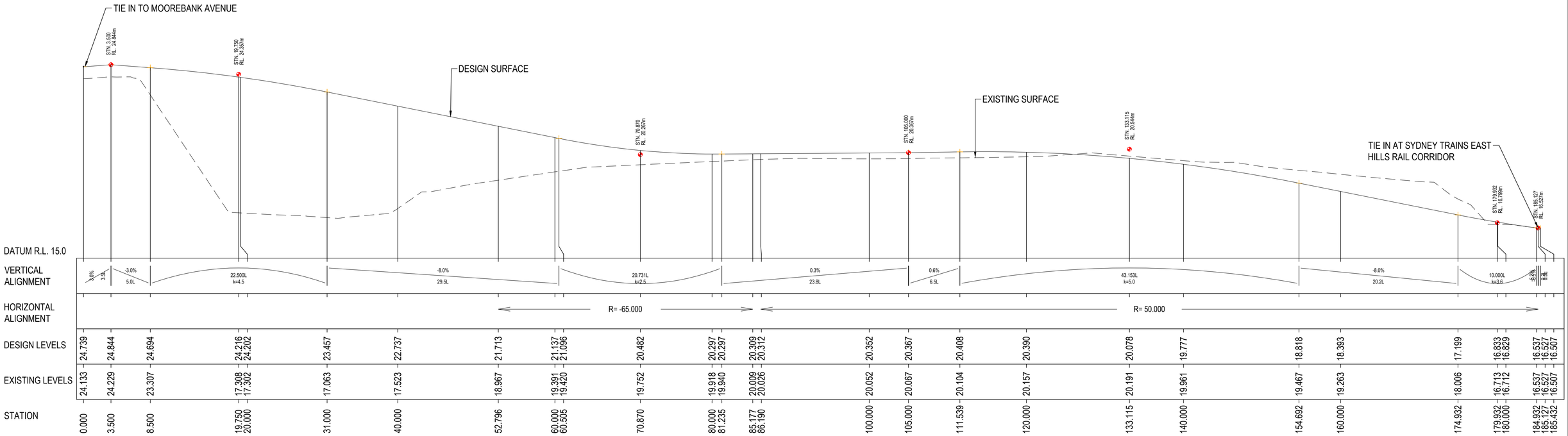
CH 20 (MCA0)



LONGITUDINAL SECTION ALONG - MA20 - SYDNEY TRAINS ACCESS TRACK

SCALE 1:100 (1 0 2 4m)

SCALE 1:250 (2.5 0 5 10m)

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	26.06.18	APPROVED FOR CONSTRUCTION	MS

SCALE	SIZE
AS SHOWN	A1

DRAWN: M.AHMAD
DESIGNED: M.SAKIB
CHECKED: D.EGITTO

FOR CONSTRUCTION

APPROVED
DATE 26.06.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	MOOREBANK INTERMODAL PROJECT SYDNEY TRAINS ACCESS ROAD- MA20 LONGITUDINAL SECTION

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	CIV	0042	01

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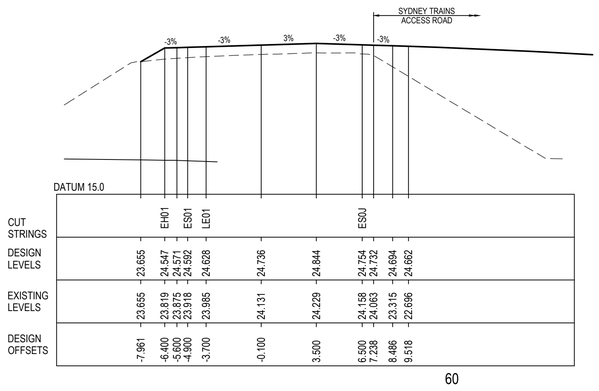
LEGEND

EXISTING SURFACE

PERMANENT DESIGN

MB2S

PROPOSED RAIL DESIGN



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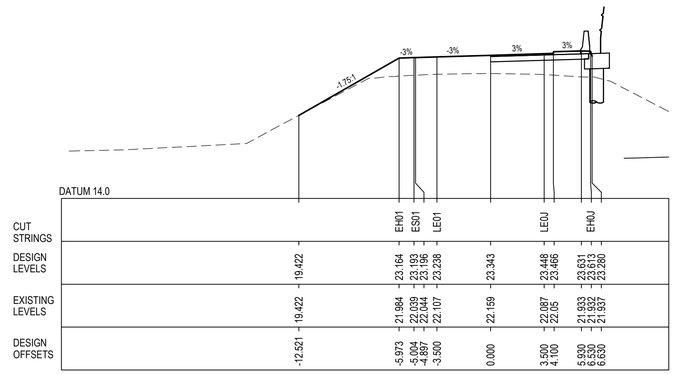

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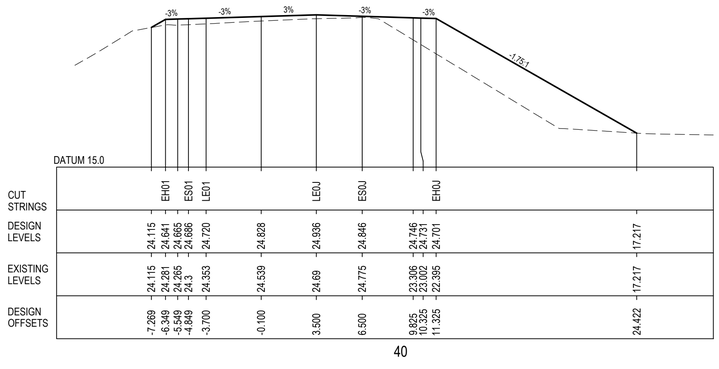

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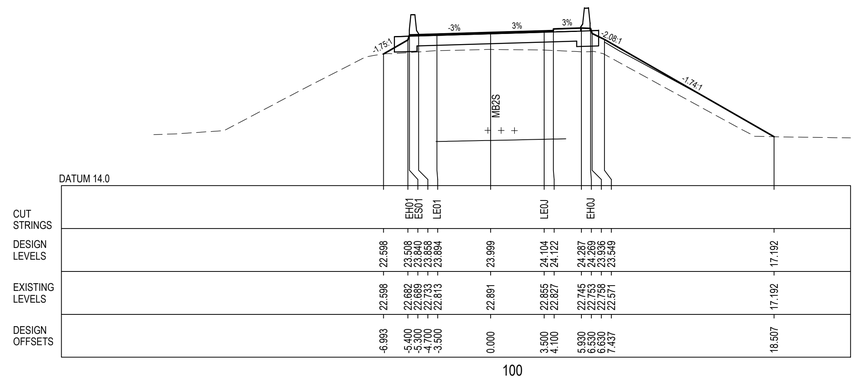

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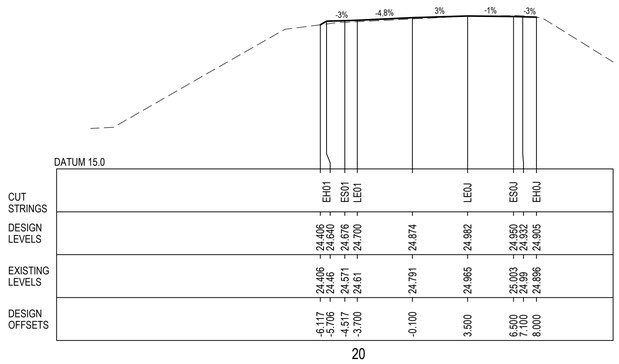

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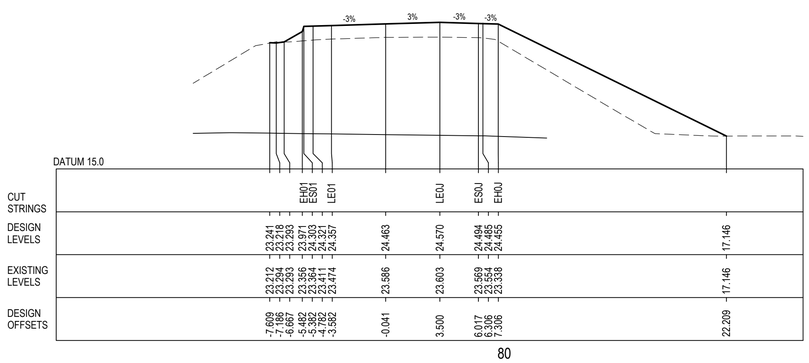

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SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	21.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	26.06.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	MS

SCALE	SIZE
AS SHOWN	A1

DRAWN: M.AHMAD

DESIGNED: M.SAKIB

CHECKED: D.EGITTO

FOR CONSTRUCTION

APPROVED

DATE 26.06.18

M.SAKIB

M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	MOOREBANK AVENUE OVERBRIDGE PERMANENT ROAD DETAILED CROSS SECTIONS - SHEET 1 OF 2

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	CIV	0060	02

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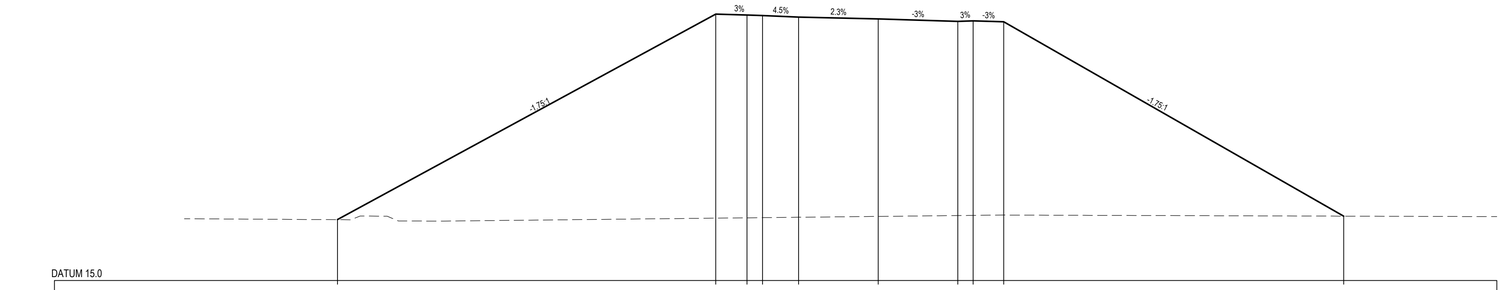
LEGEND

EXISTING SURFACE

PERMANENT DESIGN

MB2S



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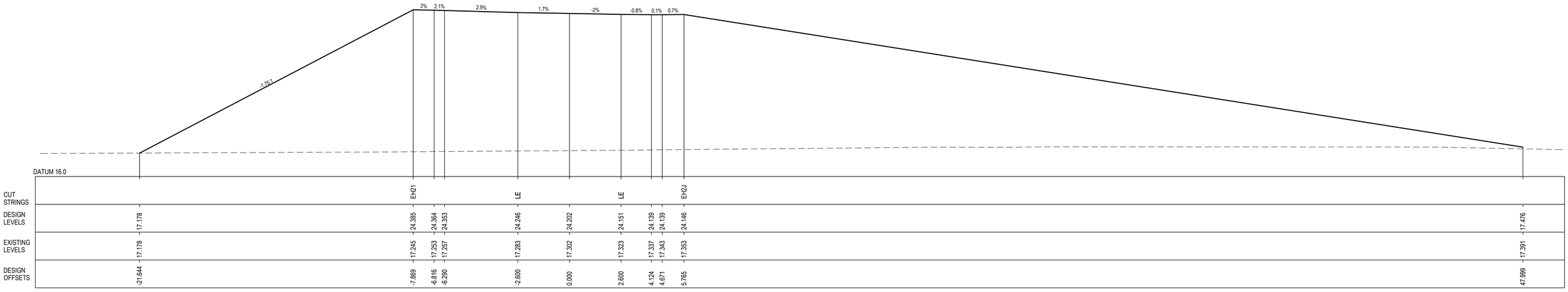

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	26.06.18	ACCEPTED FOR CONSTRUCTION	MS
02	03.09.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	MS

SCALE	SIZE
AS SHOWN	A1

DRAWN: M.AHMAD

DESIGNED: M.SAKIB

CHECKED: D.EGITTO

FOR CONSTRUCTION

APPROVED

DATE 03.09.18

M.SAKIB

M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	MOOREBANK AVENUE OVERBRIDGE SYDNEY TRAINS ACCESS ROAD CROSS SECTIONS - SHEET 1 OF 3

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	CIV	0065	02

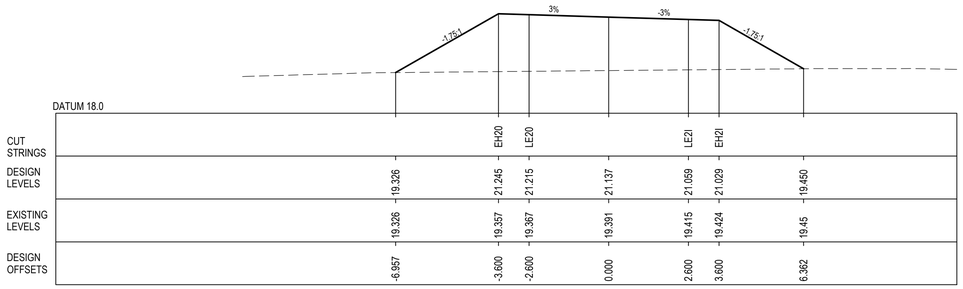
LEGEND

EXISTING SURFACE

PERMANENT DESIGN

MB2S

PROPOSED RAIL DESIGN



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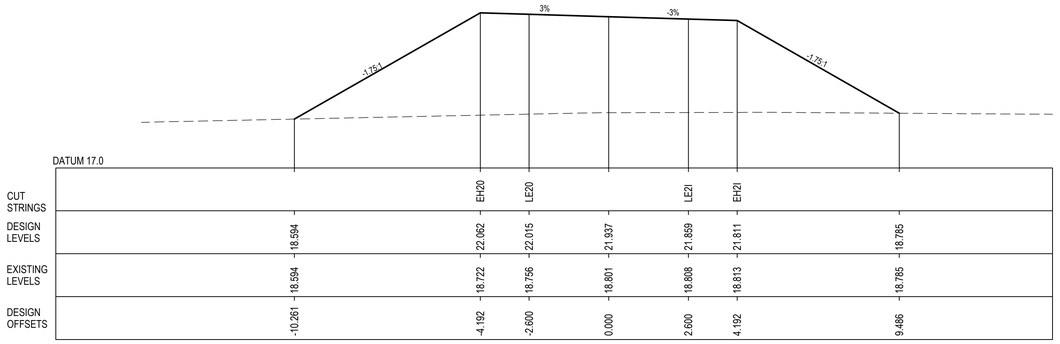

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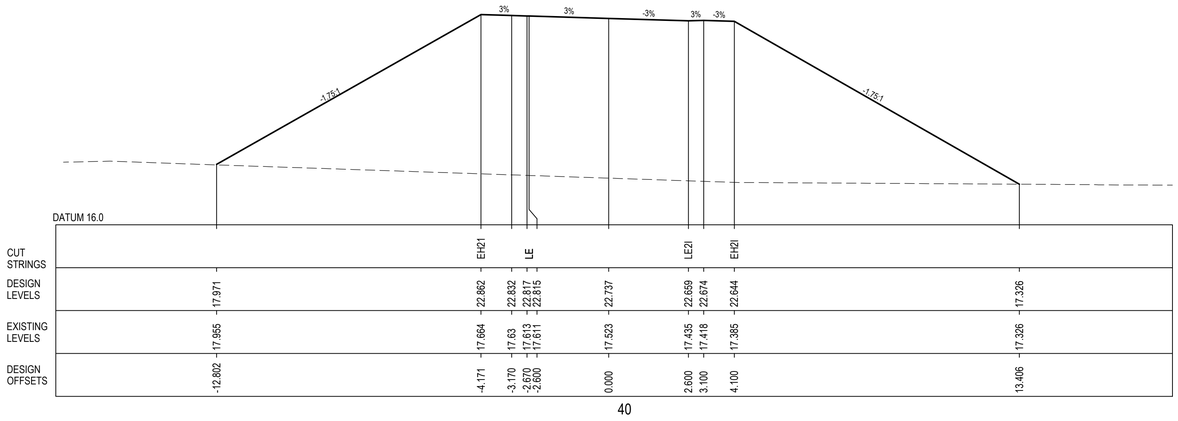

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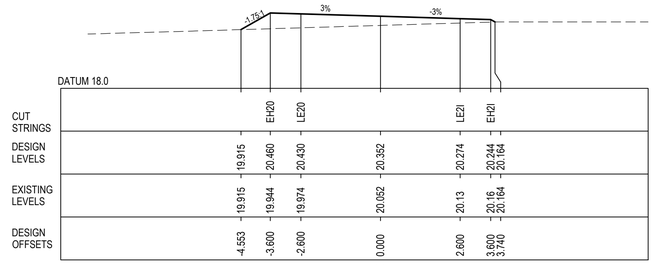

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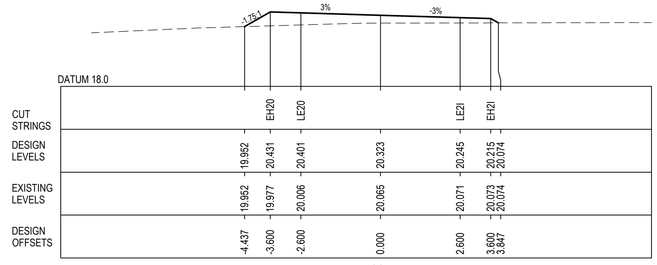

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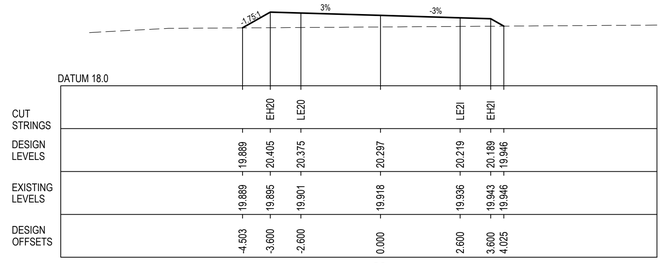

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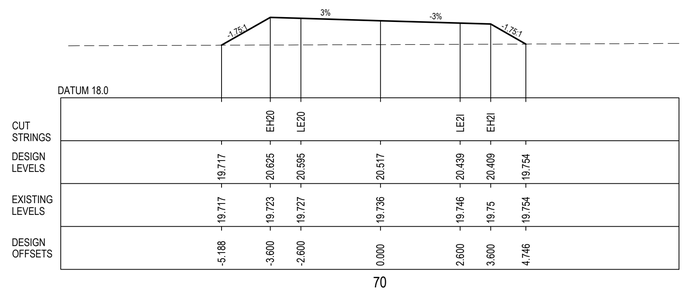

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	26.06.18	ACCEPTED FOR CONSTRUCTION	MS

SCALE	SIZE
AS SHOWN	A1

DRAWN: M.AHMAD

DESIGNED: M.SAKIB

CHECKED: D.EGITTO

FOR CONSTRUCTION

APPROVED: DATE 26.06.18 — M.SAKIB — M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: MOOREBANK AVENUE OVERBRIDGE SYDNEY TRAINS ACCESS ROAD CROSS SECTIONS - SHEET 2 OF 3

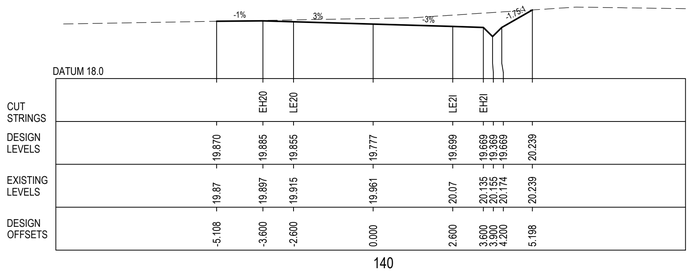
DRAWING No.: PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC CIV – NUMBER 0066 – REV 01

LEGEND

EXISTING SURFACE

PERMANENT DESIGN

MR2S
+ + +
PROPOSED RAIL DESIGN



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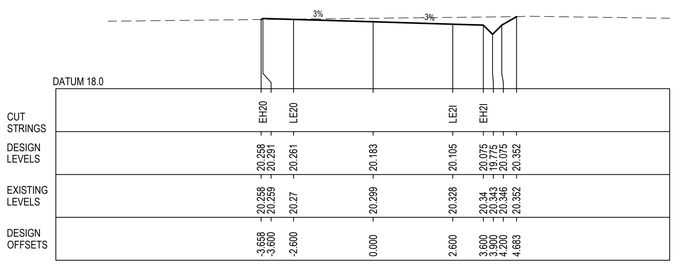

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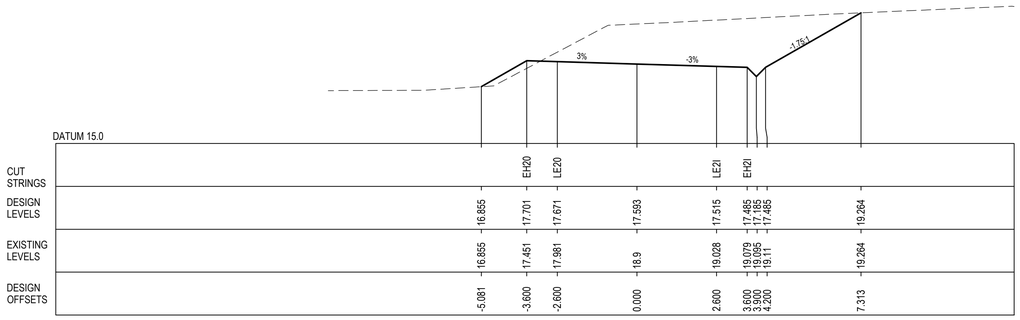

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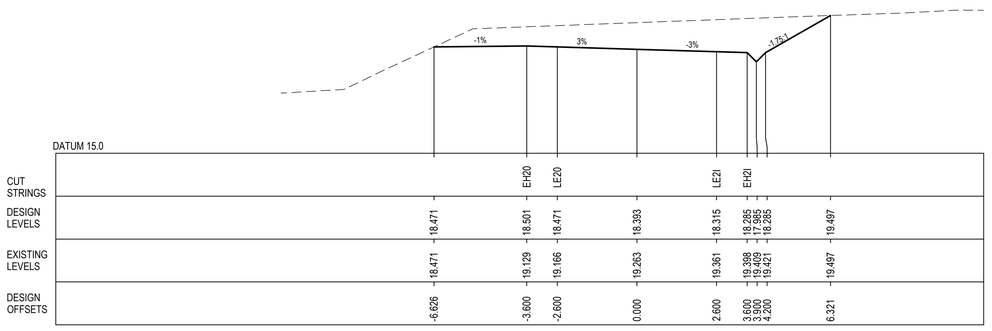

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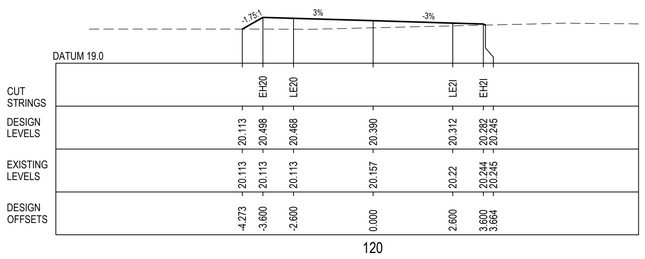

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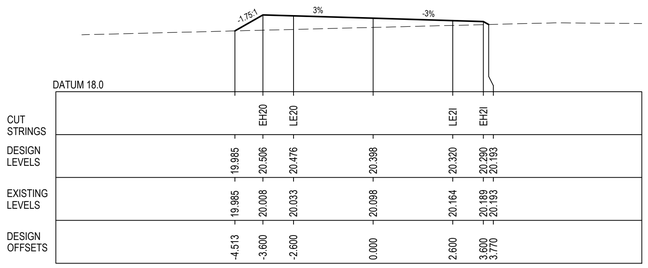

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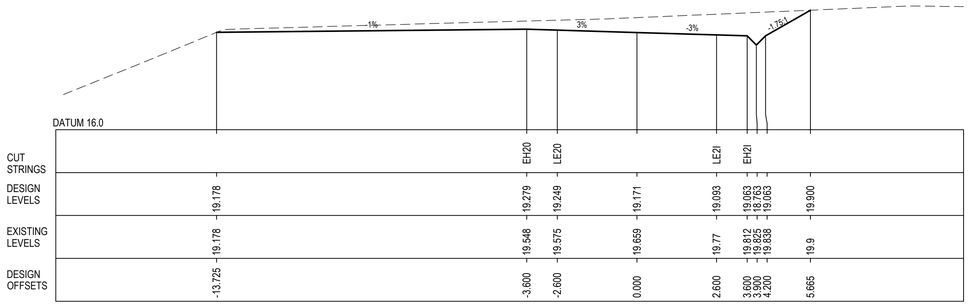

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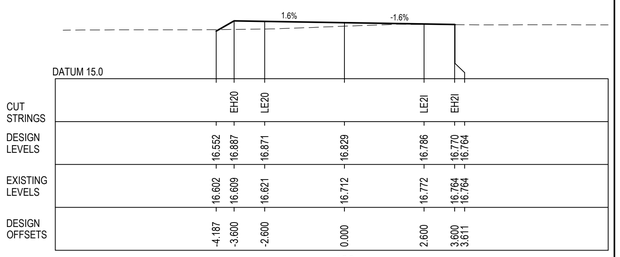

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2 0 4 8m
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ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	26.06.18	ACCEPTED FOR CONSTRUCTION	MS

SCALE	SIZE
AS SHOWN	A1

DRAWN: M.AHMAD
DESIGNED: M.SAKIB
CHECKED: D.EGITTO

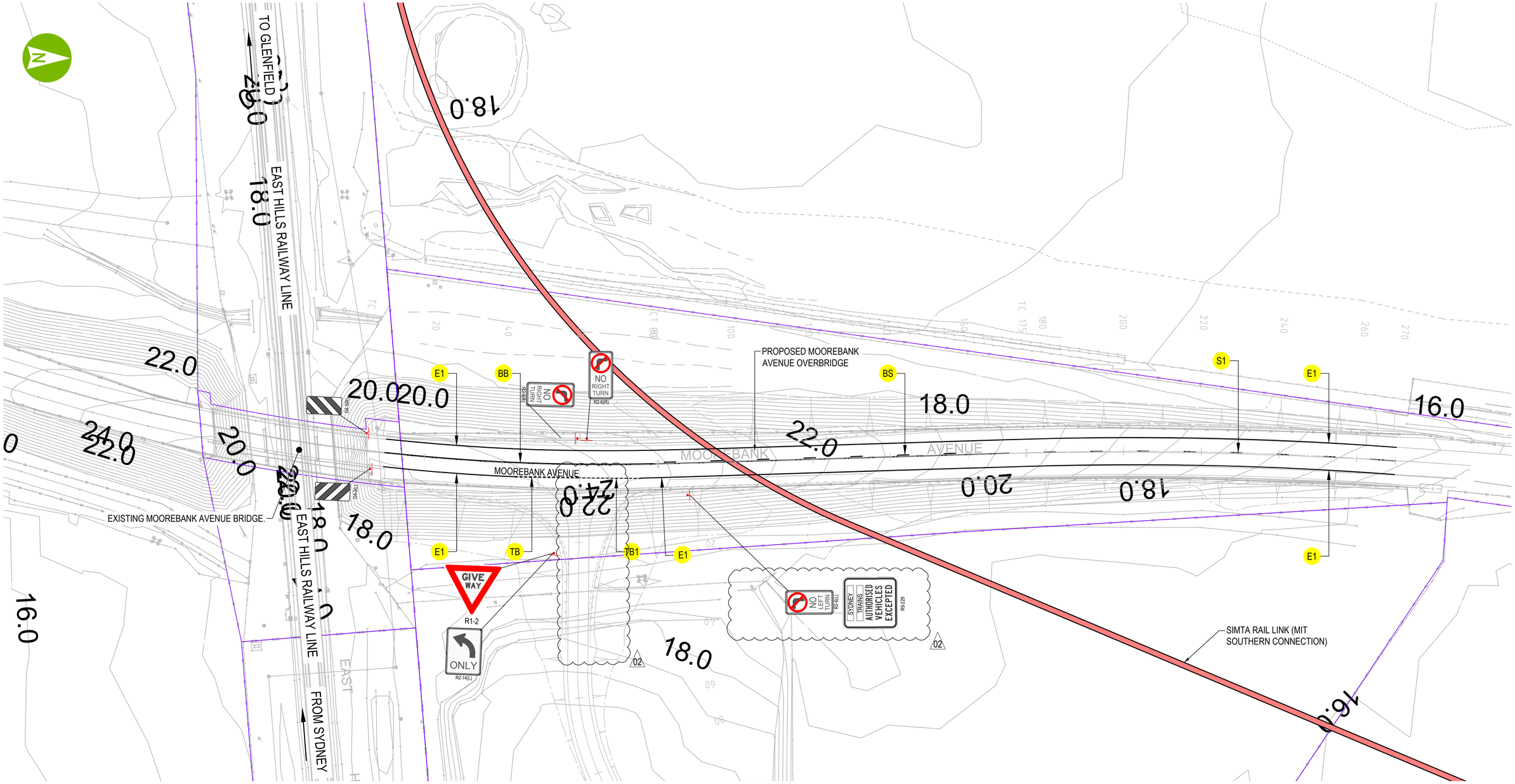
FOR CONSTRUCTION

APPROVED
DATE 26.06.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	MOOREBANK AVENUE OVERBRIDGE SYDNEY TRAINS ACCESS ROAD CROSS SECTIONS - SHEET 3 OF 3

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	CIV	0067	01

Rel Date: 3/2/18 10:39:49 AM Office: AUSYD Filename: C:\PW_WORK\MALEENA.AHMAD\ANZ_PROD\D0029215\N01031-PWD-DRG-CIV-0067.DWG



PLAN
1:500

NOTES

1. REFER RMS MANUAL DELINEATION SECTION 4 LONGITUDINAL MARKINGS FOR MORE DETAILS ON PATTERNS AND DIMENSIONS.
2. SIGNS RELATING TO ROADWORKS AND CONSTRUCTION TRAFFIC MANAGEMENT TO BE INCLUDED IN CPB CONSTRUCTION TRAFFIC MANAGEMENT PLAN.
3. PAVEMENT MARKINGS TO BE PROVIDED IN ACCORDANCE WITH ROADS AND MARITIME QA SPECIFICATION R141. TEMPORARY DELINEATION PAVEMENT MARKINGS TO BE PROVIDED AS WATERBORNE PAINT ON ASPHALT SURFACES.
4. RETRO - REFLECTIVE RAISED PAVEMENT MARKERS (RRPMs) SHALL BE USED TO AUGMENT PAVEMENT MARKINGS. FOR TYPE AND COLOUR OF RRPMs TO AUGMENT MARKINGS REFER RMS DELINEATION SECTION 15 - RAISED PAVEMENT MARKERS (TABLE) 15.1)
5. RETRO - REFLECTIVE RAISED PAVEMENT MARKERS MUST COMPLY WITH THE RMS QA SPECIFICATION R142 RETRO - REFLECTIVE RAISED PAVEMENT ,MARKERS WITH THE REQUIREMENTS OF AS 1906.3 AND HAVE THE DIMENSION SHOWN IN RMS DELINEATION SECTION 15 - RAISED PAVEMENT MARKERS (FIGURE 15.5)
6. INSTALLATION, PLACEMENT AND POSITIONING OF RRPMs SHALL BE IN ACCORDANCE WITH RMS DELINEATION SECTION 15 - RAISED PAVEMENT MARKERS (SECTION 15.7)

LEGEND - KERB TYPE

S1	DIVIDING (SEPARATIONS) LINE ON 2 LANE ROAD
E1	LEFT HAND EDGE ON GENERAL PURPOSE ROAD
BS	DIVIDING (BARRIER) LINES (RESTRICTED OVERTAKING IN ONE DIRECTION)
BB	DIVIDING (BARRIER) LINES
L3	LANE LINE ON A MULTI LANE ROAD
TB	GIVE WAY LINE (USED WITH SIGNS)
TB1	GIVE WAY LINE (USED ON RIGHT SIDE OF ROAD)

REFER RMS MANUAL DELINEATION SECTION 4 LONGITUDINAL MARKINGS FOR MORE DETAILS ON PATTERNS AND DIMENSIONS.

SCALE 1:500 (5 0 10 20m)

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	21.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	26.06.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	MS

SCALE	AS SHOWN
SIZE	A1
DRAWN	M.AHMAD
DESIGNED	M.SAKIB
CHECKED	D.EGITTO

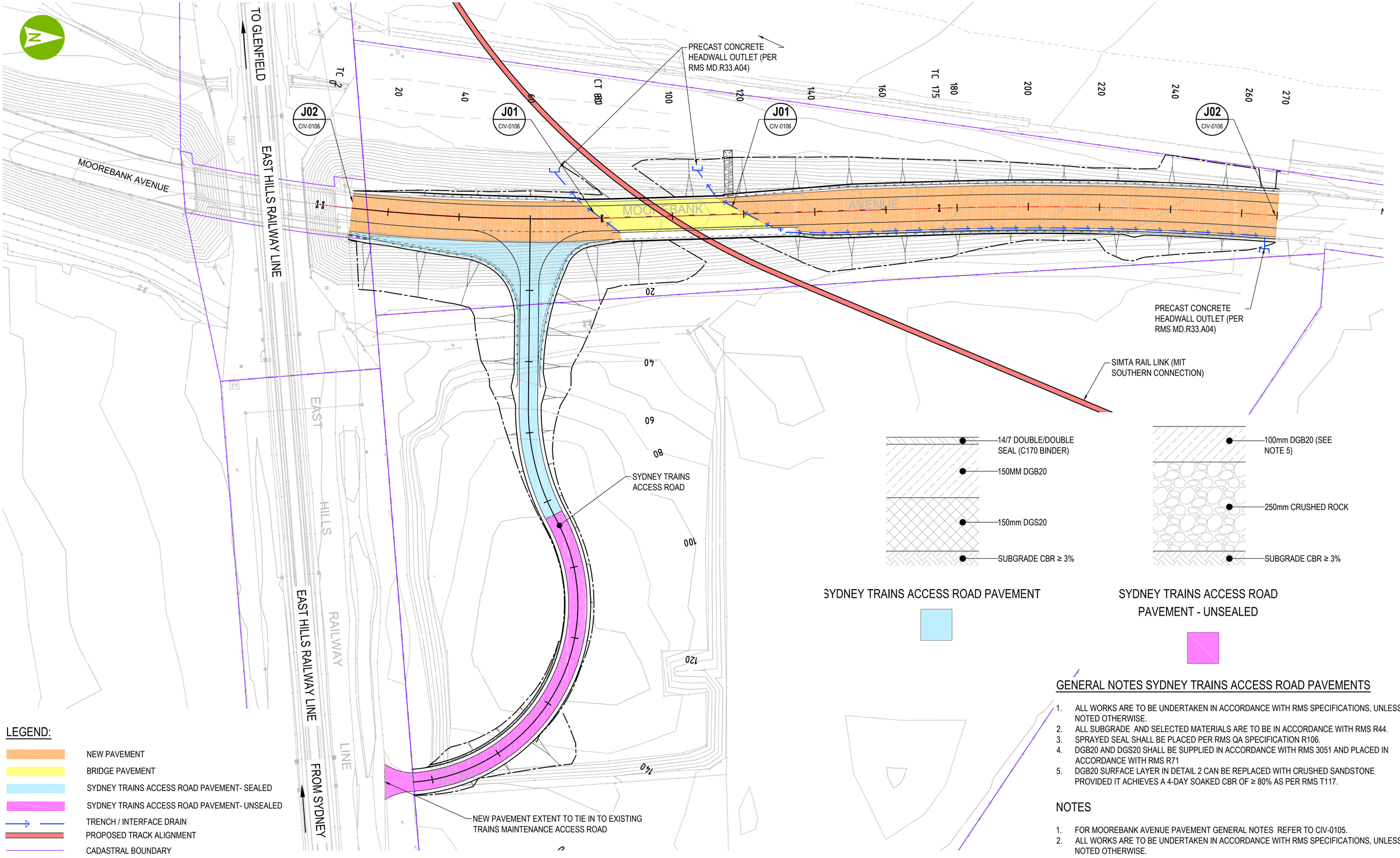
FOR CONSTRUCTION

APPROVED
DATE 26.06.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	MOOREBANK AVENUE OVERBRIDGE PERMANENT ROAD LINEMARKING AND SIGNAGE PLAN

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	CIV	0090	02

Plot Date: 9/9/2018 11:23:12 AM Office: AUSYD Filename: C:\PV_WORK\MOREBANK\SAKIBAN2_PROD\D0028297\N01031-PWD-DRG-CIV-0090.DWG



LEGEND:

- NEW PAVEMENT
- BRIDGE PAVEMENT
- SYDNEY TRAINS ACCESS ROAD PAVEMENT- SEALED
- SYDNEY TRAINS ACCESS ROAD PAVEMENT- UNSEALED
- TRENCH / INTERFACE DRAIN
- PROPOSED TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- PRECAST CONCRETE HEADWALL OUTLET (PER RMS MD.R33.A04)

PLAN
1:500

SYDNEY TRAINS ACCESS ROAD PAVEMENT

SYDNEY TRAINS ACCESS ROAD PAVEMENT - UNSEALED

GENERAL NOTES SYDNEY TRAINS ACCESS ROAD PAVEMENTS

1. ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH RMS SPECIFICATIONS, UNLESS NOTED OTHERWISE.
2. ALL SUBGRADE AND SELECTED MATERIALS ARE TO BE IN ACCORDANCE WITH RMS R44.
3. SPRAYED SEAL SHALL BE PLACED PER RMS QA SPECIFICATION R106.
4. DGB20 AND DGS20 SHALL BE SUPPLIED IN ACCORDANCE WITH RMS 3051 AND PLACED IN ACCORDANCE WITH RMS R71
5. DGB20 SURFACE LAYER IN DETAIL 2 CAN BE REPLACED WITH CRUSHED SANDSTONE PROVIDED IT ACHIEVES A 4-DAY SOAKED CBR OF ≥ 80% AS PER RMS T117.

NOTES

1. FOR MOOREBANK AVENUE PAVEMENT GENERAL NOTES REFER TO CIV-0105.
2. ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH RMS SPECIFICATIONS, UNLESS NOTED OTHERWISE.

5 0 10 20m
SCALE 1:500

ARTC DRAWING No	EDMS No	EDMS REV

Rev Date: 3/8/2018 10:44:13 AM Office: AUSYD Filename: C:\PW_WORKING\AESNA.AHMADIANZ_PROD\D0028215\N01031-PWD.DRG\CIV-0110.DWG

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CLIENT
CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	21.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	26.06.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	MS

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.KOVACEVIC
DESIGNED: J.KEMP
CHECKED: D.EGITTO

FOR CONSTRUCTION

APPROVED
DATE 26.06.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	MOOREBANK AVENUE OVERBRIDGE PERMANENT ROAD PAVEMENT PLAN AND PROFILES

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	CIV	0110	02

NOTE:

RIGHT TURN MOVEMENTS INTO AND OUT OF THE SYDNEY TRAINS ACCESS ROAD IS BANNED DUE TO LACK OF SIGHT DISTANCE. REFER DESIGN REPORT - SYDNEY TRAINS ACCESS ROAD (N01031-PWD-DRP-BRD-0004) SECTION 4.2.3 FOR MORE DETAILS.

EXISTING MOOREBANK AVENUE BRIDGE.

MOOREBANK AVENUE

MOOREBANK AVENUE OVERBRIDGE

SIMTA RAIL LINK

SYDNEY TRAINS ACCESS ROAD

EAST HILLS RAIL CORRIDOR

EAST HILLS RAILWAY LINE

DP1061150

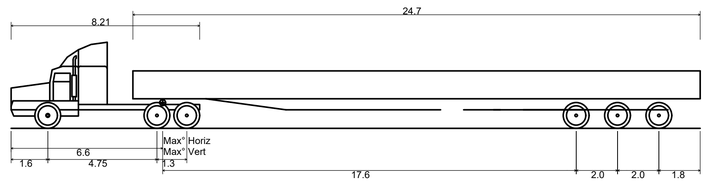
DP825745

DP825352

GENERAL NOTES - FENCE AND GATE

1. REFER FENCING, GATES AND SIGNAGE PACKAGE FOR FENCING, GATES AND SIGNAGE ASSOCIATED WITH SYDNEY TRAINS ACCESS ROAD.

03



PRIME MOVER AND LONG JINKER-TRAILER (30m)

OVERALL LENGTH	30.000m
OVERALL WIDTH	3.000m
OVERALL BODY HEIGHT	3.749m
MIN BODY GROUND CLEARANCE	0.540m
MAX TRACK WIDTH	3.000m
LOCK-TO-LOCK TIME	6.00s
CURB TO CURB TURNING RADIUS	15.000m

DESIGN VEHICLE

SCALE 1:500

ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	26.06.18	ACCEPTED FOR CONSTRUCTION	MS
02	06.07.18	ACCEPTED FOR CONSTRUCTION	MS
03	03.09.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	MS

SCALE	SIZE
AS SHOWN	A1

DRAWN: M.AHMAD
DESIGNED: M.SAKIB
CHECKED: D.EGITTO

FOR CONSTRUCTION

APPROVED
DATE 03.09.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	MOOREBANK INTERMODAL PROJECT SYDNEY TRAINS ACCESS ROAD TURNING MOVEMENTS

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	CIV	1020	03

Red Date: 9/8/2018 11:31:00 AM Office: AUSYD Filename: C:\PW_WORKWORSAL\N SAKIBAHZ_PROD\D0092515\N01031-PWD-DRG-CIV-1020.DWG

TO GLENFIELD

EAST HILLS RAILWAY LINE

EXISTING MOOREBANK AVENUE BRIDGE.

KERB OUTLET WITH EMBANKMENT BATTER SLOPE DRAIN TO BE PROVIDED TO THE BACK OF THE W BEAM TRANSITION TO F TYPE BARRIER. REFER TO RMS MD.R11.C03.A1.

MOOREBANK AVENUE

R -500.000
L 78.610

L 94.754

R 900.000
L 141.205

PROPOSED MOOREBANK AVENUE OVERBRIDGE.

L 52.796

SA KERB TO TIE INTO EXISTING AND DISCHARGE INTO EXISTING SO KERB ACROSS ENTRANCE..

SYDNEY MAINTENANCE ACCESS ROAD.

R -65.000
L 32.382

R 50.000
L 98.598

L 0.305

EAST HILLS RAILWAY LINE FROM SYDNEY

02

03

PLAN
1:500

5 0 10 20m
SCALE 1:500

LEGEND:
- PROPOSED TRACK ALIGNMENT
- CADASTRAL BOUNDARY
- CONTOUR
- THRIE BEAM BARRIER
- W-BEAM BARRIER
- BRIDGE BARRIER
- TERMINAL
- SA KERB INVERT
- PROPOSED ACCESS ROAD
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- EPL BOUNDARY (SUBJECT TO CHANGE)
- RIPARIAN VEGETATION MANAGEMENT PLAN BOUNDARIES

Plot Date: 7/9/2018 3:33:03 PM Office: AUSYD Filename: C:\PW_WORK\MALEEHA.AHMAD\AZ_PROD\D0029230\M1031.PWD.DRG.DRN.1010.DWG

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	21.12.16	ACCEPTED FOR CONSTRUCTION	AOS
02	26.06.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	MS
03	03.09.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	MS

SCALE	SIZE
AS SHOWN	A1

DRAWN: M.AHMAD
DESIGNED: M.SAKIB
CHECKED: D.EGITTO

FOR CONSTRUCTION

APPROVED
DATE 03.09.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: MOOREBANK AVENUE OVERBRIDGE PERMANENT ROAD DRAINAGE PLAN

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	0000	DRG	DRN	1010	03

ADJOINS DRG N01031-PWD-DRG-GEN-0016

ADJOINS DRG N01031-PWD-DRG-GEN-0014

EXISTING SYDNEY TRAINS MAINTENANCE ACCESS ROAD

TIE-IN WITH EXISTING MAINTENANCE ACCESS ROAD

RIPARIAN VEGETATION BOUNDARY

CONTROL LINE MB2S

To Moorebank Imex Terminal

From Sydney

BALLAST DRAG

2015 EIS APPROVED BOUNDARY

MAINTENANCE ACCESS ROAD

U GEN-0057

V GEN-0057

41km 600

MOOREBANK AVENUE OVERBRIDGE

SYDNEY TRAINS ACCESS ROADS

04

41km 300

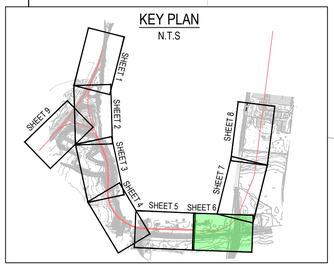
41km 400

EAST HILLS

REFER MOOREBANK AVENUE ROAD DESIGN PACKAGE FOR EARTHWORKS

MOOREBANK AVENUE

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- CADASTRAL BOUNDARY
- CONTOUR
- FUTURE INTERMODAL TERMINAL
- GWS LANDFILL CELL
- EXISTING GWS MONITORING WELL
- SYDNEY TRAINS RAIL CORRIDOR BOUNDARY
- 1.5m HIGH BOLLARD
- REINFORCED SOIL WALL
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD
- W-BEAM BARRIER
- JERSEY BARRIER
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- FUTURE NOISE WALL

PLAN
1:500

5 0 10 20m
SCALE 1:500

Plot Date: 3/10/2018 2:32:42 PM Office: AUSYD Filename: C:\PW_WORKS\ASHLEY.LITTLE\ACAD_PROD\D0028377\DWG\N0103-PWD-DRG-GEN-0015.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	26.10.17	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB
03	14.02.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB
04	18.09.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED
DATE 18.09.19
M.SAKIB
M.SAKIB

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GENERAL ARRANGEMENT PLAN SHEET 6 OF 9

DRAWING No. N01031 – PWD – DRG – GEN – 0015 – 04
(PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV)

APPENDIX H RAIL LINK EARTHWORKS DESIGN

DRAWING	TITLE	DISCIPLINE	DRAWING TYPE
N01031-PWD-DRG-GEN-0001	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	COVER SHEET
N01031-PWD-DRG-GEN-0002	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	DRAWING INDEX
N01031-PWD-DRG-GEN-0005	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GENERAL NOTES AND LEGEND
N01031-PWD-DRG-GEN-0010	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GENERAL ARRANGEMENT PLAN
N01031-PWD-DRG-GEN-0011	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GENERAL ARRANGEMENT PLAN
N01031-PWD-DRG-GEN-0012	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GENERAL ARRANGEMENT PLAN
N01031-PWD-DRG-GEN-0013	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GENERAL ARRANGEMENT PLAN
N01031-PWD-DRG-GEN-0014	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GENERAL ARRANGEMENT PLAN
N01031-PWD-DRG-GEN-0015	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GENERAL ARRANGEMENT PLAN
N01031-PWD-DRG-GEN-0016	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GENERAL ARRANGEMENT PLAN
N01031-PWD-DRG-GEN-0017	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GENERAL ARRANGEMENT PLAN
N01031-PWD-DRG-GEN-0018	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GENERAL ARRANGEMENT PLAN
N01031-PWD-DRG-GEN-0020	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0021	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0022	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0023	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0024	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0025	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0026	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0027	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0028	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0029	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0030	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0031	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0032	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0033	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0034	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0035	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0036	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0037	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0038	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0039	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0040	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0041	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0042	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0043	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0044	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0045	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0046	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION CROSS SECTIONS
N01031-PWD-DRG-GEN-0050	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0051	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0052	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	NORTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0053	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0054	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0055	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0056	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0057	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0058	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0059	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0060	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0061	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0062	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOUTHERN CONNECTION TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0065	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	TYPICAL DETAILS
N01031-PWD-DRG-GEN-0066	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	TYPICAL DETAILS
N01031-PWD-DRG-GEN-0070	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SERVICE CROSSING - NORTHERN-SOUTHERN CONNECTION
N01031-PWD-DRG-GEN-0071	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SERVICE CROSSING - NORTHERN-SOUTHERN CONNECTION
N01031-PWD-DRG-GEN-0072	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SERVICE CROSSING - SOIL NAIL WALL TO GRB
N01031-PWD-DRG-GEN-0074	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SERVICE CROSSING DETAIL
N01031-PWD-DRG-GEN-0075	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SERVICE CROSSING DETAIL
N01031-PWD-DRG-GEN-0077	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	TURNAROUND FACILITY DETAIL
N01031-PWD-DRG-GEN-0078	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	LEVEL CROSSING DETAILS
N01031-PWD-DRG-GEN-0080	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	REINFORCED SOIL WALL - TYPICAL CROSS SECTIONS
N01031-PWD-DRG-GEN-0081	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	REINFORCED SOIL WALL - PLAN
N01031-PWD-DRG-GEN-0082	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	REINFORCED SOIL WALL - LONGITUDINAL SECTION

DRAWING	TITLE	DISCIPLINE	DRAWING TYPE
N01031-PWD-DRG-GEN-0090	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOIL NAIL EMBANKMENT PLAN
N01031-PWD-DRG-GEN-0091	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOIL NAIL EMBANKMENT - LONGITUDINAL SECTION
N01031-PWD-DRG-GEN-0092	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOIL NAIL EMBANKMENT- LONGITUDINAL SECTION
N01031-PWD-DRG-GEN-0093	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOIL NAIL EMBANKMENT CROSS SECTION
N01031-PWD-DRG-GEN-0094	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOIL NAIL EMBANKMENT CROSS SECTION
N01031-PWD-DRG-GEN-0095	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOIL NAIL EMBANKMENT CROSS SECTION
N01031-PWD-DRG-GEN-0096	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOIL NAIL/ROCK BOLT SCHEDULE
N01031-PWD-DRG-GEN-0097	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SOIL NAIL EMBANKMENT- DETAILS
N01031-PWD-DRG-GEN-0110	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0111	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0112	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0113	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0114	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0115	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0116	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0117	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0118	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0119	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0120	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0121	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0122	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0123	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0124	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0125	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT PLAN
N01031-PWD-DRG-GEN-0150	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT LONGSECTION
N01031-PWD-DRG-GEN-0151	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT LONGSECTION
N01031-PWD-DRG-GEN-0152	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT LONGSECTION
N01031-PWD-DRG-GEN-0153	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT LONGSECTION
N01031-PWD-DRG-GEN-0154	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT LONGSECTION
N01031-PWD-DRG-GEN-0155	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT LONGSECTION
N01031-PWD-DRG-GEN-0156	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT LONGSECTION
N01031-PWD-DRG-GEN-0157	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT LONGSECTION
N01031-PWD-DRG-GEN-0158	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT LONGSECTION
N01031-PWD-DRG-GEN-0160	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GROUND TREATMENT SCHEDULE
N01031-PWD-DRG-GEN-0202	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	ACCESS ROAD PLAN & LONG SECTION
N01031-PWD-DRG-GEN-0203	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	ACCESS ROAD PLAN & LONG SECTION
N01031-PWD-DRG-GEN-0204	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	ACCESS ROAD PLAN & LONG SECTION
N01031-PWD-DRG-GEN-0205	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	ACCESS ROAD PLAN & LONG SECTION
N01031-PWD-DRG-GEN-0206	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	ACCESS ROAD PLAN & LONG SECTION
N01031-PWD-DRG-GEN-0220	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SETOUT TABLE
N01031-PWD-DRG-GEN-0221	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SETOUT TABLE
N01031-PWD-DRG-GEN-0222	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SETOUT TABLE
N01031-PWD-DRG-GEN-0223	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	SETOUT TABLE
N01031-PWD-DRG-GEN-0250	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GABION WALL 1 - DETAILS
N01031-PWD-DRG-GEN-0251	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GABION WALL 2 & 3 - DETAILS
N01031-PWD-DRG-GEN-0252	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GABION WALL 4 - DETAILS
N01031-PWD-DRG-GEN-0253	MOOREBANK INTERMODAL PROJECT	BULK EARTHWORKS	GABION WALL 5 - DETAILS

Plot Date: 23/2/18 10:56:22 AM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ACAD_PROD\D0026370\TMW0101-PWD\DRG\GEN\0002.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	01.09.17	ACCEPTED FOR CONSTRUCTION RESUBMISSION	G. RUSINOL
03	19.12.17	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
05	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
N.T.S.	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS DRAWING INDEX

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0002	05

GENERAL NOTES

1. EARTHWORKS DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT ID : N01031-PWD-SPE-EWK-0001).
2. THE WORKS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS (DOCUMENT ID: N01031-PWD-SPE-EWK-0001) AND THE PREVAILING ARTC AND RMS SPECIFICATIONS AS NOTED IN THE PROJECT SPECIFICATIONS.
3. ALL DESIGN, MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION SHALL COMPLY WITH THE LATEST REVISION OF THE RELEVANT ENGINEERING STANDARD AS DETAILED IN THE MOOREBANK INTERMODAL TERMINAL DEVELOPMENT RALP No1 - PPR APPENDIX 8, PERFORMANCE SPECIFICATION UNLESS OTHERWISE NOTED IN THE DRAWINGS OR EARTHWORKS SPECIFICATIONS.
4. COMPACTION TESTING SHALL BE CARRIED OUT TO MEET THE MINIMUM REQUIREMENTS IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION.
5. REVEGETATION WORKS INCLUDES SPREADING AND COMPACTION OF SITE WON TOPSOIL AND HYDRO SEEDING OF BATTERS AND DISTURBED LANDS.

EMBANKMENT

1. TERRACES/ BENCHES IN EXISTING EMBANKMENT BATTERS SHALL BE INSPECTED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER FOR UNSUITABLE MATERIALS OR WATER SEEPAGE PRIOR TO PLACEMENT OF FILL MATERIAL.
2. EMBANKMENT FOUNDATIONS TO BE INSPECTED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER AND TREATMENT TYPE APPROVED AFTER PROOF ROLLING IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION.

CUTTING

1. ALL CUT FLOORS SHALL BE PROOF ROLLED OR TREATED WHERE APPROPRIATE IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION. THE FORMATION SHALL BE INSPECTED FOR UNSUITABLE MATERIALS PRIOR TO PLACEMENT OF FILL MATERIAL BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.
2. PROOF ROLLING TO BE WITNESSED AND THE CUT FLOOR TREATMENT TYPE APPROVED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.
3. CUT BATTERS AND BENCH WIDTHS SHALL BE CONFIRMED BY A GEOTECHNICAL ENGINEER ON SITE BASED ON EXPOSED GROUND CONDITIONS.
4. CUT BATTERS ARE TO BE CLEANED AND INSPECTED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.

MATERIALS

1. WHERE THE ENGINEER CONSIDERS THAT THE MATERIAL IN THE BOTTOM OF CUTTINGS OR IN THE NATURAL SURFACE BENEATH EMBANKMENTS IS UNSUITABLE FOR TRACK STRUCTURE OR EMBANKMENT SUPPORT, SUCH MATERIAL SHALL BE EXCAVATED AS DIRECTED BY THE GEOTECHNICAL ENGINEER AND DISPOSED OF TO SPOIL.
2. SITE WON MATERIAL AND IMPORTED MATERIAL FOR USE IN STRUCTURAL ZONES SHALL COMPLY WITH THE REQUIREMENTS NOTED IN PROJECT EARTHWORKS SPECIFICATION (DOCUMENT ID: 01031-PWD-SPE-EWK-0001).
3. CAPPING MATERIAL SHALL COMPLY WITH THE REQUIREMENTS NOTED IN PROJECT EARTHWORKS SPECIFICATION (DOCUMENT ID: 01031-PWD-SPE-EWK-0001).

BOLLARDS

1. BOLLARDS TO MEET THE FOLLOWING REQUIREMENTS, SPECIFIED IN SPG 0705 SECTION 24.6:
   - THE BOLLARDS TO BE CONSTRUCTED OF GREATER THAN OR EQUAL 100mm NOMINAL BORE HEAVY GALVANISED STEEL PIPE TO AS1074 AND TO INCLUDE CAPS.
   - BOLLARDS SHALL BE CONCRETED IN A PERMANENT CONCRETE FOOTING 600mm DIAMETER AND A MINIMUM OF 1000mm DEEP.
   - THE MINIMUM HEIGHT ABOVE GROUND LEVEL TO BE 1.5m AND THE BOLLARDS TO BE FINISHED IN GLOSS WHITE ENAMEL.
   - BOLLARDS TO HAVE RED REFLECTIVE BAND TO IMPROVE THEIR NIGHT-TIME VISIBILITY.

Plot Date: 18/2018 4:03:44 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ENZ_PROD\D0039777\DWG\1031-PWD-DRG-GEN-0005.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	14.07.17	90% ARTC DESIGN ISSUE	A.O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
N.T.S.	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

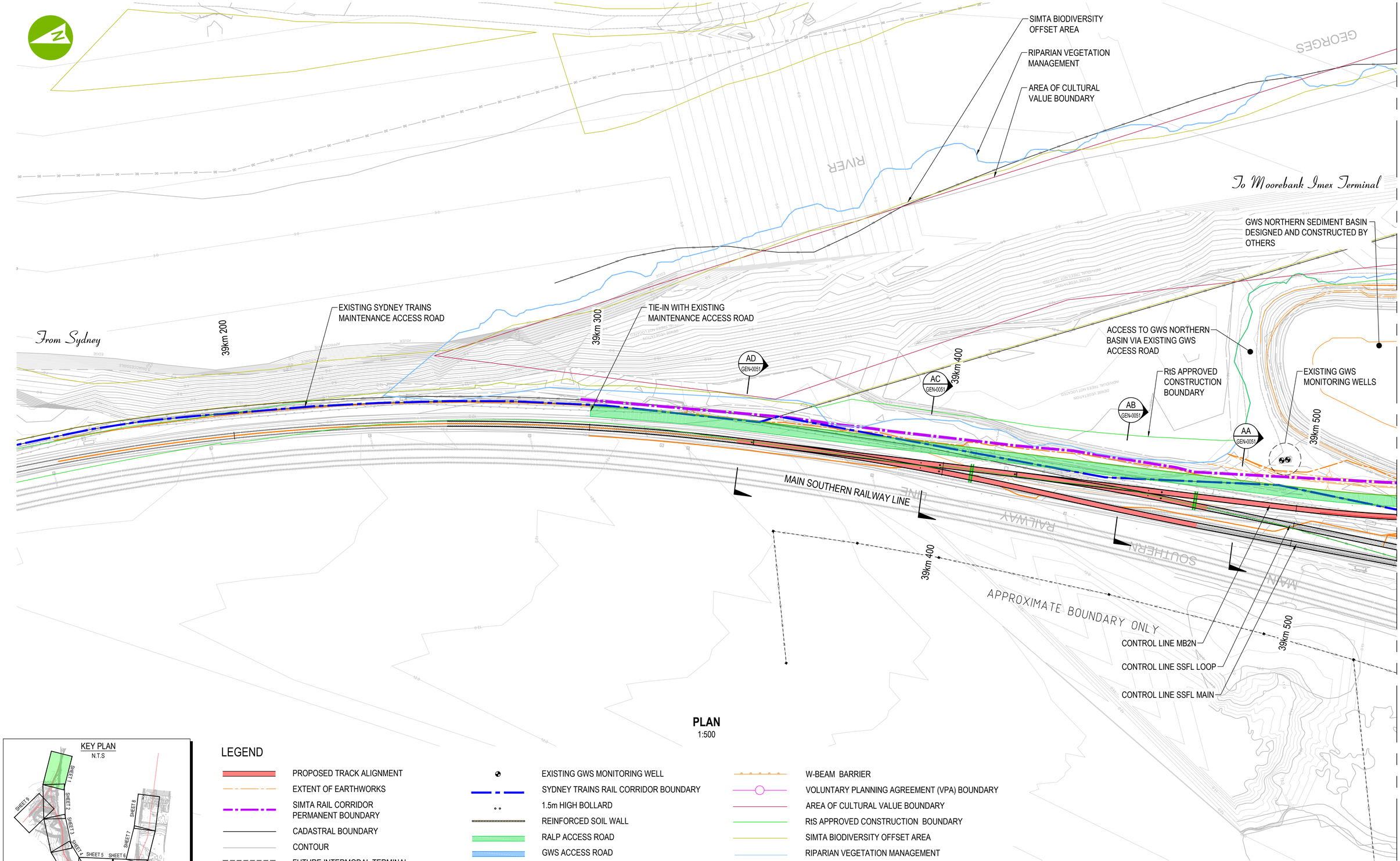
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

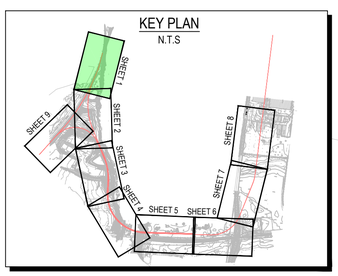
TITLE: BULK EARTHWORKS GENERAL NOTES AND LEGEND SHEET 1 OF 1

DRAWING No.: PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC GEN – NUMBER 0005 – REV 03



PLAN
1:500

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- CADASTRAL BOUNDARY
- CONTOUR
- FUTURE INTERMODAL TERMINAL
- GWS LANDFILL CELL
- EXISTING GWS MONITORING WELL
- SYDNEY TRAINS RAIL CORRIDOR BOUNDARY
- 1.5m HIGH BOLLARD
- REINFORCED SOIL WALL
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD
- W-BEAM BARRIER
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- FUTURE NOISE WALL

SCALE 1:500 (5 0 10 20m)

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GENERAL ARRANGEMENT PLAN SHEET 1 OF 9

DRAWING No. N01031 – PWD – DRG – GEN – 0010 – 03
(PROJECT No. – ZONE – TYPE – DISC – NUMBER – REV)

Plot Date: 18/2018 4:56:04 PM Office: AUSYD Filename: C:\PW_WORKS\ASLEY.LITTLE\ANZ_PROD\D0029277\DW\01031-PWD-DRG-GEN-0010.DWG

LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- CADASTRAL BOUNDARY
- CONTOUR
- FUTURE INTERMODAL TERMINAL
- GWS LANDFILL CELL
- EXISTING GWS MONITORING WELL
- SYDNEY TRAINS RAIL CORRIDOR BOUNDARY
- 1.5m HIGH BOLLARD
- REINFORCED SOIL WALL
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD
- W-BEAM BARRIER
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- FUTURE NOISE WALL

GEORGES RIVER

From Sydney

To Moorebank Imex Terminal

ADJOINS DRG N01031-PWD-DRG-GEN-0010

ADJOINS DRG N01031-PWD-DRG-GEN-0012

PRESERVE EXISTING GWS MAINTENANCE ACCESS TRACK TO FACILITATE GWS BASIN, SIMTA DRAINAGE MAINTENANCE AND ACCESS TO EXISTING GWS MONITORING WELLS

GWS NORTHERN SEDIMENT BASIN DESIGNED AND CONSTRUCTED BY OTHERS

AREA OF CULTURAL VALUE BOUNDARY

TURNAROUND FACILITY REFER TO DRAWING N01031-PWD-DRG-GEN-0077 FOR DETAILS

RIPARIAN VEGETATION MANAGEMENT

RtS APPROVED CONSTRUCTION BOUNDARY

LOCALISED WIDENING TO ACCOMMODATE 2xDOUBLE WIDTH LOCATION CASE FOR MT1

VPA BOUNDARY

RALP AND GWS SHARED MAINTENANCE ACCESS ROAD

REINFORCED SOIL WALL REFER TO N01031-PWD-DRG-0082 FOR WALL LONG SECTION

39km 900

39km 856

39km 800

A GEN-0050

B GEN-0050

D GEN-0053

AG GEN-0062

P GEN-0052

C GEN-0061

EXISTING GWS MONITORING WELLS

39km 500

EXTENT OF CLAY STABILITY BERM REFER TO TYPICAL SECTION A ON DWG N01031-PWD-DRG-GEN-0050

PROPOSED MAINTENANCE ACCESS ROAD TO ALLOW ACCESS TO SYDNEY TRAINS HV/ARTC SIGNALLING EQUIPMENT AND GWS TRIANGLE LAND

39km 600

39km 700

NORTHERN CONNECTION

CONTROL LINE MB2N

40km 121

40km 200

KEYSTONE RETAINING WALL TO LIMIT ENCROACHMENT INTO VPA BOUNDARY. AS PER DETAIL 1 IN DRAWING N01031-PWD-DRG-GEN-0060

REFER TO DRAWINGS N01031-PWD-DRG-GEN-0074 TO N01031-PWD-DRG-GEN-0076 FOR SERVICE CROSSING DETAILS

SOUTHERN CONNECTION

40km 100

TURNAROUND FACILITY REFER TO DRAWING N01031-PWD-DRG-GEN-0077 FOR DETAILS

CELL X1

TIE-IN WITH EXISTING MAINTENANCE ACCESS ROAD

MAINTENANCE ACCESS TRACK TO FACILITATE GWS LEACHATE POND MAINTENANCE

CONTROL LINE SSFL MAIN

CONTROL LINE SSFL LOOP

EXISTING SYDNEY TRAINS MAINTENANCE ACCESS ROAD

PROVISION FOR FUTURE NOISE WALL (DESIGN AND CONSTRUCTION BY OTHERS)

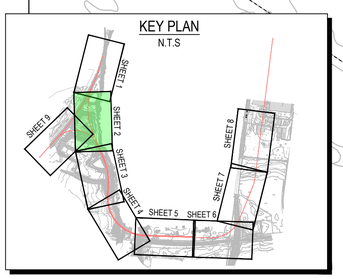
CONTROL LINE MB2S

GWS LEACHATE POND (DESIGNED AND CONSTRUCTED BY OTHERS)

39km 600

39km 700

KEY PLAN
N.T.S



PLAN
1:500

ADJOINS DRG N01031-PWD-DRG-GEN-0018

SCALE 1:500

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
03	07.02.18	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
04	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GENERAL ARRANGEMENT PLAN SHEET 2 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0011	04

GEORGES RIVER

From Sydney

To Moorebank Imex Terminal

REFER TO DRAWINGS N01031-PWD-GEN-0080 TO N01031-PWD-GEN-0082 FOR REINFORCED SOIL WALL DETAILS

EXISTING GWS MONITORING WELL

RALP AND GWS SHARED MAINTENANCE ACCESS ROAD

AREA OF CULTURAL VALUE BOUNDARY

EXISTING GWS ACCESS ROAD TO BE MAINTAINED TO PROVIDE ACCESS TO EXISTING GWS MONITORING WELLS

TURNAROUND FACILITY REFER TO DRAWING N01031-PWD-DRG-GEN-0077 FOR DETAILS

RIPARIAN VEGETATION MANAGEMENT

EXISTING GWS MONITORING WELL

ACCESS TO GWS MONITORING WELLS ON FOOT FROM EXISTING GWS ACCESS ROAD

VPA BOUNDARY

CONTROL LINE MB2N

CONTROL LINE MB2S

REINFORCED SOIL WALL REFER TO N01031-PWD-DRG-0082 FOR WALL LONG SECTION

0.6:1 SOIL NAIL EMBANKMENT. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0090 TO N01031-PWD-DRG-0096

GWS MAINTENANCE ACCESS ROAD

ADJOINS DRG N01031-PWD-DRG-GEN-0011

ADJOINS DRG N01031-PWD-DRG-GEN-0013

39km 900

39km 935

40km 000

40km 100

40km 200

40km 225

40km 280

40km 300

40km 400

40km 500

40km 600

CELL X1

CELL X2

CELL B2

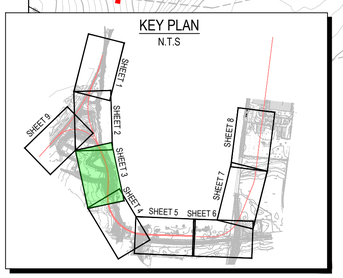
CELL A2

E GEN-0053

AF GEN-0080

Z GEN-0068

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- CADASTRAL BOUNDARY
- CONTOUR
- FUTURE INTERMODAL TERMINAL
- GWS LANDFILL CELL
- EXISTING GWS MONITORING WELL
- SYDNEY TRAINS RAIL CORRIDOR BOUNDARY
- 1.5m HIGH BOLLARD
- REINFORCED SOIL WALL
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD
- W-BEAM BARRIER
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- FUTURE NOISE WALL

PLAN
1:500

5 0 10 20m
SCALE 1:500

Plot Date: 18/07/18 4:06:56 PM Office: AUSYD Filename: C:\PW_WORKASHLEY.LITTLE\ANZ_PROD\92837\N01031-PWD\DRG-GEN\0012.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
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E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	W.DENG
APPROVED	M.SAKIB
DATE	31.07.18

FOR CONSTRUCTION

ARTC DRAWING No	EDMS No	EDMS REV

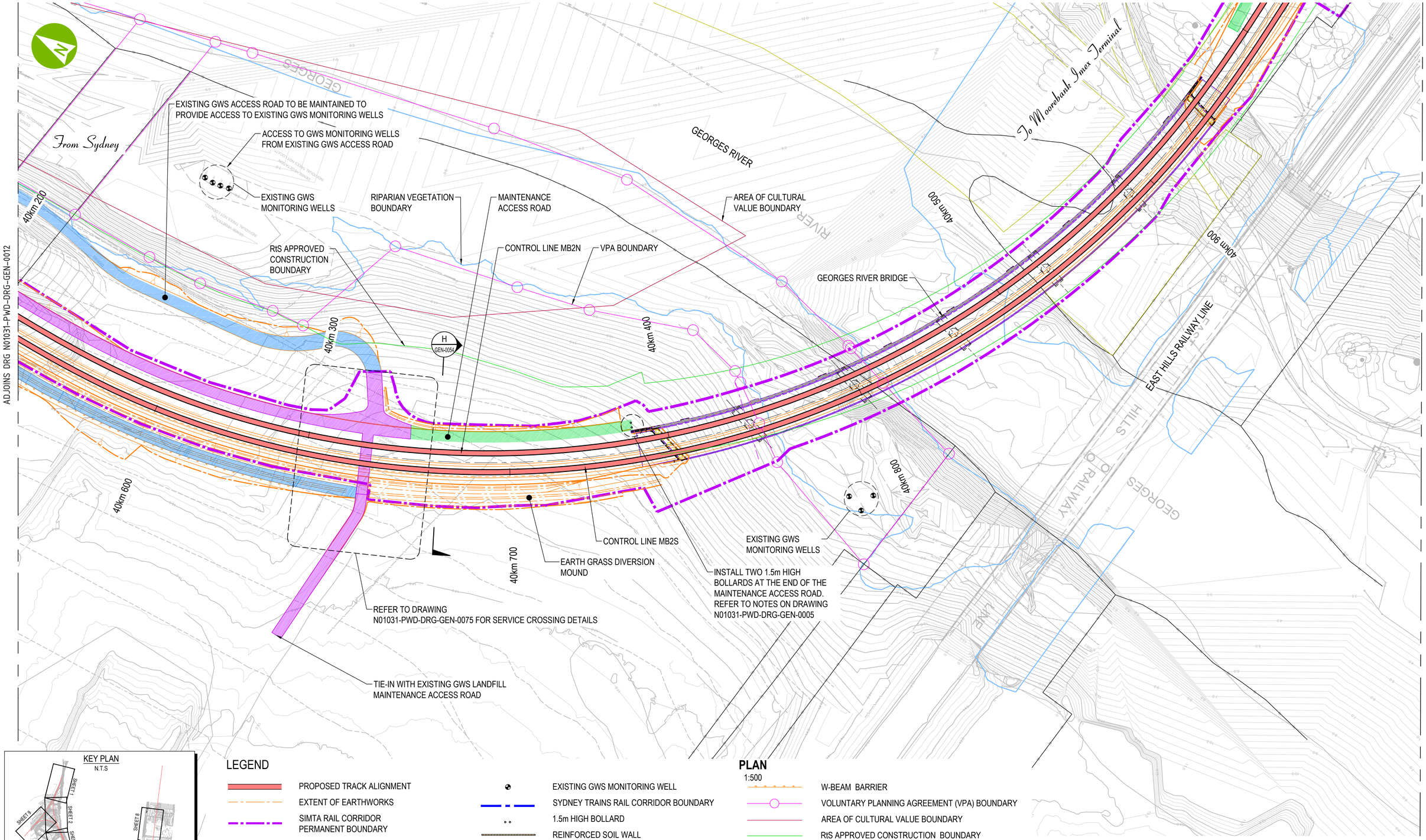
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GENERAL ARRANGEMENT PLAN SHEET 3 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0012	03

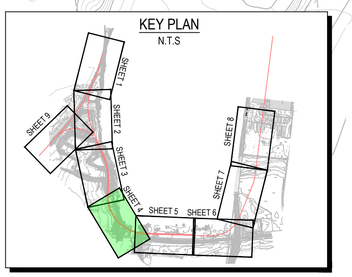
ADJOINS DRG N01031-PWD-DRG-GEN-0012

ADJOINS DRG N01031-PWD-DRG-GEN-0014

Plot Date: 3/8/2018 12:13:19 PM Office: AUSYD Filename: C:\PW_WORKSHARE\LY.LITTLE\NAZ_PROD\D0283777\DWG\N01031-PWD-DRG-GEN-0013.DWG



KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- CADASTRAL BOUNDARY
- CONTOUR
- FUTURE INTERMODAL TERMINAL
- GWS LANDFILL CELL
- EXISTING GWS MONITORING WELL
- SYDNEY TRAINS RAIL CORRIDOR BOUNDARY
- 1.5m HIGH BOLLARD
- REINFORCED SOIL WALL
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD
- W-BEAM BARRIER
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- FUTURE NOISE WALL

PLAN
1:500

5 0 10 20m
SCALE 1:500

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	07.02.18	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

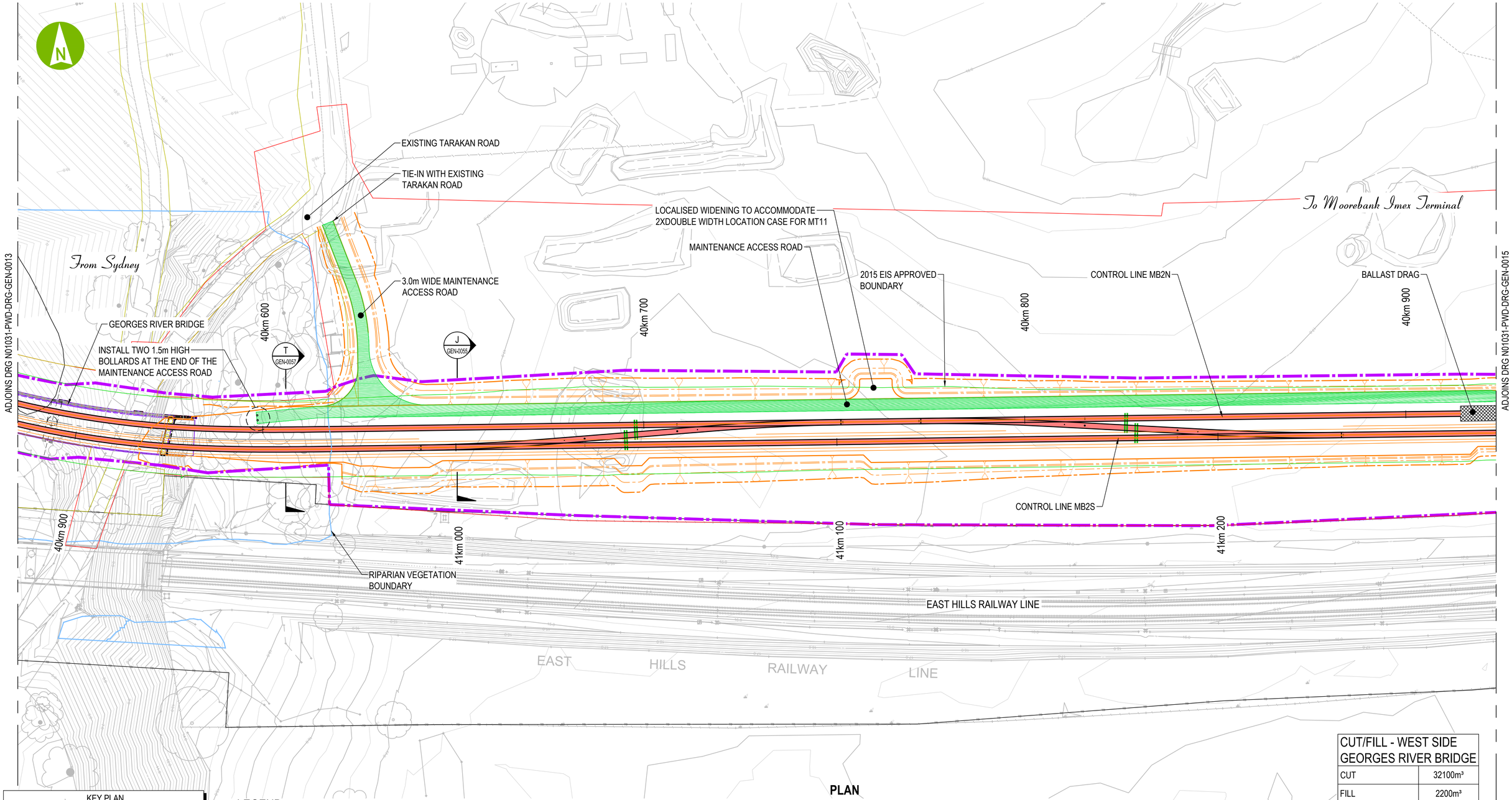
ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GENERAL ARRANGEMENT PLAN SHEET 4 OF 9

DRAWING No.

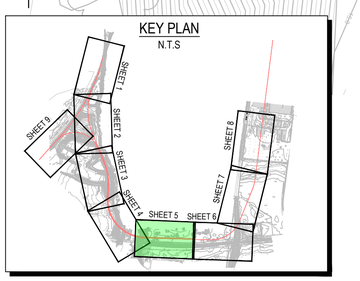
PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0013	03



PLAN

CUT/FILL - WEST SIDE GEORGES RIVER BRIDGE	
CUT	32100m³
FILL	2200m³
TOPSOIL CUT	7400m³
TOPSOIL FILL	760m³

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- CADASTRAL BOUNDARY
- CONTOUR
- FUTURE INTERMODAL TERMINAL
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- EXISTING GWS MONITORING WELL
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- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD
- W-BEAM BARRIER
- VOLUNTARY PLANNING AGREE
- AREA OF CULTURAL VALUE BO
- RtS APPROVED CONSTRUCTIO
- SIMTA BIODIVERSITY OFFSET A
- RIPARIAN VEGETATION MANAG
- FUTURE NOISE WALL

NOTE:

1. BOLLARDS TO MEET THE FOLLOWING REQUIREMENTS, SPECIFIED IN SPG 0705 SECTION 24.6:
   - THE BOLLARDS TO BE CONSTRUCTED OF GREATER THAN OR EQUAL 100mm NOMINAL BORE HEAVY GALVANISED STEEL PIPE TO AS1074 AND TO INCLUDE CAPS.
   - IN-GROUND BOLLARDS SHALL BE CONCRETED 1m INTO THE GROUND AND CONCRETE FOOTING SHALL BE 600mm DIA.
   - BOLLARDS SHALL BE CONCRETED IN A PERMANENT CONCRETE FOOTING 600mm DIAMETER AND A MINIMUM OF 1000mm DEEP.
   - THE MINIMUM HEIGHT ABOVE GROUND LEVEL TO BE 1.5m AND THE BOLLARDS TO BE FINISHED IN GLOSS WHITE ENAMEL.
   - BOLLARDS TO HAVE RED REFLECTIVE BAND TO IMPROVE THEIR NIGHT-TIME VISIBILITY.

5 0 10 20m
SCALE 1:500

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
03	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GENERAL ARRANGEMENT PLAN SHEET 5 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0014	03

Red Date: 1/8/2018 4:08:52 PM Office: AUSYD Filename: C:\PW_WORKSPACE\KY.LITTLE\ANZ_PROD\D0028277\N01031-PWD-DRG-GEN-0014.DWG

ADJOINS DRG N01031-PWD-DRG-GEN-0016

ADJOINS DRG N01031-PWD-DRG-GEN-0014

EXISTING SYDNEY TRAINS MAINTENANCE ACCESS ROAD

TIE-IN WITH EXISTING MAINTENANCE ACCESS ROAD

MOOREBANK AVENUE OVERBRIDGE

41km 600

RIPARIAN VEGETATION BOUNDARY

CONTROL LINE MB2S

To Moorebank Imex Terminal

From Sydney

BALLAST DRAG

2015 EIS APPROVED BOUNDARY

MAINTENANCE ACCESS ROAD

U GEN-0051

V GEN-0057

41km 600

REFER MOOREBANK AVENUE ROAD DESIGN PACKAGE FOR EARTHWORKS

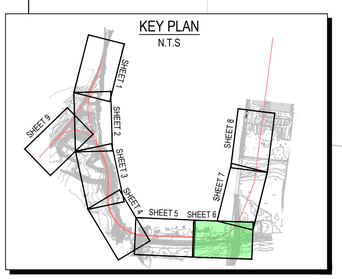
41km 300

41km 400

EAST HILLS

MOOREBANK AVENUE

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
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- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- FUTURE NOISE WALL

5 0 10 20m
SCALE 1:500

Plot Date: 18/2018 4:09:53 PM Office: AUSYD Filename: C:\PW_WORKSHARE\Y:\LITTLEJAZ_PROD\D0039777\DWG\N1031-PWD-DRG-GEN-0015.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	26.10.17	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GENERAL ARRANGEMENT PLAN SHEET 6 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0015	02

ADJOINS DRG N01031-PWD-DRG-GEN-0015

ADJOINS DRG N01031-PWD-DRG-GEN-0017

From Sydney

MOOREBANK AVENUE OVERBRIDGE

REFER TO MOOREBANK AVENUE ROAD DESIGN PACKAGE FOR EARTHWORKS.

EXISTING SYDNEY TRAINS MAINTENANCE ACCESS ROAD

MOOREBANK AVENUE

MOOREBANK AVENUE

INSTALL TWO 1.5m HIGH BOLLARDS AT THE END OF THE MAINTENANCE ACCESS ROAD

W GEN-0058

K GEN-0055

RIPARIAN VEGETATION BOUNDARY

2015 EIS APPROVED BOUNDARY

MAINTENANCE ACCESS ROAD

CONTROL LINE MB2S

41km 600

41km 700

41km 800

41km 900

04

EXISTING SYDNEY TRAINS MAINTENANCE ACCESS ROAD

EXISTING MAINTENANCE ACCESS ROAD

TIE-IN WITH EXISTING MAINTENANCE ACCESS ROAD

TIE-IN CONSTRUCTION ON HOLD FROM SIMTA RAIL CORRIDOR BOUNDARY UNTIL CCR APPROVAL IS PROVIDED BY THE ER

To Moorebank Imex Terminal

INSTALL TWO 1.5m HIGH BOLLARDS AT THE END OF THE MAINTENANCE ACCESS ROAD

GABION WALL 2. REFER DRAWING N01031-PWD-DRG-GEN-0251 FOR DETAILS.

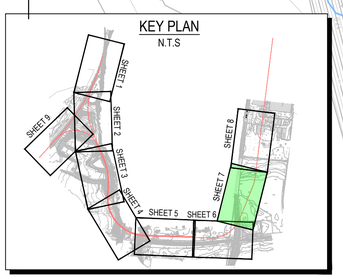
GABION WALL 1. REFER DRAWING N01031-PWD-DRG-GEN-0250 FOR DETAILS.

GABION WALL 3. REFER DRAWING N01031-PWD-DRG-GEN-0251 FOR DETAILS.

ANZAC CREEK CULVERT

PLAN
1:500

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
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- W-BEAM BARRIER
- VOLUNTARY PLANNING AGREEMI
- AREA OF CULTURAL VALUE BOUI
- RtS APPROVED CONSTRUCTION
- SIMTA BIODIVERSITY OFFSET AR
- RIPARIAN VEGETATION MANAGEI
- FUTURE NOISE WALL

NOTES:

1. BOLLARDS TO MEET THE FOLLOWING REQUIREMENTS, SPECIFIED IN SPG 0705 SECTION 24.6:
   - THE BOLLARDS TO BE CONSTRUCTED OF GREATER THAN OR EQUAL 100mm NOMINAL BORE HEAVY GALVANISED STEEL PIPE TO AS1074 AND TO INCLUDE CAPS.
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   - THE MINIMUM HEIGHT ABOVE GROUND LEVEL TO BE 1.5m AND THE BOLLARDS TO BE FINISHED IN GLOSS WHITE ENAMEL.
   - BOLLARDS TO HAVE RED REFLECTIVE BAND TO IMPROVE THEIR NIGHT-TIME VISIBILITY.

5 0 10 20m
SCALE 1:500

ARTC DRAWING No	EDMS No	EDMS REV

Rev Date: 20/07/2018 11:03:45 AM Office: AUSYD Filename: C:\PW_WORKSA\SALEY.LITTLE\AAZ_PROD\D0029377\DWG\N01031-PWD-DRG-GEN-0016.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	19.12.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	M.SAKIB
03	09.02.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	M.SAKIB
04	31.07.18	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GENERAL ARRANGEMENT PLAN SHEET 7 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0016	04

ADJOINS DRG N01031-PWD-DRG-GEN-0016

MOOREBANK AVENUE

RIPARIAN VEGETATION BOUNDARY

GABION WALL 4. REFER DRAWING N01031-PWD-DRG-GEN-0252 FOR DETAILS.

From Sydney

INSTALL TWO 1.5m HIGH BOLLARD AT THE END OF THE MAINTENANCE ACCESS ROAD

L GEN-0055

X GEN-0056

TIE-IN CONSTRUCTION ON HOLD FROM SIMTA RAIL CORRIDOR BOUNDARY UNTIL CCR APPROVAL IS PROVIDED BY THE ER

EXISTING MAINTENANCE ACCESS ROAD

TIE-IN WITH EXISTING MAINTENANCE ACCESS ROAD

GABION WALL 5. REFER DRAWING N01031-PWD-DRG-GEN-0253 FOR DETAILS.

MAINTENANCE ACCESS ROAD

CONTROL LINE MB2S

Y GEN-0055

LOCALISED WIDENING TO ACCOMMODATE BUNGALOW FOR MT18

ACCESS FROM SIMTA IMEX TERMINAL

To Moorebank Imex Terminal

ANZAC CULVERT

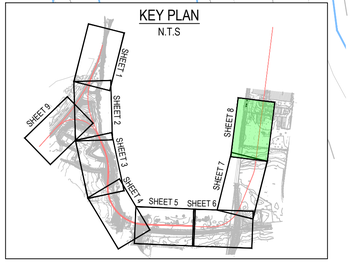
2015 EIS APPROVED BOUNDARY

04

42km 000

42km 200

KEY PLAN
N.T.S



LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- CADASTRAL BOUNDARY
- CONTOUR
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- W-BEAM BARRIER
- VOLUNTARY PLANNING AGREEMENT (VPA) BOU
- AREA OF CULTURAL VALUE BOUNDARY
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- FUTURE NOISE WALL

NOTES:

1. BOLLARDS TO MEET THE FOLLOWING REQUIREMENTS, SPECIFIED IN SPG 0705 SECTION 24.6:
   - THE BOLLARDS TO BE CONSTRUCTED OF GREATER THAN OR EQUAL 100mm NOMINAL BORE HEAVY GALVANISED STEEL PIPE TO AS1074 AND TO INCLUDE CAPS.
   - IN-GROUND BOLLARDS SHALL BE CONCRETED 1m INTO THE GROUND AND CONCRETE FOOTING SHALL BE 600mm DIA.
   - BOLLARDS SHALL BE CONCRETED IN A PERMANENT CONCRETE FOOTING 600mm DIAMETER AND A MINIMUM OF 1000mm DEEP.
   - THE MINIMUM HEIGHT ABOVE GROUND LEVEL TO BE 1.5m AND THE BOLLARDS TO BE FINISHED IN GLOSS WHITE ENAMEL.
   - BOLLARDS TO HAVE RED REFLECTIVE BAND TO IMPROVE THEIR NIGHT-TIME VISIBILITY.
2. EARTHWORKS TO BE REGARDED LOCALLY SO THAT RAINWATER WITHIN THE RALP SITE IS CONTAINED WITHIN THE RALP BOUNDARY. IMEX TERMINAL CONTRACTOR TO ENSURE THAT THE IMEX TERMINAL DESIGN CONTAINS AND ADDRESSES RAINWATER WITHIN THE IMEX BOUNDARY AND DOES NOT IMPACT THE CURRENT RALP DESIGN. LOCAL EARTHWORKS REGARDING OF THE RALP NO 1 DESIGN DOES NOT ALLOW FOR ADDITIONAL DESIGN OR MODELLING WORKS.
3. REFER TO IMEX TERMINAL DESIGN BY OTHERS FOR IMEX TERMINAL MAR WHICH IS LOCATED ON THE SOUTHERN SIDE OF THE IMEX/RALP BOUNDARY. IMEX TERMINAL CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE MAR THAT RUNS PARALLEL TO THE IMEX/RALP BOUNDARY. LOCAL EARTHWORKS REGRADING OF THE RALP NO 1 DESIGN TO TIE-IN WITH THE PROPOSED IMEX/RALP MAR DOES NOT ALLOW FOR ADDITIONAL DESIGN OR MODELLING WORKS.

5 0 10 20m
SCALE 1:500

ARTC DRAWING No	EDMS No	EDMS REV

Plot Date: 2/8/2018 11:11:44 AM Office: AUSYD Filename: C:\PW_WORKSHARE\EY.LITTLE\ANZ_PROD\30035777\DWG\N01031-PWD-DRG-GEN-0017.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
03	19.12.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	M.SAKIB
04	31.07.18	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GENERAL ARRANGEMENT PLAN SHEET 8 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0017	04

ADJOINS DRG N01031-PWD-DRG-GEN-0011

To Moorebank Intermodal Terminal

40km 100

SOUTHERN CONNECTION

CONTROL LINE MB2S

C GEN-0061

ACCESS ROAD TO FACILITATE GWS LEACHATE POND MAINTENANCE

PROVISION FOR FUTURE GWS NOISE WALL (DESIGN AND CONSTRUCTION BY OTHERS)

GWS LEACHATE POND (DESIGNED AND CONSTRUCTED BY OTHERS)

39km 700

40km 000

39km 900

EXISTING GWS MONITORING WELLS

TIE-IN WITH EXISTING SYDNEY TRAINS MAINTENANCE ACCESS ROAD

RtS APPROVED CONSTRUCTION BOUNDARY

40km 000

From Glenfield

R GEN-0056

Q GEN-0056

AE GEN-0060

AH GEN-0060

2xDOUBLE WIDTH LOCATION CASE FOR GF24

MAIN SOUTHERN RAILWAY LINE

39km 800

39km 900

40km 000

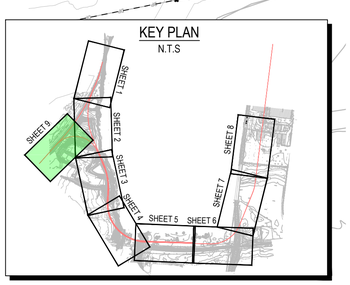
APPROXIMATE BOUNDARY ONLY

39km 700

CONTROL LINE SSFL LOOP

CONTROL LINE SSFL MAIN

KEY PLAN
N.T.S



PLAN
1:500

LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
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- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA BIODIVERSITY OFFSET AREA
- RIPARIAN VEGETATION MANAGEMENT
- FUTURE NOISE WALL

5 0 10 20m
SCALE 1:500

Rel Date: 18/2018,4:14:19 PM Office: AUSYD Filename: C:\PW_WORKSHARE\Y LITTLE\NZ_PROD\D0283777\WD\0018-PWD-DRG-GEN-0018.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
03	07.02.18	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
04	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

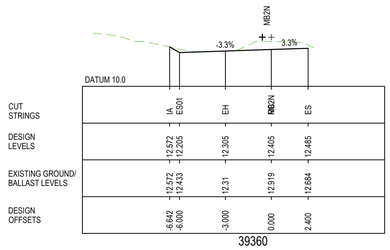
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GENERAL ARRANGEMENT PLAN SHEET 9 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0018	04



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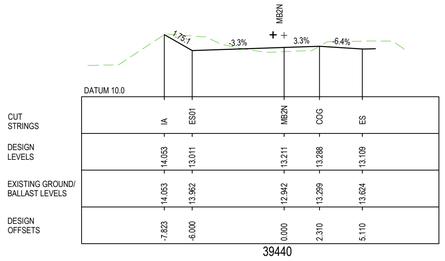

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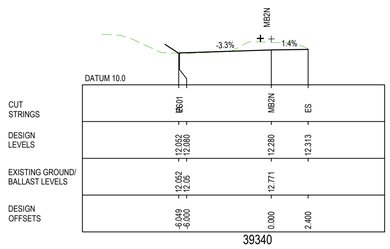

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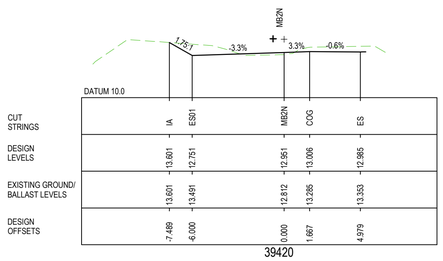

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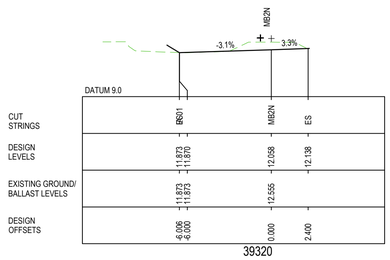

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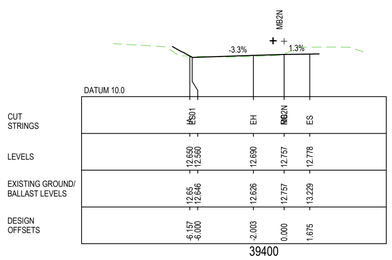

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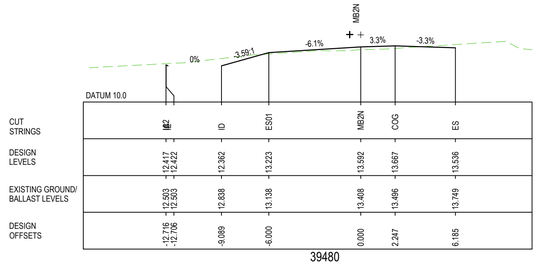

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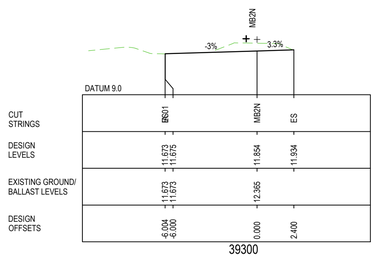

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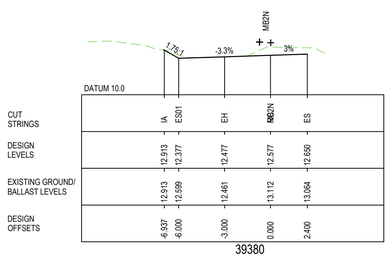

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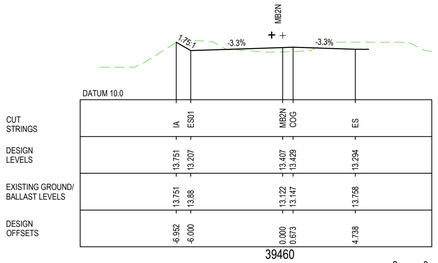

39460

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS NORTHERN CONNECTION CROSS SECTIONS SHEET 1 OF 8

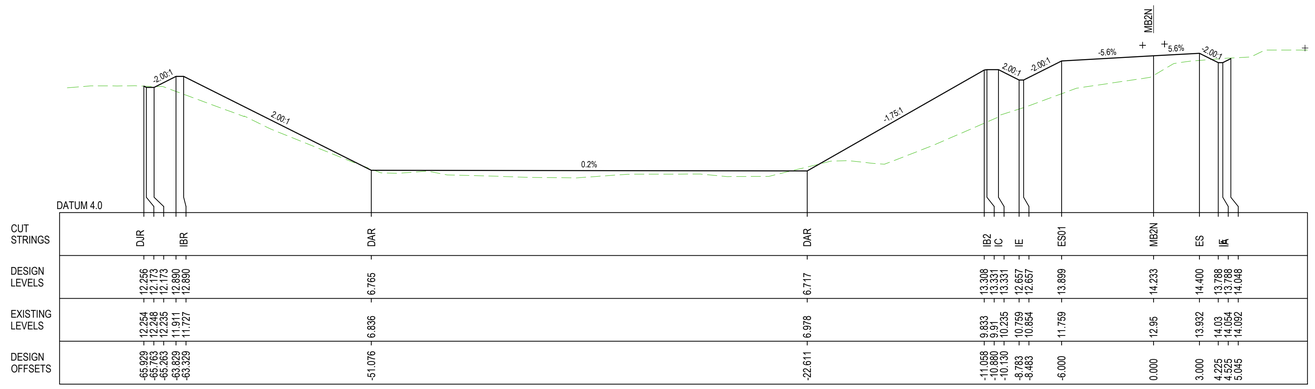
DRAWING No. N01031 – PWD – DRG – GEN – 0020 – 01

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0020	01

Xref C:\pw_work\khalid.alnajjar\anz_prod\d0279706\XRF-PWD-D-FWK-RAIL-XSEC LEGEND.dwg

LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



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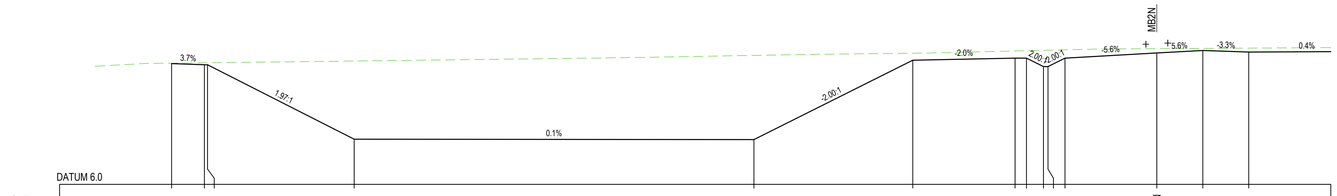
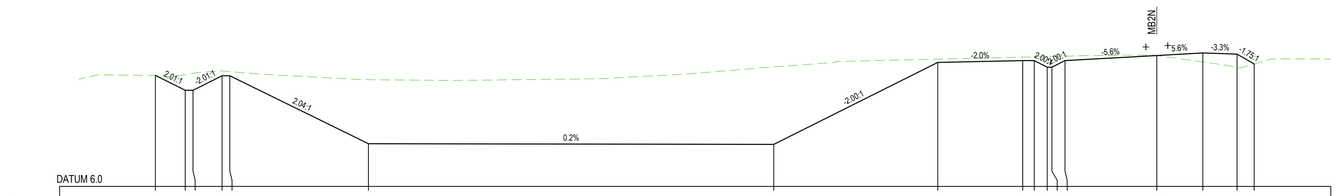
LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



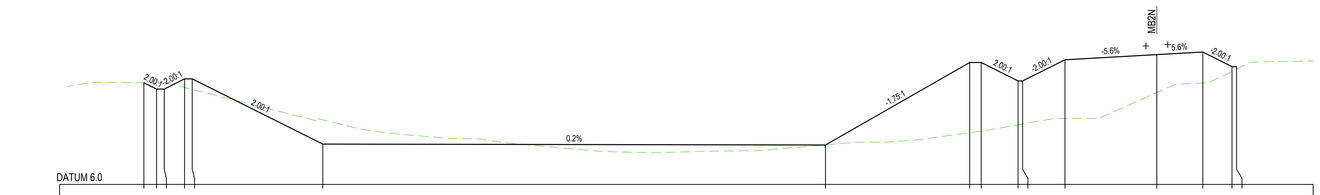
	IBR	DAR	DA	IA2	IB2	IC	IE	ES01	MB2N	ES	
DESIGN LEVELS	13.881	13.800	8.942	8.916	14.103	14.237	14.237	13.684	14.237	14.571	14.738	14.638
EXISTING LEVELS	13.907	13.93	14.048	14.415	14.557	14.701	14.719	14.745	14.732	14.778	14.854	14.872	14.89
DESIGN OFFSETS	-64.335	-62.192	-51.984	-52.412	-26.309	-15.935	-9.259	-8.509	-7.405	-7.105	-6.000	0.000	3.000	6.000

39600



	DJR	IBR	DAR	DA	IA2	IB2	IC	IE	ES01	MB2N	ES	IA	
DESIGN LEVELS	13.244	12.275	13.218	8.782	8.741	14.098	14.209	14.209	13.782	14.209	14.543	14.710	14.635	13.966
EXISTING LEVELS	13.242	13.295	13.539	12.966	13.801	14.307	14.438	14.456	14.476	14.483	14.503	14.543	14.124	13.757	13.995
DESIGN OFFSETS	-65.392	-62.441	-61.038	-51.463	-25.013	-14.301	-8.759	-8.008	-7.154	-6.854	-6.000	0.000	3.000	5.236	6.357

39580



	DJR	IBR	DAR	DA	IB2	IC	IE	ES01	MB2N	ES	IE
DESIGN LEVELS	12.636	12.214	12.890	8.635	8.575	13.965	13.955	12.754	12.754	14.137	14.471	14.638	13.686	13.686
EXISTING LEVELS	12.638	12.625	12.625	12.323	10.212	8.581	9.38	9.484	9.892	9.945	10.309	11.998	12.614	13.364	13.517
DESIGN OFFSETS	-66.144	-65.317	-64.817	-62.482	-54.460	-21.634	-12.218	-11.468	-9.066	-8.766	-6.000	0.000	3.000	4.905	5.205

39560

2 0 4 8m
SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

Ref Date: 18/2/19 4:15:40 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\AZ_PROD\D0029370\N01031-PWD\DRG\GEN\0022.DWG

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

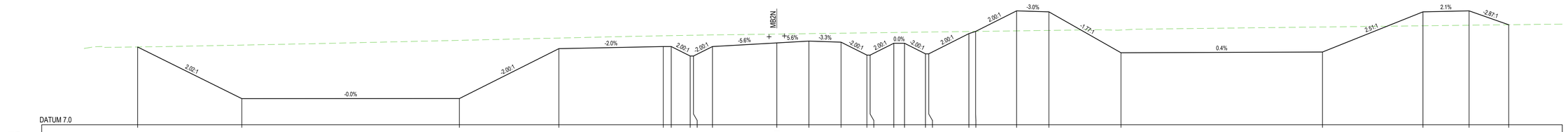
TITLE: BULK EARTHWORKS NORTHERN CONNECTION CROSS SECTIONS SHEET 3 OF 8

DRAWING No. N01031 – PWD – DRG – GEN – 0022 – 01

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0022	01

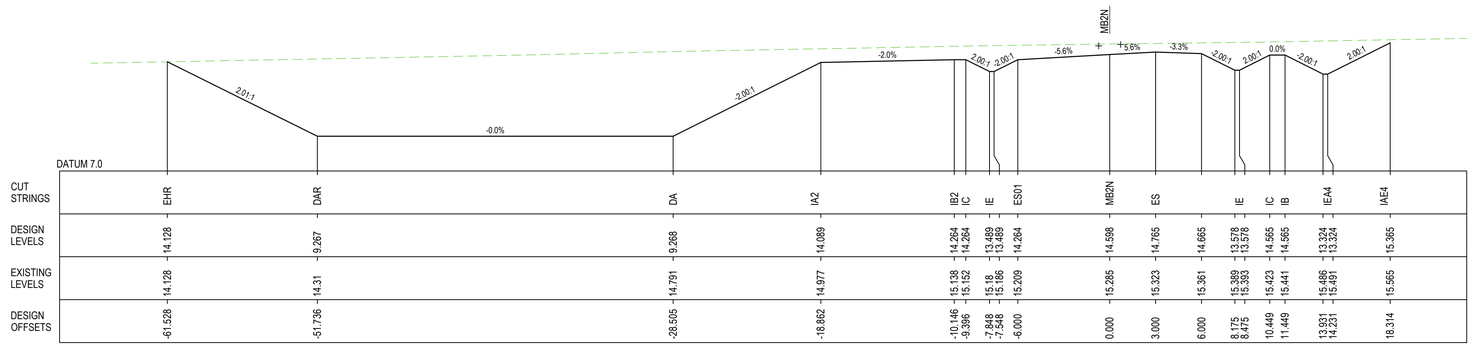
LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- PROPOSED RAIL DESIGN



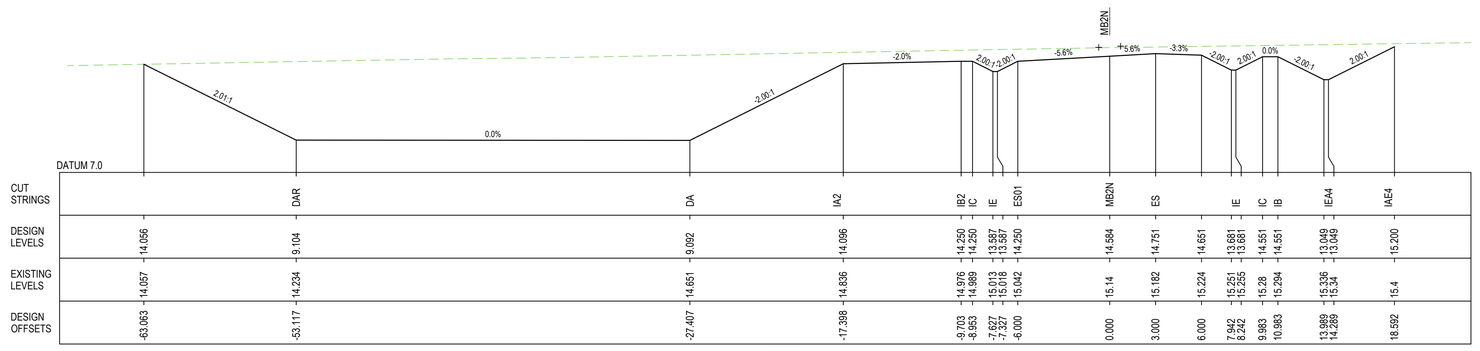
	EHR	DAR	DA	IA2	IB2	IC	IE	ES01	MB2N	ES	IE	IC	IB	IEA4	IAE4	DAR	DAR		
DESIGN LEVELS	14.235	9.433	9.442	14.082	14.277	14.277	13.392	14.277	14.611	14.778	14.678	13.475	13.475	14.578	14.578	13.599	13.599	15.472	15.680	17.590	17.500	13.695	13.763	17.500	17.590	16.299
EXISTING LEVELS	14.235	14.41	14.851	15.064	15.274	15.288	15.321	15.327	15.355	15.434	15.474	15.514	15.546	15.55	15.579	15.592	15.618	15.622	15.672	15.68	15.731	15.771	15.807	16.093	16.204	16.255	16.299
DESIGN OFFSETS	-59.615	-49.896	-29.606	-20.325	-10.589	-9.839	-8.070	-7.770	-6.000	0.000	3.000	6.000	8.408	8.708	10.915	11.915	13.874	14.174	17.920	18.549	22.372	25.385	32.109	50.906	60.277	64.576	68.275

39660



	EHR	DAR	DA	IA2	IB2	IC	IE	ES01	MB2N	ES	IE	IC	IB	IEA4	IAE4
DESIGN LEVELS	14.128	9.267	9.268	14.089	14.264	14.264	13.489	14.264	14.598	14.765	14.665	13.578	13.578	14.565	14.565	13.324	13.324	15.365
EXISTING LEVELS	14.128	14.31	14.791	14.977	15.138	15.152	15.18	15.186	15.209	15.285	15.323	15.361	15.389	15.393	15.423	15.441	15.486	15.491	15.565
DESIGN OFFSETS	-61.528	-51.736	-28.505	-18.862	-10.146	-9.396	-7.848	-7.548	-6.000	0.000	3.000	6.000	8.175	8.475	10.449	11.449	13.931	14.231	18.314

39640



	DAR	DA	IA2	IB2	IC	IE	ES01	MB2N	ES	IE	IC	IB	IEA4	IAE4
DESIGN LEVELS	14.056	9.104	9.092	14.096	14.250	14.250	13.587	13.587	14.250	14.584	14.751	14.651	13.681	13.681	14.551	14.551	13.049	13.049	15.200
EXISTING LEVELS	14.057	14.234	14.651	14.836	14.976	14.989	15.013	15.018	15.042	15.14	15.182	15.224	15.251	15.255	15.28	15.294	15.336	15.34	15.4
DESIGN OFFSETS	-63.063	-53.117	-27.407	-17.398	-9.703	-8.953	-7.627	-7.327	-6.000	0.000	3.000	6.000	7.942	8.242	9.983	10.983	13.989	14.289	18.592

39620

2 0 4 8m
SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

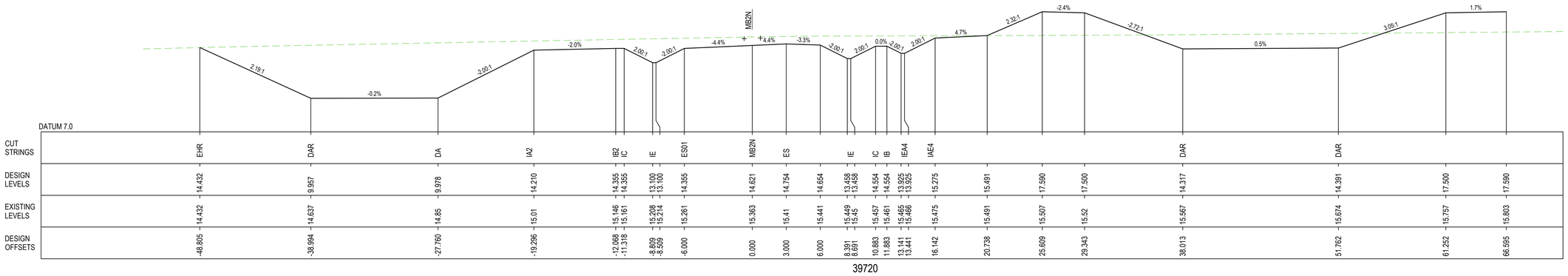
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS NORTHERN CONNECTION CROSS SECTIONS SHEET 4 OF 8

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0023	01

Plot Date: 18/2/19 4:16:07 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ACAD_PROD\D0926370\N01031-PWD\DRG\GEN\0023.DWG

LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN

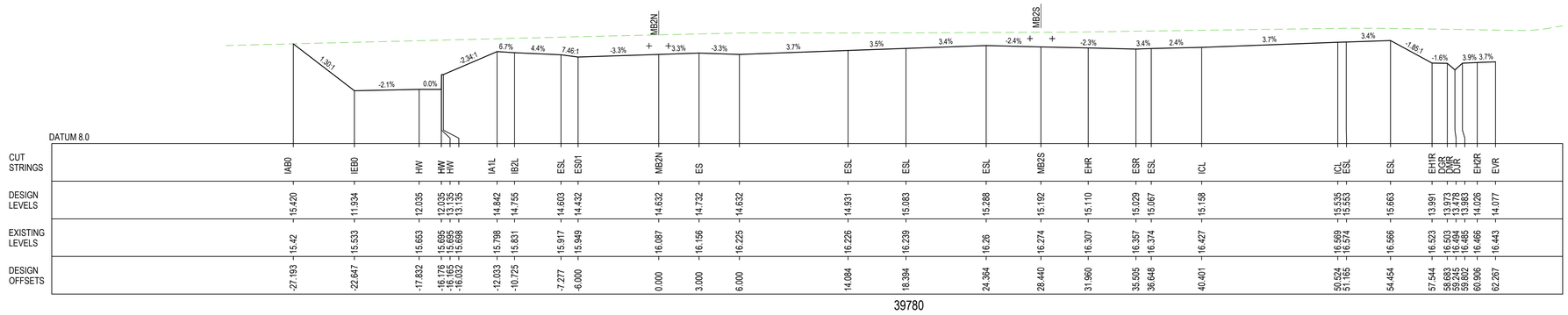


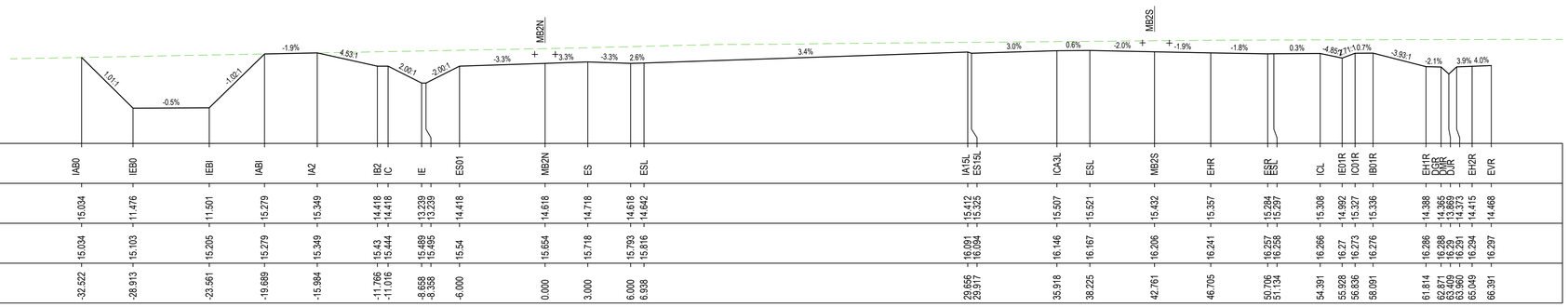
DATUM 7.0

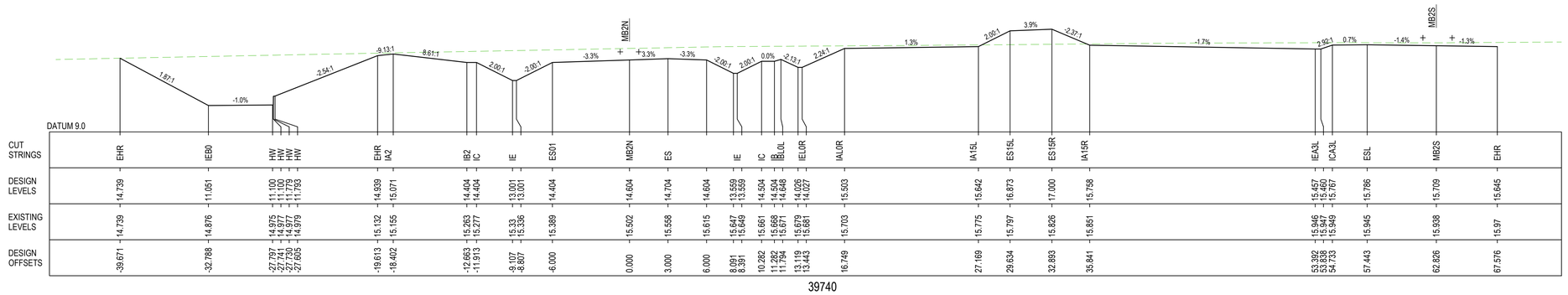
| | | |

LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN







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SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

CLIENT

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

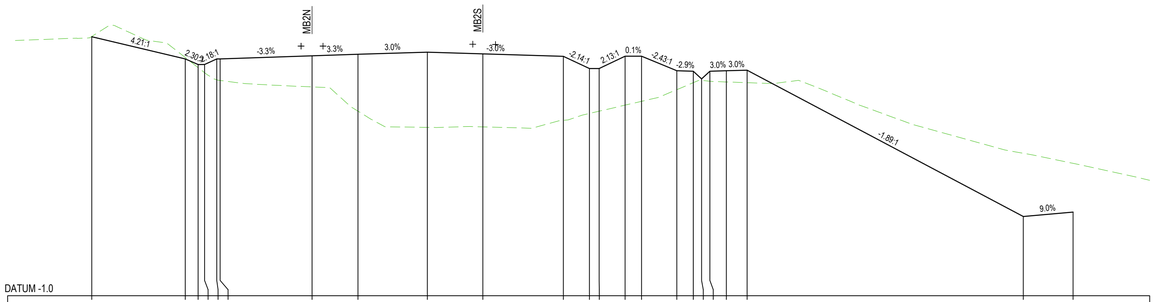
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS NORTHERN CONNECTION CROSS SECTIONS SHEET 6 OF 8

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0025	03

Plot Date: 18/2/19 4:15:51 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\AZ_PROD\D0026370\N01031-PWD\DRG\GEN\0025.DWG

LEGEND

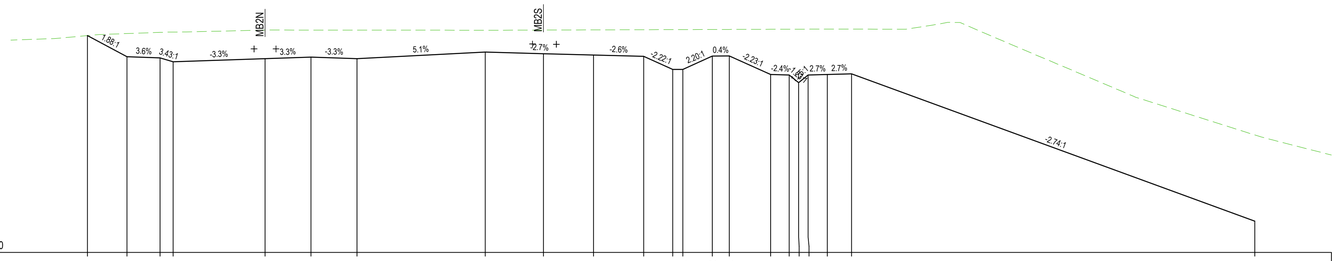
- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



DATUM -1.0

CUT STRINGS	IAL	ICL	IEL	ESL	ESD1	MB2N	ES	ESL	MB2S	ESR	IED1R	ICO1R	IBO1R	EH1R	DGR	DJR	EH2R	EVR
DESIGN LEVELS	15.909	14.460	14.097	14.054	14.459	14.460	14.660	14.760	14.896	14.785	14.627	13.835	13.808	14.632	14.633	13.684	13.653	13.153	13.153	13.022	13.665	13.726	4.169	4.463
EXISTING LEVELS	15.926	14.548	13.89	13.95	13.093	13.05	12.633	11.05	9.99	10.024	10.447	10.809	11.048	11.442	11.691	12.452	12.905	13.06	13.153	13.022	12.954	12.908	8.302	7.642
DESIGN OFFSETS	-14.379	-8.275	-7.439	-7.103	-6.223	-6.000	0.000	3.000	7.526	11.156	16.413	18.108	18.748	20.443	21.514	23.816	24.896	25.436	25.976	27.055	28.405	46.436	49.693

39820



DATUM 2.0

CUT STRINGS	IAL	IB2L	ESL	ESD1	MB2N	ES	ESL	MB2S	EHR	ESR	IED1R	ICO1R	IBO1R	EH1R	DGR	DJR	EH2R	EVR
DESIGN LEVELS	16.151	14.774	14.695	14.446	14.646	14.746	14.646	15.075	14.973	14.885	14.799	13.944	13.945	14.818	14.823	13.610	13.581	13.081	13.382	13.616	13.668	4.038
EXISTING LEVELS	16.151	16.285	16.362	16.384	16.511	16.512	16.51	16.503	16.513	16.525	16.536	16.543	16.545	16.552	16.556	16.565	16.569	16.571	16.574	16.578	16.576	9.668
DESIGN OFFSETS	-11.598	-9.013	-6.854	-6.000	0.000	3.000	6.000	14.377	18.176	21.444	24.724	26.620	27.281	29.200	30.313	33.015	34.222	34.837	35.460	36.714	38.296	64.625

39800

SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

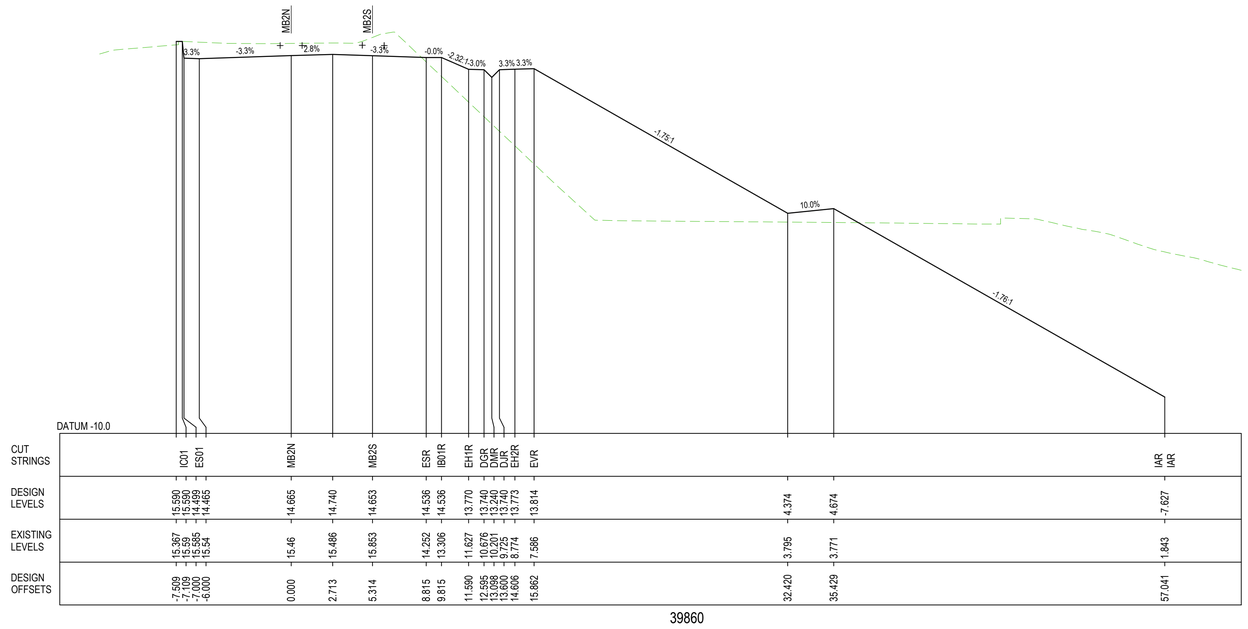
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS NORTHERN CONNECTION CROSS SECTIONS SHEET 7 OF 8

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0026	03

Plot Date: 18/2/19 4:11:19 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\NZ_PROD\D0937078N\I0101-PWD\DRG\GEN\0026.DWG

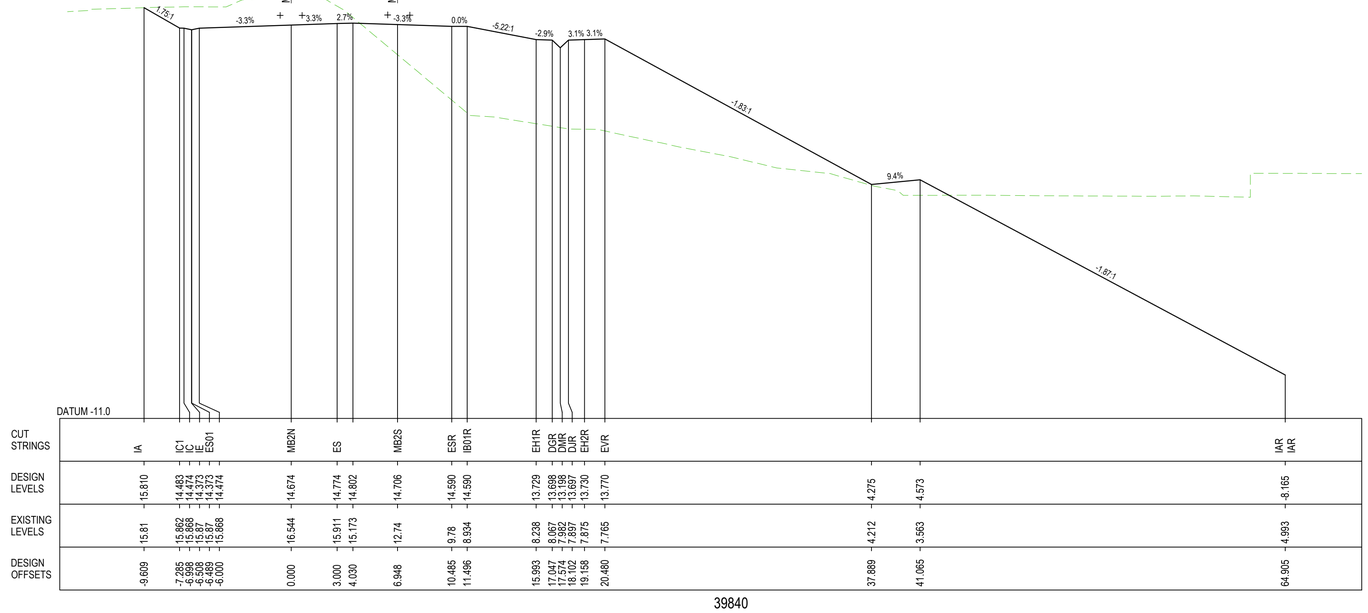
LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



		IA	IC01	IC	ESD1	MB2N		MB2S	ESR	IB01R	EH1R	DGR	DJR	EH2R	EVR			IAR	IAR
CUT STRINGS																			
DESIGN LEVELS			-15.590	-15.590	-14.465	-14.665	-14.740	-14.653	-14.536	-14.536	-13.770	-13.740	-13.740	-13.773	-13.814	-4.374	-4.674	-7.627	
EXISTING LEVELS			-15.367	-15.59	-15.585	-15.46	-15.486	-15.853	-14.252	-13.306	-11.627	-10.676	-10.701	-9.725	-7.566	-3.795	-3.771	-1.843	
DESIGN OFFSETS			-7.509	-7.309	-6.000	0.000	2.713	5.314	8.815	9.815	11.590	12.595	13.095	13.600	15.862	32.420	35.429	57.041	

39860



		IA	IC1	IC	ESD1	MB2N	ES	MB2S	ESR	IB01R	EH1R	DGR	DJR	EH2R	EVR			IAR	IAR
CUT STRINGS																			
DESIGN LEVELS		-15.810	-14.483	-14.474	-14.373	-14.674	-14.774	-14.706	-14.590	-14.590	-13.729	-13.698	-13.698	-13.697	-13.770	-4.275	-4.573	-8.165	
EXISTING LEVELS		-15.81	-15.862	-15.868	-15.87	-16.544	-15.911	-15.173	-9.78	-8.934	-8.238	-8.667	-8.667	-7.897	-7.765	-4.212	-3.563	-4.993	
DESIGN OFFSETS		-9.609	-7.285	-6.968	-6.489	0.000	3.000	4.030	10.485	11.496	15.993	17.047	17.547	18.102	20.480	37.889	41.065	64.905	

39840

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SCALE 1:200

Ref Date: 18/01/18 4:17:45 PM Office: AUSYD Filename: C:\PW_WORKSABLE\T.LITTLE\ANZ_PROJ\D0028377\DM\N0103-PWD-DRG-GEN-0027.DWG

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

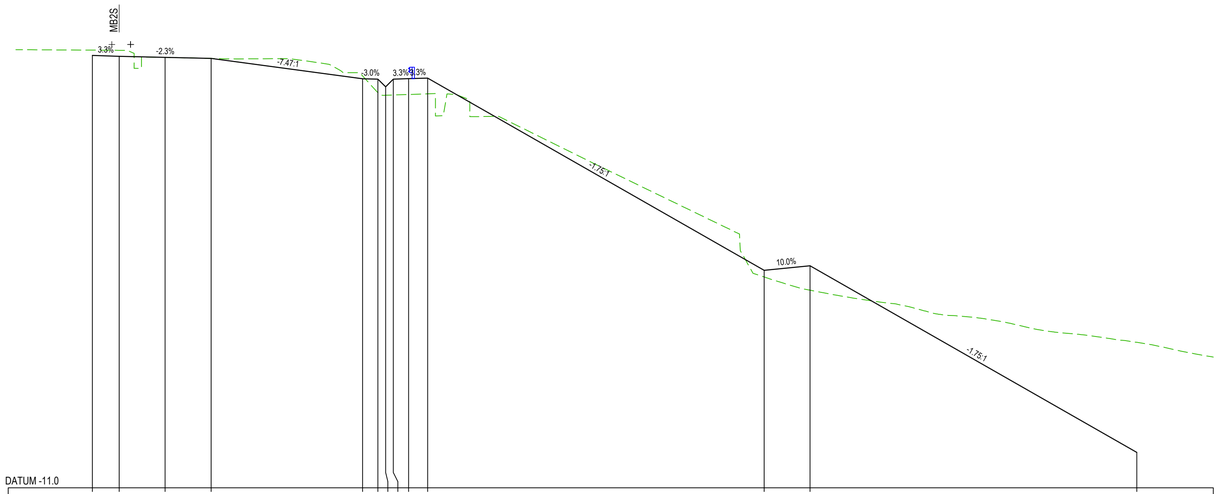
PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS NORTHERN CONNECTION CROSS SECTIONS SHEET 8 OF 8

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0027	03

LEGEND

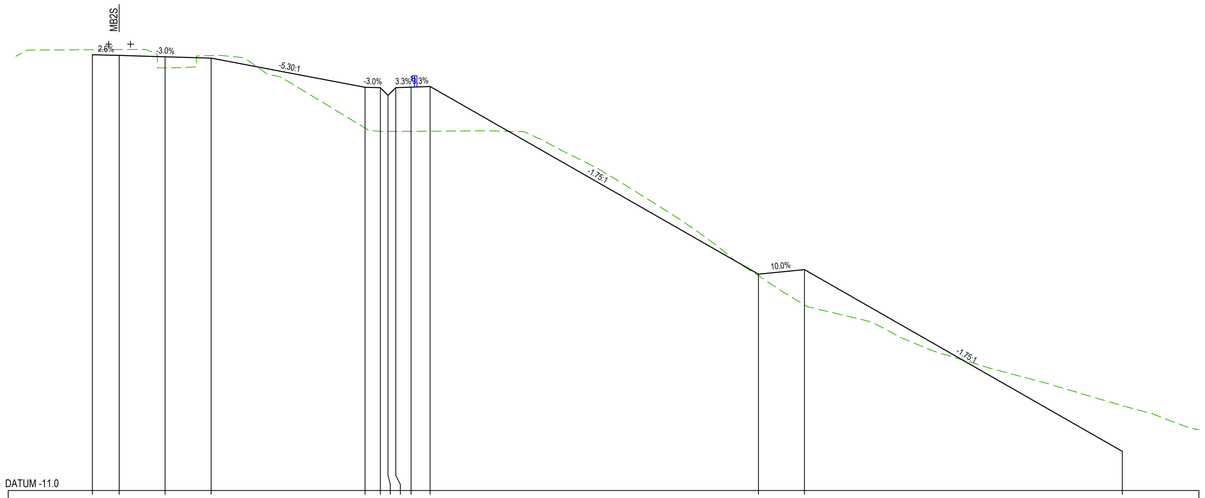
- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



DATUM -11.0

	ESL	MB2S	EHR	ESR	EH1R	DMR	EH2R	EVR	BIR	BOR	ARR
CUT STRINGS											
DESIGN LEVELS	17.222	17.165	17.095	17.026	15.701	15.671	15.671	15.704	3.196	3.496	-8.694
EXISTING LEVELS	17.569	17.557	17.094	17.027	15.889	14.801	14.624	14.641	14.614	2.761	1.896	-1.506
DESIGN OFFSETS	-1.750	0.000	3.000	6.000	15.896	16.896	17.396	17.896	18.896	20.146	42.109	45.109	66.441

39900



DATUM -11.0

	ESL	MB2S	EHR	ESR	EH1R	DMR	EH2R	EVR	BIR	BOR	ARR
CUT STRINGS											
DESIGN LEVELS	17.447	17.401	17.312	17.223	15.324	15.294	14.794	15.254	15.327	15.369	3.119	3.419	-8.442
EXISTING LEVELS	17.774	17.783	16.588	17.386	12.66	12.45	12.437	12.441	12.448	12.457	3.027	1.118	-5.457
DESIGN OFFSETS	-1.750	0.000	3.000	6.000	16.056	17.056	17.556	18.056	19.056	20.306	41.743	44.743	65.500

39880

2 0 4 8m
SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 1 OF 19

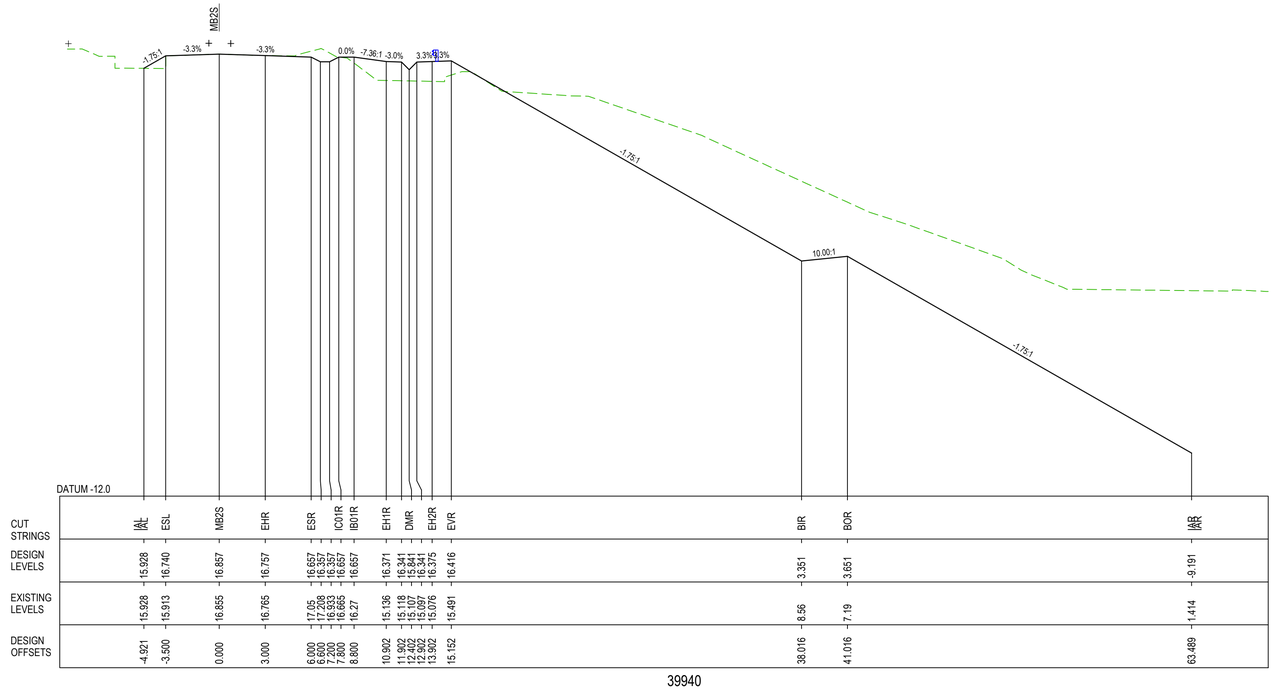
DRAWING No. N01031 – PWD – DRG – GEN – 0028 – 02

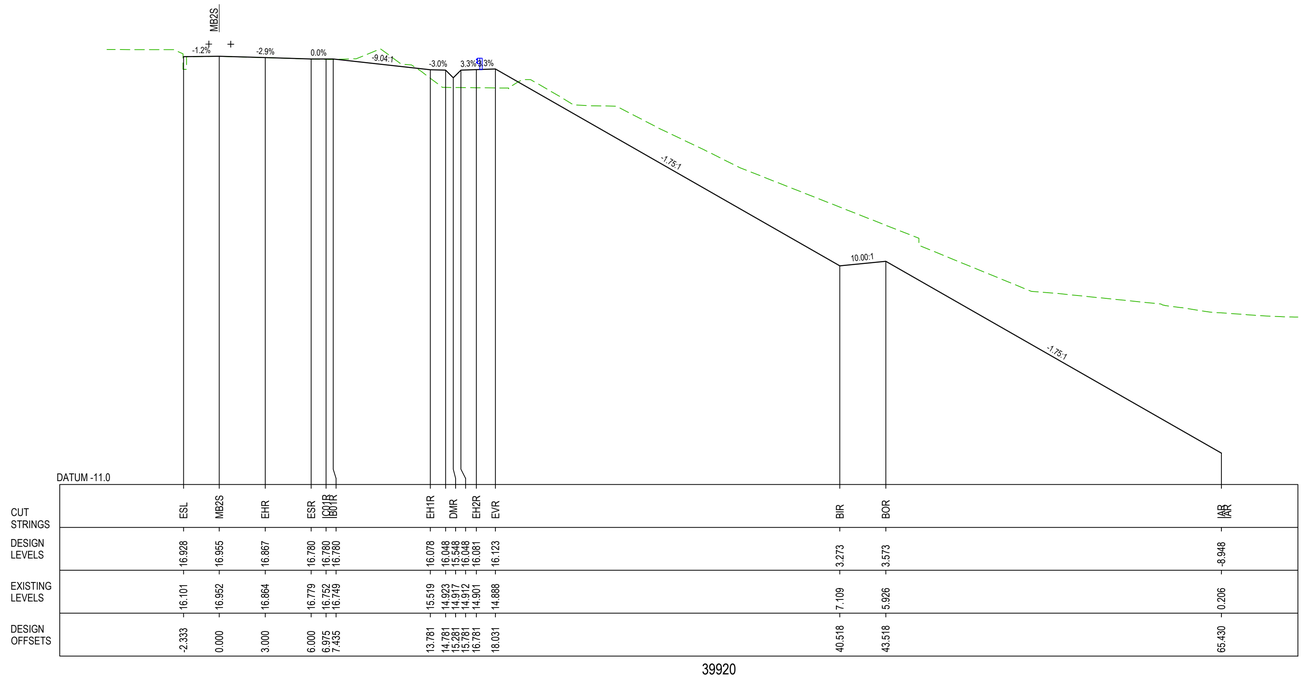
PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV

Plot Date: 1/8/2018 5:45:54 PM Office: AUSYD Filename: C:\PW_WORKAREA\EX.LITTLEJ\ACPRODS\N03537\N01031-PWD.DRG-GEN-0028.DWG

LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN





2 0 4 8m
SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 2 OF 19

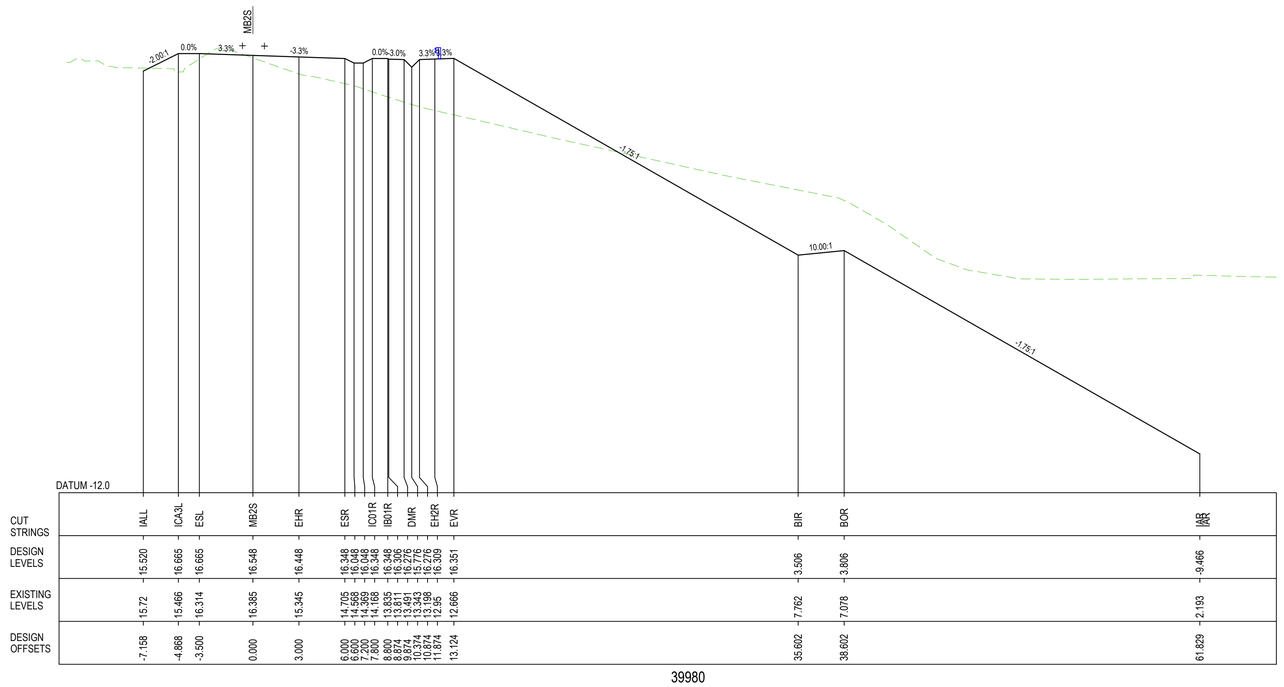
DRAWING No. N01031 – PWD – DRG – GEN – 0029 – 01

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0029	01

Plot Date: 18/2018 4:18:49 PM Office: AUSYD Filename: C:\PW_WORKASHLEY LITTLE\ANZ_PROD\30283777\N01031.PWD\DRG\GEN\0029.DWG

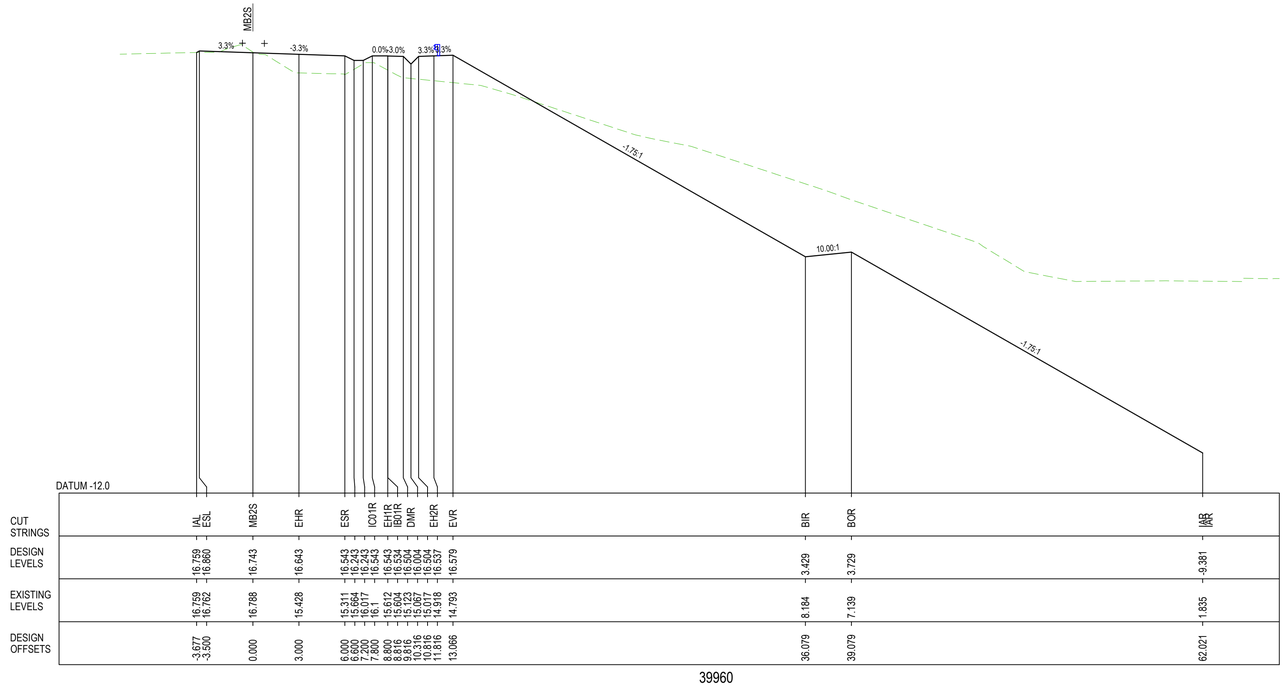
LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



CUT STRINGS	IALL	ICA3L	ESL	MB2S	EHR	ESR	ICO1R	IBO1R	DMR	EH2R	EVR	BIR	BOR	IAR
DESIGN LEVELS	15.520	16.665	16.665	16.548	16.448	16.348	16.048	16.348	16.306	16.276	16.351	3.506	3.806	-9.466
EXISTING LEVELS	15.72	15.466	16.314	16.385	15.345	14.705	14.568	14.168	13.835	13.198	12.666	7.762	7.078	2.193
DESIGN OFFSETS	-7.158	-4.868	-3.500	0.000	3.000	6.000	6.800	7.800	8.800	10.374	13.124	35.602	38.602	61.829

39980



CUT STRINGS	IAL ESL	MB2S	EHR	ESR	ICO1R	EH1R IBO1R	DMR	EH2R	EVR	BIR	BOR	IAR
DESIGN LEVELS	16.759 16.860	16.743	16.643	16.543 16.243	16.243 16.543	16.543 16.534	16.504	16.004	16.537	3.429	3.729	-9.381
EXISTING LEVELS	16.759 16.762	16.788	15.428	15.311 15.661	15.617 16.1	15.612 15.604	15.532	15.067	15.017	8.184	7.139	1.835
DESIGN OFFSETS	-3.677 -3.500	0.000	3.000	6.000 6.800	6.800 7.800	8.800 8.816	8.816	10.316	11.816	36.079	39.079	62.021

39960

2 0 4 8m
SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

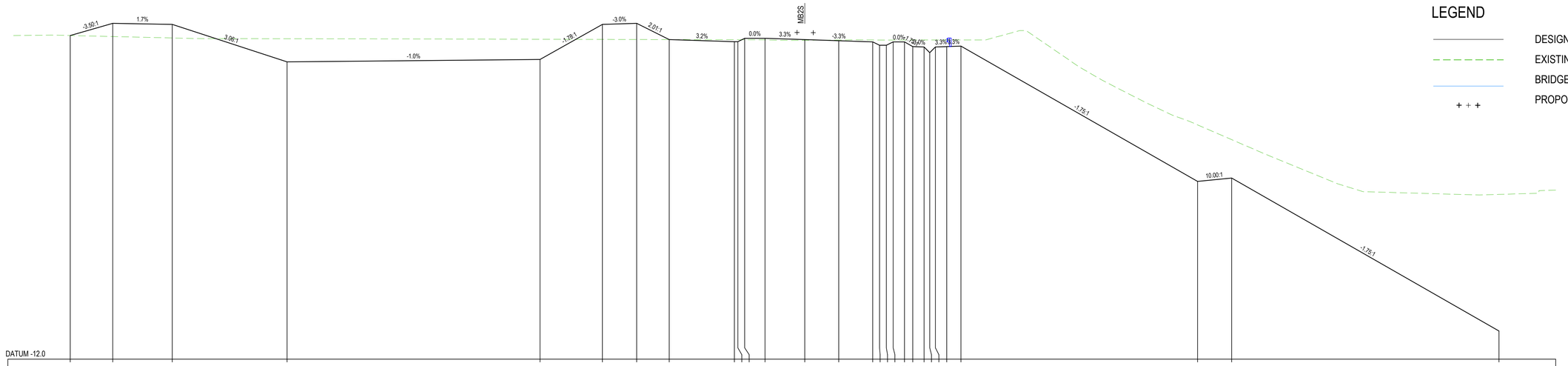
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 3 OF 19

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0030	03

Plot Date: 1/8/2018 4:19:36 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ.PROD\D0029377\N01031-PWD-DRG-GEN-0030.DWG

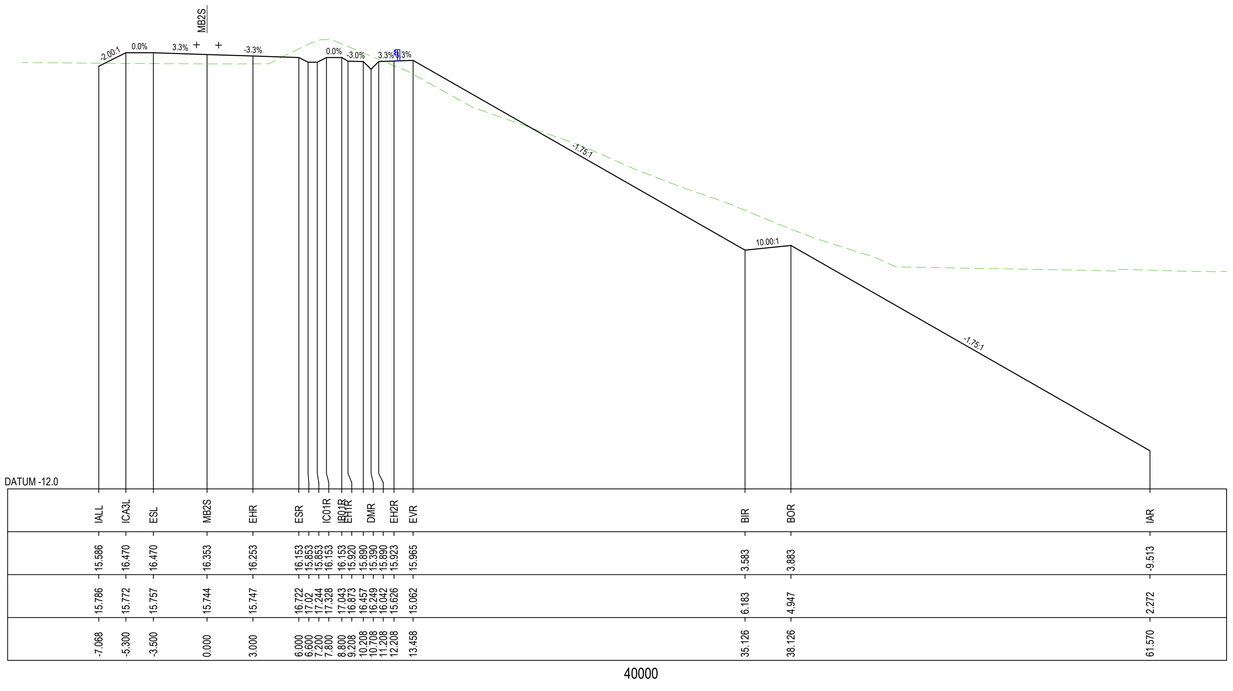
LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



	DZL	DOL	DBL	DAR	DAR	DBL	DOL	DZL	ICA3L	ESL	MB2S	EHR	ESR	IC01R	IB01R	EH1R	DMR	EH2R	EVR	BIR	BOR	IAR
CUT STRINGS																						
DESIGN LEVELS	16.518	17.590	17.500	14.193	14.412	17.500	17.590	16.161	15.975 15.975 16.275	16.275	16.158	16.058	15.958 15.658 15.658 15.958 15.958				15.542 15.512 15.512 15.546		15.587	3.661	3.961	9.516
EXISTING LEVELS	16.518	16.429	16.303	16.238	16.188	16.175	16.168	16.161	16.147 16.145 16.145	16.138	16.098	16.125	16.124 16.122 16.122 16.123 16.123				16.123 16.124 16.124 16.124		16.125	8.645	7.348	2.519
DESIGN OFFSETS	-64.784	-61.033	-55.783	-45.657	-23.345	-17.849	-14.822	-11.951	-6.200 -5.300 -5.300	-3.500	0.000	3.000	6.000 6.600 7.200 7.800 8.800				9.528 10.528 11.028 11.528 12.528		13.778	34.649	37.649	61.234

40020



	IALL	ICA3L	ESL	MB2S	EHR	ESR	IC01R	IB01R EH1R	DMR	EH2R	EVR	BIR	BOR	IAR
CUT STRINGS														
DESIGN LEVELS	15.586	16.470	16.470	16.353	16.253	16.153 15.853 15.853 16.153 16.153			15.920 15.890 15.890	15.923	15.965	3.583	3.883	9.513
EXISTING LEVELS	15.786	15.772	15.757	15.744	15.747	16.722 17.022 17.244 17.328 17.043			16.873 16.429 16.042	15.626	15.062	6.183	4.947	2.272
DESIGN OFFSETS	-7.068	-5.300	-3.500	0.000	3.000	6.000 6.600 7.200 7.800 8.800			9.208 10.208 11.208	12.208	13.458	35.126	38.126	61.570

40000

2 0 4 8m

SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE

DESIGNED: M.SAKIB

CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED

DATE 31.07.18

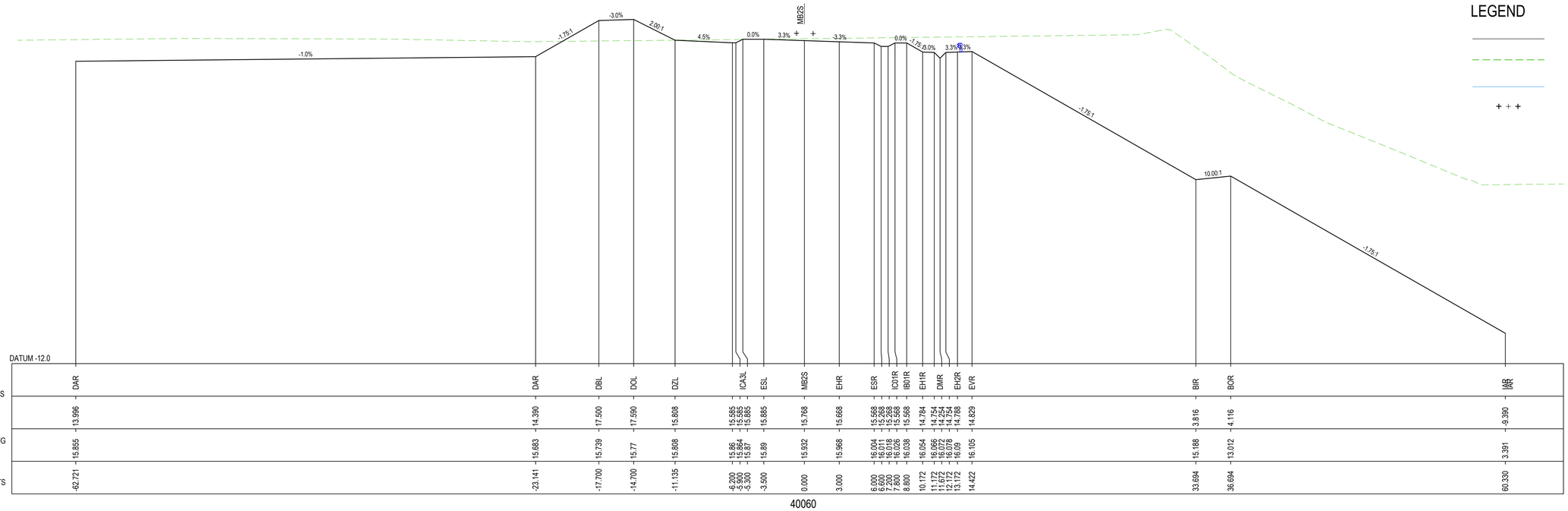
M.SAKIB

M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 4 OF 19

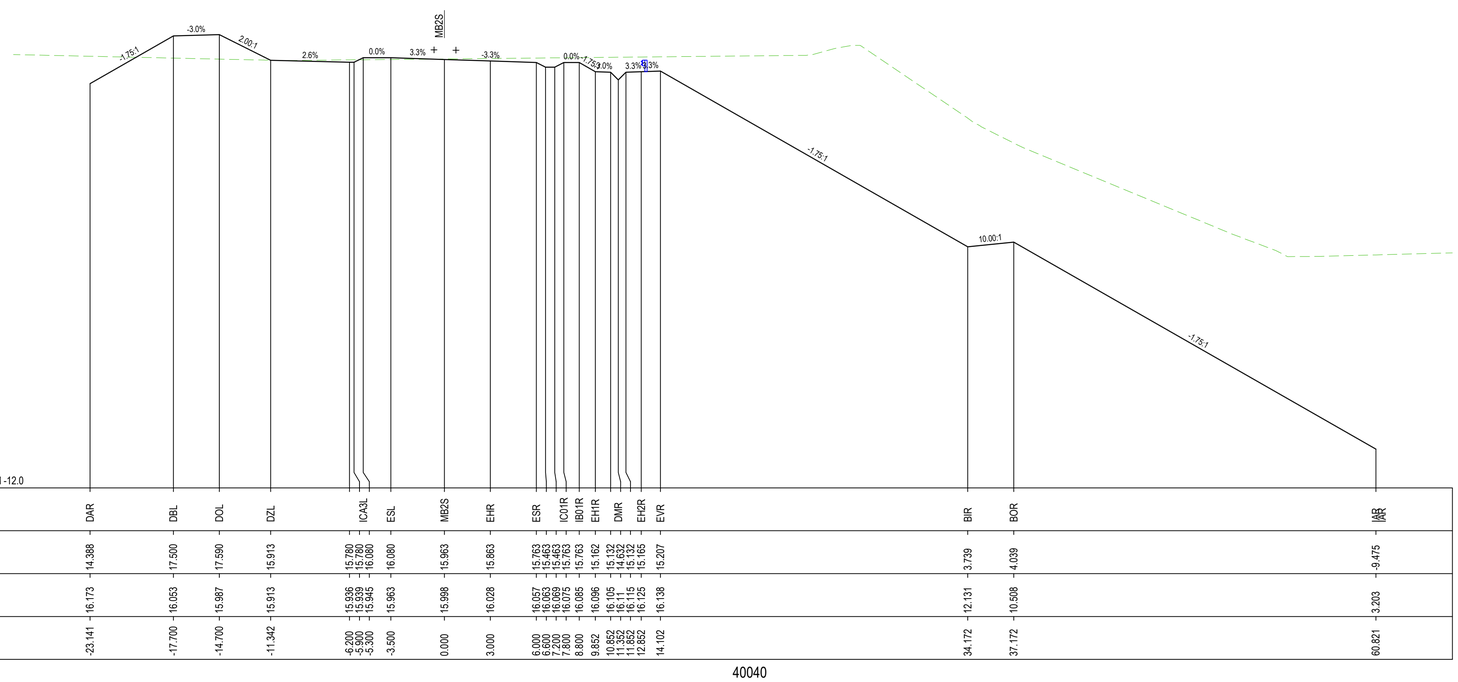
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0031	03

Plot Date: 1/8/2018 4:20:03 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ACAD_PROD\D0029370\N01031-PWD\DRG\GEN\0031.DWG



	DAR	DAR	DBL	DOL	DZL	ICA3L	ESL	MB2S	EHR	ESR	ICO1R	IBO1R	EH1R	DMR	EH2R	EVR	BIR	BOR	IAR
CUT STRINGS																			
DESIGN LEVELS	-13.996	-14.390	-17.500	-17.590	-15.808	-15.585 -15.585 -15.885	-15.885	-15.768	-15.668	-15.588 -15.588 -15.288 -15.568	-15.568	-15.568	-14.784	-14.754 -14.254 -14.754 -14.788		-14.829	-3.816	-4.116	-9.390
EXISTING LEVELS	-15.855	-15.683	-15.739	-15.77	-15.808	-15.86 -15.864 -15.87	-15.89	-15.932	-15.968	-16.004 -16.011 -16.018 -16.026	-16.038		-16.054	-16.066 -16.072 -16.078 -16.09		-16.105	-15.188	-13.012	-3.391
DESIGN OFFSETS	-62.721	-23.141	-17.700	-14.700	-11.135	-6.200 -5.900 -5.300	-3.500	0.000	3.000	6.000 6.600 7.200 7.800	8.800		10.172	11.172 11.672 12.172 13.172		14.422	33.694	36.694	60.330

40060



	DAR	DBL	DOL	DZL	ICA3L	ESL	MB2S	EHR	ESR	ICO1R	IBO1R	EH1R	DMR	EH2R	EVR	BIR	BOR	IAR
CUT STRINGS																		
DESIGN LEVELS	-14.388	-17.500	-17.590	-15.913	-15.780 -15.780 -16.080	-16.080	-15.963	-15.863	-15.763 -15.463 -15.463 -15.763			-15.162	-15.132 -14.632 -15.13	-15.165	-15.207	-3.739	-4.039	-9.475
EXISTING LEVELS	-16.173	-16.053	-15.987	-15.913	-15.936 -15.939 -15.945	-15.963	-15.998	-16.026	-16.057 -16.057 -16.069 -16.075			-16.085	-16.096	-16.105 -16.11 -16.115	-16.125	-16.138	-12.131	-10.508	-3.203
DESIGN OFFSETS	-23.141	-17.700	-14.700	-11.342	-6.200 -5.900 -5.300	-3.500	0.000	3.000	6.000 6.600 7.200 7.800	8.800		9.852	10.852 11.352 11.852 12.852			14.102	34.172	37.172	60.821

40040

2 0 4 8m
SCALE 1:200

LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN

Plot Date: 18/2018 4:20:30 PM Office: AUSYD Filename: C:\PW_WORKSHARE\BY LITTLEA\NZ_PROD\N3093777\N01031-PWD\DRG\GEN\0032.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

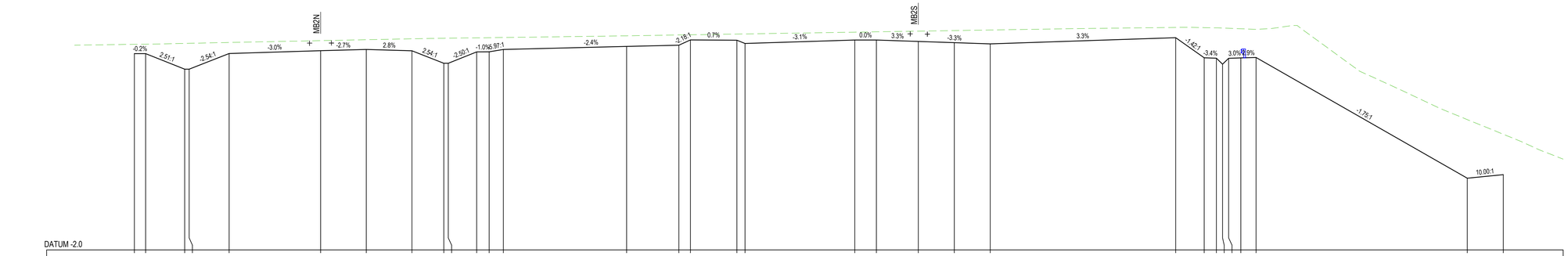
PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

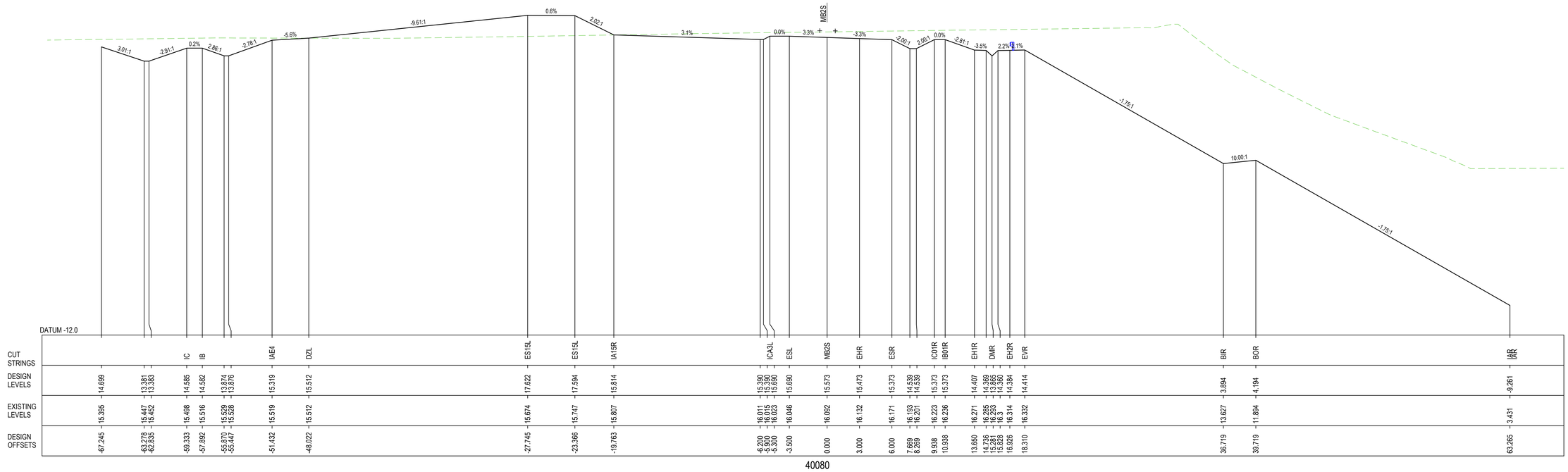
TITLE: BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 5 OF 19

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0032	03

LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN





SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 6 OF 19

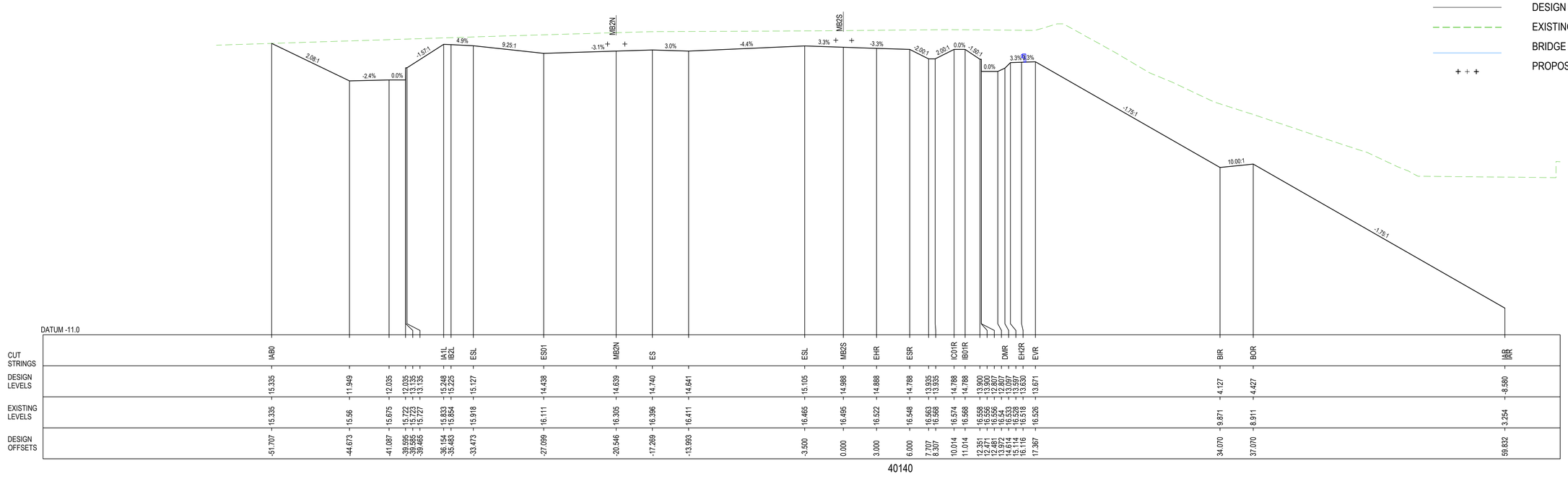
DRAWING No. N01031 – PWD – DRG – GEN – 0033 – 03

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0033	03

Plot Date: 1/8/2018 4:21:06 PM Office: AUSYD Filename: C:\PW_WORKSA\ALEX.LITTLE\ACAD_PROJ\DOC\2827770\M01031-PWD-DRG-GEN-0033.DWG

LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



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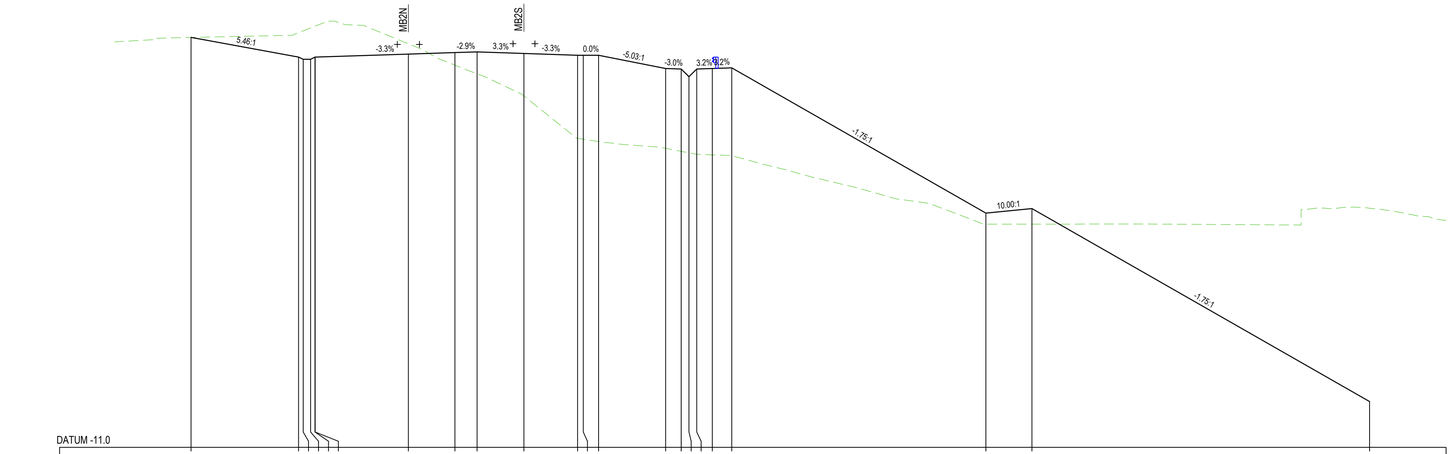
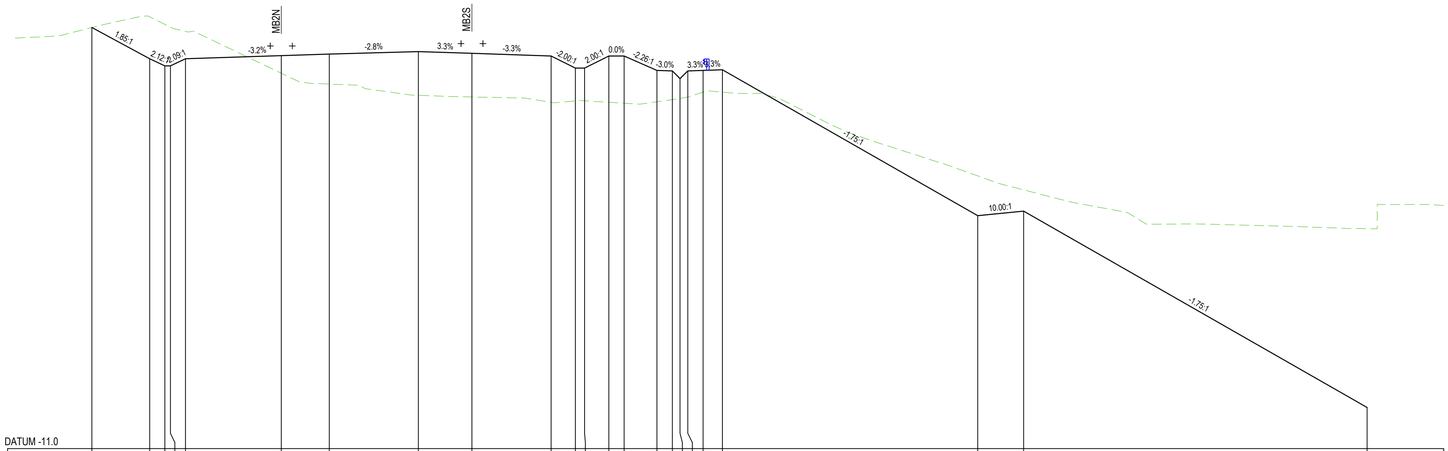
LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



CUT STRINGS	DESIGN LEVELS	EXISTING LEVELS	DESIGN OFFSETS
DATUM -11.0			
IAL	-15.757	-15.757	-21.733
ICL	-14.710	-16.069	-14.714
ICR	-14.371	-16.067	-14.371
ES01	-14.333	-16.376	-13.934
ES02	-14.471	-16.491	-13.843
ES03	-14.470	-16.496	-13.800
MB2N	-14.671	-15.342	-7.548
ES	-14.771	-13.946	-4.507
	-14.813	-13.38	-3.056
MB2S	-14.711	-11.935	0.000
ESR	-14.595	-9.169	3.500
ICOTR	-14.595	-9.112	3.874
IBO1R	-14.595	-8.959	4.874
EH1R	-13.725	-8.519	9.253
DMR	-13.694	-8.321	10.268
	-13.694	-8.222	10.776
EH2R	-13.727	-8.088	12.299
EVR	-13.768	-8.038	13.568
BIR	-4.284	-3.565	30.165
BOR	-4.584	-3.568	33.165
IAR	-8.014	-4.6	55.212

40180



CUT STRINGS	DESIGN LEVELS	EXISTING LEVELS	DESIGN OFFSETS
DATUM -11.0			
IA	-16.488	-16.488	-24.819
IC	-14.453	-17.192	-21.045
ES01	-13.883	-16.695	-20.048
	-13.994	-16.55	-19.088
	-14.455	-16.24	-18.708
MB2N	-14.656	-13.506	-12.448
ES	-14.756	-12.798	-9.319
ESL	-14.921	-12.065	-3.500
MB2S	-14.805	-11.956	0.000
ESR	-14.633	-11.602	5.167
	-13.839	-11.701	6.753
	-13.839	-11.708	7.353
ICO1R	-14.633	-11.61	8.940
IBO1R	-14.633	-11.549	9.940
EH1R	-13.686	-11.643	12.083
DMR	-13.656	-11.784	13.088
	-13.156	-11.866	13.590
EH2R	-13.155	-11.905	14.092
EVR	-13.689	-12.274	15.097
	-13.730	-12.27	16.353
BIR	-4.205	-6.805	33.022
BOR	-4.505	-5.892	36.022
IAR	-8.311	-3.358	58.450

40160

2 0 4 8m
SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

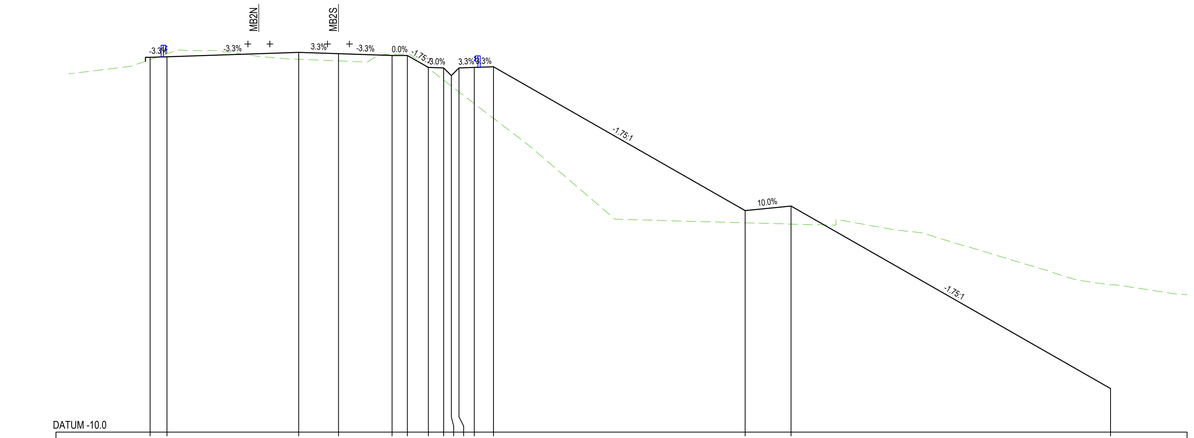
TITLE: BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 8 OF 19

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0035	03

Rel Date: 1/8/2018 4:22:06 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ_PROD\D0026370\N01031-PWD\DRG\GEN\0035.DWG

LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



DATUM -10.0

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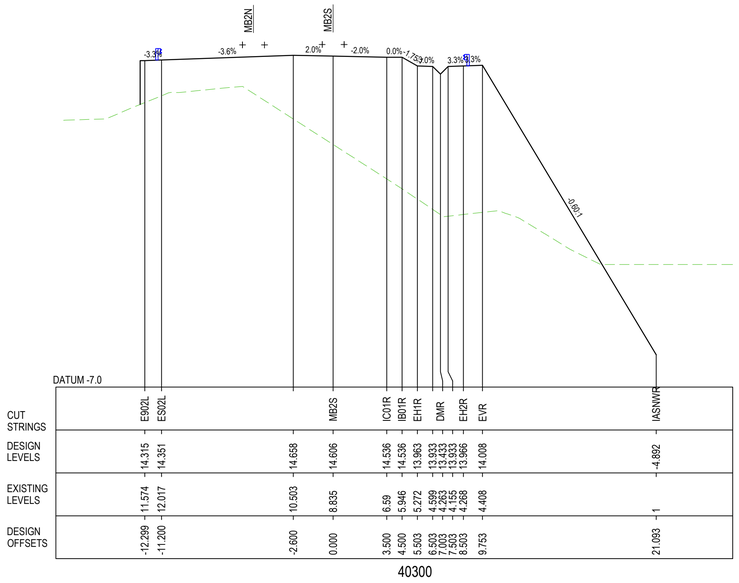
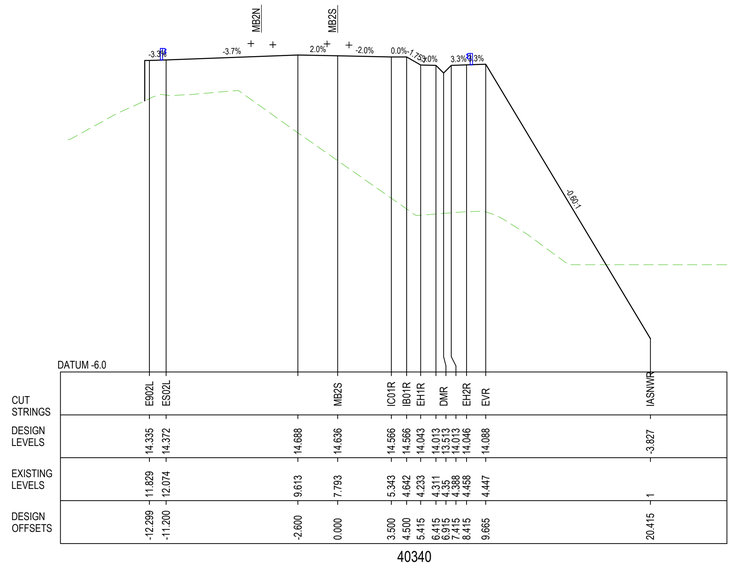
LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



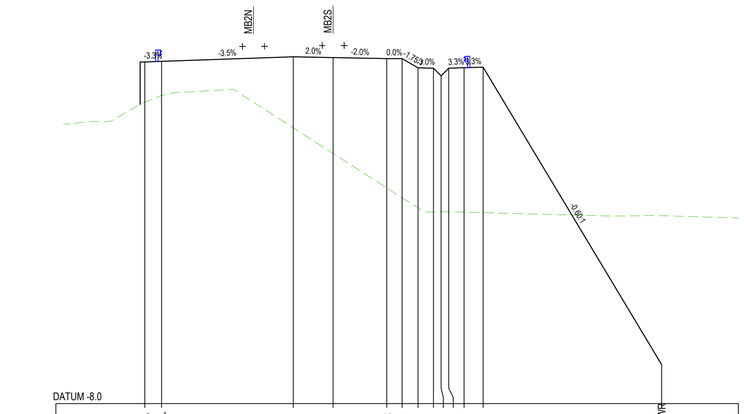
CUT STRINGS	E902L	ES02L		MB2S	IC01R	IB01R	EH1R	DMR	EH2R	EVR	IASNWR
DESIGN LEVELS	14.315	14.351		14.658	14.606	14.536	14.536	13.963	13.933	13.913	13.966	14.008	-4.892
EXISTING LEVELS	11.574	12.017		10.503	8.835	6.59	5.946	5.272	4.928	4.283	4.155	4.268	4.408	-1
DESIGN OFFSETS	-12.299	-11.200		-2.600	0.000	3.500	4.500	5.503	6.203	7.003	7.503	8.503	9.753	21.093

40300



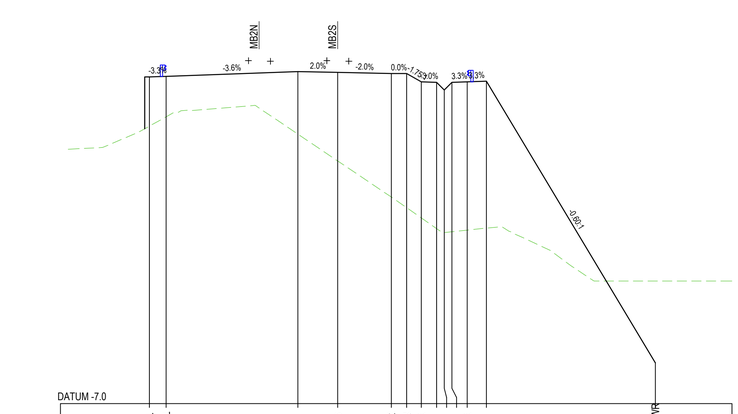
CUT STRINGS	E902L	ES02L		MB2S	IC01R	IB01R	EH1R	DMR	EH2R	EVR	IASNWR
DESIGN LEVELS	14.335	14.372		14.688	14.636	14.566	14.566	14.043	14.013	13.513	14.013	14.046	14.088	-3.827
EXISTING LEVELS	11.829	12.074		9.613	7.793	5.343	4.642	4.233	4.311	4.35	4.388	4.448	4.447	-1
DESIGN OFFSETS	-12.299	-11.200		-2.600	0.000	3.500	4.500	5.415	6.415	6.915	7.415	8.415	9.665	20.415

40340



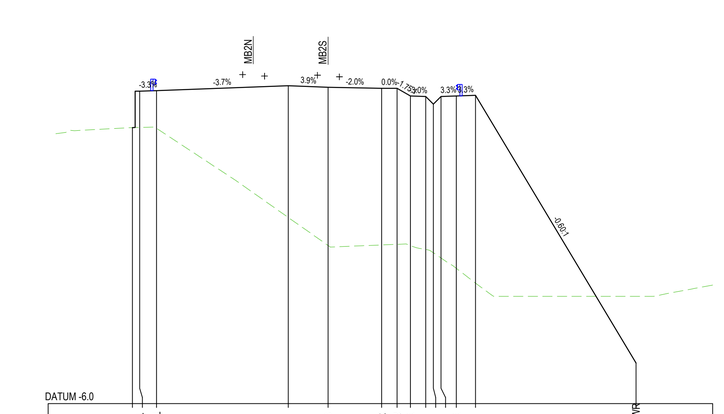
CUT STRINGS	E902L	ES02L		MB2S	IC01R	IB01R	EH1R	DMR	EH2R	EVR	IASNWR
DESIGN LEVELS	14.305	14.341		14.643	14.591	14.521	14.521	13.923	13.893	13.883	13.926	13.968	-5.459
EXISTING LEVELS	11.671	12.112		10.003	8.331	6.078	5.435	4.786	4.521	4.526	4.499	4.466	4.266	-1
DESIGN OFFSETS	-12.299	-11.200		-2.600	0.000	3.500	4.500	5.546	6.546	7.546	8.546	9.796	21.452

40280



CUT STRINGS	E902L	ES02L		MB2S	IC01R	IB01R	EH1R	DMR	EH2R	EVR	IASNWR
DESIGN LEVELS	14.325	14.361		14.673	14.621	14.551	14.551	14.003	13.973	13.473	13.973	14.007	14.048	-4.338
EXISTING LEVELS	11.112	11.725		10.592	8.842	6.485	5.793	5.122	4.422	4.165	4.218	4.326	4.459	1
DESIGN OFFSETS	-12.299	-11.200		-2.600	0.000	3.500	4.500	5.458	6.458	6.958	7.458	8.458	9.708	20.741

40320



CUT STRINGS	E902L	ES02L		MB2S	IC01R	IB01R	EH1R	DMR	EH2R	EVR	IASNWR
DESIGN LEVELS	12.018	14.395	14.432	14.753	14.651	14.581	14.581	14.083	14.053	13.553	14.053	14.086	14.128	-3.346
EXISTING LEVELS	12.019	12.032	11.97	6.155	4.324	4.36	4.4	4.319	4.057	3.845	3.507	2.832	1.87	1
DESIGN OFFSETS	-12.777	-12.299	-11.200	-2.600	0.000	3.500	4.500	5.373	6.373	6.873	7.373	8.373	9.623	20.107

40360

2 0 4 8m
SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

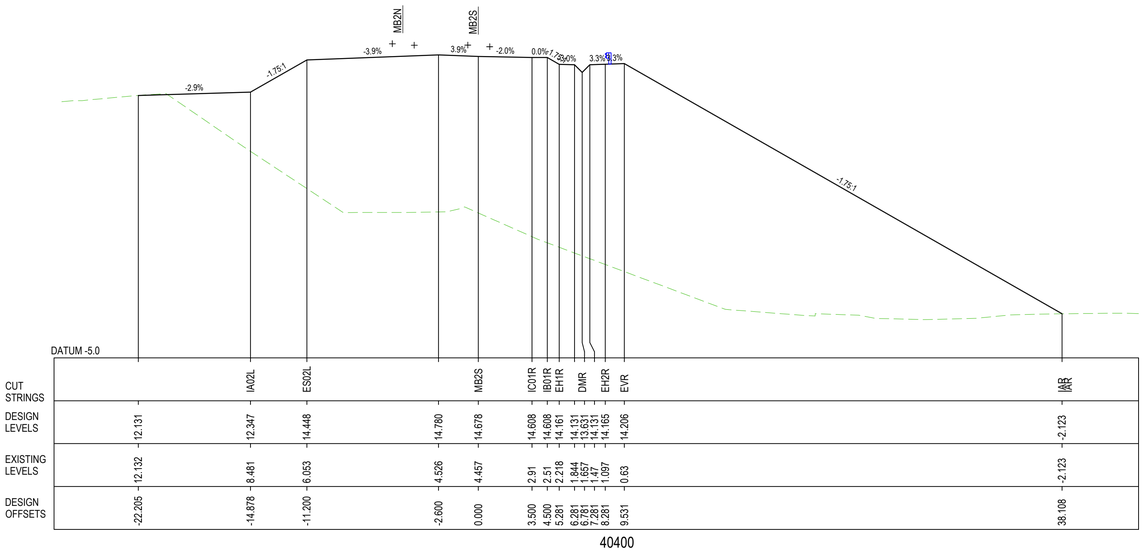
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 10 OF 19

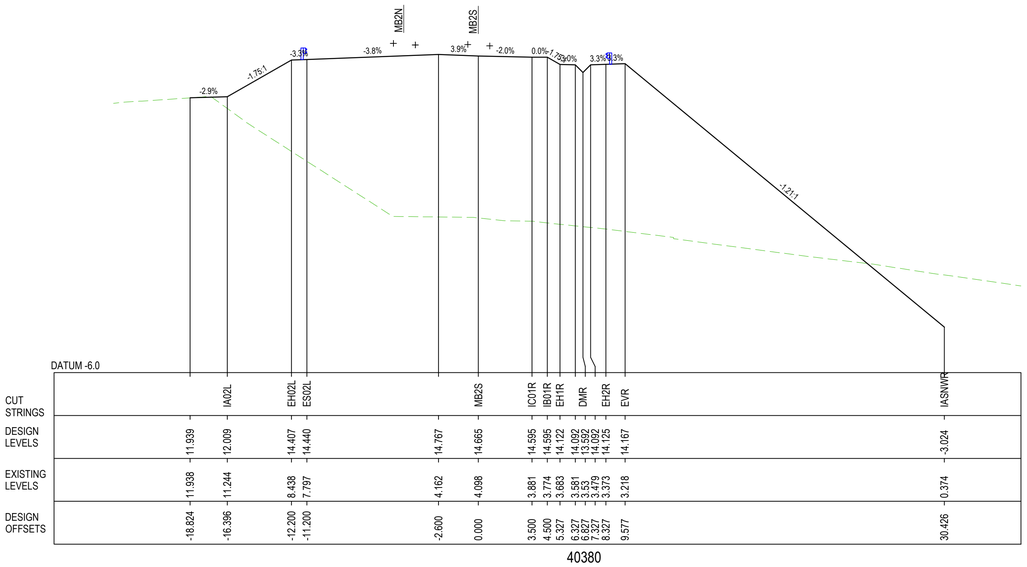
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0037	03

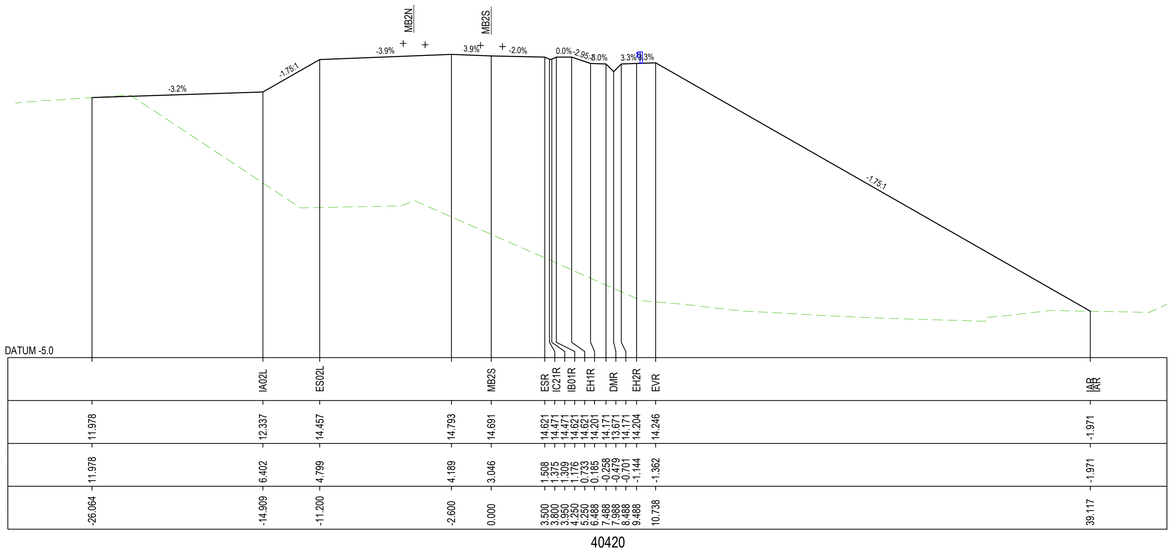
Plot Date: 18/2/19 4:23:03 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\AZ_PROD\D0026370\N01031-PWD\DRG\GEN\0037.DWG

LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN







SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE

DESIGNED: M.SAKIB

CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED: DATE 31.07.18

M.SAKIB

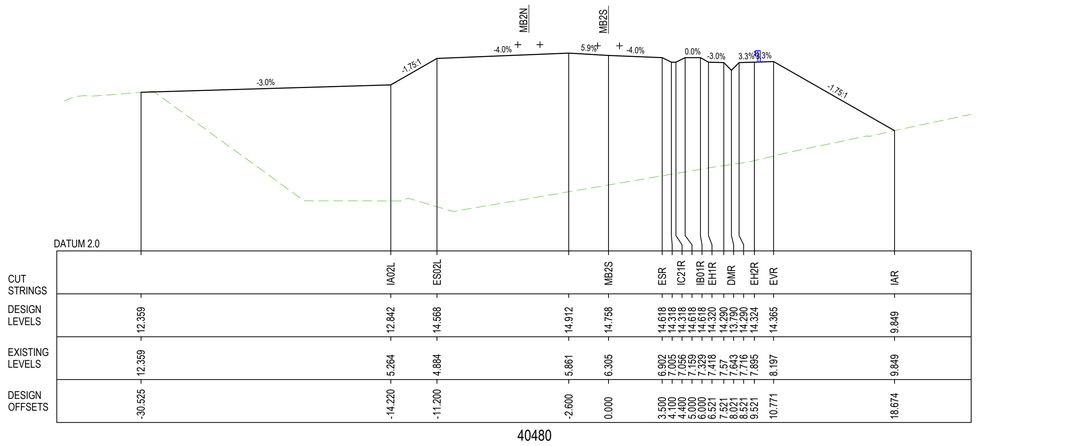
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 11 OF 19

DRAWING No. N01031 – PWD – DRG – GEN – 0038 – 02

(PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV)

Plot Date: 1/8/2018 4:23:29 PM Office: AUSYD Filename: C:\PW_WORKABLE\EX.LITTLEJ\ACPROJ\D0302577\W0183.PWD.DRG-GEN-0038.DWG



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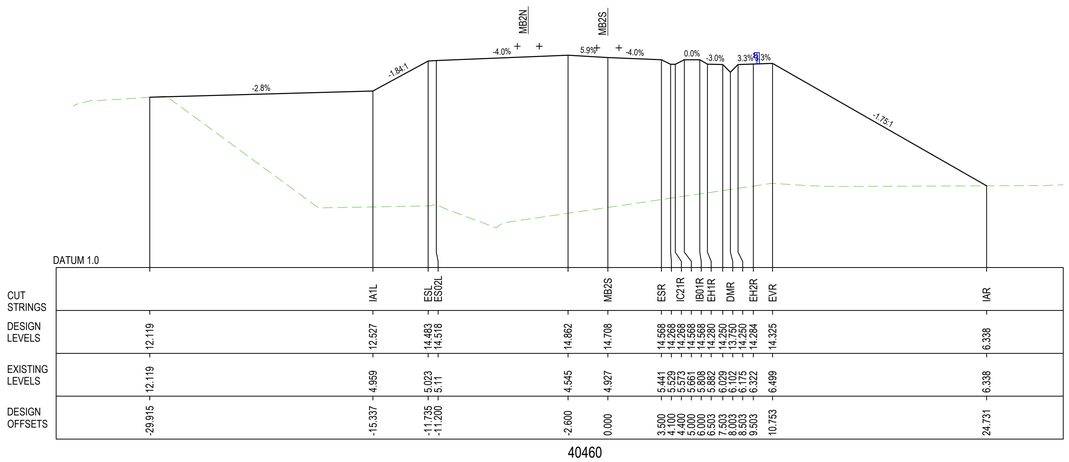

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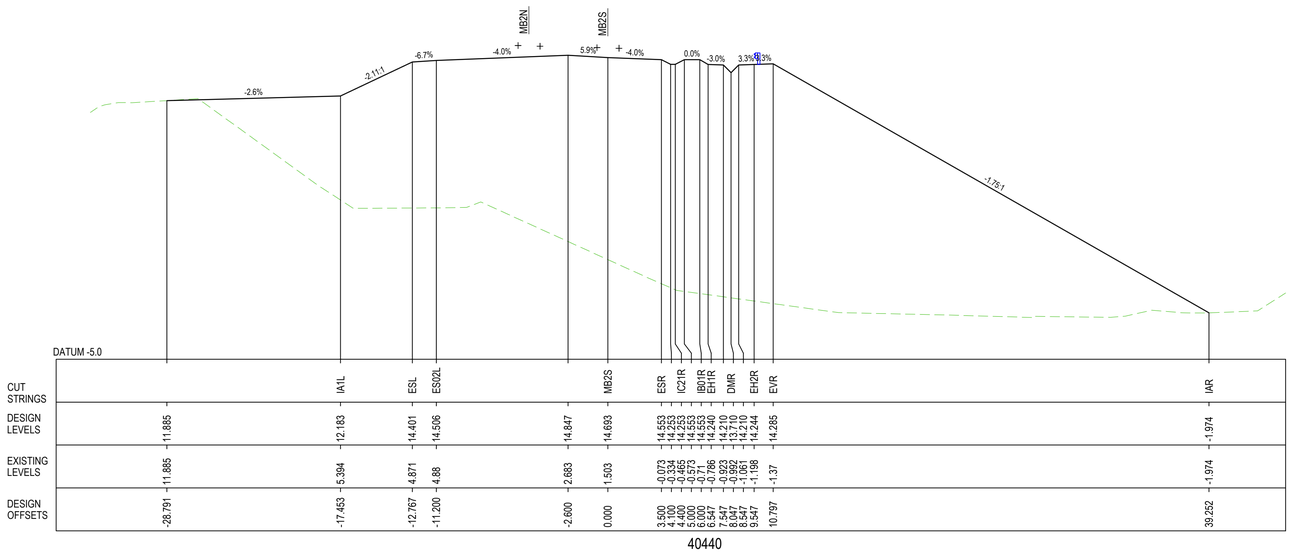

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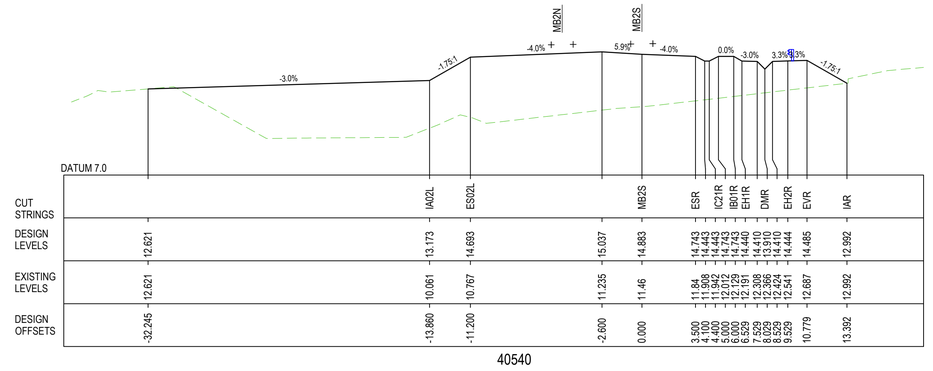

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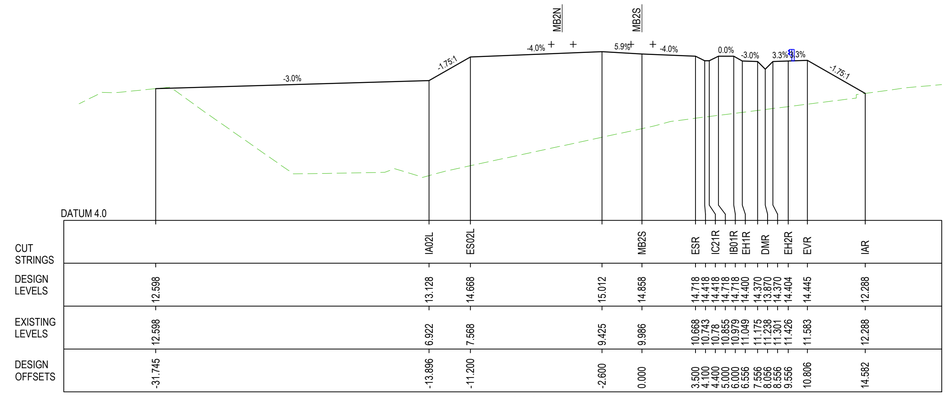

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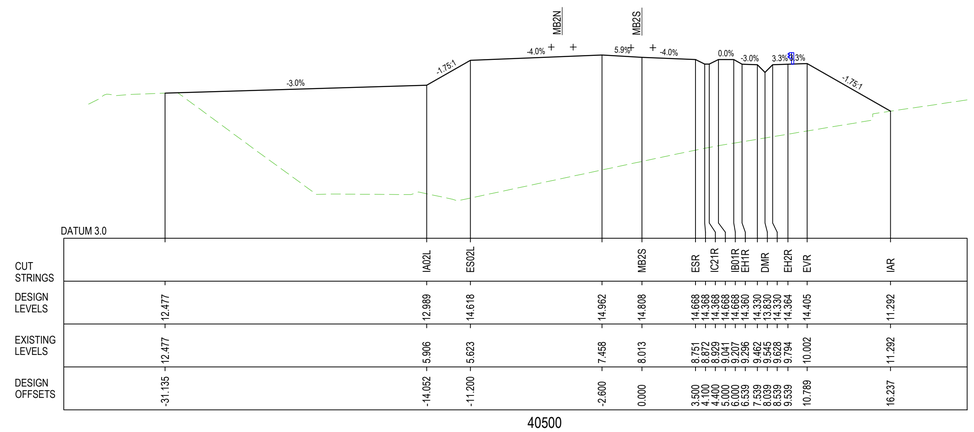

40500

LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN

SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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www.aurecongroup.com

CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

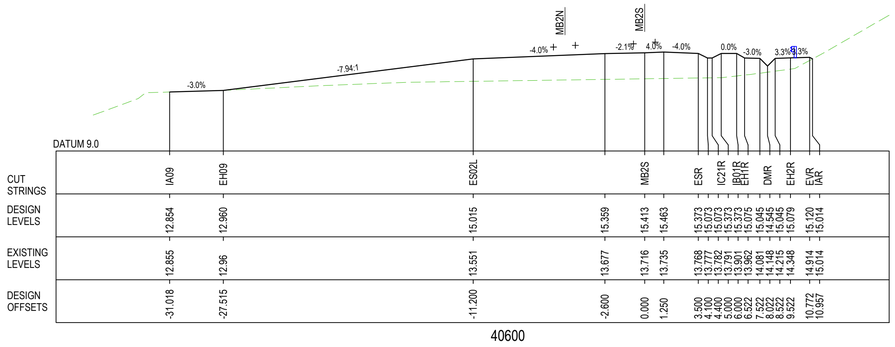
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 12 OF 19

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0039	03

Plot Date: 18/07/18 4:25:50 PM Office: AUSYD Filename: C:\PW_WORKSHARE\CY\LITTLEANZ_PROD\D0283770\N01031-PWD-DRG-GEN-0039.DWG

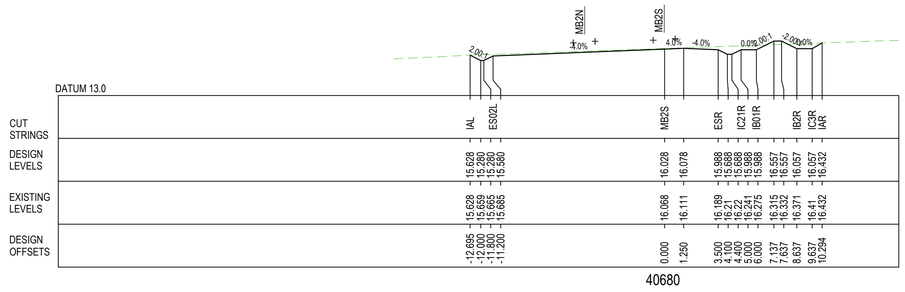
LEGEND

- DESIGN SURFACE (TOP OF CAPPING)
- EXISTING SURFACE
- BRIDGE STRUCTURE
- + + + PROPOSED RAIL DESIGN



	IA09	EH09	ES02L	MB2S	ESR	IC21R	IB01R EH1R	DMR	EH2R	EVR IAR
CUT STRINGS										
DESIGN LEVELS	12.854	12.960	15.015	15.359	15.413	15.463	15.373	15.075	15.045	15.079	15.120 15.014
EXISTING LEVELS	12.855	12.96	13.551	13.677	13.716	13.735	13.768 13.777 13.782 13.791 13.901 13.962 14.081 14.148 14.215 14.348				14.914 15.014
DESIGN OFFSETS	-31.018	-27.515	-11.200	-2.600	0.000	1.250	3.500 4.100 4.400 5.000 6.000 6.522 7.522 8.022 8.522 9.522				10.772 10.957

40600



	IAL	ES02L	MB2S	ESR	IC21R	IB01R	IB2R	IOR IAR
CUT STRINGS								
DESIGN LEVELS	15.628	15.280 15.260 15.260 15.880	16.028	16.078	15.988 15.688 15.988 15.988		16.557 16.557 16.057 16.432	
EXISTING LEVELS	15.628	15.659 15.665 15.665 16.685	16.068	16.111	16.189 16.21 16.241 16.275		16.315 16.332 16.371 16.41 16.432	
DESIGN OFFSETS	-12.695	-12.000 -11.500 -11.200	0.000	1.250	3.500 4.100 5.000 6.000		7.137 7.637 8.637 9.637 10.294	

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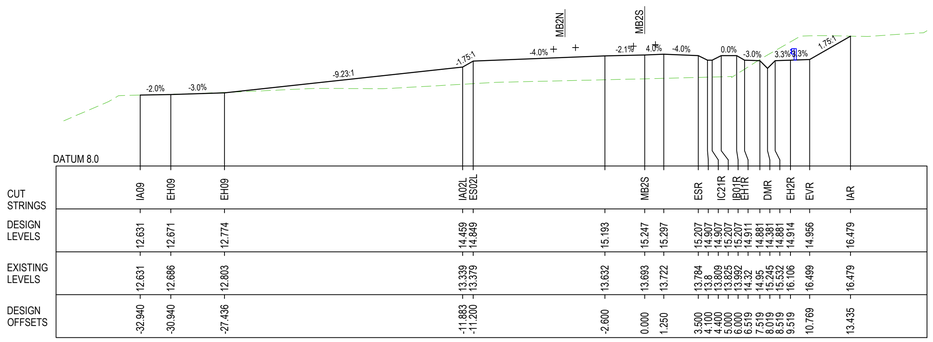

	IA09	EH09	EH09	IA02L ES02L	MB2S	ESR	IC21R	IB01R EH1R	DMR	EH2R	EVR	IAR
CUT STRINGS												
DESIGN LEVELS	12.631	12.671	12.774	14.459 14.849	15.193	15.247	15.297	15.207 14.907 14.907 15.207 14.911	14.881 14.881 14.881	14.914	14.956	16.479
EXISTING LEVELS	12.631	12.686	12.803	13.339 13.379	13.632	13.693	13.722	13.784 13.8 13.869 13.962 14.32	14.505 14.512 15.512	16.106	16.499	16.479
DESIGN OFFSETS	-32.940	-30.940	-27.436	-11.883 -11.200	-2.600	0.000	1.250	3.500 4.100 4.400 5.000 6.000 6.519 7.519 8.019 8.519 9.519			10.769	13.435

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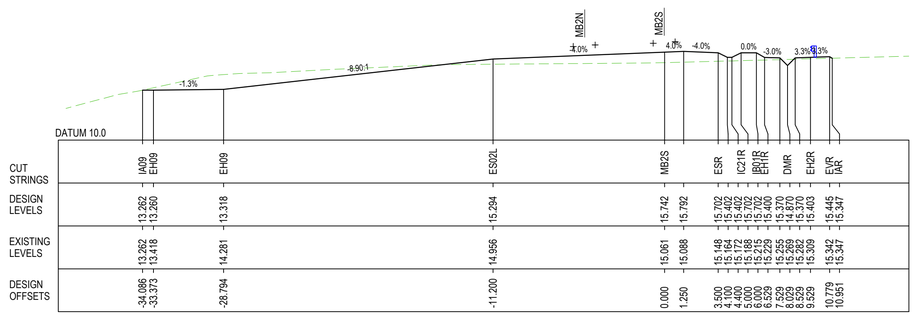

	IA09 EH09	EH09	ES02L	MB2S	ESR	IC21R	IB01R EH1R	DMR	EH2R	EVR IAR
CUT STRINGS										
DESIGN LEVELS	13.262 13.260	13.318	15.294	15.742	15.792	15.702 15.402 15.702 15.702 15.702		15.370 14.870 15.370 15.403		15.445 15.347
EXISTING LEVELS	13.262 13.418	14.281	14.956	15.061	15.088	15.148 15.172 15.188 15.215 15.238		15.255 15.269 15.282 15.309		15.342 15.347
DESIGN OFFSETS	-34.086 -33.373	-28.794	-11.200	0.000	1.250	3.500 4.100 5.000 6.000 6.529 7.529 8.029 8.529 9.529				10.779 10.951

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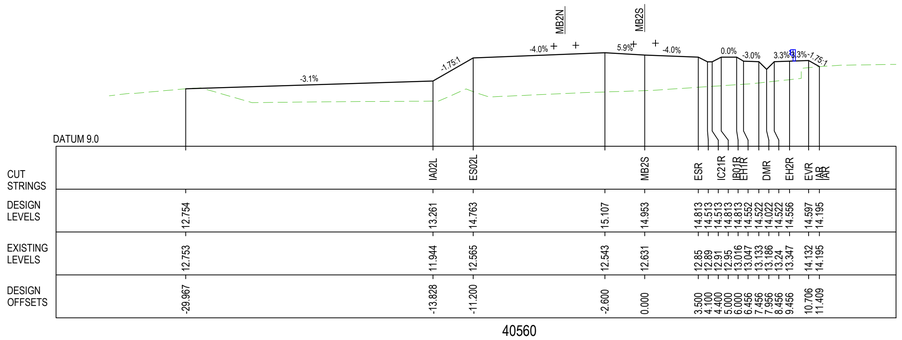

	IA02L	ES02L	MB2S	ESR	IC21R	IB01R EH1R	DMR	EH2R	EVR	IAR IAR
CUT STRINGS										
DESIGN LEVELS	12.754	13.261	14.763	15.107	14.953	14.813 14.513 14.513 14.813 14.552	14.522 14.522 14.522	14.556	14.597	14.195
EXISTING LEVELS	12.753	11.944	12.565	12.543	12.631	12.85 12.89 12.91 13.02 13.016 13.047 13.133 13.186 13.24	13.347		14.132	14.195
DESIGN OFFSETS	-29.967	-13.828	-11.200	-2.600	0.000	3.500 4.100 4.400 5.000 6.000 6.456 7.456 7.956 8.456 9.456			10.706	11.409

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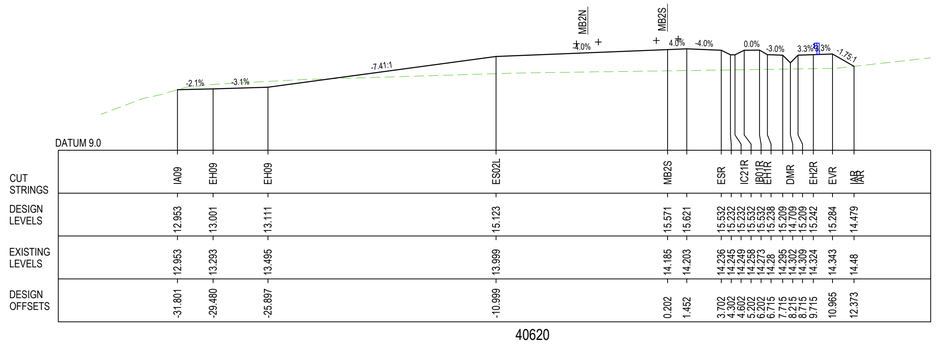

	IA09	EH09	EH09	ES02L	MB2S	ESR	IC21R	IB01R EH1R	DMR	EH2R	EVR	IAR
CUT STRINGS												
DESIGN LEVELS	12.953	13.001	13.111	15.123	15.571	15.621	15.532 15.232 15.532 15.532 15.238 15.709 14.709 15.209 15.242				15.284	14.479
EXISTING LEVELS	12.953	13.293	13.495	13.999	14.185	14.203	14.236 14.245 14.258 14.273 14.28 14.302 14.302 14.309 14.324				14.343	14.48
DESIGN OFFSETS	-31.801	-29.460	-25.897	-10.999	0.202	1.452	3.702 4.302 4.602 5.202 6.202 6.715 7.715 8.215 9.715				10.965	12.373

40620

2 0 4 8m
SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 13 OF 19

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0040	03

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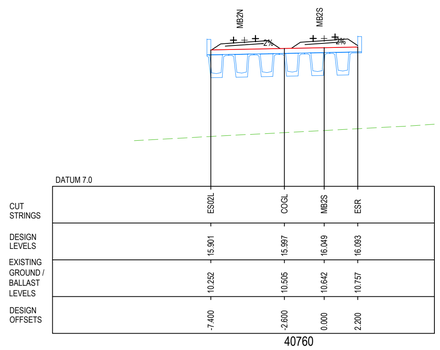

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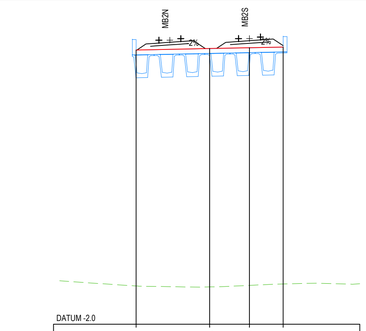

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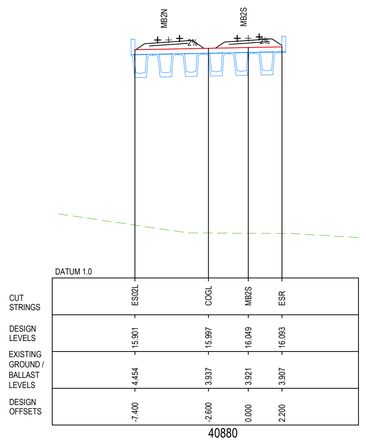

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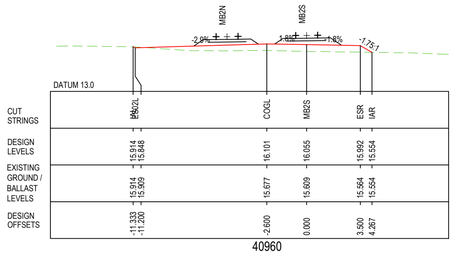

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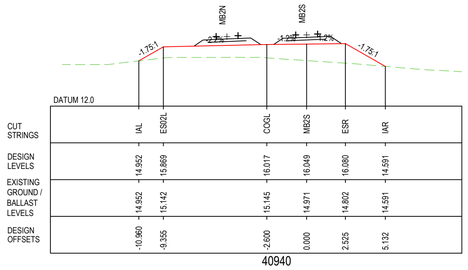

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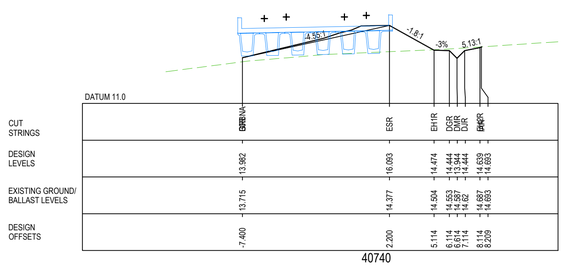

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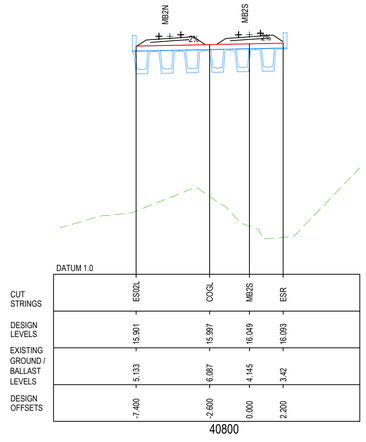

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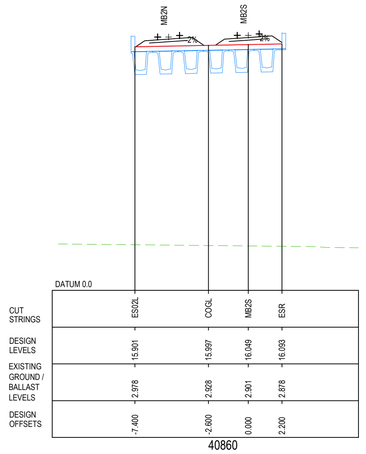

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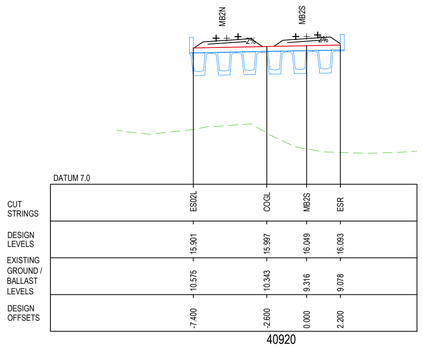

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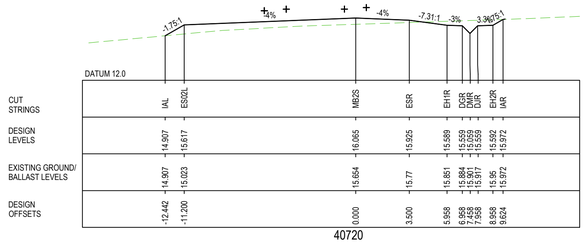

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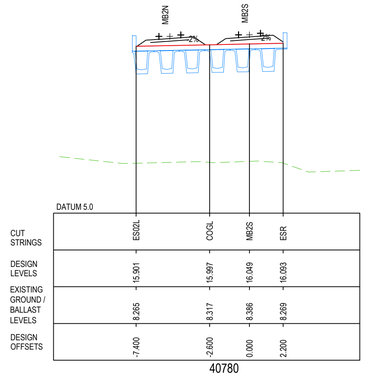

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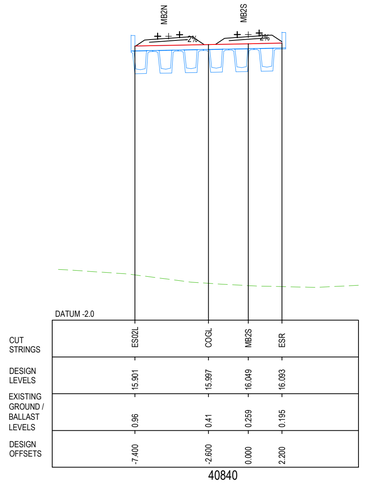

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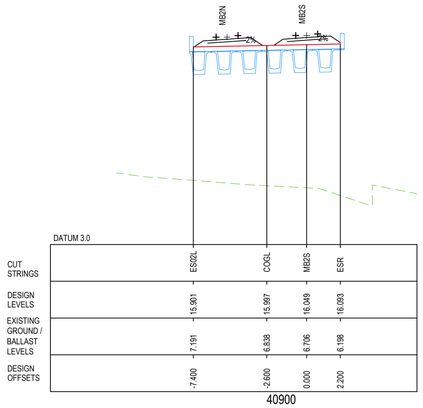

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

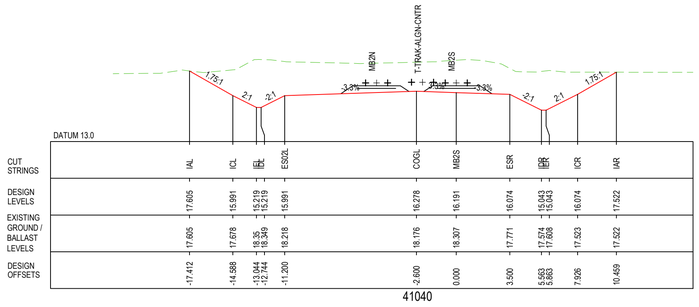
SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 14 OF 19

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0041	01



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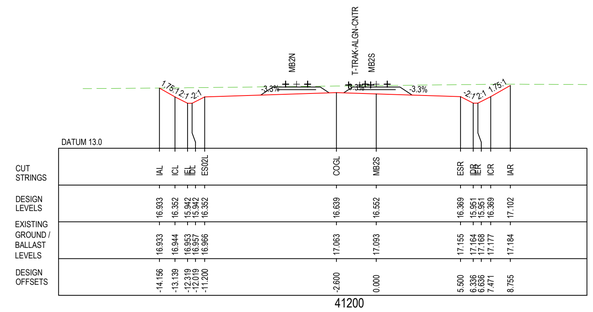

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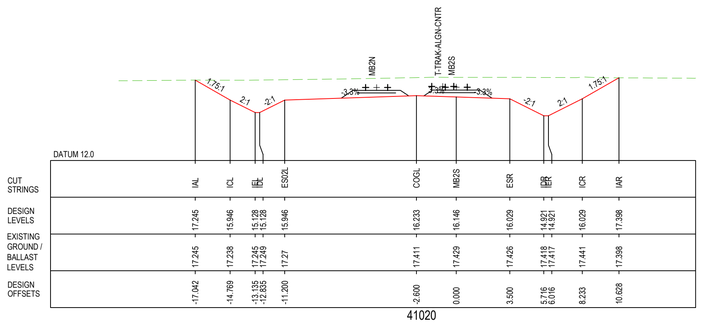

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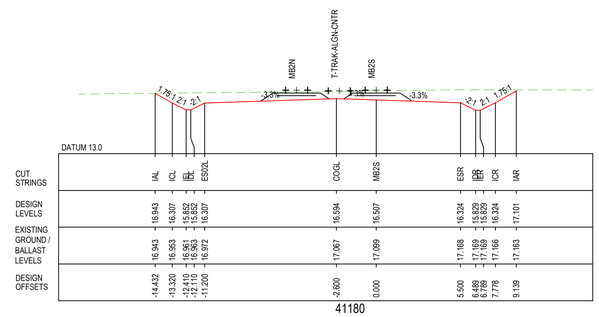

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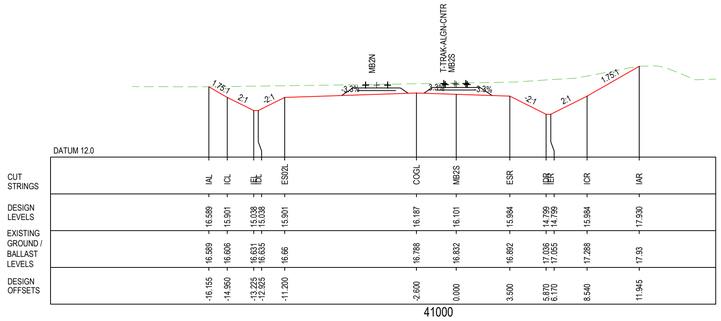

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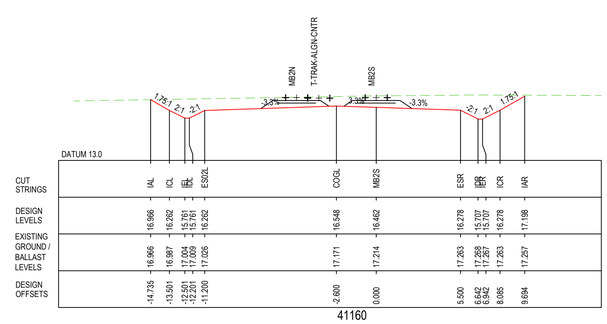

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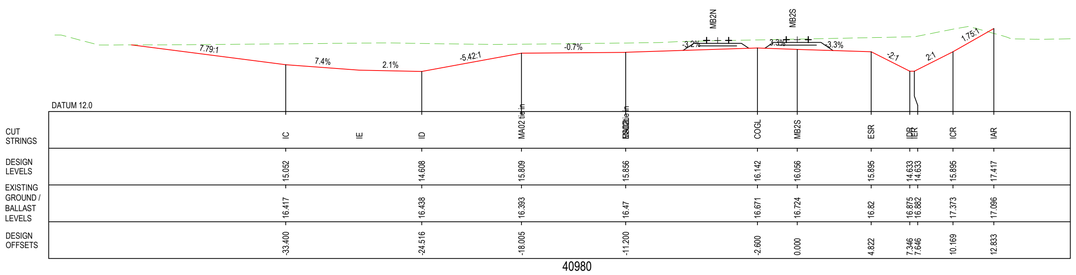

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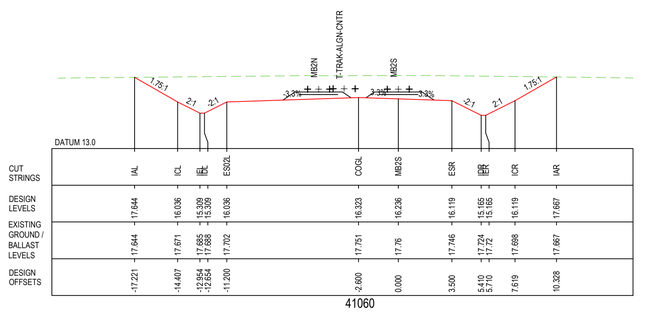

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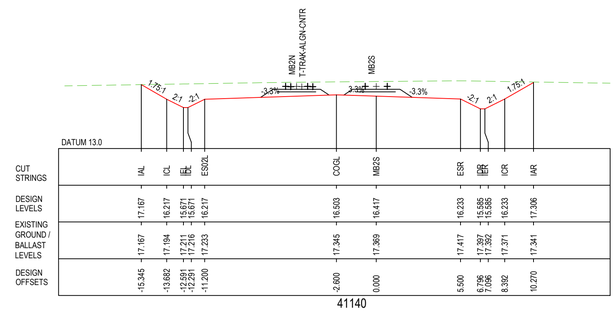

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ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 15 OF 19

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0042	01

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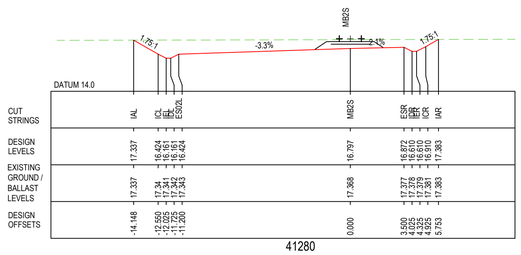

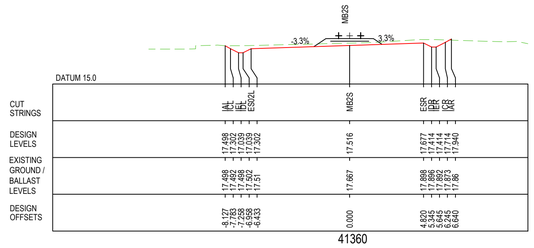

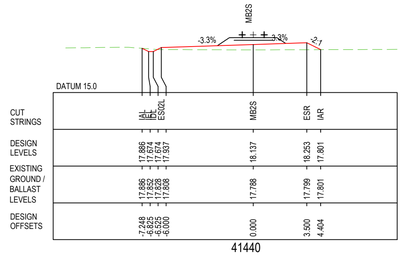

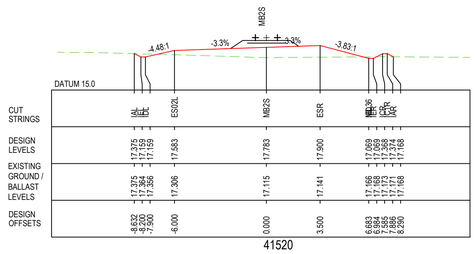

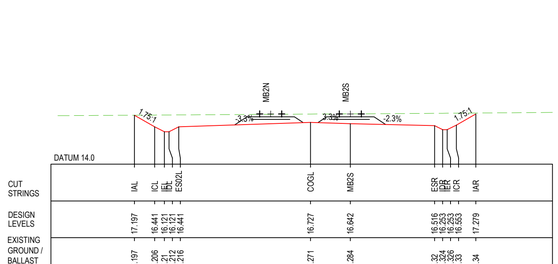

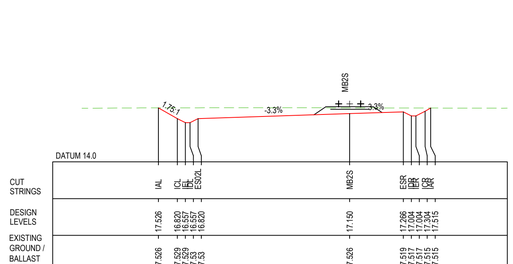

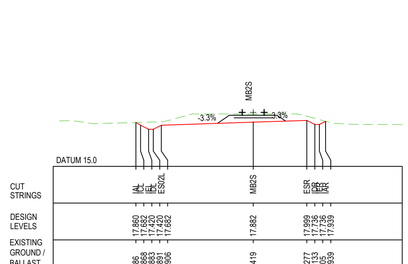

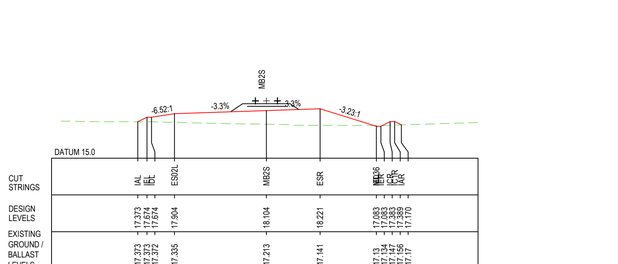

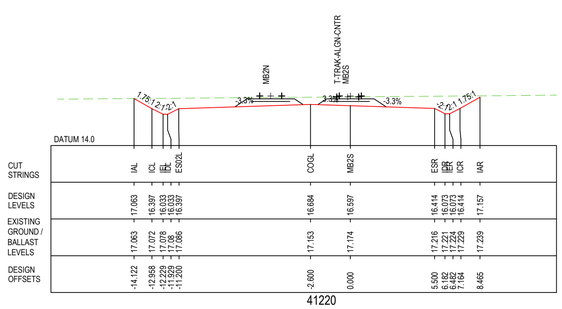

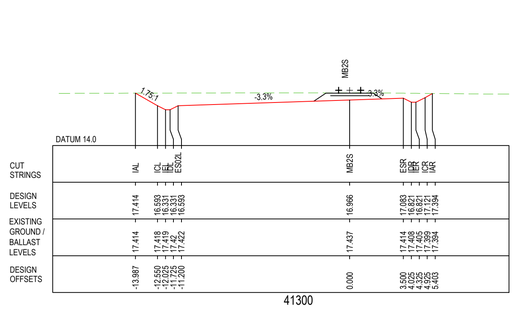

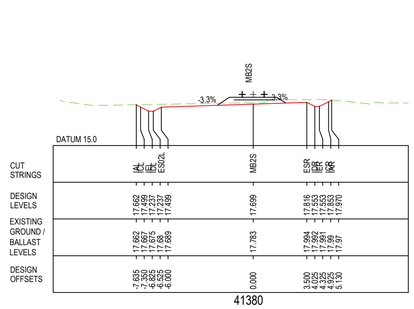

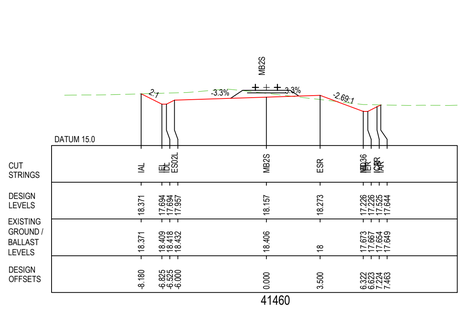

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ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT
CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

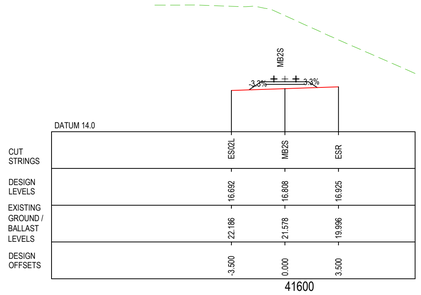
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 16 OF 19

DRAWING No. N01031 – PWD – DRG – GEN – 0043 – 01
(PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV)

Rev Date: 18/2/18 4:28:14 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ACAD_PROD\D0026370\TWI0101-PWD\DRG\GEN\0043.DWG



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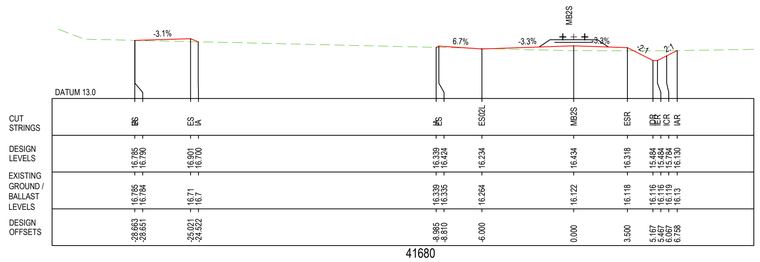

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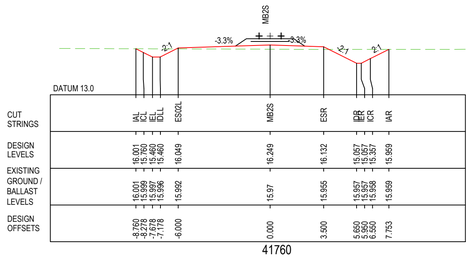

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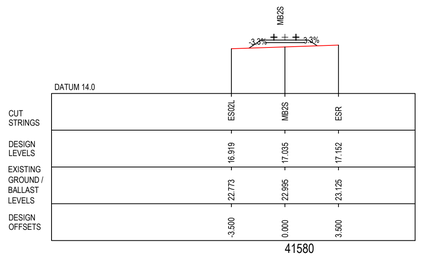

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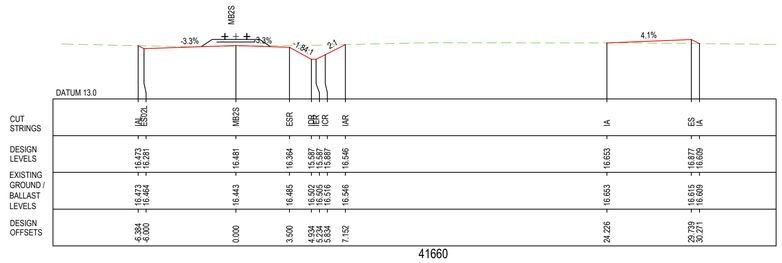

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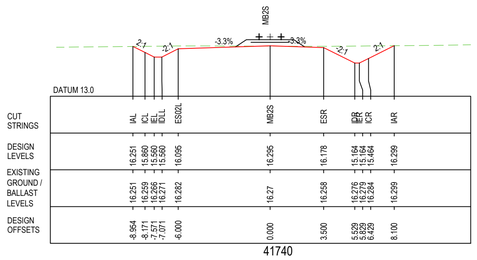

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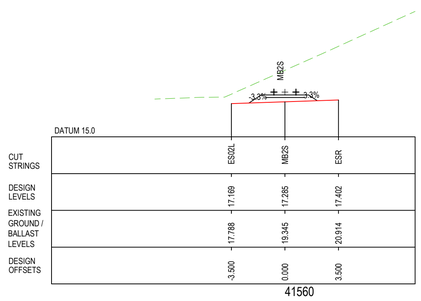

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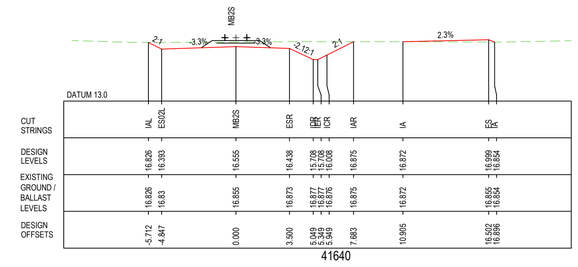

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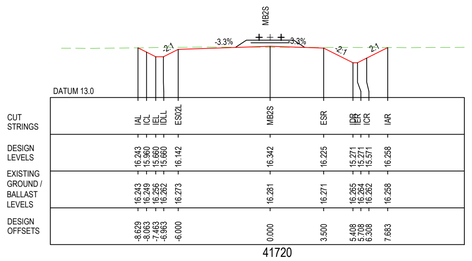

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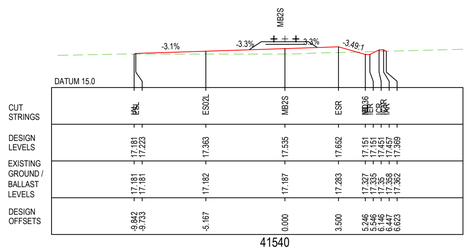

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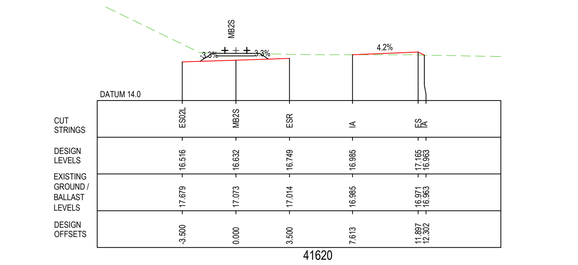

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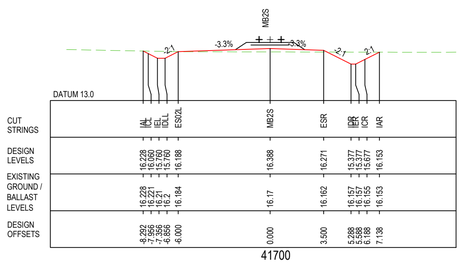

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 17 OF 19

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0044	01

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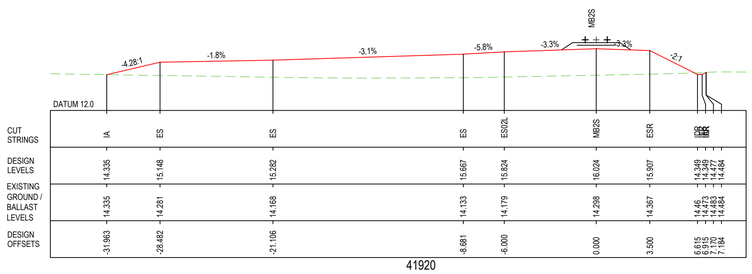

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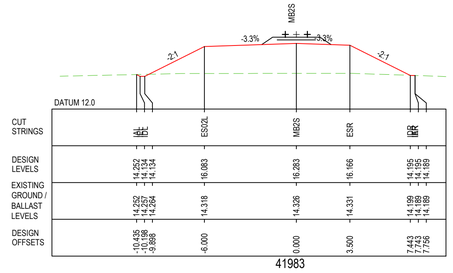

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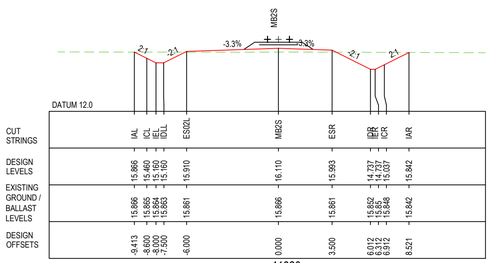

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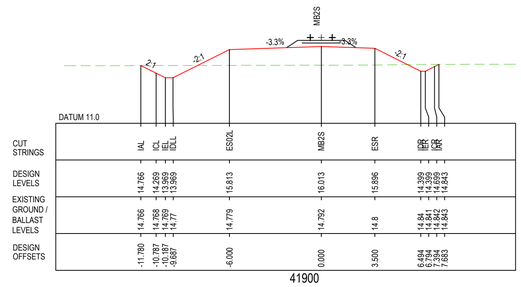

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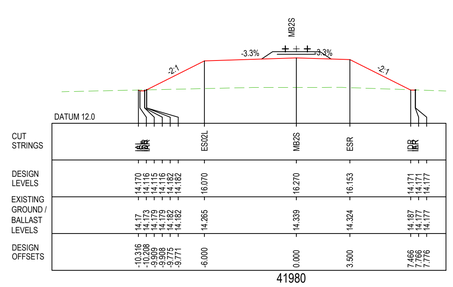

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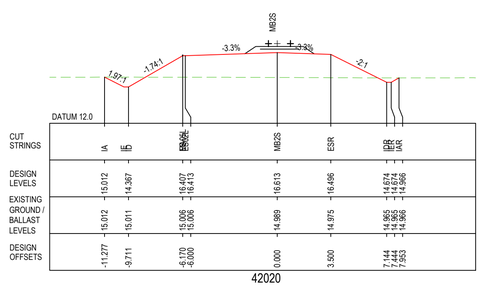

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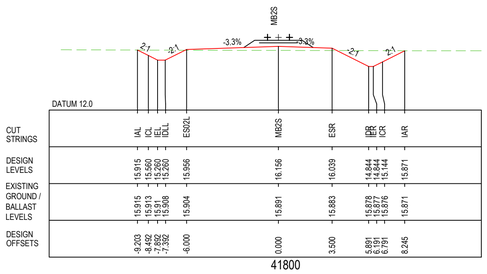

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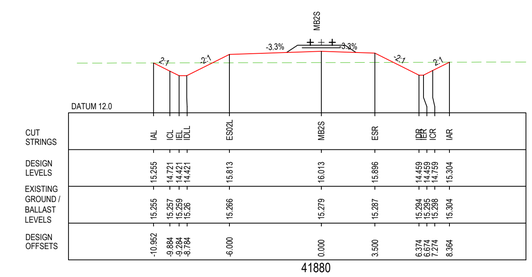

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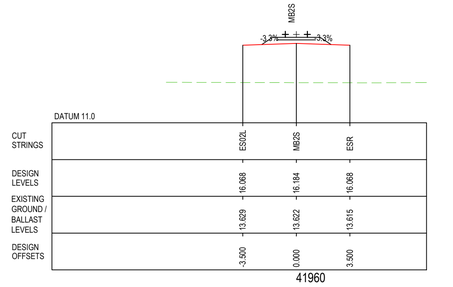

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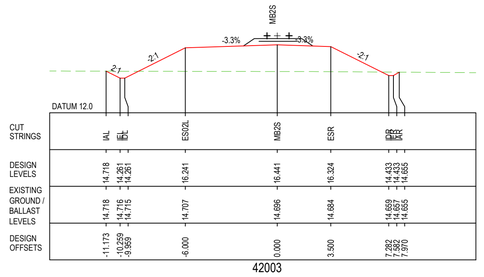

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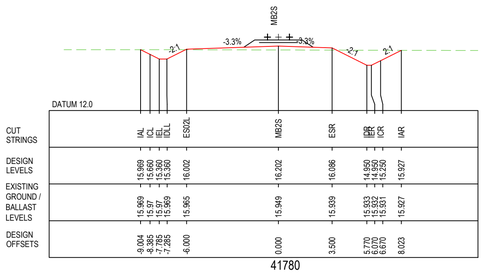

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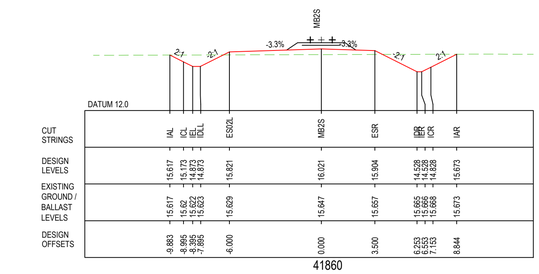

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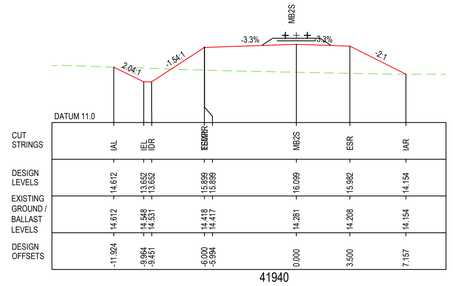

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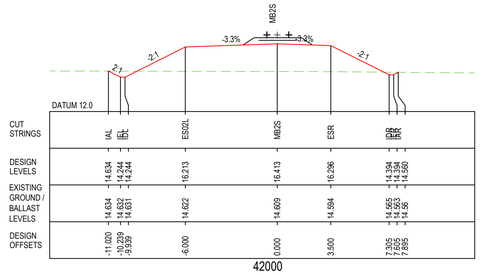

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

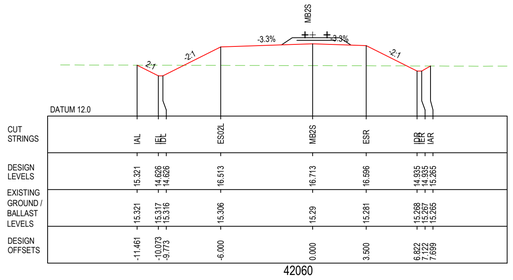
ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 18 OF 19

DRAWING No. N01031 – PWD – DRG – GEN – 0045 – 01

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0045	01



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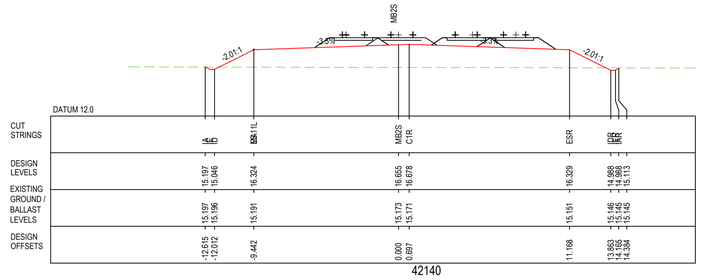

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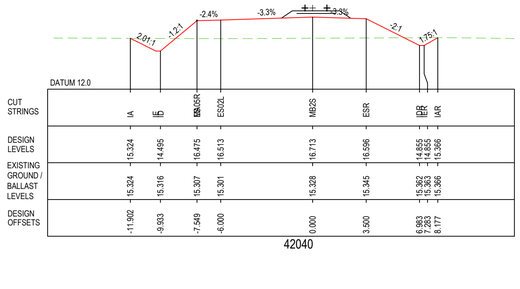

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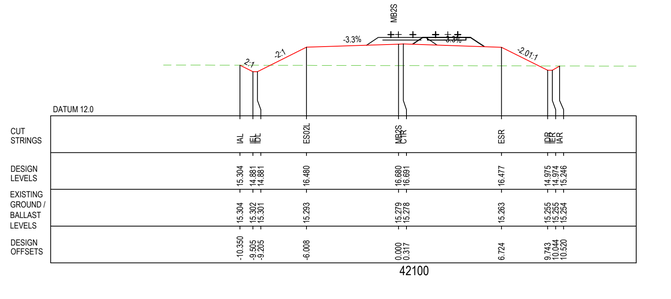

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SCALE 1:200

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

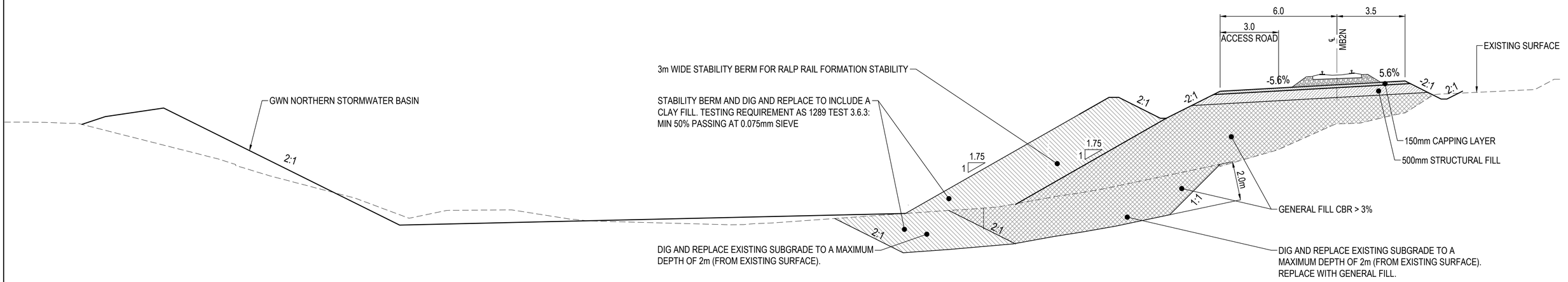
DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION CROSS SECTIONS SHEET 19 OF 19

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0046	01

Plot Date: 1/8/2018 4:30:41 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\AZ.PROD\20\09277\DWG\01-PWD-DRG-GEN-0046.DWG



SECTION A (GEN-0011 0112)
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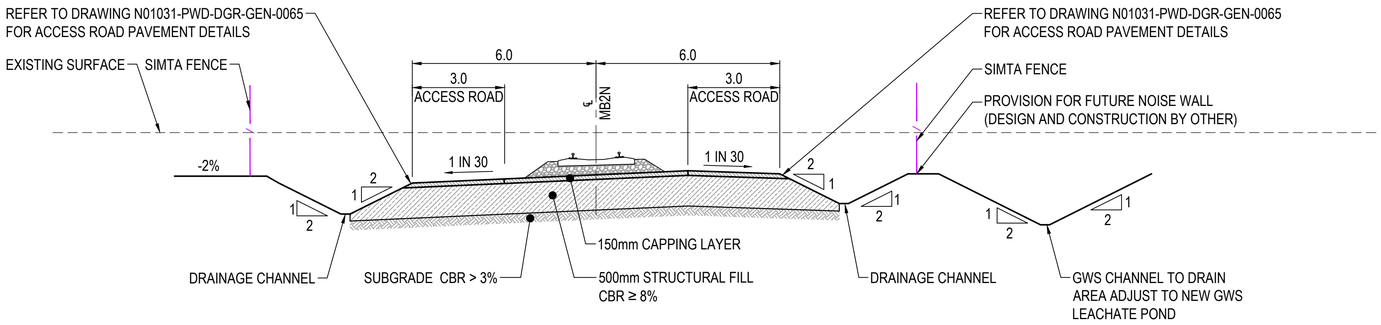
TYPICAL SECTION - CONTROL LINE MB2N
CH 39553

NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-DRG-GEN-0066 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
    THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
    REFER TO DRAWING N01031-PWD-DRG-GEN-0065 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.



SECTION B (GEN-0011 0113)
1:100

TYPICAL SECTION - CONTROL LINE MB2N
CH 39720

1 0 2 4m
SCALE 1:100

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS — SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

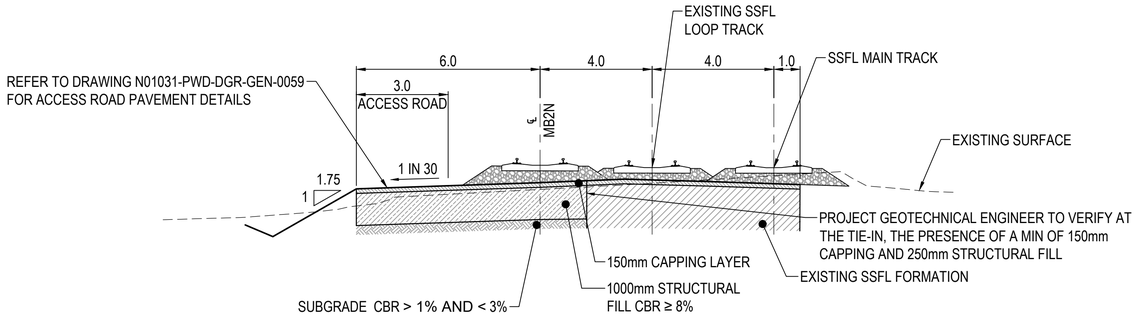
FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS NORTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 1 OF 3

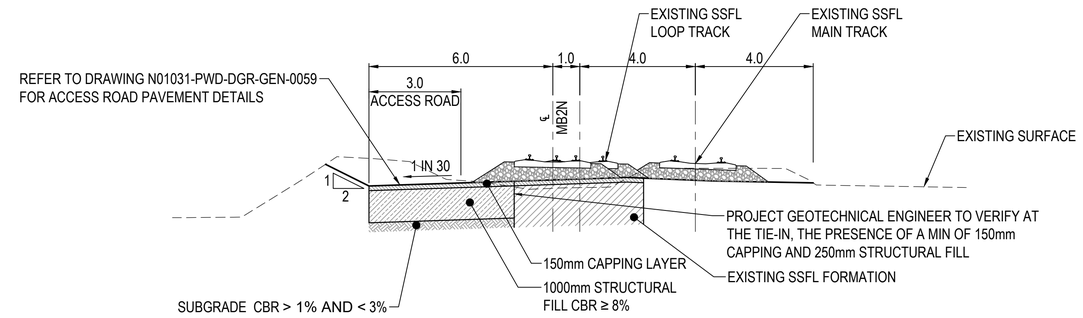
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0050	03

Plot Date: 18/08/18 4:31:07 PM Office: AUSYD Filename: C:\PW_WORKSHARE\EY LITTLEANZ_PROD\D0028377\DWG\N01031-PWD-DRG-GEN-0050.DWG



SECTION AA (GEN-0010) 1:100

TYPICAL SECTION - CONTROL LINE MB2N
CH 39485

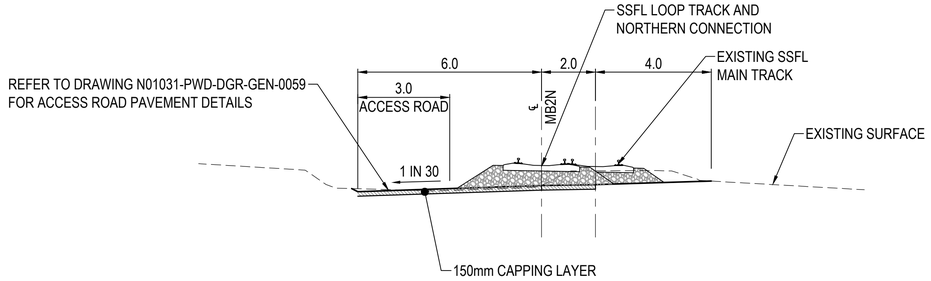


SECTION AB (GEN-0010) 1:100

TYPICAL SECTION - CONTROL LINE MB2N
CH 39450

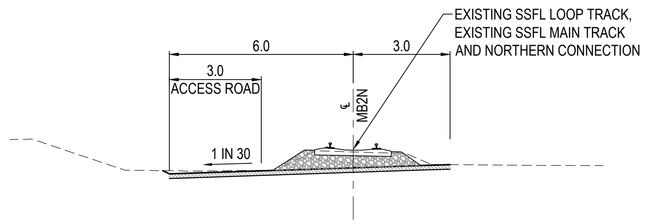
NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0025 TO N01031-PWD-DRG-GEN-0040 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-PWD-GEN-0059 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
    THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
    REFER TO DRAWING N01031-PWD-DRG-GEN-0059 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.
12. REFER TO DRAWING N01031-PWD-DRG-GEN-0081 FOR FOUNDATION TRANSITION DETAIL BETWEEN EXISTING SSFL FOUNDATION AND PROPOSED FOUNDATION TREATMENT.
13. INSTALL COMPACTED GENERAL FILL LAYER (AS PER CLAUSE 3.1.2 OF THE EARTHWORK SPECIFICATION) OVER THE EXPOSED SAND LAYER EXTENDING APPROXIMATELY FROM CH39880 TO CH40180 (ON MB2S) AND THEN FROM CH40230 TO CH40258 (ON MB2S). THE VERTICAL EXTENT OF THE SAND LAYER IS APPROXIMATELY BETWEEN RL11m AND AL3m. THE EXTENT OF THE SAND LAYER IS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE.



SECTION AC (GEN-0010) 1:100

TURNOUT TYPICAL SECTION - CONTROL LINE MB2N
CH 39400



SECTION AD (GEN-0010) 1:100

TURNOUT TYPICAL SECTION - CONTROL LINE MB2N
CH 39350

1 0 2 4m
SCALE 1:100

ARTC DRAWING No	EDMS No	EDMS REV

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS NORTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 2 OF 3

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0051	01

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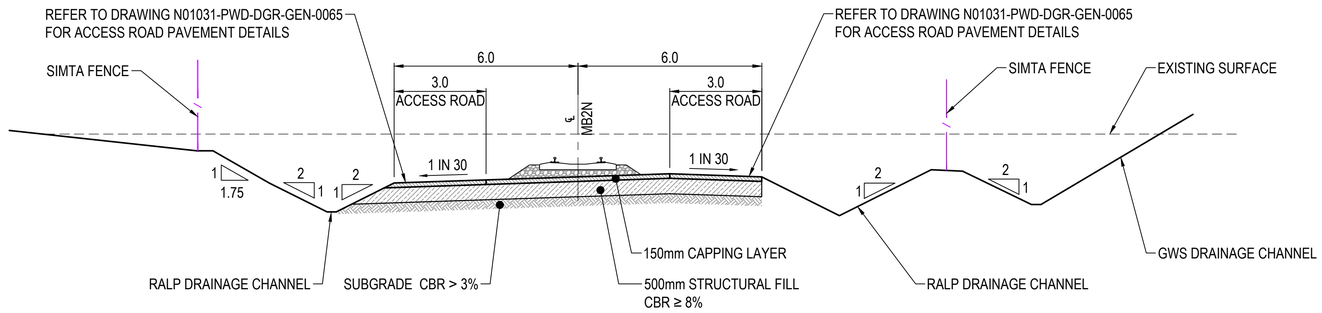
CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

Plot Date: 18/01/18 4:31:46 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLEJOHN\D0002837\N01031-PWD-DRG-GEN-0051.DWG



SECTION P
1:100 GEN-0011 0113

TYPICAL SECTION - CONTROL LINE MB2N
CH 39740

. **REFER TO DRAWINGS N01031-PWD-SPE-EWK-0025 TO N01031-PWD-DRG-GEN-0040 FOR** EARTHWORKS CROSS SECTIONS.

. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.

. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.

. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.

. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.

. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.

. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.

. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

). ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.

1. SUBSOILS MAY BE REQUIRED REFER TO N0131-PWD-GEN-0059 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
REFER TO DRAWING N01031-PWD-DRG-GEN-0059 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.

2. REFER TO DRAWING N01031-PWD-DRG-GEN-0081 FOR FOUNDATION TRANSITION DETAIL BETWEEN EXISTING SSFL FOUNDATION AND PROPOSED FOUNDATION TREATMENT.

3. INSTALL COMPACTED GENERAL FILL LAYER (AS PER CLAUSE 3.1.2 OF THE EARTHWORK SPECIFICATION) OVER THE EXPOSED SAND LAYER EXTENDING APPROXIMATELY FROM

1 0 2 4m
SCALE 1:100

Plot Date: 18/2018 4:32:24 PM Office: AUSYD Filename: C:\PW_WORKING\HALEY.LITTLE\ANZ_PROD\D0028377\DWG\N01031-PWD-DRG-GEN-0052.DWG

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CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

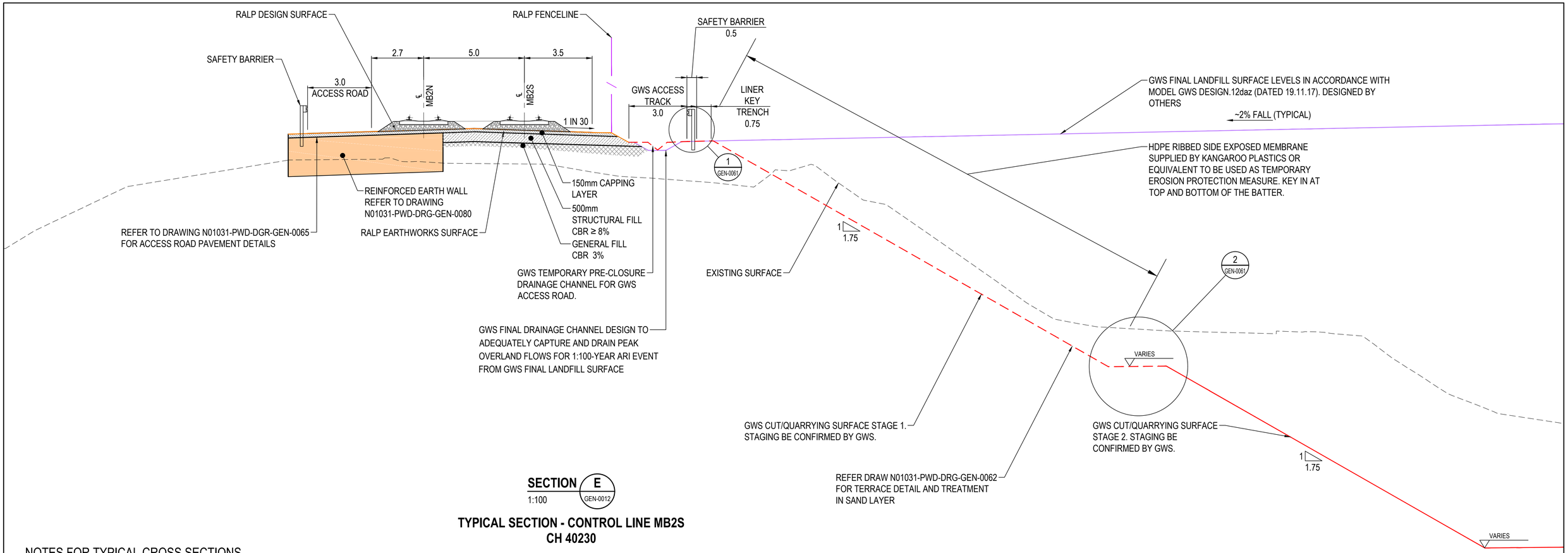
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS NORTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 3 OF 3

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0052	03

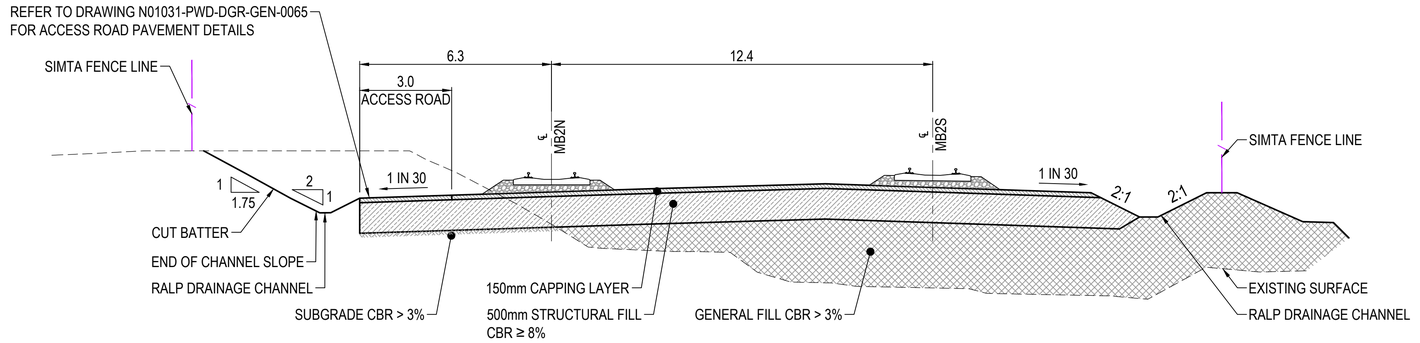


SECTION E (GEN-0012)
1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 40230

NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-DRG-GEN-0066 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
    THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
    REFER TO DRAWING N01031-PWD-DRG-GEN-0065 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.



SECTION D (GEN-0011)
1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 40160

1 0 2 4m
SCALE 1:100

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

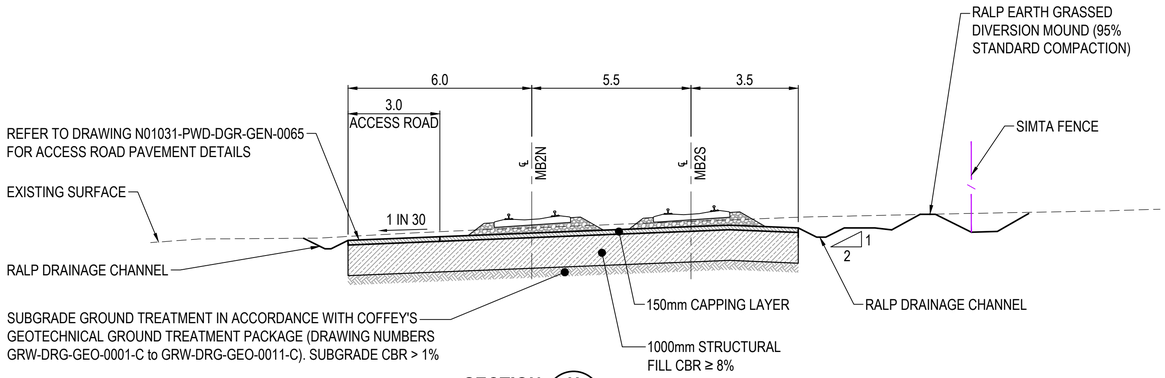
APPROVED: DATE 31.07.18 — M.SAKIB — M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 1 OF 10

DRAWING No.: PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC GEN – NUMBER 0053 – REV 02

Ref Date: 3/8/2018 1:15:32 PM Office: AUSYD Filename: C:\PW_WORKSHARE\SALIN.SAKIB\ANZ_PROD\D0029770\N01031-PWD-DRG-GEN-0053.DWG



SECTION H (GEN-0013)
1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 40680

NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-DRG-GEN-0066 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
REFER TO DRAWING N01031-PWD-DRG-GEN-0065 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.

Plot Date: 3/8/2018 11:35:42 AM Office: AUSYD Filename: C:\PW_WORK\MALEESHA.AHMADIANZ_PROD\D0028277\N01031-PWD-DRG-GEN-0054.DWG

1 0 2 4m
SCALE 1:100

ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

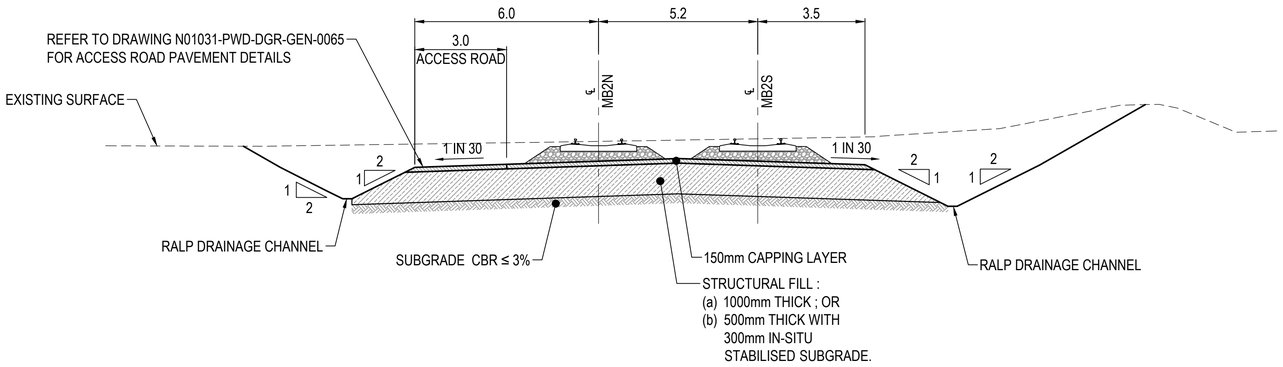
DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

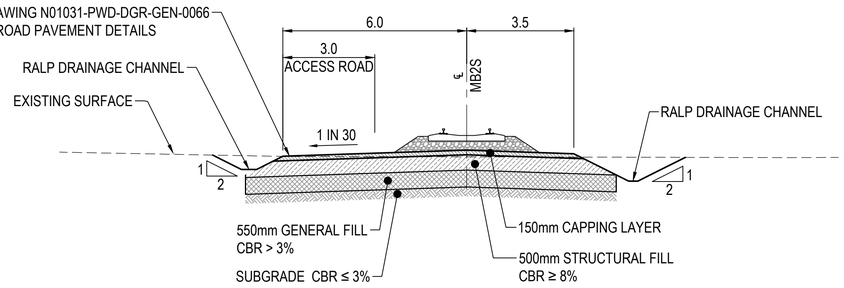
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 2 OF 10

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0054	03



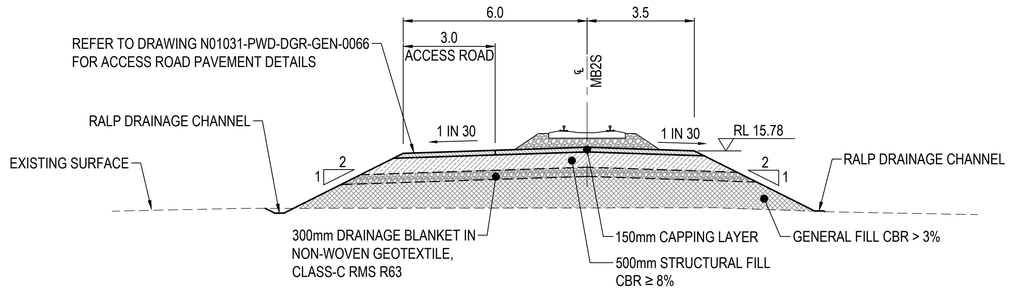
SECTION J (GEN-0014) 1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 41000
CH 41740 (SIMILAR GROUND TREATMENT)



SECTION K (GEN-0016) 1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 41700
CH 41800 (SIMILAR)



SECTION L (GEN-0017) 1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 41985

NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-DRG-GEN-0066 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
REFER TO DRAWING N01031-PWD-DRG-GEN-0065 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.

Plot Date: 18/07/18 4:33:16 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLEJNE.PRO\D0092077\NN1031-PWD-DRG-GEN-0055.DWG

1 0 2 4m
SCALE 1:100

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS | SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

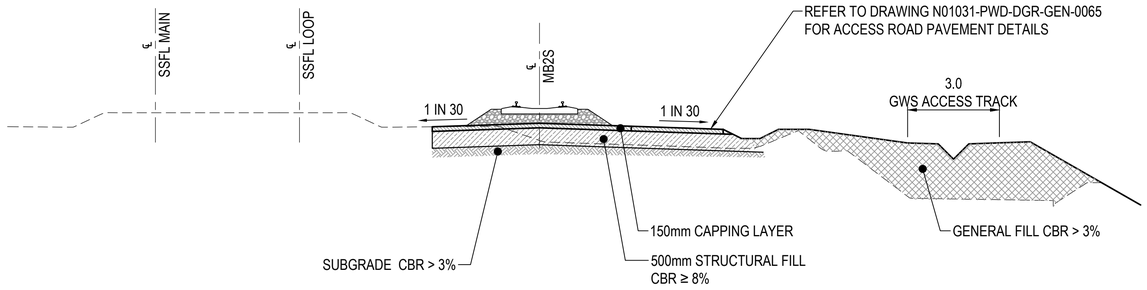
DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 3 OF 10

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0055	02

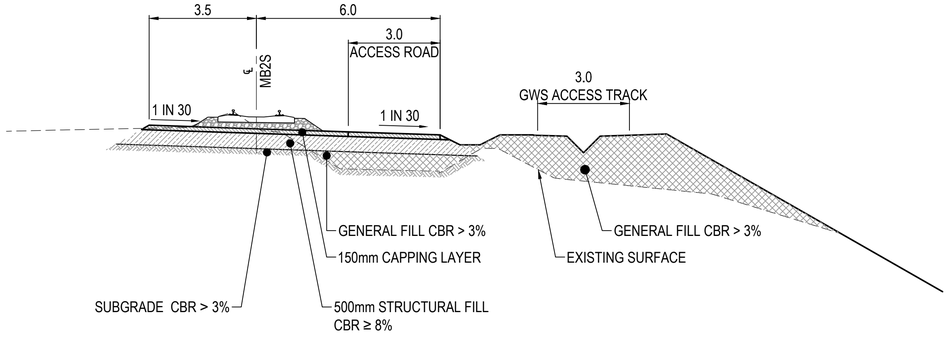


SECTION Q
1:100 GEN-0018 0125

TYPICAL SECTION - CONTROL LINE MB2S
CH 39932

NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-DRG-GEN-0066 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
    THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
    REFER TO DRAWING N01031-PWD-DRG-GEN-0065 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.



SECTION R
1:100 GEN-0018 0125

TYPICAL SECTION - CONTROL LINE MB2S
CH 39960

1 0 2 4m
SCALE 1:100

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT
CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

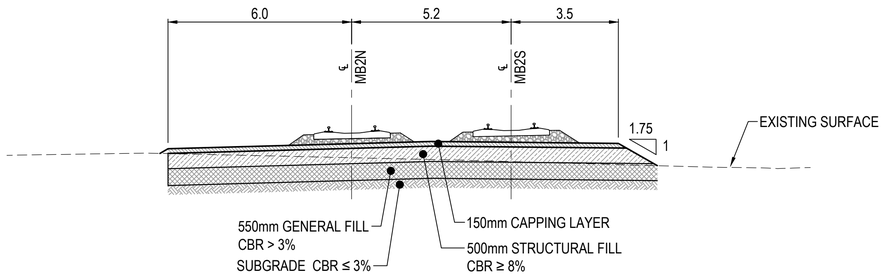
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 4 OF 10

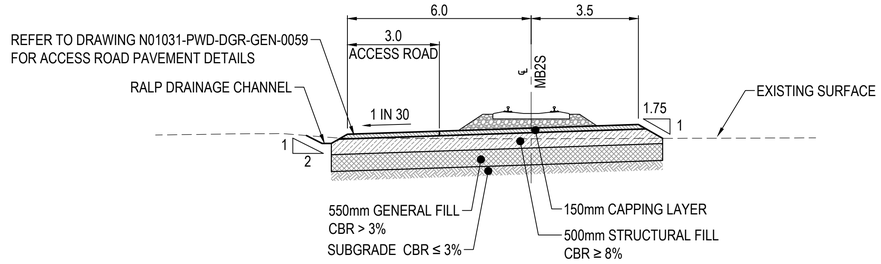
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0056	03

Plot Date: 1/8/2018 4:33:16 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ.PROD\D0028377\N01031-PWD-DRG-GEN-0056.DWG



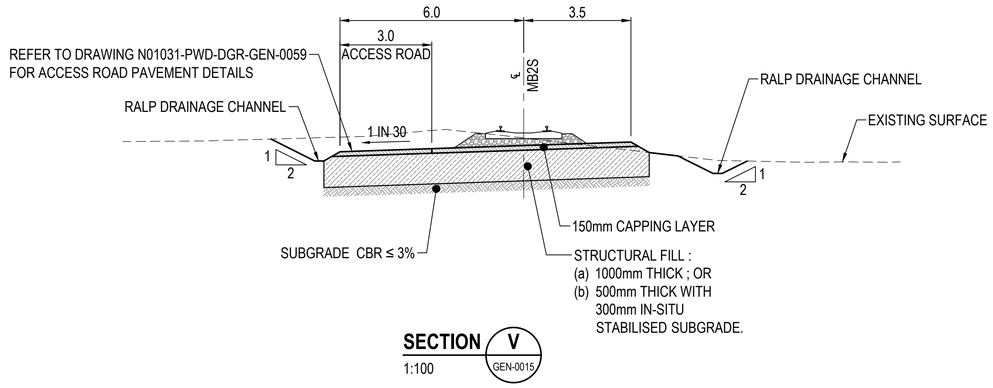
SECTION T (GEN-0014) 1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 40955



SECTION U (GEN-0015) 1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 41440



SECTION V (GEN-0015) 1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 41460

NOTES

1. REFER PREVIOUS DRAWING FOR TYPICAL CROSS SECTION NOTES

1 0 2 4m
SCALE 1:100

Plot Date: 18/2018 4:34:19 PM Office: AUSYD Filename: C:\PW_WORKA\SALEY.LITTLE.ANZ_PROD\3035277\M01031-PWD\DRG\GEN\0057.DWG

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CPB CONTRACTORS
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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

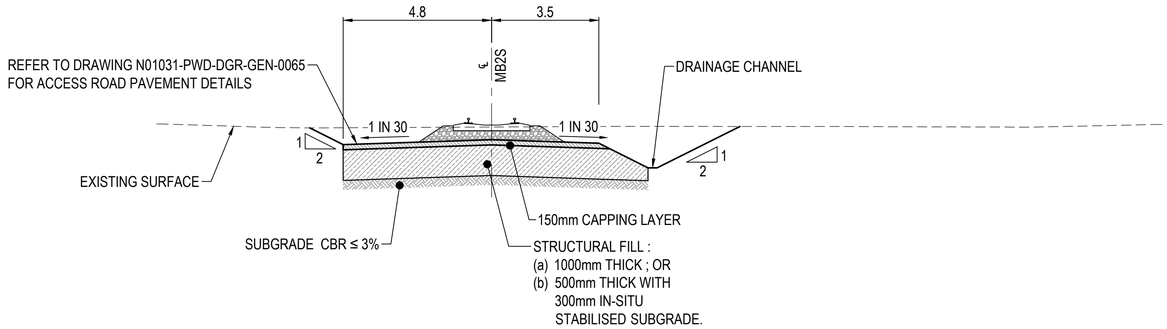
APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

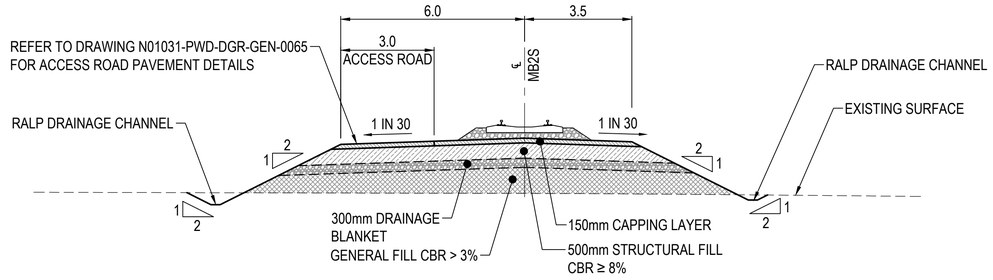
TITLE: BULK EARTHWORKS SOUTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 5 OF 10

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0057	01



SECTION W (GEN-0016) 1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 41640

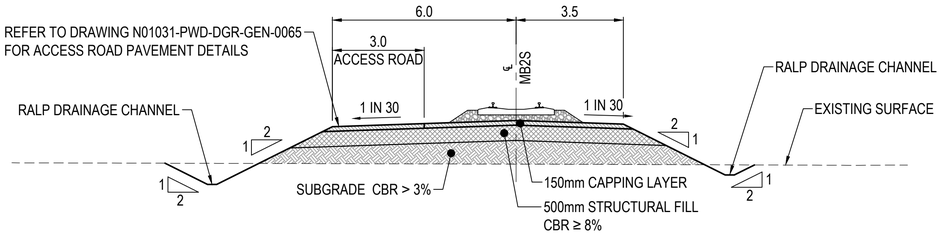


SECTION X (GEN-0017) 1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 42000

NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-DRG-GEN-0066 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
REFER TO DRAWING N01031-PWD-DRG-GEN-0065 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.



SECTION Y (GEN-0017) 1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 42060

1 0 2 4m
SCALE 1:100

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS | SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

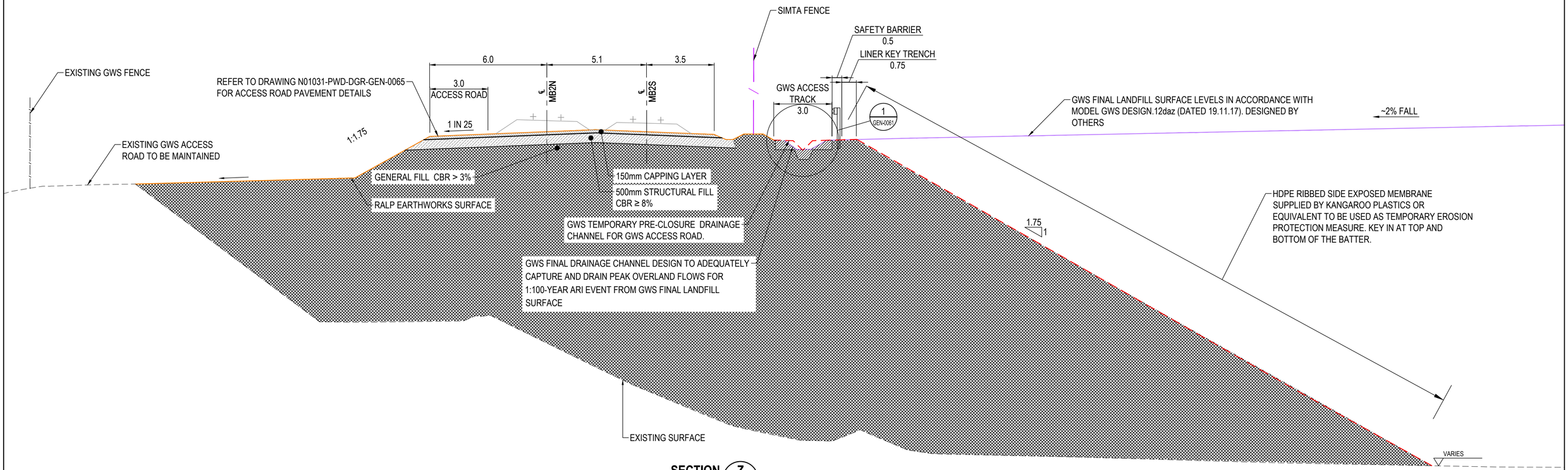
FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 6 OF 10

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0058	01

Red Date: 1/8/2018 3:34:45 PM Office: AUSYD Filename: C:\PW_WORKSHARE\EY.LITTLE.ANZ_PROD\D0028777\N01031-PWD-DRG-GEN-0058.DWG



SECTION Z (GEN-0012)
1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 40440

NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-DRG-GEN-0066 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
REFER TO DRAWING N01031-PWD-DRG-GEN-0065 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.

1 0 2 4m
SCALE 1:100

Plot Date: 3/8/2018 11:36:16 AM Office: AUSYD Filename: C:\PW_WORK\MALEEHA.AHMAD\AZ_PROD\D0303770\N01031-PWD-DRG-GEN-0059.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

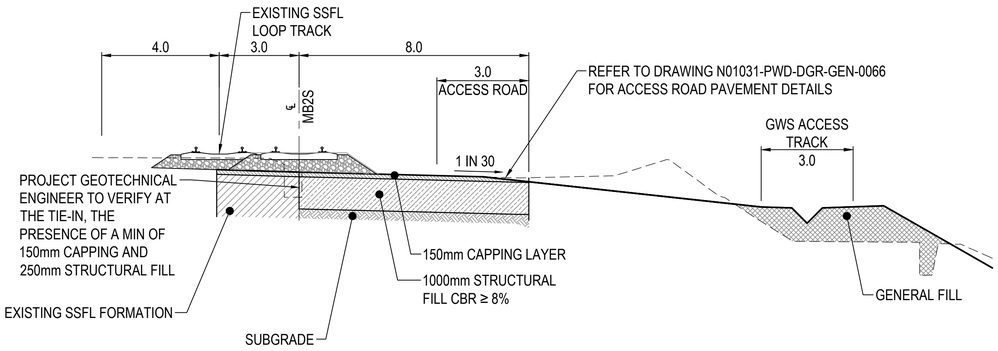
SCALE	AS SHOWN
SIZE	A1
DRAWN	J.RASAMEEMANEEPONG
DESIGNED	K.GIGGACHER
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

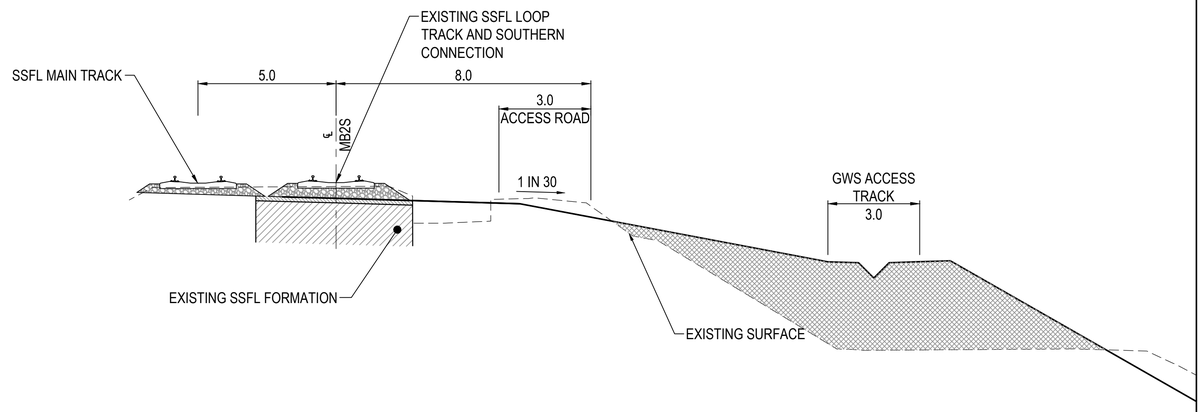
ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 7 OF 10

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0059	03



SECTION AE (GEN-0018 0125)
1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 39910

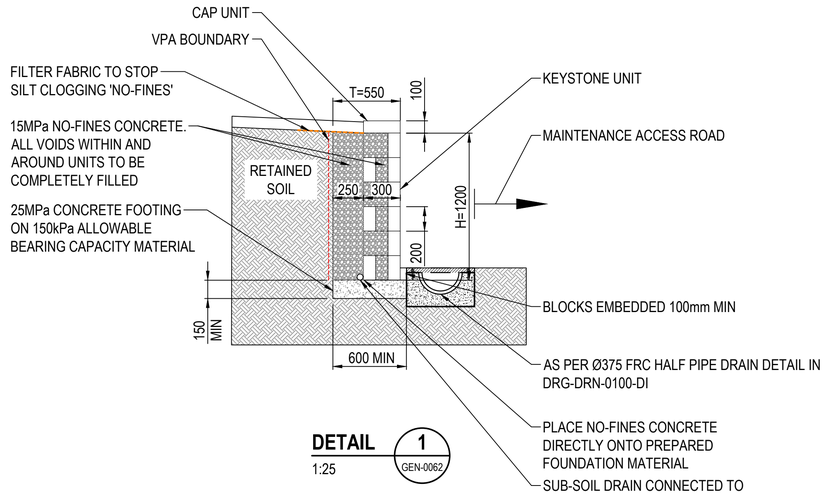


SECTION AH (GEN-0018 0126)
1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 39880

NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0025 TO N01031-PWD-DRG-GEN-0040 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-PWD-GEN-0059 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
    THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
    REFER TO DRAWING N01031-PWD-DRG-GEN-0059 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.
12. REFER TO DRAWING N01031-PWD-DRG-GEN-0081 FOR FOUNDATION TRANSITION DETAIL BETWEEN EXISTING SSFL FOUNDATION AND PROPOSED FOUNDATION TREATMENT.
13. INSTALL COMPACTED GENERAL FILL LAYER (AS PER CLAUSE 3.1.2 OF THE EARTHWORK SPECIFICATION) OVER THE EXPOSED SAND LAYER EXTENDING APPROXIMATELY FROM CH39880 TO CH40180 (ON MB2S) AND THEN FROM CH40230 TO CH40258 (ON MB2S). THE VERTICAL EXTENT OF THE SAND LAYER IS APPROXIMATELY BETWEEN RL11m AND RL3m. THE EXTENT OF THE SAND LAYER IS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE.



DETAIL 1 (GEN-0062)
1:25

TYPICAL KEYSTONE WALL DETAIL

250 0 500 1000mm — SCALE 1:25
1 0 2 4m — SCALE 1:100

Plot Date: 3/8/2018 11:38:34 AM Office: AUSYD Filename: C:\PW_WORKING\AEEHA\AMMOANZ_PROJ\D0023277\PW\N01031-PWD-DRG-GEN-0060.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

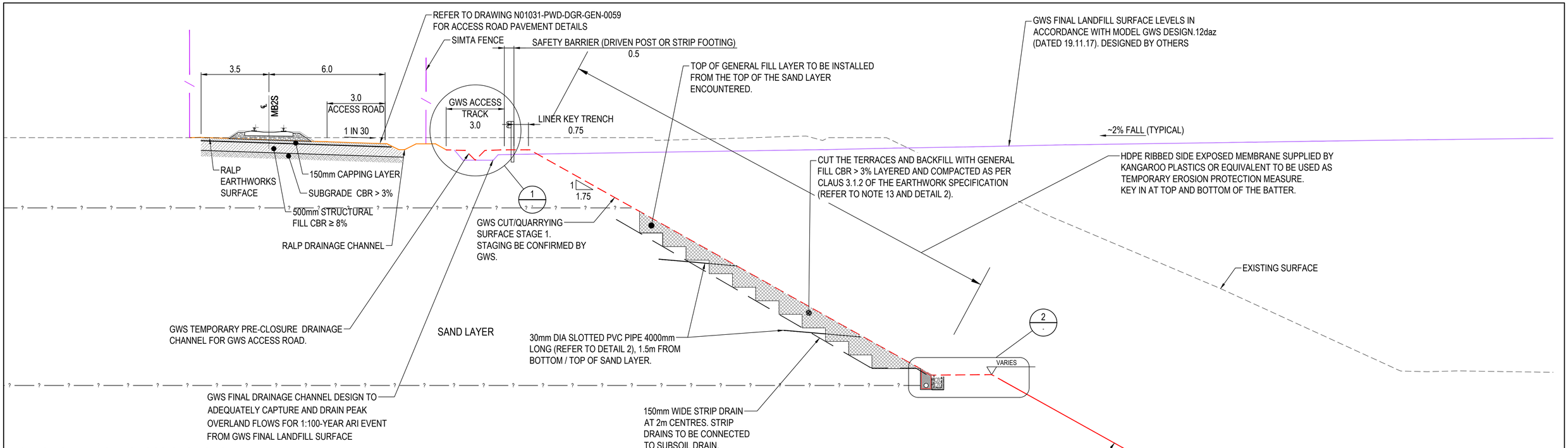
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 8 OF 10

DRAWING No. | PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV
N01031 – PWD – DRG – GEN – 0060 – 02

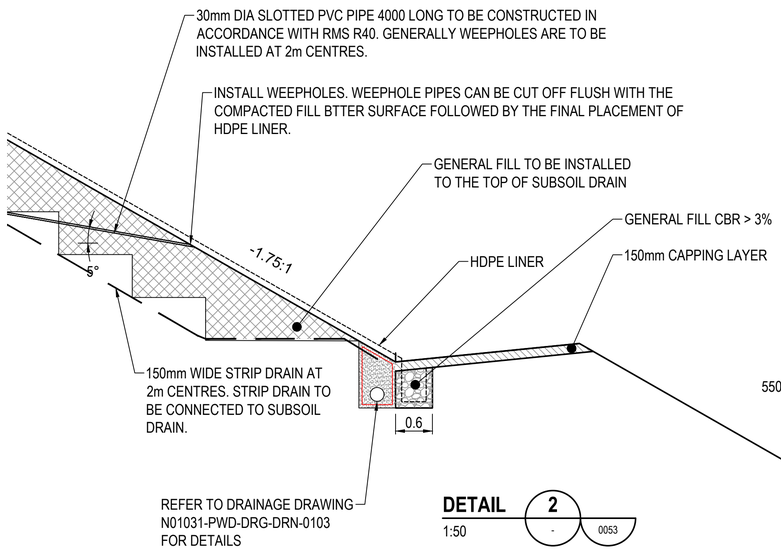


SECTION C (GEN-0011 / 0018 / 0125) 1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 40040

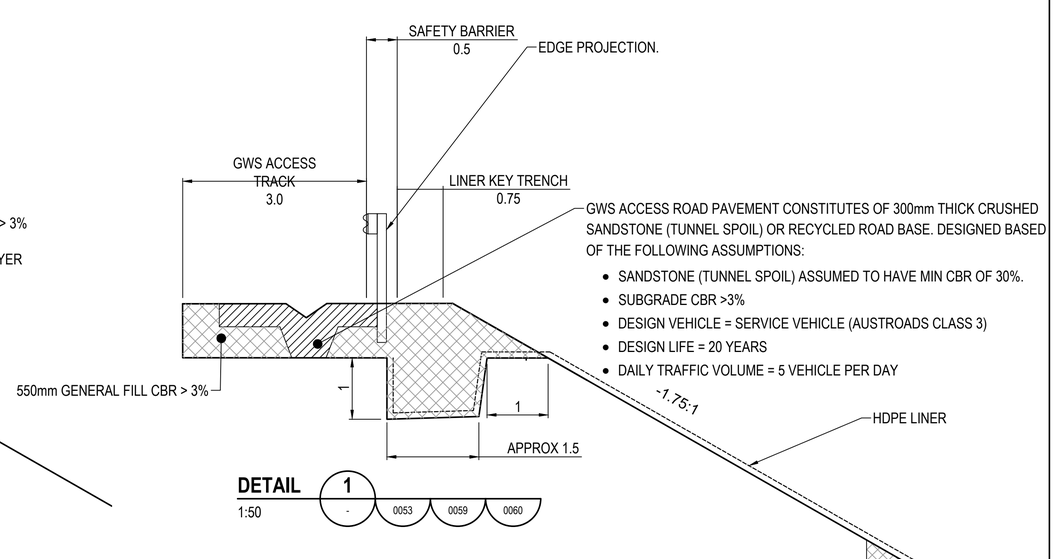
NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0025 TO N01031-PWD-DRG-GEN-0040 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-PWD-GEN-0059 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
    THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.
    REFER TO DRAWING N01031-PWD-DRG-GEN-0059 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.
12. REFER TO DRAWING N01031-PWD-DRG-GEN-0081 FOR FOUNDATION TRANSITION DETAIL BETWEEN EXISTING SSFL FOUNDATION AND PROPOSED FOUNDATION TREATMENT.
13. INSTALL COMPACTED GENERAL FILL LAYER (AS PER CLAUSE 3.1.2 OF THE EARTHWORK SPECIFICATION) OVER THE EXPOSED SAND LAYER EXTENDING APPROXIMATELY FROM CH39880 TO CH40180 (ON MB2S) AND THEN FROM CH40230 TO CH40258 (ON MB2S). THE VERTICAL EXTENT OF THE SAND LAYER IS APPROXIMATELY BETWEEN RL11m AND RL3m. THE EXTENT OF THE SAND LAYER IS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE.



DETAIL 2 (0053) 1:50

TYPICAL SECTION - BATTER EROSION PROTECTION
TOE OF UPPER BATTER MB2S CH 39879-CH 40275



DETAIL 1 (0053 / 0059 / 0060) 1:50

TYPICAL SECTION - BATTER EROSION PROTECTION
TOP OF UPPER BATTER MB2S CH 39879-CH 40275

SCALE 1:100 (1 0 2 4m) SCALE 1:50 (500 0 1000 2000mm)

Ref Date: 6/8/2018 1:42:12 PM Office: AUSYD Filename: C:\PW_WORKSPACE\ALN.SAKIBAHZ.PROD\D0009770\N01031-PWD-DRG-GEN-0061.DWG

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

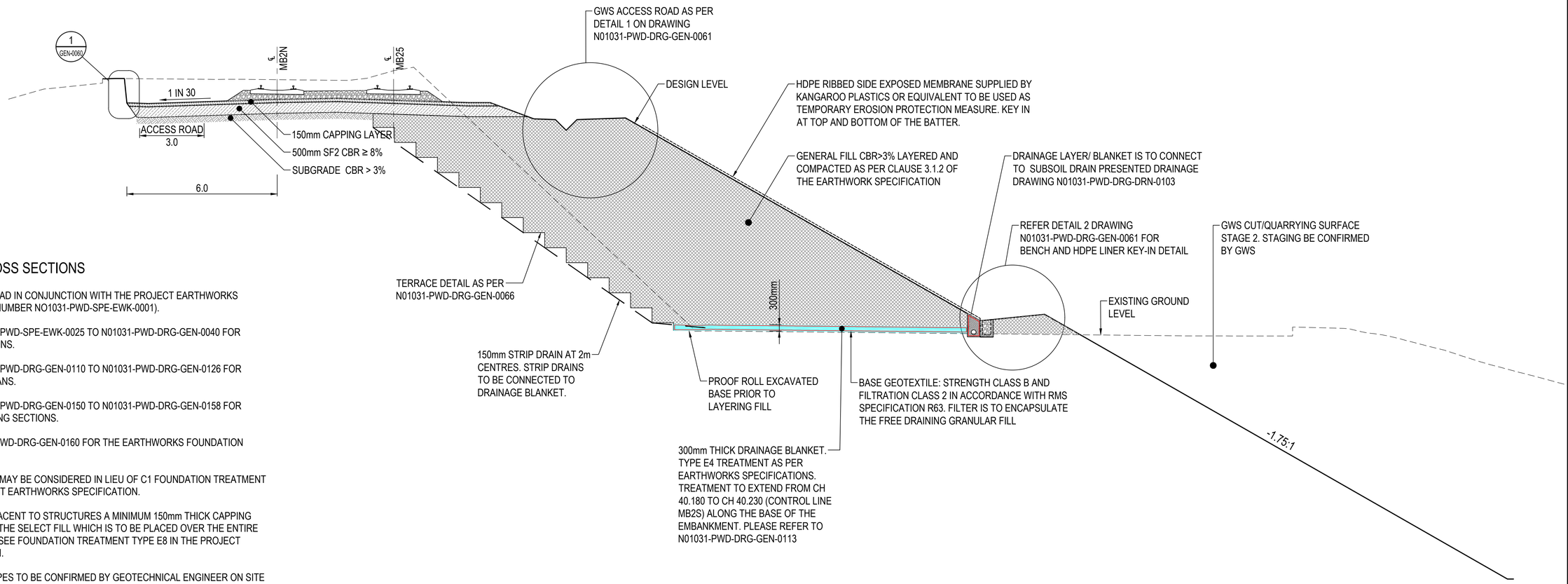
APPROVED: M.SAKIB DATE 31.07.18
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOUTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 9 OF 10

DRAWING No.: PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC GEN – NUMBER 0061 – REV 02



NOTES FOR TYPICAL CROSS SECTIONS

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0025 TO N01031-PWD-DRG-GEN-0040 FOR EARTHWORKS CROSS SECTIONS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR FOUNDATION TREATMENT PLANS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
5. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
6. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
7. FOR PLACEMENT OF FILL ADJACENT TO STRUCTURES A MINIMUM 150mm THICK CAPPING LAYER IS TO BE PLACE OVER THE SELECT FILL WHICH IS TO BE PLACED OVER THE ENTIRE HEIGHT OF THE STRUCTURE. SEE FOUNDATION TREATMENT TYPE E8 IN THE PROJECT EARTHWORKS SPECIFICATION.
8. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
9. LOCALISED POCKETS OF UNSUITABLE MATERIAL AT BASE OF PROPOSED FORMATION TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT EARTHWORKS SPECIFICATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
10. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
11. SUBSOILS MAY BE REQUIRED REFER TO N0131-PWD-GEN-0059 FOR ACCESS ROAD PAVEMENT FOUNDATION IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
    THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER. REFER TO DRAWING N01031-PWD-DRG-GEN-0059 FOR ACCESS ROAD PAVEMENT (FOUNDATION) DETAILS.
12. REFER TO DRAWING N01031-PWD-DRG-GEN-0081 FOR FOUNDATION TRANSITION DETAIL BETWEEN EXISTING SSFL FOUNDATION AND PROPOSED FOUNDATION TREATMENT.
13. INSTALL COMPACTED GENERAL FILL LAYER (AS PER CLAUSE 3.1.2 OF THE EARTHWORK SPECIFICATION) OVER THE EXPOSED SAND LAYER EXTENDING APPROXIMATELY FROM CH39880 TO CH40180 (ON MB2S) AND THEN FROM CH40230 TO CH40258 (ON MB2S). THE VERTICAL EXTENT OF THE SAND LAYER IS APPROXIMATELY BETWEEN RL11m AND AL3m. THE EXTENT OF THE SAND LAYER IS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE.

SECTION AG (GEN-0011)
1:100

TYPICAL SECTION - CONTROL LINE MB2S
CH 40200

1 0 2 4m
SCALE 1:100

Plot Date: 1/8/2018 4:38:42 PM Office: AUSYD Filename: C:\PW_WORKS\ASHLEY.LITTLE\ANZ_PROD\D0928777\TMW0101-PWD-DRG-GEN-0062.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

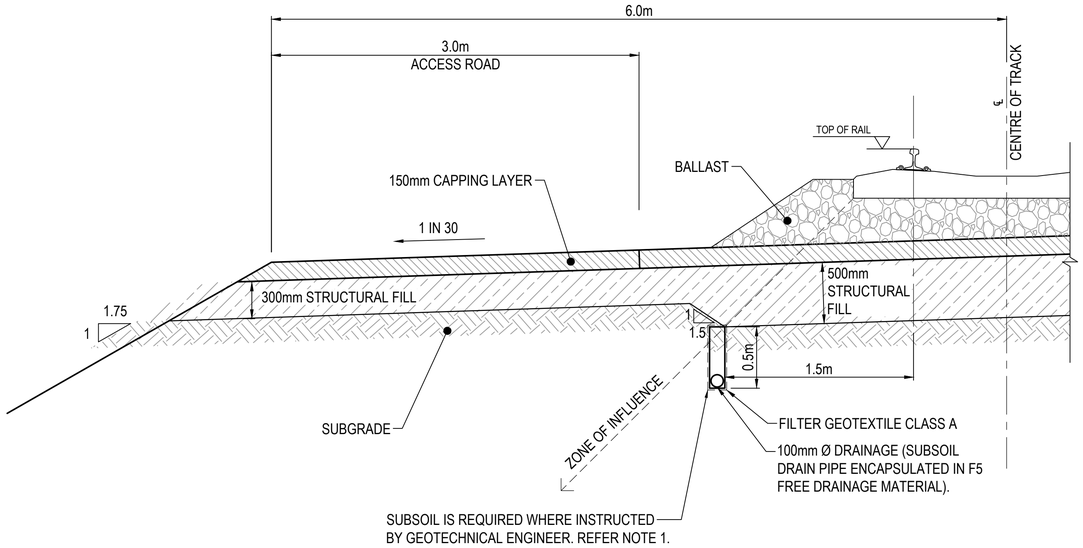
SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

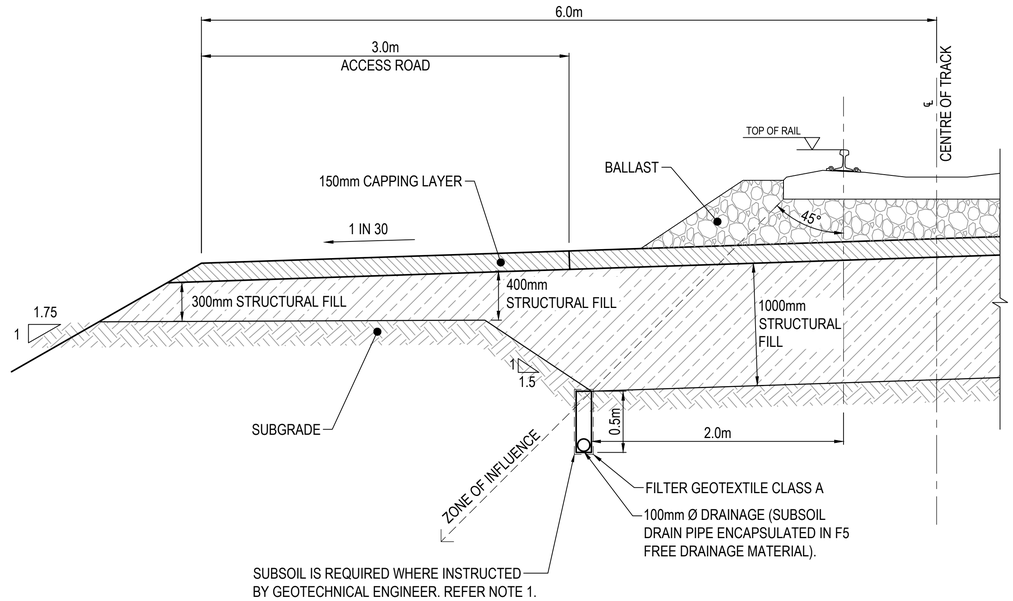
ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOUTHERN CONNECTION TYPICAL CROSS SECTIONS SHEET 10 OF 10

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0062	02



OPTION 1 : SUBGRADE CBR ≥ 3%

1:25



OPTION 2 : SUBGRADE CBR < 3%

1:25

NOTES FOR TYPICAL DETAILS

1. SUBSOILS MAY BE REQUIRED IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
   THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.

250 0 500 1000mm
SCALE 1:25

ARTC DRAWING No	EDMS No	EDMS REV

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

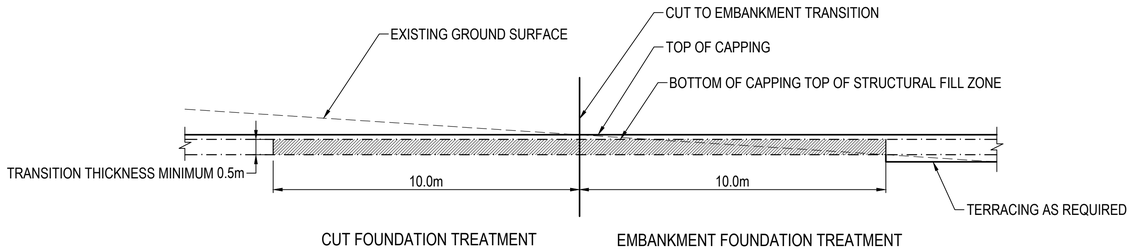
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT
PACKAGE 1- RALP No.1

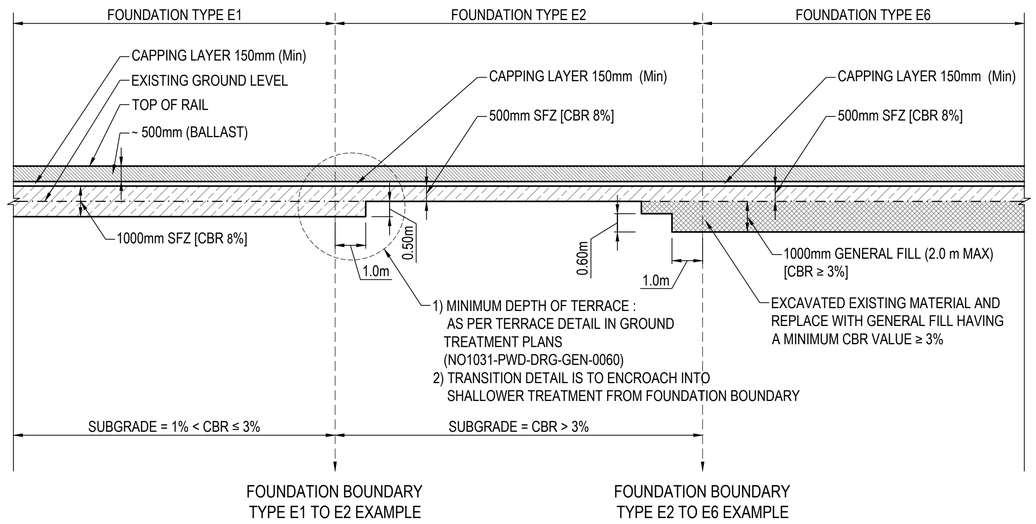
TITLE: BULK EARTHWORKS
TYPICAL DETAILS
SHEET 1 OF 2

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0065	03

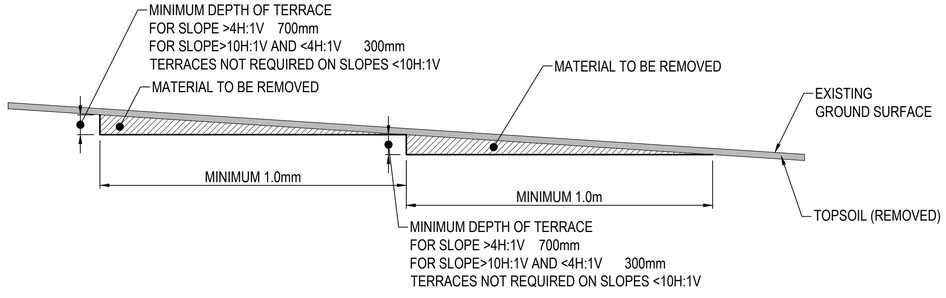
Plot Date: 18/2018 4:37:07 PM Office: AUSYD Filename: C:\PW_WORKSHARE\BY LITTLE\ANZ_PROD\D0039377\N01031-PWD\DRG\GEN\0065.DWG



CUT TO EMBANKMENT FOUNDATION TREATMENT TRANSITION
1:100



FOUNDATION TRANSITION DETAILED EXAMPLE
1:100



EXISTING SLOPE TREATMENT
1:10

NOTES FOR TYPICAL DETAILS

1. SUBSOILS MAY BE REQUIRED IF IN CUT OR SEEPAGE IS EVIDENT ON SITE.
   THE REQUIREMENT FOR SUBSOIL IS TO BE DECIDED ON SITE BY GEOTECHNICAL ENGINEER.

LEGEND

- BALLAST
- CAPPING LAYER
- STRUCTURAL FILL ZONE (SFZ)
- GENERAL FILL
- EXISTING GROUND LEVEL

100 0 200 400mm
SCALE 1:10

1 0 2 4m
SCALE 1:100

Plot Date: 18/2018 4:37:42 PM Office: AUSYD Filename: C:\PW_WORKASHLEY.LITTLE-ANZ_PROD\D0093777\N01031-PWD\DRG\GEN\0066.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS TYPICAL DETAILS SHEET 2 OF 2

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0066	03

PLAN
1:250

2.5 0 5 10m
SCALE 1:250

Ref Date: 1/8/2018 4:38:48 PM Office: AUSYD Filename: C:\PV_WORKASHLEY LITTLE\ALE_PROD\20200277\0N01031-PWD\DRG\GEN\0070.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	24.07.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	G. RUSINOL
03	08.09.17	ACCEPTED FOR CONSTRUCTION RESUBMISSION	G. RUSINOL
04	23.09.17	ACCEPTED FOR CONSTRUCTION RESUBMISSION	G. RUSINOL
05	03.10.17	ACCEPTED FOR CONSTRUCTION RESUBMISSION	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
06	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE: 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SERVICE CROSSING - NORTHERN-SOUTHERN CONNECTION SHEET 1 OF 2

DRAWING No. | PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV
N01031 – PWD – DRG – GEN – 0070 – 06

PLAN
1:250

2.5 0 5 10m
SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

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REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN J.RASAMEEMANEEPONG
DESIGNED M.SAKIB
CHECKED W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SERVICE CROSSING - NORTHERN-SOUTHERN CONNECTION SHEET 2 OF 2

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0071	01

Plot Date: 1/8/2018 4:39:41 PM Office: AUSYD Filename: C:\PV_WORKASHLEY.LITTLEJNE_PROD\20200277\0N01031-PWD-DRG-GEN-0071.DWG

PLAN
1:250

2.5 0 5 10m
SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

Plot Date: 18/07/18 4:40:32 PM Office: AUSYD Filename: C:\PV_WORKA\SLEV LITTLE\ANZ_PROD\2020027700\N01031-PWD\DRG\GEN\0072.DWG

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REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

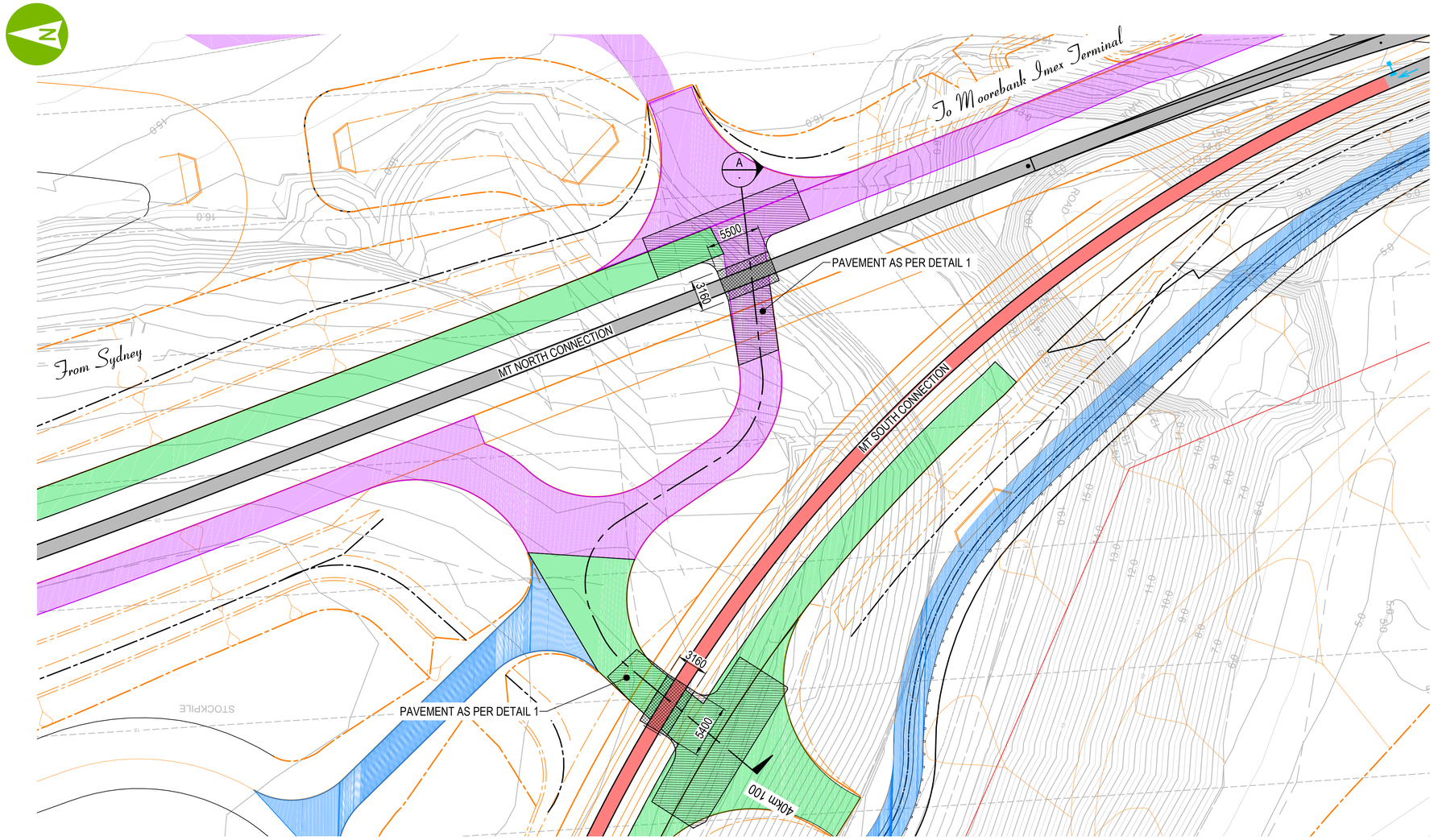
DRAWN: J.RASAMEEMANEEPONG
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SERVICE CROSSING - SOIL NAIL WALL TO GRB SHEET 1 OF 1

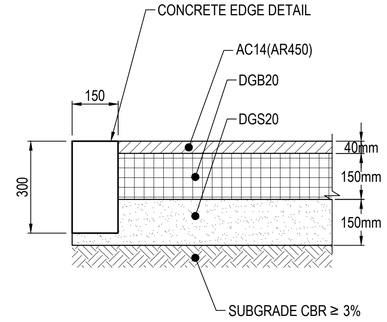
DRAWING No. N01031 – PWD – DRG – GEN – 0072 – 01
(PROJECT No. – ZONE – TYPE – DISC – NUMBER – REV)



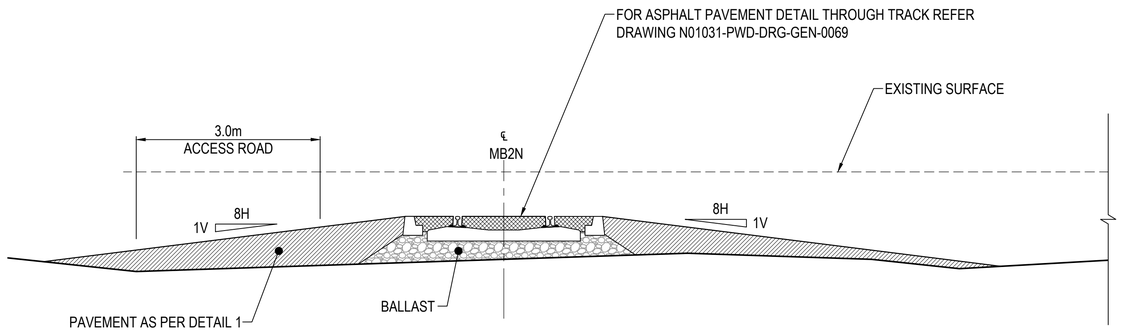
PLAN
1:250

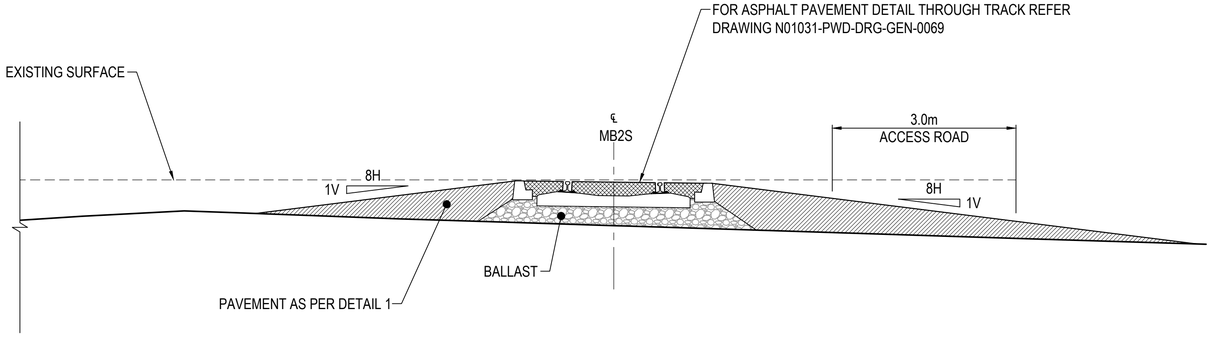
LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- CONTOUR
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD



DETAIL 1 / -
1:10





SECTION A / -
1:50

100 0 200 400mm SCALE 1:10
500 0 1000 2000mm SCALE 1:50
2.5 0 5 10m SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

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REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: M.SAKIB
CHECKED: W.DENG

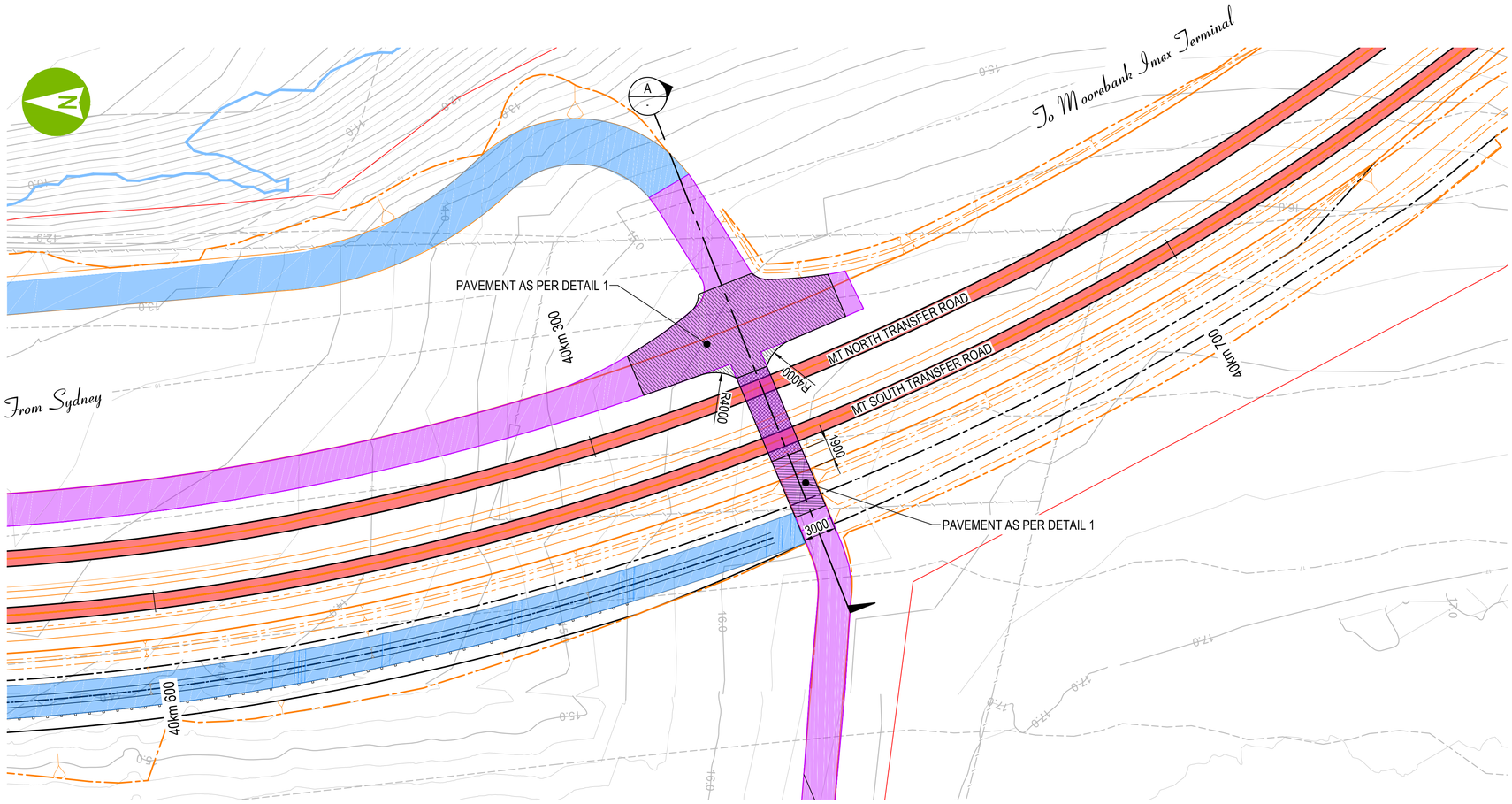
FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SERVICE CROSSING DETAIL SHEET 1 OF 3

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0074	01

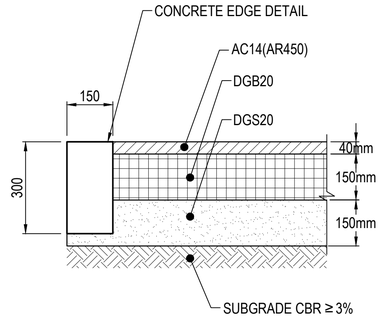
Plot Date: 1/8/2018 4:41:54 PM Office: AUSYD Filename: C:\PW_WORKSPACE\EX.LITTLEANZ_PROD\D0283777\N01031-PWD-DRG-GEN-0074.DWG



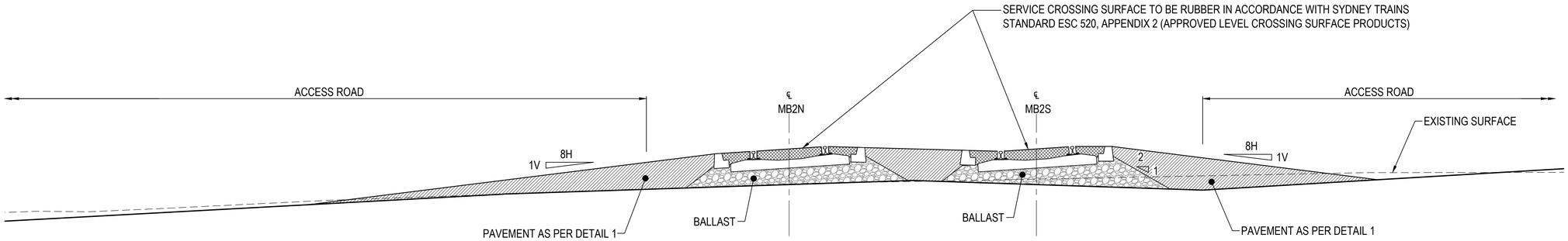
PLAN
1:250

LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- CONTOUR
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD



DETAIL 1 / -
1:10



SECTION A / -
1:50

100 0 200 400mm SCALE 1:10
500 0 1000 2000mm SCALE 1:50
2.5 0 5 10m SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	24.07.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: M.SAKIB
CHECKED: W.DENG

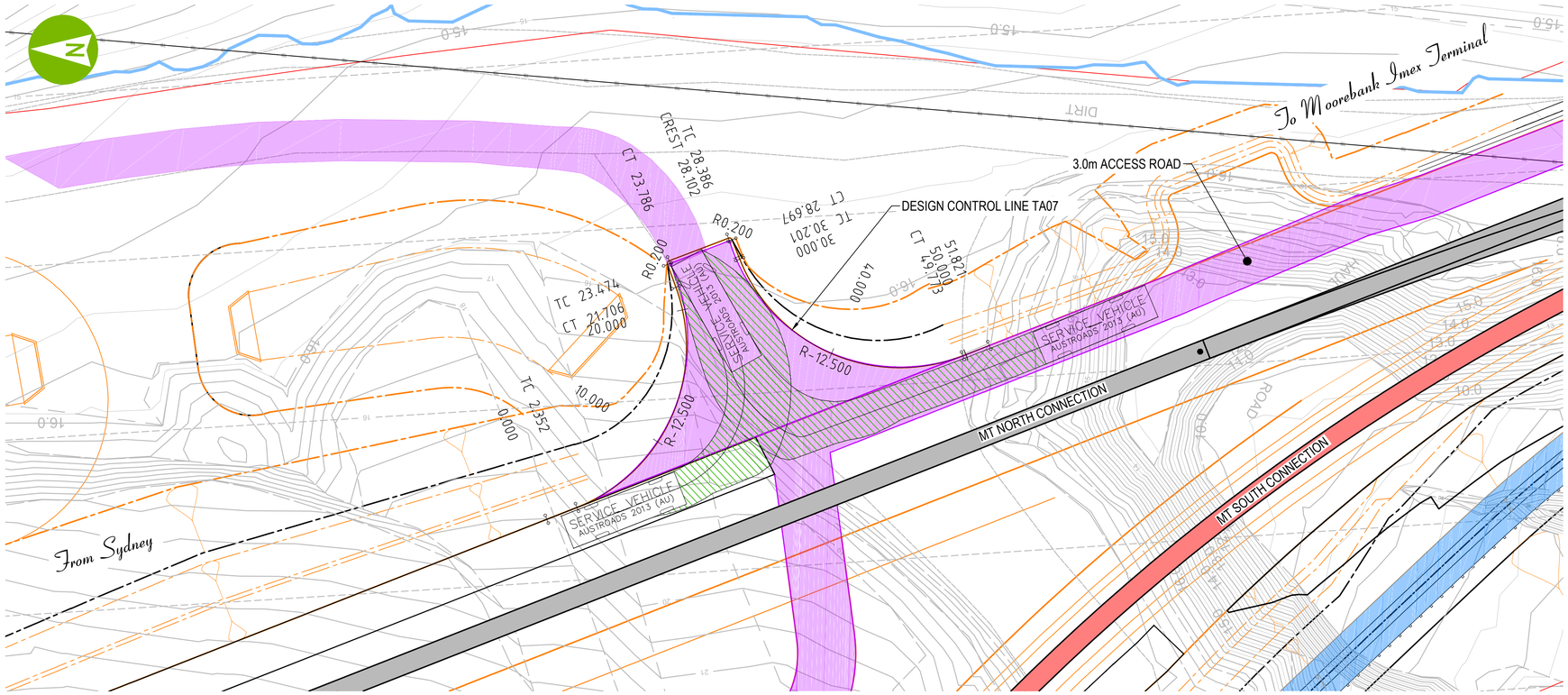
FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SERVICE CROSSING DETAIL SHEET 2 OF 3

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0075	03

Plot Date: 18/2018 4:42:58 PM Office: AUSYD Filename: C:\PW_WORKSHARE\EY.LITTLE.ANZ_PROJ\D0028777\TM\N1031-PWD-DRG-GEN-0075.DWG



PLAN
1:200

LEGEND

- PROPOSED TRACK ALIGNMENT
- EXTENT OF EARTHWORKS
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- CONTOUR
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD

2 0 4 8m
SCALE 1:200

Ref Date: 18/2018 4:45:57 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ_PROD\D0029370\N01031-PWD\DRG\GEN\0077.DWG

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CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

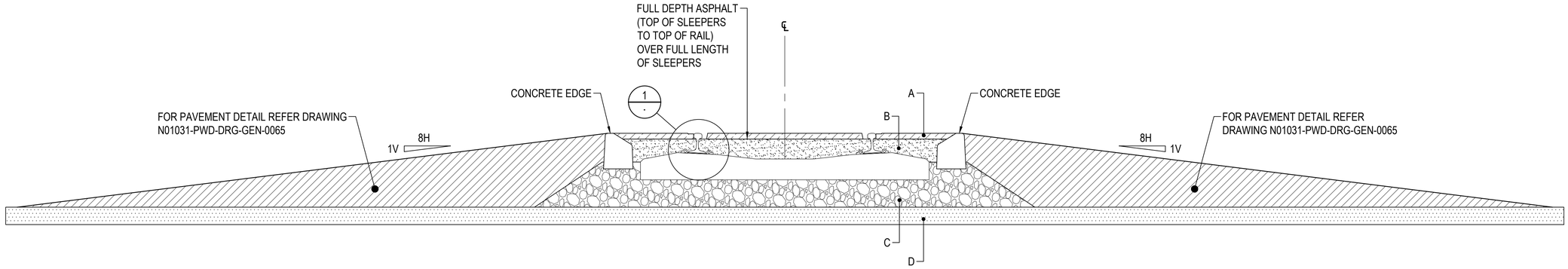
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS TURNAROUND FACILITY DETAIL SHEET 1 OF 1

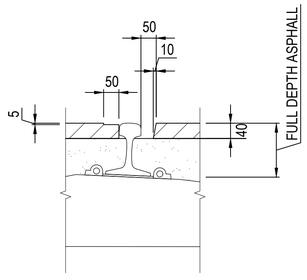
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0077	01



PAVEMENT DETAIL CROSS SECTION AT SERVICE CROSSING
1:20

TRACK FOUNDATION DETAIL

A	ASPHALT WEARING COURSE 40mm SIZE 14 AR450 BINDER ASPHALT TYPE Hm
B	INTERMEDIATE LAYER ASPHALT 60mm SIZE 20 TYPE T (CLASS 320) BASE LAYER ASPHALT 90mm SIZE 20 TYPE T (CLASS 320)
C	COMPACTED BALLAST 250mm (MIN)
D	CAPPING LAYER



DETAIL 1 / -
1:10

100 0 200 400mm
SCALE 1:10

200 0 400 800mm
SCALE 1:20

NOTES

1. ALL DIMENSIONS IN MILLIMETERS.
2. REFER TO TYPICAL CROSS-SECTIONS ,GROUND TREATMENT PLANS AND LONGSECTIONS FOR FOUNDATION TREATMENT UNDERNEATH CAPPING LAYER.

ARTC DRAWING No	EDMS No	EDMS REV

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: P.KHAIPRAPHAI
DESIGNED: M.SAKIB
CHECKED: W.DENG

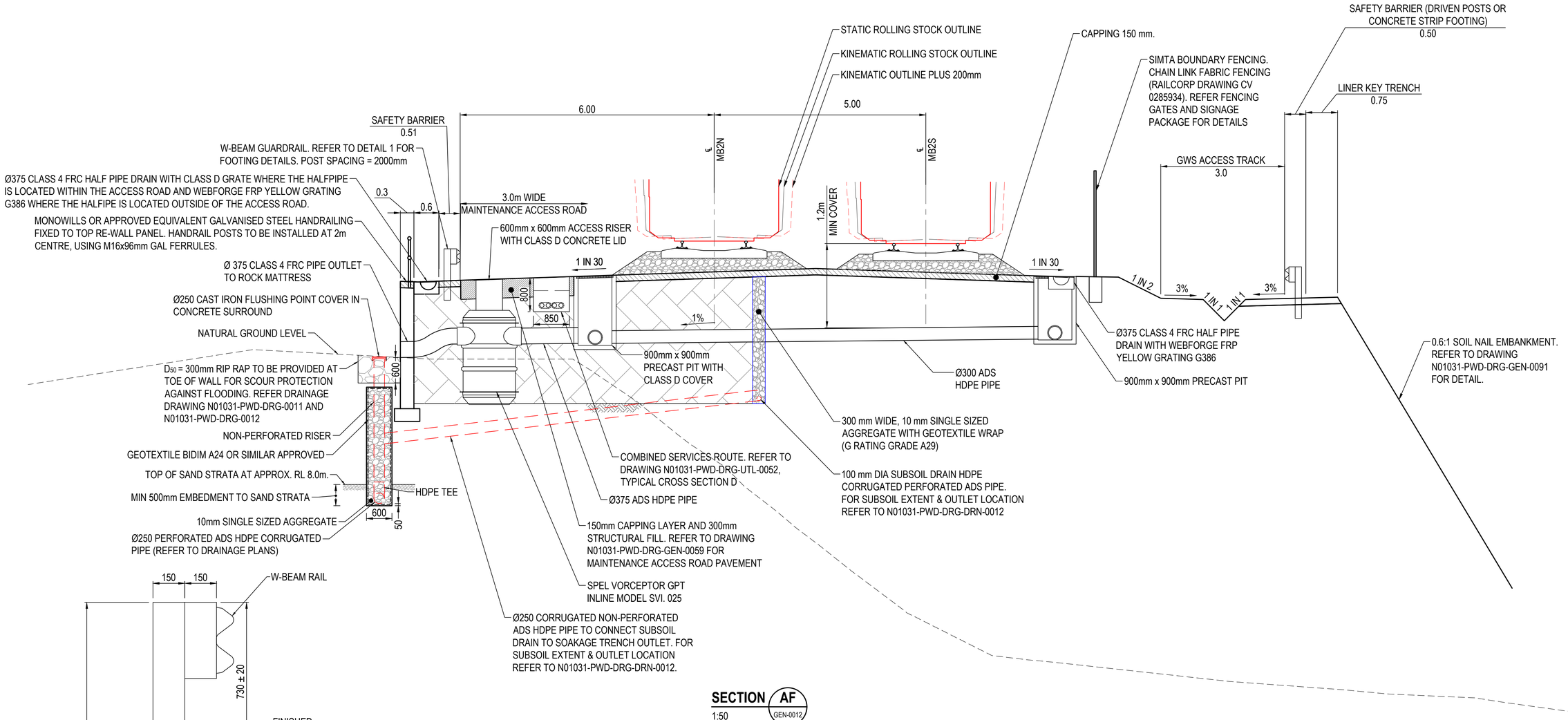
FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS LEVEL CROSSING DETAILS SHEET 1 OF 1

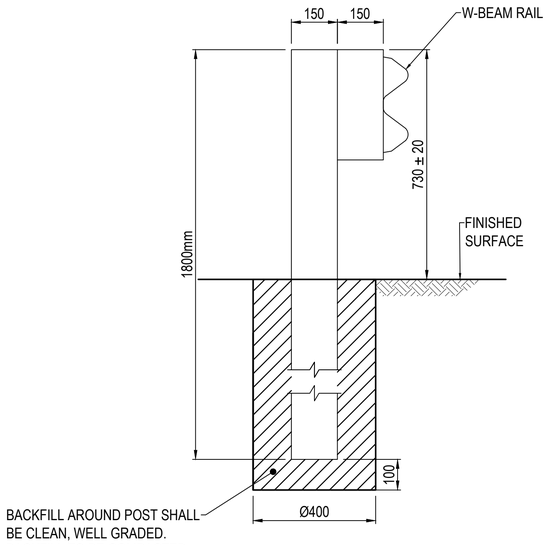
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0078	01

Plot Date: 18/2/18 4:46:15 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ_PROD\D0829770\N01031-PWD\DRG\GEN\0078.DWG



SECTION AF (GEN-0012)
1:50

RSW DETAILED DESIGN (TYP.)



DETAIL 1
1:10

W-BEAM GUARD RAIL DETAIL

SCALE 1:10 (100 0 200 400mm)
SCALE 1:50 (500 0 1000 2000mm)

NOTES

1. EXPOSURE CLASSIFICATION: B1.
2. DESIGN (BY RSW SUPPLIER) OF RSW TO BE IN ACCORDANCE WITH RMS SPEC 57.
3. FOR WALL ELEVATION, WALL FACING, INTERNAL WALL CONFIGURATION, INTERNAL DRAINAGE, FOOTING AND FOUNDATION TREATMENT DETAILS REFER TO RECO DESIGN DRAWINGS.

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	J.RASAMEEMANEEPONG
DESIGNED	K.GIGGACHER
CHECKED	W.DENG
APPROVED	M.SAKIB
DATE	31.07.18

FOR CONSTRUCTION

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS REINFORCED SOIL WALL - TYPICAL CROSS SECTIONS SHEET 1 OF 1
DRAWING No.	PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC GEN – NUMBER 0080 – REV 03

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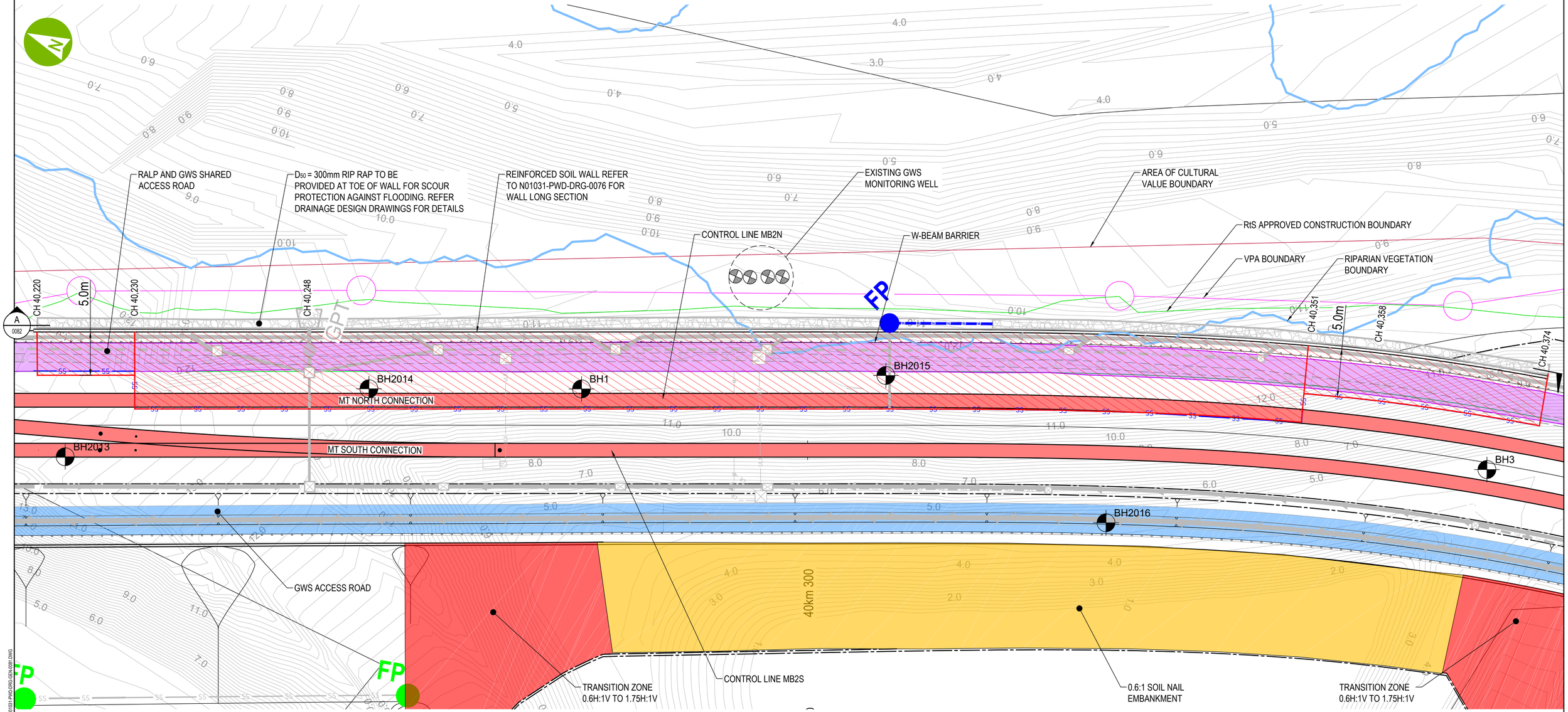
Plot Date: 6/8/2018 12:44:32 PM Office: AUSYD Filename: C:\PW_WORKING\RSALIN.SAKIB\ANZ_PROD\D0925770\N01031-PWD-DRG-GEN-0080.DWG



LAYOUT PLAN
1:200

LEGEND

- TRACK ALIGNMENT
- RALP ACCESS ROAD
- GWS ACCESS ROAD
- PROPOSED RALP AND GWS SHARED ACCESS ROAD
- CONTOUR
- CADASTRAL BOUNDARY
- W-BEAM BARRIER
- AREA OF CULTURAL VALUE
- SIMTA BIODIVERSITY OFFSET AREA
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- RIPARIAN VEGETATION MANAGEMENT
- RtS APPROVED CONSTRUCTION BOUNDARY
- SIMTA RAIL CORRIDOR PERMANENT BOUNDARY
- RETAINING WALL BLOCK WIDTH

NOTES

1. REFER TO DRAINAGE PACKAGE N01031-PWD-DRG-DRN FOR DRAINAGE PIT DETAILS

SCALE 1:200

Ref Date: 18/01/18 4:47:16 PM Office: AUSYD Filename: C:\PW_WORKSPACE\EY.LITTLE.ANZ_PROD\D0282777\N01031-PWD-DRG-GEN-0081.DWG

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	K.GIGGACHER
CHECKED	W.DENG

FOR CONSTRUCTION

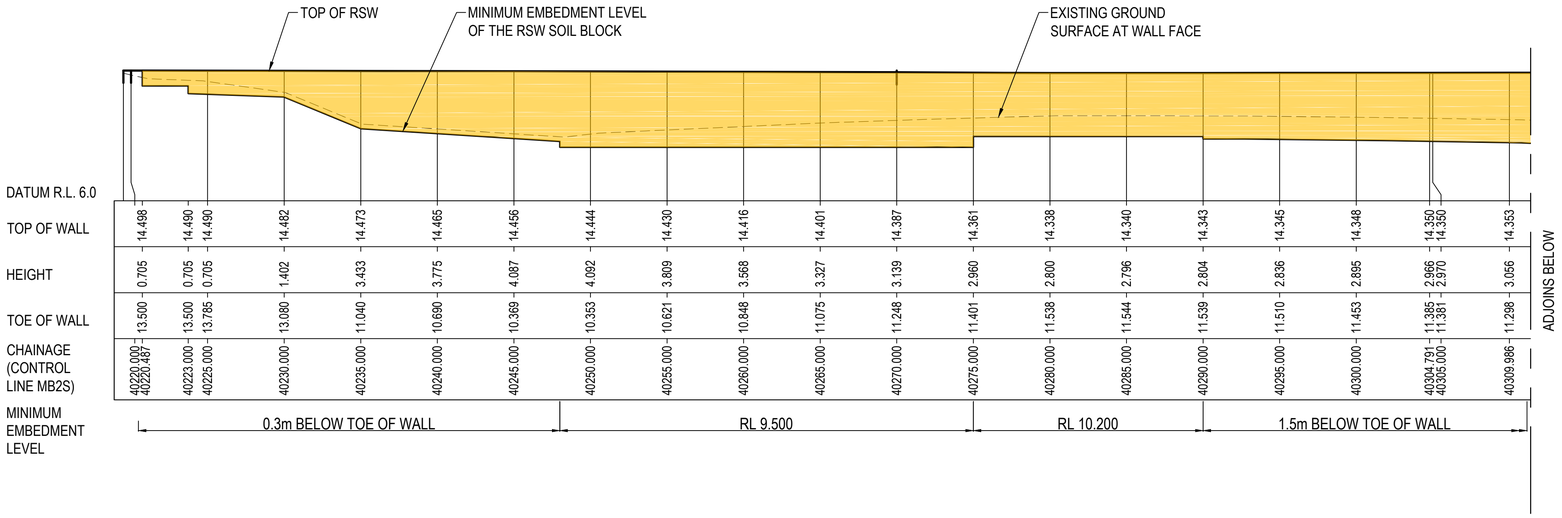
APPROVED: DATE 31.07.18 — M.SAKIB — M.SAKIB

ARTC DRAWING No | EDMS No | EDMS REV

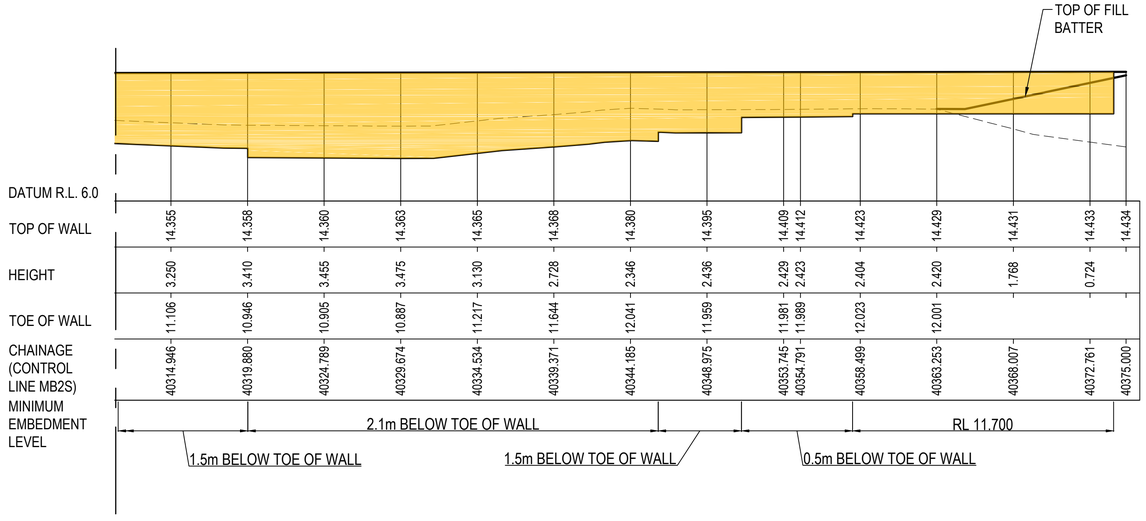
PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS REINFORCED SOIL WALL - PLAN SHEET 1 OF 1

DRAWING No.: PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC GEN – NUMBER 0081 – REV 03



SECTION A
1:200
GEN-0081



SECTION A
1:200
GEN-0081

2 0 4 8m
SCALE 1:200

Ref Date: 18/2/18 4:48:26 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ACAD_PROD\D0093707\ND\0101-PWD\DRG\GEN-0082.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	02.02.18	90% ARTC DESIGN ISSUE (RESUBMISSION)	M.SAKIB
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

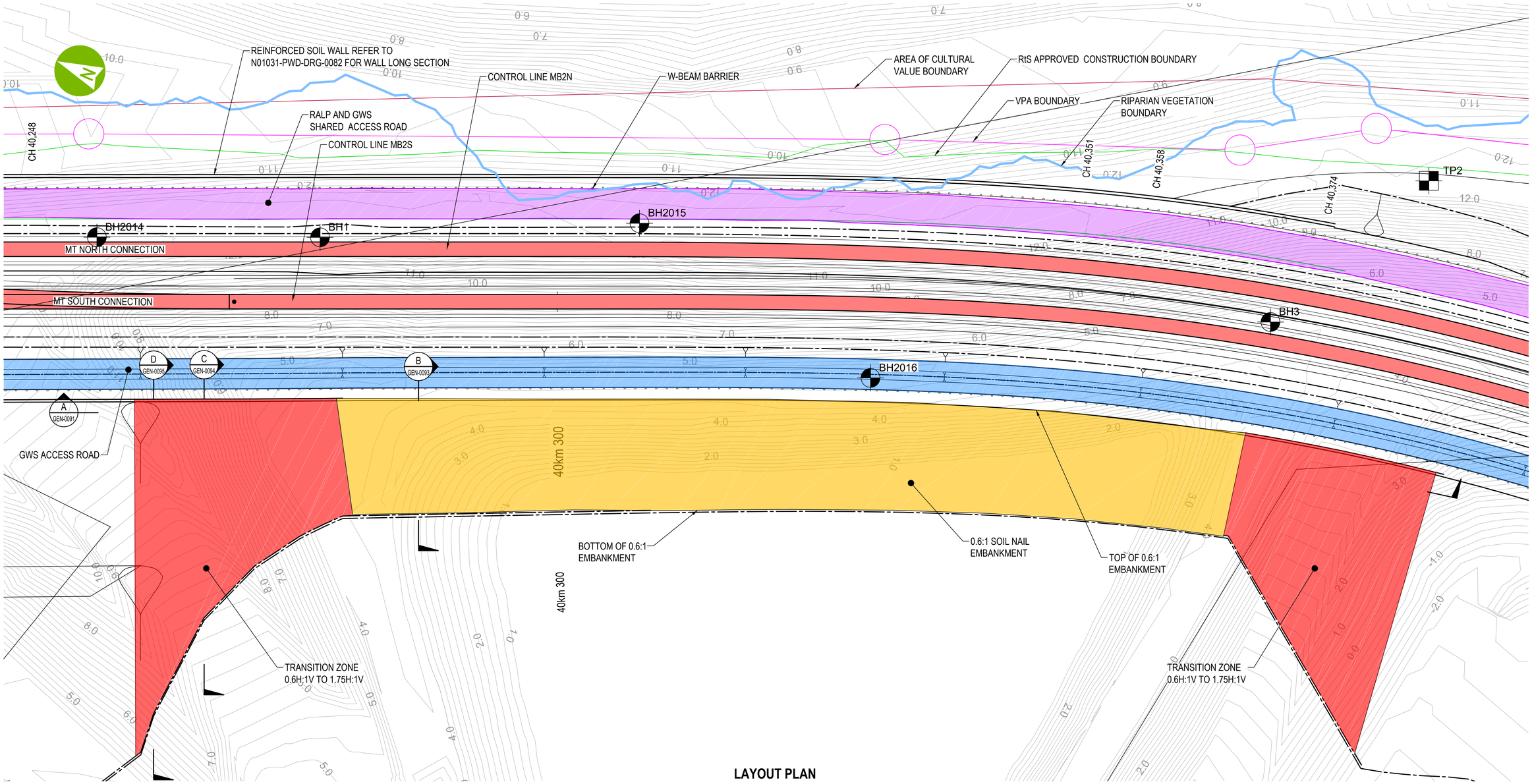
ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS REINFORCED SOIL WALL - LONGITUDINAL SECTION SHEET 2 OF 2

DRAWING No.

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0082	03



LAYOUT PLAN
1:200

LEGEND

- TRACK ALIGNMENT
- RALP AND GWS SHARED ACCESS ROAD
- GWS ACCESS ROAD
- CONTOUR
- W-BEAM BARRIER
- BOREHOLE (BH)
- AREA OF CULTURAL VALUE
- SIMTA BIODIVERSITY OFFSET AREA
- VOLUNTARY PLANNING AGREEMENT (VPA) BOUNDARY
- RIPARIAN VEGETATION MANAGEMENT
- RtS APPROVED CONSTRUCTION BOUNDARY
- REINFORCED SOIL WALL
- TRANSITION ZONE

2 0 4 8m
SCALE 1:200

Plot Date: 18/2/2018 4:49:56 PM Office: AUSYD Filename: C:\PW_WORKS\NLEY.LITTLEANZ_PROJ\D0029277\PW\N01031-PWD\DRG\GEN\0090.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
03	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

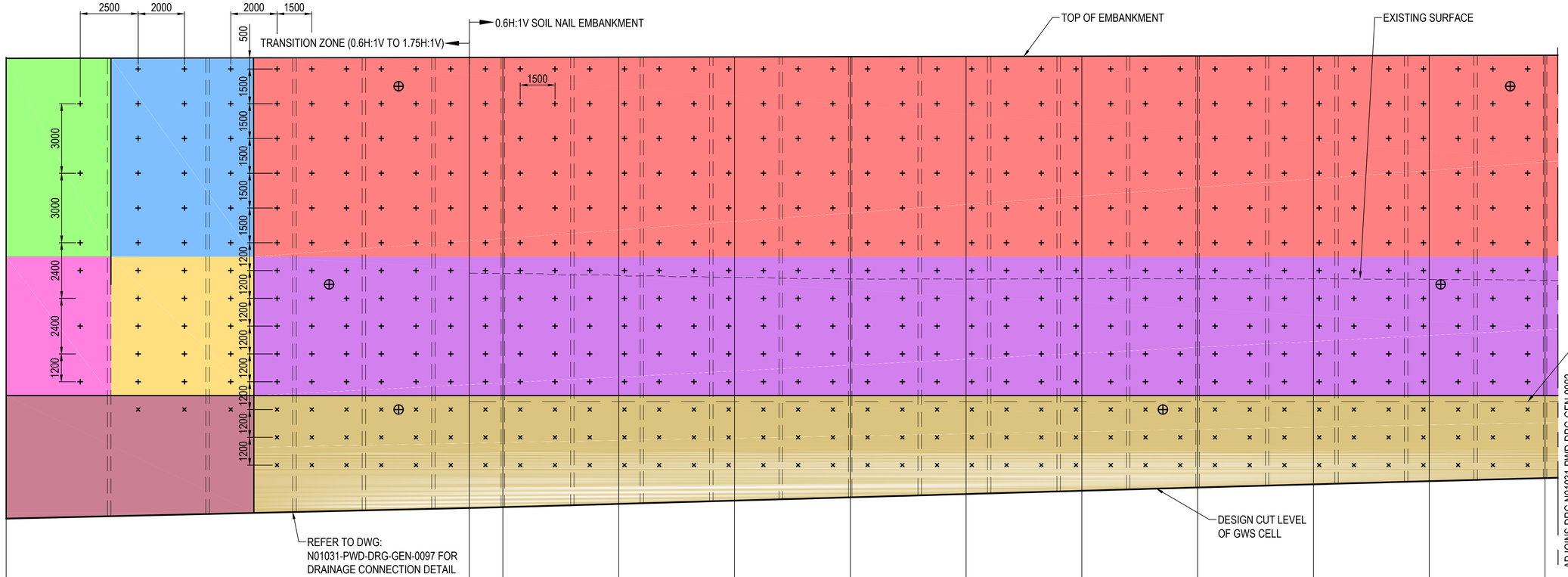
ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

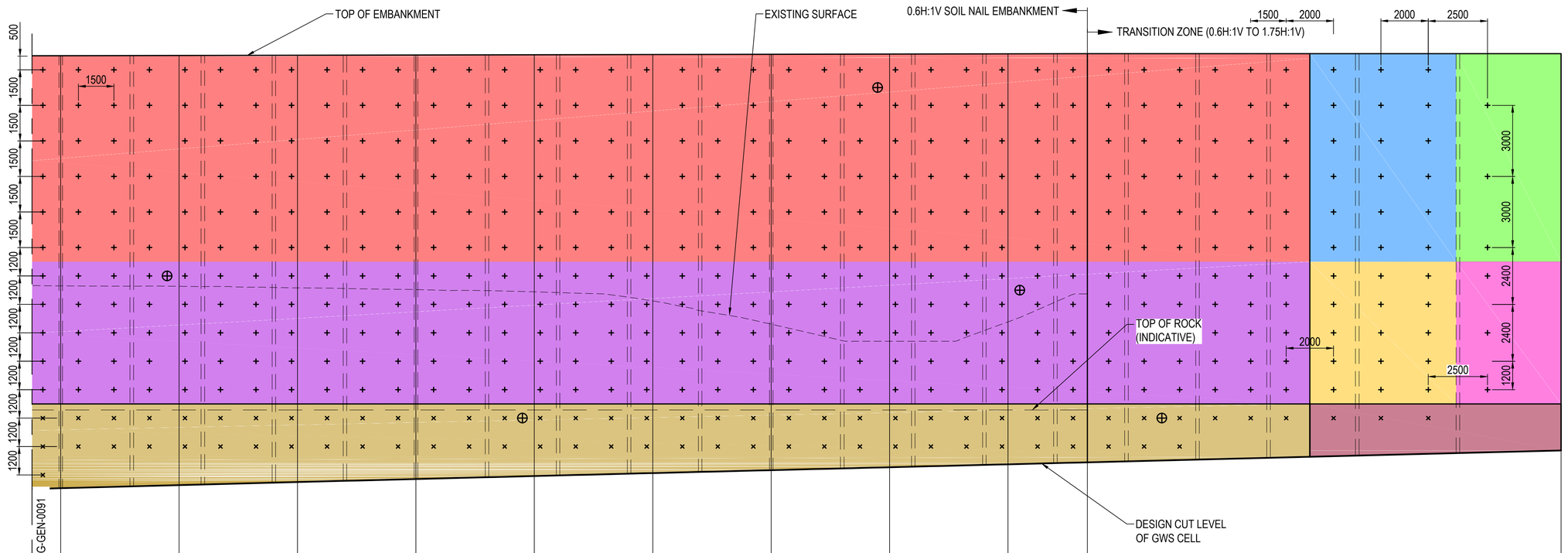
TITLE: BULK EARTHWORKS SOIL NAIL EMBANKMENT - PLAN SHEET 1 OF 1

DRAWING No.

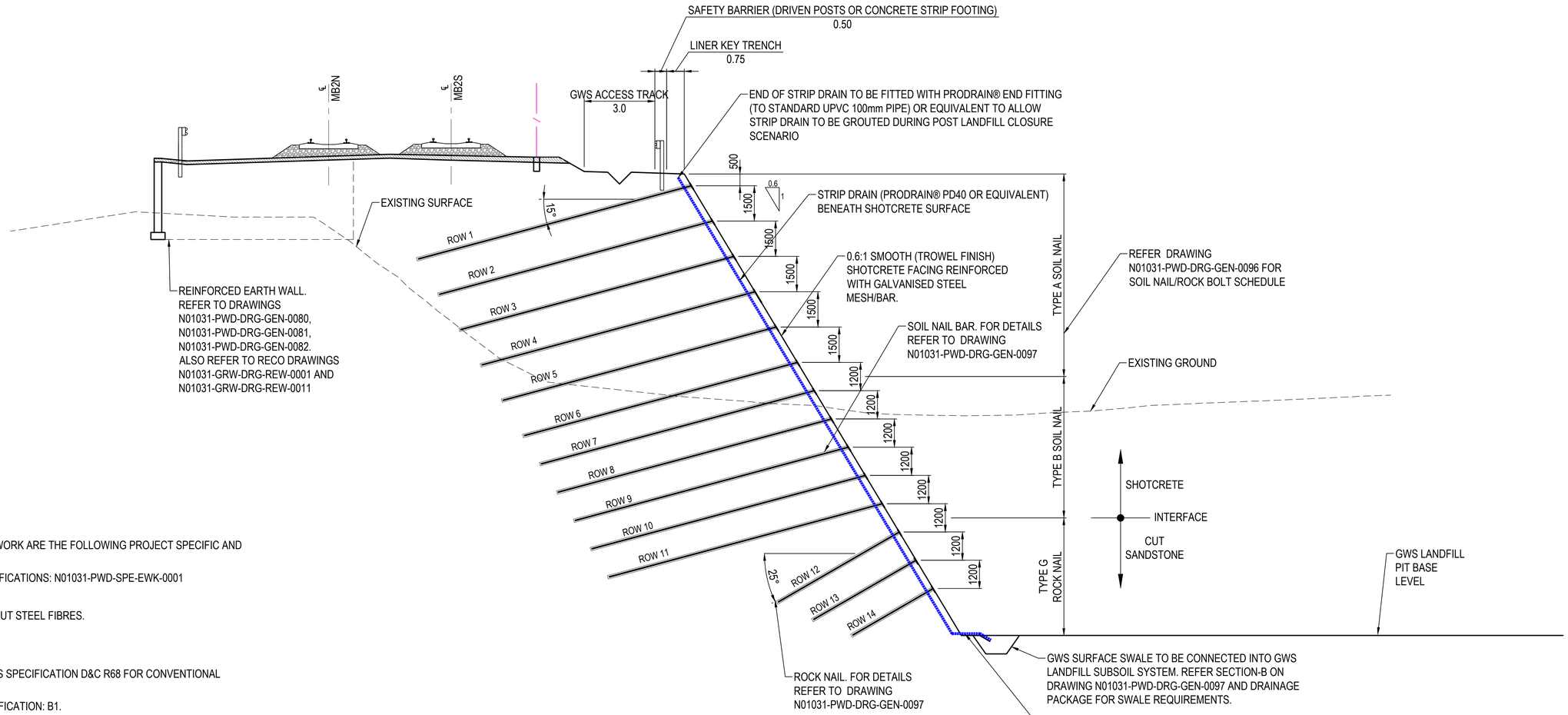
PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0090	03


2500
2000
2000
1500
500
TRANSITION ZONE (0.6H:1V TO 1.75H:1V)
0.6H:1V SOIL NAIL EMBANKMENT
TOP OF EMBANKMENT
EXISTING SURFACE
TOP OF ROCK
(INDICATIVE, REFER
TO NOTES 1 AND 2)
ADJOINS DRG N01031-PWD-DRG-GEN-0092
DESIGN CUT LEVEL
OF GWS CELL
REFER TO DWG:
N01031-PWD-DRG-GEN-0097 FOR
DRAINAGE CONNECTION DETAIL
3000
3000
2400
2400
1200
1500
1200

| | | |


TOP OF EMBANKMENT
EXISTING SURFACE
0.6H:1V SOIL NAIL EMBANKMENT
TRANSITION ZONE (0.6H:1V TO 1.75H:1V)
TOP OF ROCK (INDICATIVE)
DESIGN CUT LEVEL OF GWS CELL
1500
2000
2500
3000
2400
1200
500

| | | |



SECTION B (GEN-0090) 1:100

TYPICAL SECTION - CONTROL LINE MB2S (CH 40 286)

NOTES:

SPECIFICATION

S1. THE SPECIFICATIONS THAT APPLY TO THIS WORK ARE THE FOLLOWING PROJECT SPECIFIC AND RMS SPECIFICATIONS:

- PROJECT SPECIFIC EARTHWORKS SPECIFICATIONS: N01031-PWD-SPE-EWK-0001
- RMS D&C R64, SOIL NAILING.
- RMS D&C R68, SHOTCRETE WORK WITHOUT STEEL FIBRES.

SHOTCRETE

SC1. SHOTCRETE SHALL COMPLY WITH THE RMS SPECIFICATION D&C R68 FOR CONVENTIONAL REINFORCED SHOTCRETE WITH NO FIBRES.

SC2. ALL SHOTCRETE TO BE EXPOSURE CLASSIFICATION: B1.

SC3. SHOTCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 32 MPa AT 28 DAYS U.N.O. TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH RMS D&C R68 AS APPROPRIATE.

SC4. SHOT CRETE THICKNESS IS MEASURED TO THE CUT FACE OF THE SOIL/ROCK, WHERE THE STRIP DRAIN IS PLACED ON TOP OF THE CUT FACE, THE SHOTCRETE THICKNESS IS MEASURED TO THE EXPOSED FACE OF THE STRIP DRAIN.

SC5. ALL REINFORCEMENT IN SHOTCRETE IS TO BE HOT DIP GALVANISED IN ACCORDANCE WITH AS/NZS4680 AND RMS D&C SPECIFICATION R64.

SOIL NAILS

SN1. SUITABILITY TESTS SHALL BE CARRIED OUT ON 1% OF SOIL NAILS IN ACCORDANCE WITH RMS D&C R64.

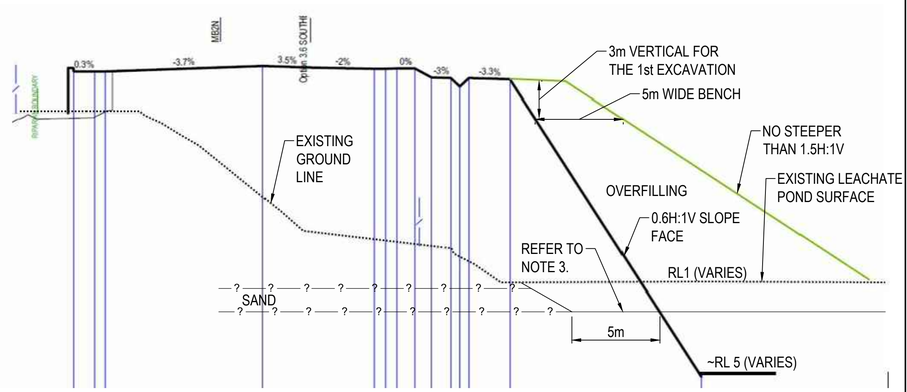
SN2. ACCEPTANCE TEST SHALL BE CARRIED OUT ON 3% OF SOIL NAILS IN ACCORDANCE WITH RMS D&C R64.

EXCAVATION NOTES

1. THE FILL SLOPE CONSTRUCTION AND EXCAVATION SEQUENCE IS TO BE CONDUCTED IN ACCORDANCE WITH THE CONSTRUCTION NOTES. IRREGULARITIES IN THE CUT FACE, EXCAVATION OVERBREAK OR INADVERTENT OVER EXCAVATION MAY REQUIRE REMEDIATION VIA ADDITIONAL SHOTCRETE THICKNESSES OR OTHER MEASURES.
2. DURING CONSTRUCTION THE CONDITIONS ABOVE THE EXCAVATED SLOPE FACE SHALL BE REVIEWED ON A DAILY BASIS FOR SIGNS OF GROUND MOVEMENT. IF UNRAVELLING OR LOCAL INSTABILITY OF THE SLOPE FACE EXCAVATION OCCURS UNSTABLE AREAS SHALL BE TEMPORARILY STABILISED BY MEANS OF TEMPORARY SUPPORTING THE EXPOSED FACE WITH AN EARTH BERM OR OTHER APPROPRIATE METHODS. WORK IS TO BE SUSPENDED IN UNSTABLE AREAS UNTIL REMEDIAL MEASURES IMPLEMENTED.

CONSTRUCTION SEQUENCE OF THE 0.6H:1V SLOPE

1. DECOMMISSION THE EXISTING LEACHATE POND;
2. SLASH VEGETATION AND REMOVE TREES AND SHRUBS AT THE EXISTING SLOPE TO THE WEST OF THE EXISTING SLOPE. TREE STUMPS TO BE REMOVED. ROOT MAT AND TOP SOIL TO BE LEFT IN PLACE AND NOT DISTURBED;
3. EXISTING SAND LAYER TO BE REMOVED 5m FROM THE FINAL FACE OF THE SOIL NAIL EMBANKMENT AND BACKFILLED WITH COMPACTED GENERAL FILL AS PER PROJECT EARTHWORKS SPECIFICATION (REF DOC: N01031-PWD-SPE-EWK-0001) PRIOR TO ANY OTHER SOIL NAIL WALL CONSTRUCTION ACTIVITIES.
4. 1ST LIFT OF EXCAVATION TO CREATE A 5m WIDE BENCH FOR MACHINERY/PLANT OPERATION. THE EXCAVATION HEIGHT FOR THE 1ST LIFT OF EXCAVATION SHALL BE NO MORE THAN 3m;
5. INSTALL SOIL NAIL ROW 1 AND ROW 2, STRIP DRAINS AND STEEL MESH/SHOTCRETE FACING OVER THE 3m HIGH EXCAVATED 0.6H:1V SURFACE;
6. CUT EXCAVATION TO 2.4m (MAX) DEPTH BELOW THE INITIALLY EXCAVATED BENCH LEVEL;
7. INSTALL SOIL NAIL ROW 3 AND ROW 4, STRIP DRAINS AND STEEL MESH/SHOTCRETE FACING OVER THE 2.4m HIGH EXCAVATED 0.6H:1V SURFACE;
8. REPEAT STAGES 4 AND 5 FOR THE INSTALLATION OF SOIL NAIL ROW 5 AND ROW 6;
9. EXCAVATE BELOW SOIL NAIL ROW 6 TO NO MORE THAN 1.2m DEPTH;
10. INSTALL SOIL NAIL ROW 7, STRIP DRAINS AND STEEL MESH/SHOTCRETE FACING OVER THE 1.5m HIGH EXCAVATED 0.6H:1V SURFACE;
11. REPEAT STAGES 8 AND 9 FOR THE INSTALLATION OF SOIL NAIL ROW 8 TO ROW 14; AND
12. STEEL MESH WITH SHOTCRETE FACING CAN BE TERMINATED AT THE TOP OF THE MEDIUM STRENGTH SILTSTONE LEVEL.



SECTION A - CONSTRUCTION SEQUENCE OF THE 0.6H:1V SLOPE BETWEEN CH40258 AND CH40389

SCALE 1:100

REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	J.RASAMEEMANEEPONG
DESIGNED	K.GIGGACHER
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED DATE 31.07.18 M.SAKIB M.SAKIB

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SOIL NAIL EMBANKMENT CROSS SECTION SHEET 1 OF 1
DRAWING No.	PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC GEN – NUMBER 0093 – REV 01

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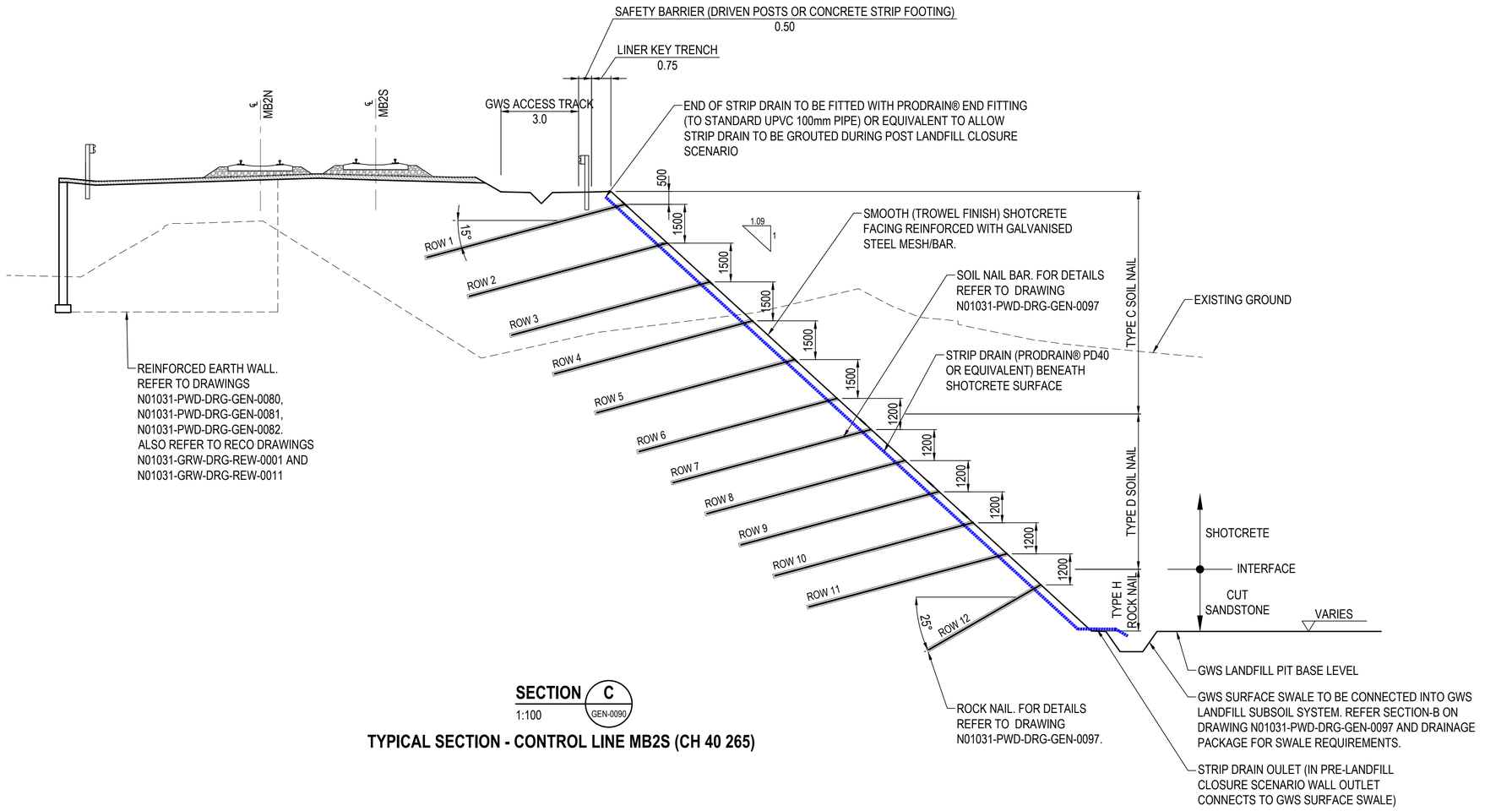
CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

Plot Date: 6/8/2018 12:59:53 PM Office: AUSYD Filename: C:\PW_WORKSPACE\ALN.SAKIBALI_PROD\D0037270\N01031-PWD-DRG-GEN-0093.DWG



SECTION C (GEN-0090)
1:100

TYPICAL SECTION - CONTROL LINE MB2S (CH 40 265)

NOTES:

1. FOR SPECIFICATIONS REFER TO DRAWING N01031-PWD-DRG-GEN-0093.
2. FOR SOIL NAIL AND ROCK BOLT SCHEDULE REFER TO DRAWING N01031-PWD-DRG-GEN-0096.
3. FOR SOIL NAIL AND ROCK BOLT AND DRAINAGE DETAILS REFER TO DRAWING N01031-PWD-DRG-GEN-0097.

1 0 2 4m
SCALE 1:100

ARTC DRAWING No	EDMS No	EDMS REV

Plot Date: 3/8/2018 11:37:39 AM Office: AUSYD Filename: C:\PW_WORKING\ALEESHA.AHMAD\ANZ_PROD\D0029277\DWG\N01031-PWD-DRG-GEN-0094.DWG

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REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

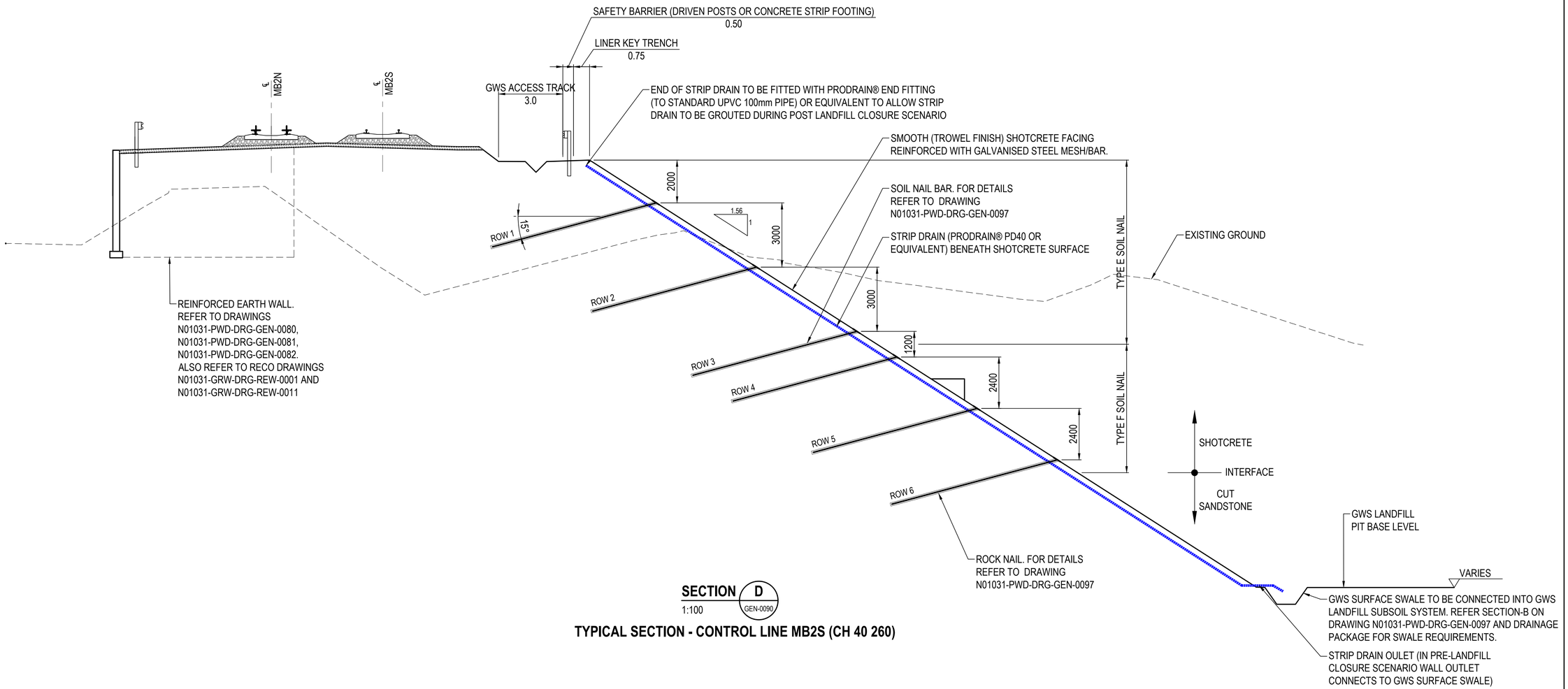
FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOIL NAIL EMBANKMENT CROSS SECTION SHEET 1 OF 1

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0094	01



SECTION D (GEN-0090)
1:100

TYPICAL SECTION - CONTROL LINE MB2S (CH 40 260)

NOTES:

1. FOR SPECIFICATIONS REFER TO DRAWING N01031-PWD-DRG-GEN-0093.
2. FOR SOIL NAIL AND ROCK BOLT SCHEDULE REFER TO DRAWING N01031-PWD-DRG-GEN-0096.
3. FOR SOIL NAIL AND ROCK BOLT AND DRAINAGE DETAILS REFER TO DRAWING N01031-PWD-DRG-GEN-0097.

1 0 2 4m
SCALE 1:100

Plot Date: 3/8/2018 11:58:02 AM Office: AUSYD Filename: C:\PW_WORKING\EEHA.AHMADIANE_RODO\D0283770\N01031-PWD-DRG-GEN-0095.DWG

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CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS
SOIL NAIL EMBANKMENT CROSS SECTION
SHEET 1 OF 1

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0095	01

0.6H:1V BATTER SUPPORT TYPES											SUITABILITY TEST NAILS (1) (2) (3)			
SUPPORT TYPE	CHAINAGE ALONG MB2S	SPACING VERTICAL (m)	SPACING HORIZONTAL (m)	LENGTH (m)	INCLINATION BELOW HORIZONTAL	BOLT / NAIL TYPE	MINIMUM HOLE DIAMETER (mm)	MAXIMUM WORKING LOAD (kN/NAIL) PER NAIL	SOIL / ROCK TYPE	TARGET FAILURE MECHANISM	No. TEST	SOIL/ROCK TYPE AT TEST LOCATION	ULTIMATE BEND STRENGTH (kPa)	ESTIMATED TEST FAILURE LOAD (kN)
TYPE A SOIL NAIL	40269-40378	ROW 1 AT 0.5m FROM SLOPE CREST; ROW 2 TO ROW 6 AT 1.5m VERTICAL SPACING	1.5	12.0	15	N20	150	85	GENERAL FILL (COMPACTION NOT LESS THAN 95% STD)	CIRCULAR FAILURE IN FILL SLOP	3	FILL	50	70
TYPE B SOIL NAIL	40269-40378	ROW 7 AT 1.2m BELOW ROW 6 OF TYPE A SOIL NAIL; 1.2m VERTICAL SPACING BETWEEN ROW 7 AND ROW 11	1.5	12.0	15	N20	150	85	PARTIALLY SATURATED (DUE TO SEEPAGE) MEDIUM DENSE/DENSE SAND	CIRCULAR FAILURE IN FILL SLOP	3	MEDIUM DENSE/ DENSE SAND	50	70
TYPE G – PATTERN ROCK NAIL	40269-40378	ROW 12 AT 1.2m BELOW ROW 11 OF TYPE B SOIL NAIL; 1.2m VERTICAL SPACING BETWEEN ROW 12 AND ROW 14	1.5	6.0 FOR ROW 12; 5.0 FOR ROW 13; 4.0 FOR ROW 14;	25	N28	130	100	EL – L SHALE; M SHALE	CIRCULAR FAILURE IN WEATHERED ROCK; FAILURE IN JOINTED ROCK AND BEDDING PLANES	4	SHALE - L SHALE - M	200	245

TRANSITION ZONE (1.75H:1V TO 0.6H:1V) SUPPORT TYPES										
SUPPORT TYPE	CHAINAGE ALONG MB2S	SPACING VERTICAL (m)	SPACING HORIZONTAL (m)	LENGTH (m)	INCLINATION BELOW HORIZONTAL	BOLT / NAIL TYPE	MINIMUM HOLE DIAMETER (mm)	MAXIMUM WORKING LOAD (kN/NAIL) PER NAIL	SOIL / ROCK TYPE	TARGET FAILURE MECHANISM
TYPE C SOIL NAIL	40263-40269, 40378-40384	ROW 1 AT 0.5m FROM SLOPE CREST; ROW 2 TO ROW 6 AT 1.5m VERTICAL SPACING	2.0	8.0	15	N20	150	85	GENERAL FILL (COMPACTION NOT LESS THAN 95% STD)	CIRCULAR FAILURE IN FILL SLOP
TYPE D SOIL NAIL	40263-40269, 40378-40384	ROW 7 AT 1.2m BELOW ROW 6 OF TYPE C SOIL NAIL; 1.2m VERTICAL SPACING BETWEEN ROW 7 AND ROW 11	2.0	8.0	15	N20	150	85	PARTIALLY SATURATED (DUE TO SEEPAGE) DENSE SAND	CIRCULAR FAILURE IN FILL SLOP
TYPE E SOIL NAIL	40258.5-40263, 40384-40388.3	ROW 1 AT 1.5m FROM SLOPE CREST; ROW 2 AND ROW 3 AT 3m VERTICAL SPACING	2.5	8.0	15	N20	150	85	GENERAL FILL (COMPACTION NOT LESS THAN 95% STD)	CIRCULAR FAILURE IN FILL SLOP
TYPE F SOIL NAIL	40258.5-40263, 40384-40388.3	ROW 4 AT 1.2m BELOW ROW 3 OF TYPE E SOIL NAIL; 2.4m VERTICAL SPACING BETWEEN ROW 4 AND ROW 6	2.5	8.0	15	N20	150	85	GENERAL FILL (COMPACTION NOT LESS THAN 95% STD)	CIRCULAR FAILURE IN FILL SLOP
TYPE H ROCK NAIL	40258.5-40269, 40378-40388.3	ROW 12 AT 1.2m BELOW ROW 11 OF TYPE D SOIL NAIL	2.0	5.0	25	N28	130	100	EL – L SHALE; M SHALE	CIRCULAR FAILURE IN WEATHERED ROCK; FAILURE IN JOINTED ROCK AND BEDDING PLANES

NOTES:

1. SUITABILITY TESTS TO BE CARRIED OUT ON SACRIFICIAL NAILS TO PULL-OUT FAILURE OR TO 200% OF THE DESIGN WORKING LOAD, WHICHEVER IS LOWER. FOR DESIGN WORKING LOAD REFER TO 'ESTIMATED TEST FAILURE LOAD' IN THE TABLE ABOVE. THE TESTS SHALL BE CARRIED OUT IN ACCORDANCE WITH RMS SPECIFICATION D&C R64.
2. THE SUITABILITY TEST NAILS SHOULD HAVE A MINIMUM NAIL LENGTH OF 4.5m, OF WHICH A MINIMUM DEBONDED ZONE OF 1 METRE LENGTH IMMEDIATELY BEHIND THE FACING IS CONSIDERED.
3. FOR THE LOCATIONS (INDICATIVE) OF THE SUITABILITY TEST NAILS, REFER TO DRAWING N01031-PWD-DRG-0091 AND 0092. FINAL LOCATIONS OF SUITABILITY TEST NAILS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER AND APPROVED BY GEOTECHNICAL ENGINEER.
4. ACCEPTANCE TESTS TO BE CARRIED OUT ON MINIMUM 3% OF THE PRODUCTION NAILS IN ACCORDANCE WITH RMS SPECIFICATION D&C R64. THE ACCEPTANCE TEST NAILS SHALL BE UNIFORMLY DISTRIBUTED OVER THE HEIGHT & LENGTH OF THE SLOPE TO BE REPRESENTATIVE OF THE RANGE OF SOIL/ROCK CONDITIONS. TEST LOCATIONS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER AND APPROVED BY GEOTECHNICAL ENGINEER.

Plot Date: 3/8/2018 12:07:38 PM Office: AUSYD Filename: C:\PW_WORKA\SHLEY.LITTLE\ANZ_PROD\D0029270\N01031-PWD\DRG\GEN\0096.DWG

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CLIENT
CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
NTS	A1

DRAWN: A.LITTLE
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

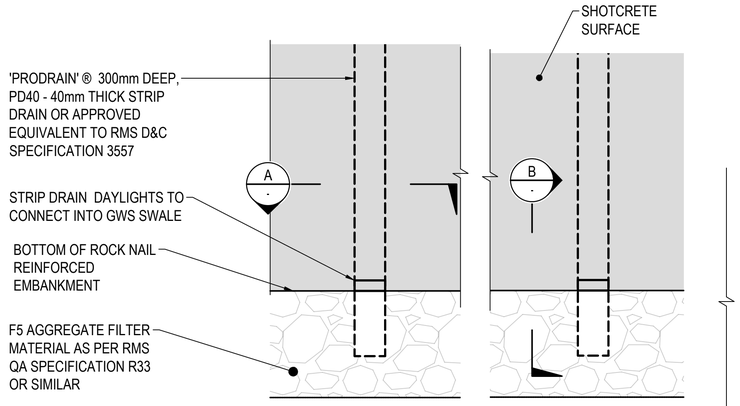
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOIL NAIL/ROCK BOLT SCHEDULE SHEET 1 OF 1

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0096	01



DRAINAGE DETAIL
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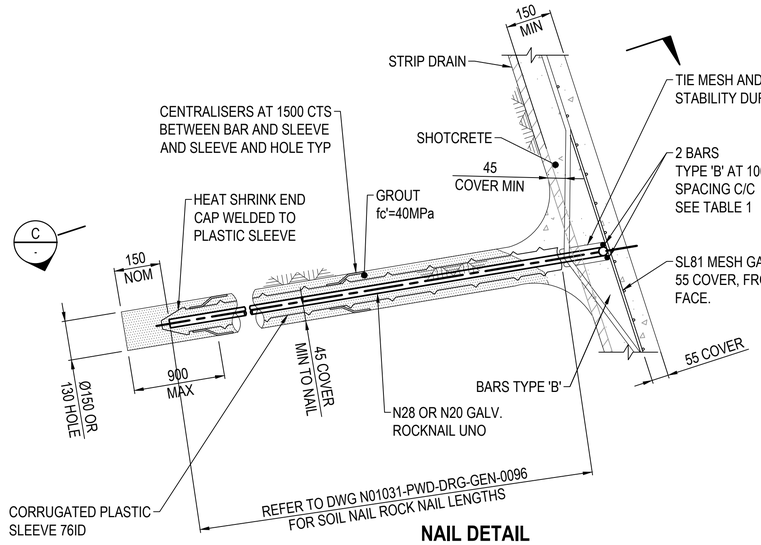

NAIL DETAIL
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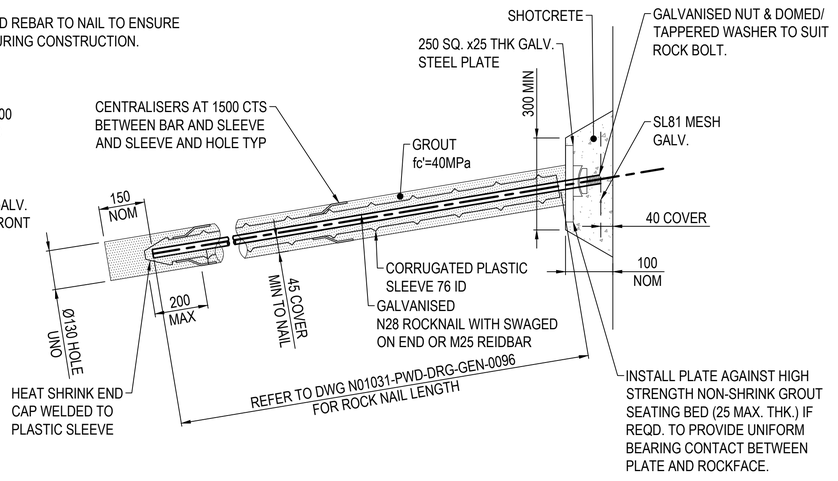
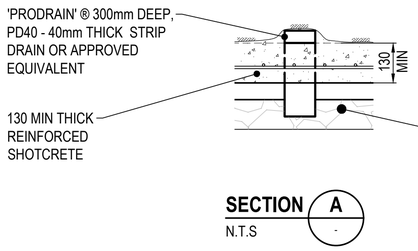
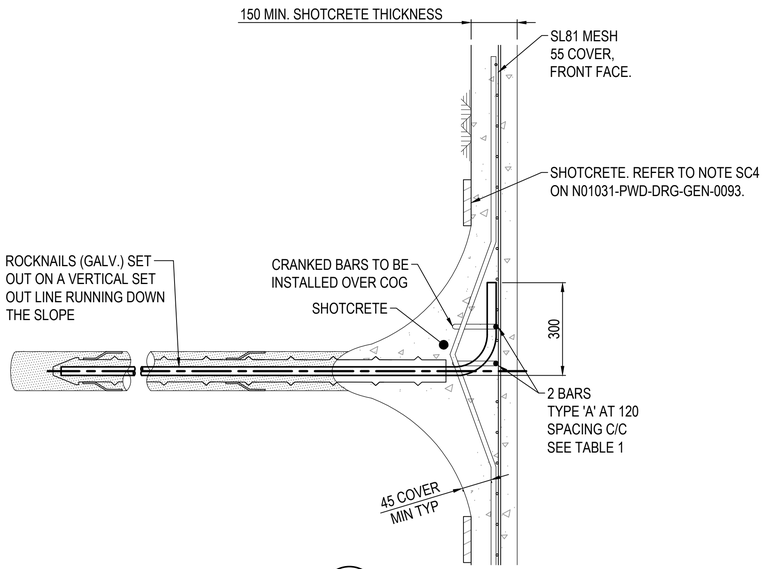


ROCK NAIL DETAIL
1:10



SECTION A
N.T.S



SECTION C
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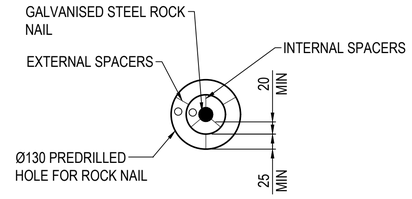
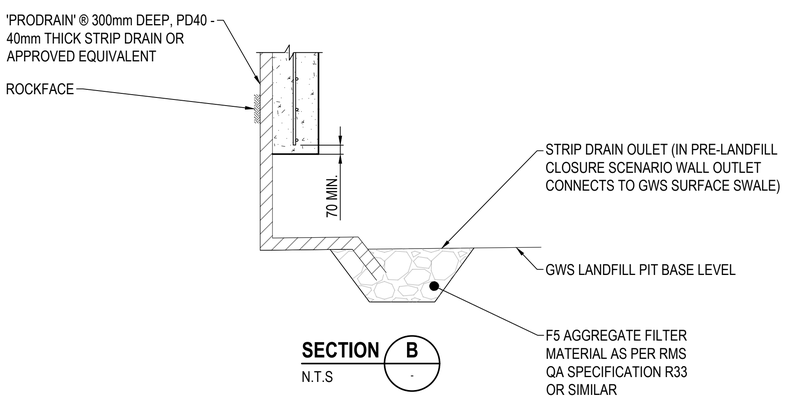


TYPICAL SECTION THROUGH ENCAPSULATED ROCK NAIL
N.T.S.

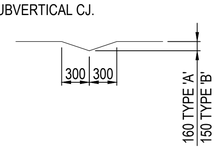


SECTION B
N.T.S

TABLE 1 - ADDITIONAL REINFORCING BAR SCHEDULE

MAX NAIL SPACING (mm)	ADDITIONAL REINFORCEMENT AT EACH NAILHEAD			
	BAR 'A'		BAR 'B'	
	SIZE	LENGTH (mm)	SIZE	LENGTH (mm)
1500	N16 (GALV.)	1500	N16 (GALV.)	1500

1. BARS TO BE CRANKED WHERE SHOWN
2. HOOK BARS IN PLANE OF WALL ONE END WHERE ADJACENT TO SUBVERTICAL CJ.



TYPICAL SECTION THROUGH ENCAPSULATED SOIL NAIL
N.T.S.

100 0 200 400mm
SCALE 1:10

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
01	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

FOR CONSTRUCTION

DRAWN: A.LITTLE
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

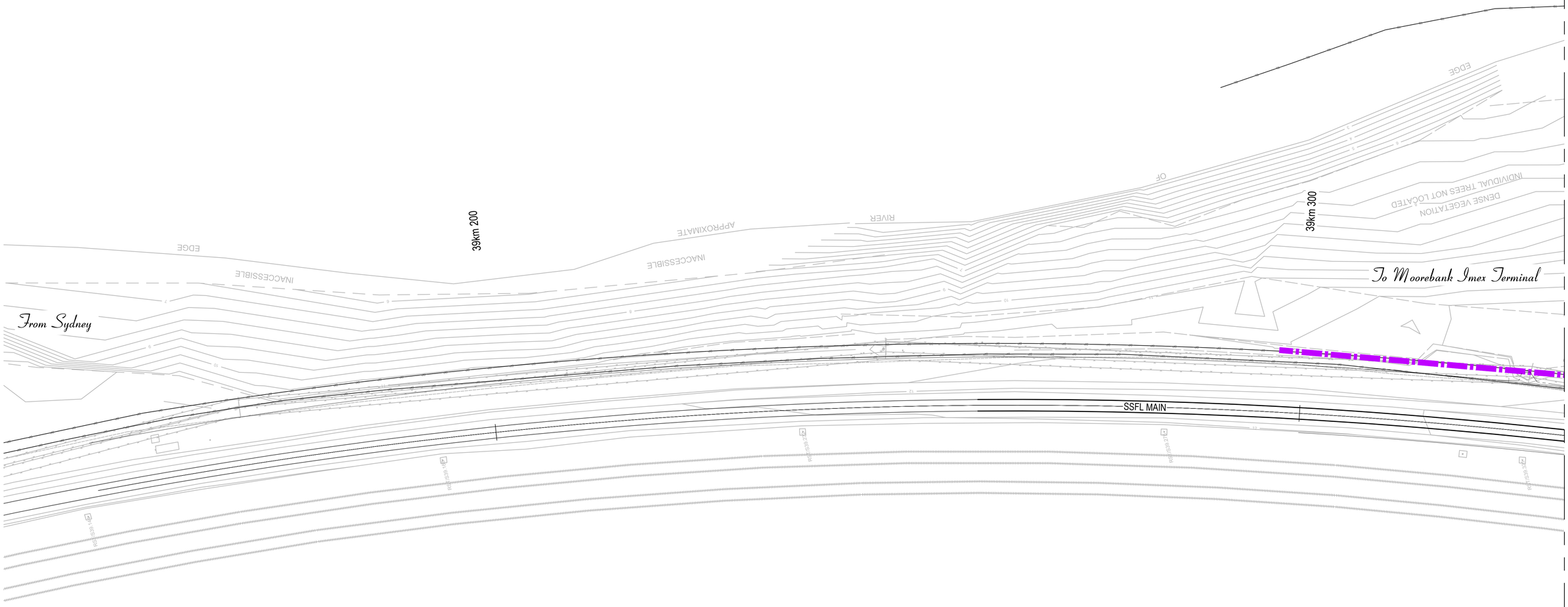
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SOIL NAIL EMBANKMENT- DETAILS SHEET 1 OF 1

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0097	01

Plot Date: 18/2018 4:52:27 PM Office: AUSYD Filename: C:\PW_WORKA\SHLEY.LITTLE\AZ_PROD\D0029377\DWG\N01031-PWD-DRG-GEN-0097.DWG

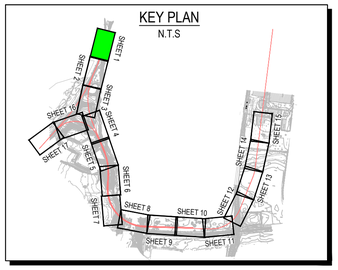


ADJOINS DRG N01031-PWD-DRG-GEN-00111

NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
3. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0062 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
8. THE EXTENT OF EACH FOUNDATION TREATMENT ZONE AS SHOWN HAS BEEN DETERMINED WITH REFERENCE TO EACH RAIL CONTROL LINE AND WHETHER IT IS IN CUT OR FILL. EXACT FOUNDATION TREATMENT ZONE EXTENTS AND TRANSITION FROM CUT FILL (AND VICE VERSA) TO BE DETERMINED ON SITE.

KEY PLAN
N.T.S



PLAN
1:250

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

	E1		E5
	E2		E6
	E3		E7
	E4		E8

CUTS

	C1 OR C3
	C2

2.5 0 5 10m
SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

Plot Date: 18/01/18 4:53:43 PM Office: AUSYD Filename: C:\PW_WORKSHARE\BY LITTLE\ANZ_PROD\30039377\N01031-PWD\DRG\GEN\N0110.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 1 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0110	01

ADJOINS DRG N01031-PWD-DRG-GEN-000110

ADJOINS DRG N01031-PWD-DRG-GEN-00112

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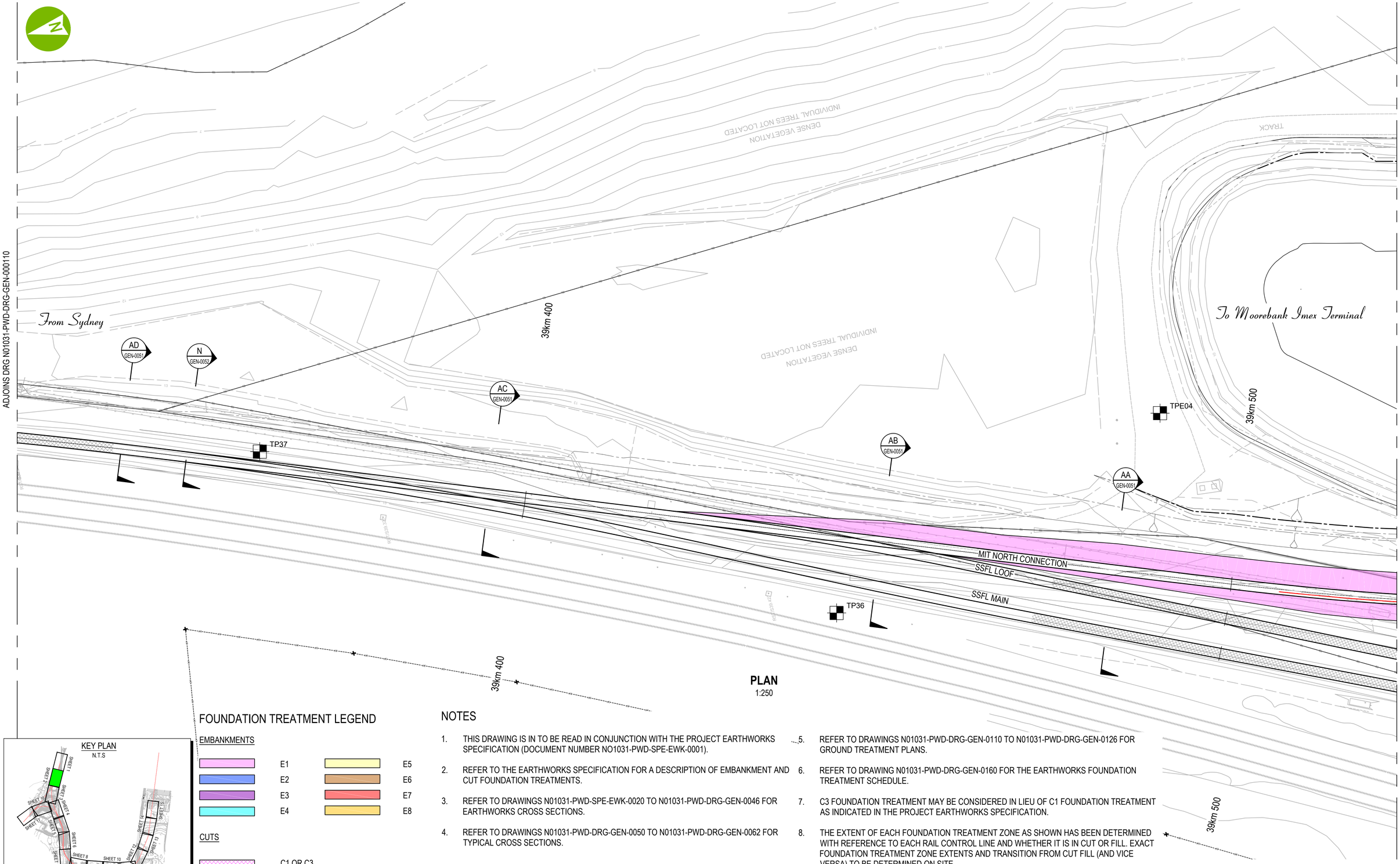
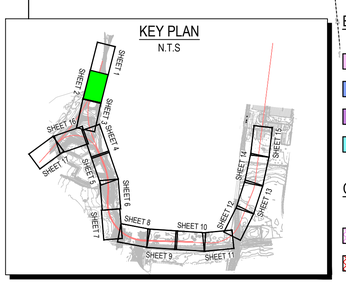


PLAN
1:250

KEY PLAN
N.T.S



FOUNDATION TREATMENT LEGEND

EMBANKMENTS

	E1		E5
	E2		E6
	E3		E7
	E4		E8

CUTS

	C1 OR C3
	C2

NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
3. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0062 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
8. THE EXTENT OF EACH FOUNDATION TREATMENT ZONE AS SHOWN HAS BEEN DETERMINED WITH REFERENCE TO EACH RAIL CONTROL LINE AND WHETHER IT IS IN CUT OR FILL. EXACT FOUNDATION TREATMENT ZONE EXTENTS AND TRANSITION FROM CUT FILL (AND VICE VERSA) TO BE DETERMINED ON SITE.

2.5 0 5 10m
SCALE 1:250

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 2 OF 17

DRAWING No.: PROJECT No. N01031 – ZONE PWD – TYPE DRG – DISC GEN – NUMBER 0111 – REV 02

ADJOINS DRG N01031-PWD-DRG-GEN-000111

ADJOINS DRG N01031-PWD-DRG-GEN-00113

BH2028

A
GEN-0050

To Moorebank Imex Terminal

39km 700

TP37

TP2002B

TP37

TPE05

39km 600

From Sydney

EXTENT OF STABILITY BERM

BH2019

MIT NORTH CONNECTION

BH2020

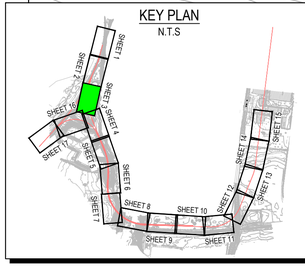
TP35

39km 600

TP37

TP34

KEY PLAN
N.T.S



NOTE
REFER DRG N01031-PWD-DRG-GEN-0111 FOR NOTES

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

	E1		E5
	E2		E6
	E3		E7
	E4		E8

CUTS

	C1 OR C3
	C2

PLAN
1:250

2.5 0 5 10m
SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

Rel Date: 18/2/18 4:57:08 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ_PROD\D0937078\N01031-PWD\DRG\GEN\0112.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 3 OF 17

DRAWING No. N01031 – PWD – DRG – GEN – 0112 – 02

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0112	02

ADJOINS DRG N01031-PWD-DRG-GEN-000112

ADJOINS DRG N01031-PWD-DRG-GEN-00114

GEORGES RIVER

DENSE VEGETATION
INDIVIDUAL TREES NOT LOCATED

TRACK

DIRT

ROAD

STOCKPILE

39km 800

39km 900

40km 200

From Sydney

To Moorebank Imex Terminal

B GEN-0050

P GEN-0052

D GEN-0053

AG GEN-0063

E GEN-0053

MIT NORTH CONNECTION

MIT SOUTH CONNECTION

NOTE
REFER DRG N01031-PWD-DRG-GEN-0111 FOR NOTES

FOUNDATION TREATMENT LEGEND

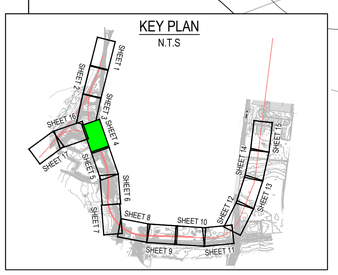
EMBANKMENTS

- E1
- E2
- E3
- E4
- E5
- E6
- E7
- E8

CUTS

- C1 OR C3
- C2

KEY PLAN
N.T.S



PLAN
1:250

2.5 0 5 10m
SCALE 1:250

Plot Date: 18/07/2018 4:58:19 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ.PROD\D0037\TN\N01031-PWD-DRG-GEN-0113.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
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02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 4 OF 17

DRAWING No. N01031 – PWD – DRG – GEN – 0113 – 02
(PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV)

GEORGES RIVER

39km 900

40km 000

40km 300

40km 400

From Sydney

To Moorebank Imex Terminal

BH2014

BH1

BH2015

BH3

BH4

BH2016

TP2

MIT NORTH TRANSFER ROAD

MIT SOUTH TRANSFER ROAD

INDIVIDUAL TREES NOT LOCATED

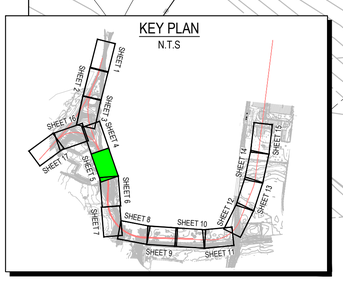
DENSE VEGETATION

ADJOINS DRG N01031-PWD-DRG-GEN-000113

ADJOINS DRG N01031-PWD-DRG-GEN-00115

PLAN
1:250

KEY PLAN
N.T.S



NOTE
REFER DRG N01031-PWD-DRG-GEN-0111 FOR NOTES

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

	E1		E5
	E2		E6
	E3		E7
	E4		E8

CUTS

	C1 OR C3
	C2

2.5 0 5 10m
SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

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CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

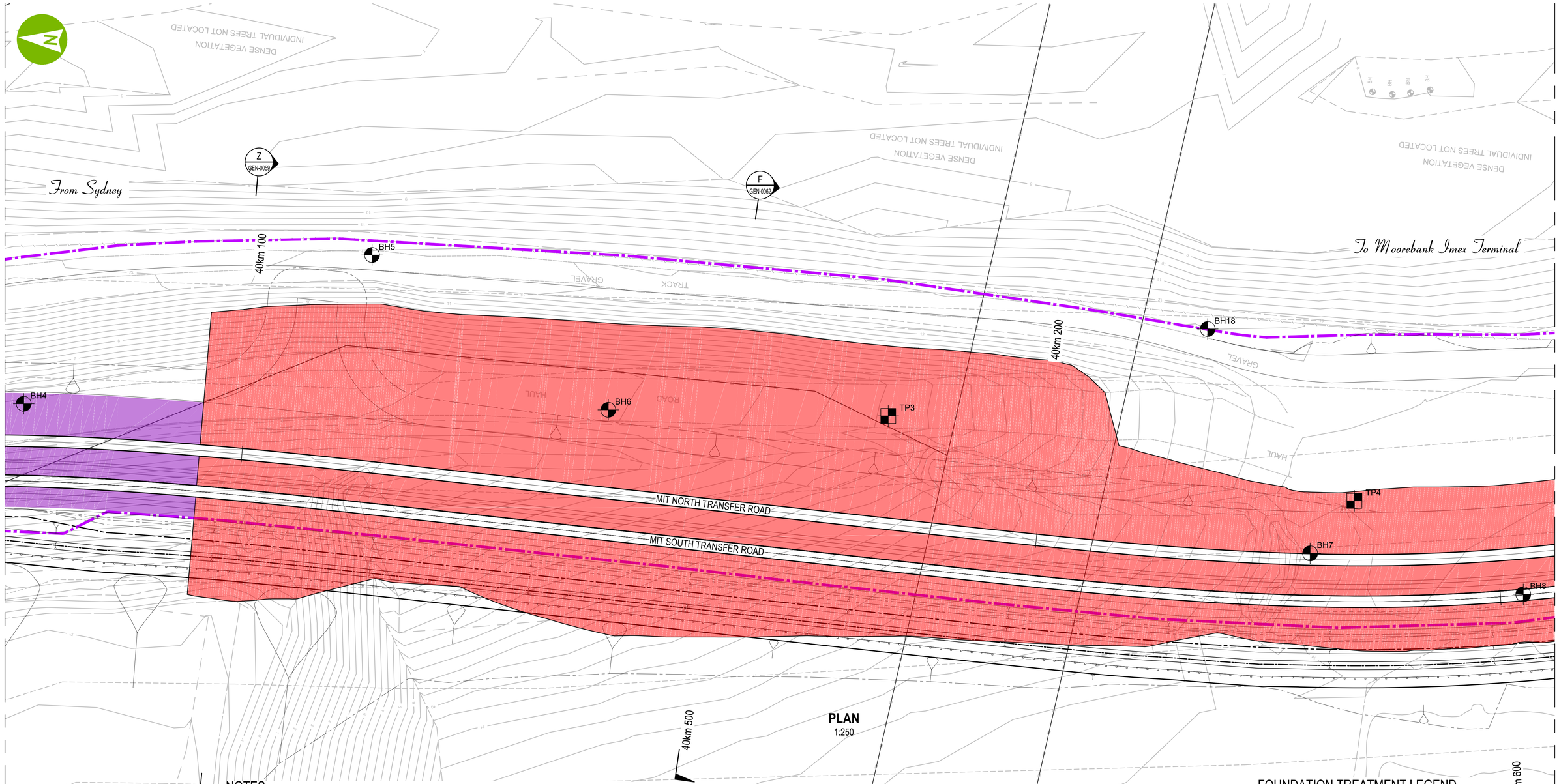
TITLE: BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 5 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0114	02

Rel Date: 18/07/18 4:49:28 PM Office: AUSYD Filename: C:\PW_WORKS\ASHLEY.LITTLE\AAZ_PROD\D0280770\N01031-PWD-DRG-GEN-0114.DWG

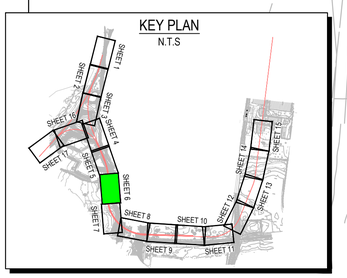
ADJOINS DRG N01031-PWD-DRG-GEN-000114

ADJOINS DRG N01031-PWD-DRG-GEN-00116



PLAN
1:250

KEY PLAN
N.T.S



NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
3. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0062 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
8. THE EXTENT OF EACH FOUNDATION TREATMENT ZONE AS SHOWN HAS BEEN DETERMINED WITH REFERENCE TO EACH RAIL CONTROL LINE AND WHETHER IT IS IN CUT OR FILL. EXACT FOUNDATION TREATMENT ZONE EXTENTS AND TRANSITION FROM CUT FILL (AND VICE VERSA) TO BE DETERMINED ON SITE.

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

E1		E5	
E2		E6	
E3		E7	
E4		E8	

CUTS

C1 OR C3	
C2	

2.5 0 5 10m
SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

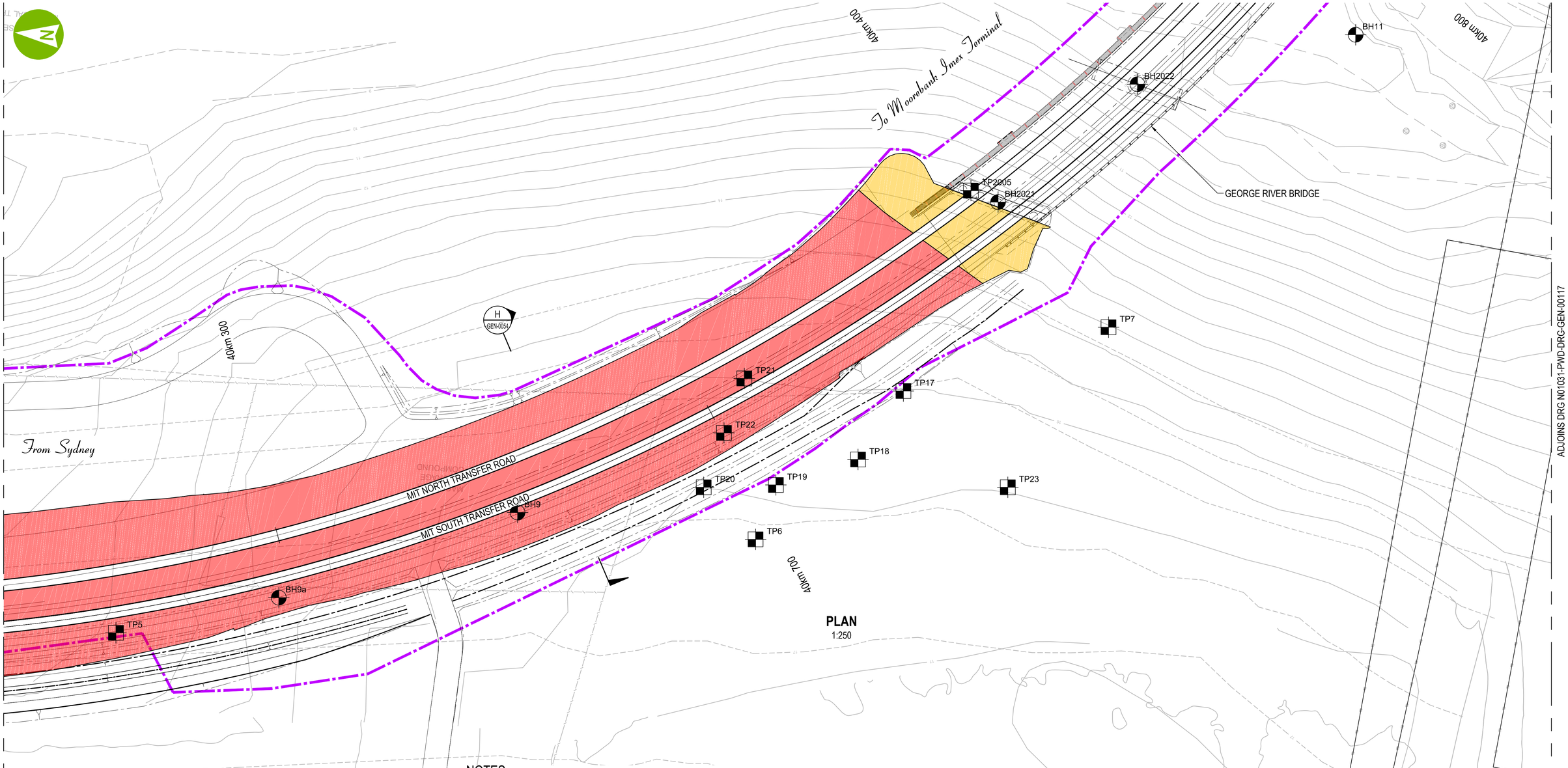
APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 6 OF 17

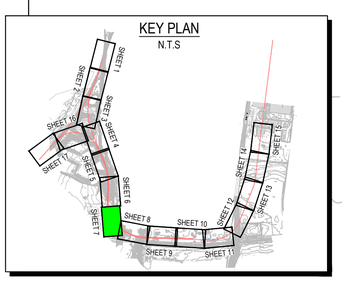
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0115	01

Plot Date: 18/2018 5:00:35 PM Office: AUSYD Filename: C:\PW_WORKS\ASHLEY.LITTLE\ANZ_PROD\D0929370\N01031-PWD\DRG\GEN\0115.DWG



PLAN
1:250

KEY PLAN
N.T.S



NOTES

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6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
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FOUNDATION TREATMENT LEGEND

EMBANKMENTS

	E1		E5
	E2		E6
	E3		E7
	E4		E8

CUTS

	C1 OR C3
	C2

2.5 0 5 10m
SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 7 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0116	01

Plot Date: 18/01/18 5:01:50 PM Office: AUSYD Filename: C:\PW_WORKABLE\EX.LITTLEJANZ_PROJ\D0035277\N01031-PWD-DRG-GEN-0116.DWG

NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
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3. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0062 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
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FOUNDATION TREATMENT LEGEND

EMBANKMENTS

	E1		E5
	E2		E6
	E3		E7
	E4		E8

CUTS

	C1 OR C3
	C2

ADJOINS DRG N01031-PWD-DRG-GEN-000116

ADJOINS DRG N01031-PWD-DRG-GEN-00118

From Sydney

To Moorebank Imex Terminal

GEORGES RIVER

GEORGE RIVER BRIDGE

RIVER

MIT NORTH TRANSFER ROAD

MIT SOUTH TRANSFER ROAD

EAST HILLS RAILWAY LINE

BH11

BH12022

BH2024

BH2025

BH2026

BH2027

BH14

40km 400

40km 500

40km 600

40km 800

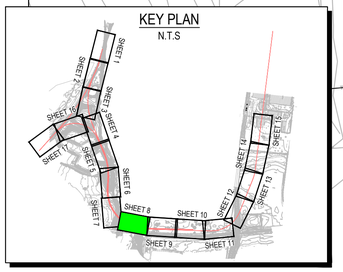
40km 900

DENSE VEGETATION

INDIVIDUAL TREES NOT LOCATED

T GEN-0057

KEY PLAN
N.T.S



PLAN
1:250

2.5 0 5 10m
SCALE 1:250

Plot Date: 18/01/2018 9:03:18 PM Office: AUSYD Filename: C:\PW_WORKS\ASHLEY.LITTLE\ANZ_PROD\D0092277\N01031-PWD-DRG-GEN-A0117.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	AS SHOWN
SIZE	A1
DRAWN	J.RASAMEEMANEEPONG
DESIGNED	K.GIGGACHER
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 8 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0117	01

NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
3. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0062 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
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ADJOINS DRG N01031-PWD-DRG-GEN-000117

ADJOINS DRG N01031-PWD-DRG-GEN-00119

40km 700

40km 800

From Sydney

To Moorebank Imex Terminal

J GEN-0055

MIT WEST TERMINAL LINE

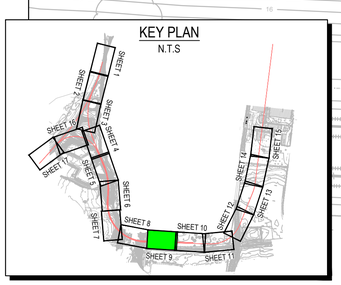
MIT EAST TERMINAL LINE

TP12

41km 000

41km 100

KEY PLAN
N.T.S



PLAN
1:250

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

- E1
- E2
- E3
- E4
- E5
- E6
- E7
- E8

CUTS

- C1 OR C3
- C2

2.5 0 5 10m
SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 9 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0118	01

Red Date: 18/01/18 5:05:07 PM Office: AUSYD Filename: C:\PW_WORKSA\BLEY.LITTLE\ANZ_PROJ\D028277\N01031-PWD.DRG.GEN.0118.DWG

NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
3. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0062 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
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FOUNDATION TREATMENT LEGEND

EMBANKMENTS

	E1		E5
	E2		E6
	E3		E7
	E4		E8

CUTS

	C1 OR C3
	C2

ADJOINS DRG N01031-PWD-DRG-GEN-000118

ADJOINS DRG N01031-PWD-DRG-GEN-00120

40km 800

40km 900

41km 200

41km 300

From Sydney

To Moorebank Imex Terminal

BALLAST ARRESTOR

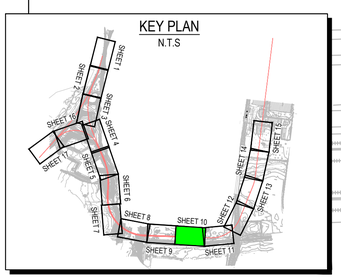
MIT WEST TERMINAL LINE

MIT EAST TERMINAL LINE

TP13

EAST HILLS RAILWAY LINE

KEY PLAN
N.T.S



PLAN
1:250

2.5 0 5 10m
SCALE 1:250

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	AS SHOWN
SIZE	A1
DRAWN	J.RASAMEEMANEEPONG
DESIGNED	K.GIGGACHER
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 10 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0119	01

Plot Date: 18/01/18 5:05:10 PM Office: AUSYD Filename: C:\PW_WORKSHARE\EY.LITTLE\ANZ_PROJ\D0028777\N01031-PWD\DRG\GEN\0119.DWG

NOTES

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ADJOINS DRG N01031-PWD-DRG-GEN-000119

ADJOINS DRG N01031-PWD-DRG-GEN-00121

From Sydney

To Moorebank Intermodal Terminal

BALLAST ARRESTOR

U GEN-0057

V GEN-0057

TPE08

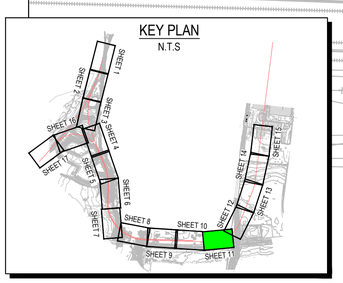
TPE09

MIT EAST TERMINAL LINE

41km 500

41km 400

KEY PLAN
N.T.S



PLAN
1:250

SCALE 1:250

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

E1		E5	
E2		E6	
E3		E7	
E4		E8	

CUTS

C1 OR C3	
C2	

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 11 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0120	01

Plot Date: 18/01/18 5:06:19 PM Office: AUSYD Filename: C:\PW_WORKABLE\EY.LITTLE\ANZ_PROD\D0283777\N01031-PWD-DRG-GEN-0120.DWG

ADJOINS DRG N01031-PWD-DRG-GEN-000120

ADJOINS DRG N01031-PWD-DRG-GEN-00122

Plot Date: 18/01/18 5:07:25 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ_PROD\D0302277\DWG\N01031-PWD-DRG-GEN-0121.DWG

From Sydney

To Moorebank Imex Terminal

AVENUE

MOOREBANK AVENUE BRIDGE

MIT SOUTH TRANSFER ROAD

BH15

BH16

TPE10

TPE11

TPE13

TPE14

TPE15

K GEN-0055

W GEN-0058

41km 600

41km 700

NOTES

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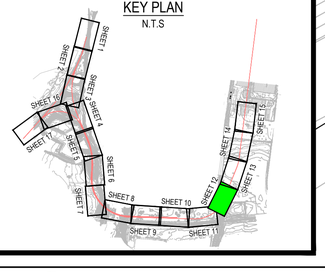
KEY PLAN
N.T.S



PLAN
1:250

2.5 0 5 10m
SCALE 1:250

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

- E1
- E2
- E3
- E4
- E5
- E6
- E7
- E8

CUTS

- C1 OR C3
- C2

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	AS SHOWN
SIZE	A1
DRAWN	J.RASAMEEMANEEPONG
DESIGNED	K.GIGGACHER
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 12 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0121	01

ADJOINS DRG N01031-PWD-DRG-GEN-000121

ADJOINS DRG N01031-PWD-DRG-GEN-00123

From Sydney

To Moorebank Imex Terminal

TPE15

TPE16

TPE17

MIT EAST TERMINAL LINE

TPE18

TPE19

TPE20

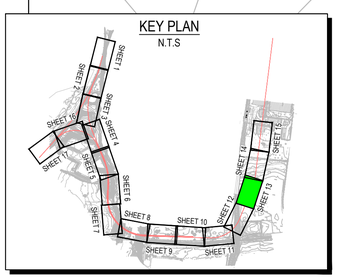
TPE21

41km 800

NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
3. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0062 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
8. THE EXTENT OF EACH FOUNDATION TREATMENT ZONE AS SHOWN HAS BEEN DETERMINED WITH REFERENCE TO EACH RAIL CONTROL LINE AND WHETHER IT IS IN CUT OR FILL. EXACT FOUNDATION TREATMENT ZONE EXTENTS AND TRANSITION FROM CUT FILL (AND VICE VERSA) TO BE DETERMINED ON SITE.

KEY PLAN
N.T.S



PLAN
1:250

2.5 0 5 10m
SCALE 1:250

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

	E1		E5
	E2		E6
	E3		E7
	E4		E8

CUTS

	C1 OR C3
	C2

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 13 OF 17

DRAWING No.

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0122	01

Plot Date: 18/2018 5:08:39 PM Office: AUSYD Filename: C:\PV_WORK\ASHLEY.LITTLE\ANZ_PROD\N2837700\N01031-PWD-DRG-GEN-0122.DWG

ADJOINS DRG N01031-PWD-DRG-GEN-000122

ADJOINS DRG N01031-PWD-DRG-GEN-00124

From Sydney

To Moorebank Imex Terminal

ANZAC CULVERT

L GEN-0055

X GEN-0058

Y GEN-0056

MIT EAST TERMINAL LINE

TPE21

TP8

TPE23

TP9B BH17

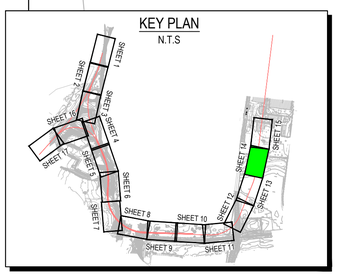
41km 900

42km 000

NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
3. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0062 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
8. THE EXTENT OF EACH FOUNDATION TREATMENT ZONE AS SHOWN HAS BEEN DETERMINED WITH REFERENCE TO EACH RAIL CONTROL LINE AND WHETHER IT IS IN CUT OR FILL. EXACT FOUNDATION TREATMENT ZONE EXTENTS AND TRANSITION FROM CUT FILL (AND VICE VERSA) TO BE DETERMINED ON SITE.

KEY PLAN
N.T.S



PLAN
1:250

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

- E1
- E2
- E3
- E4
- E5
- E6
- E7
- E8

CUTS

- C1 OR C3
- C2

2.5 0 5 10m
SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

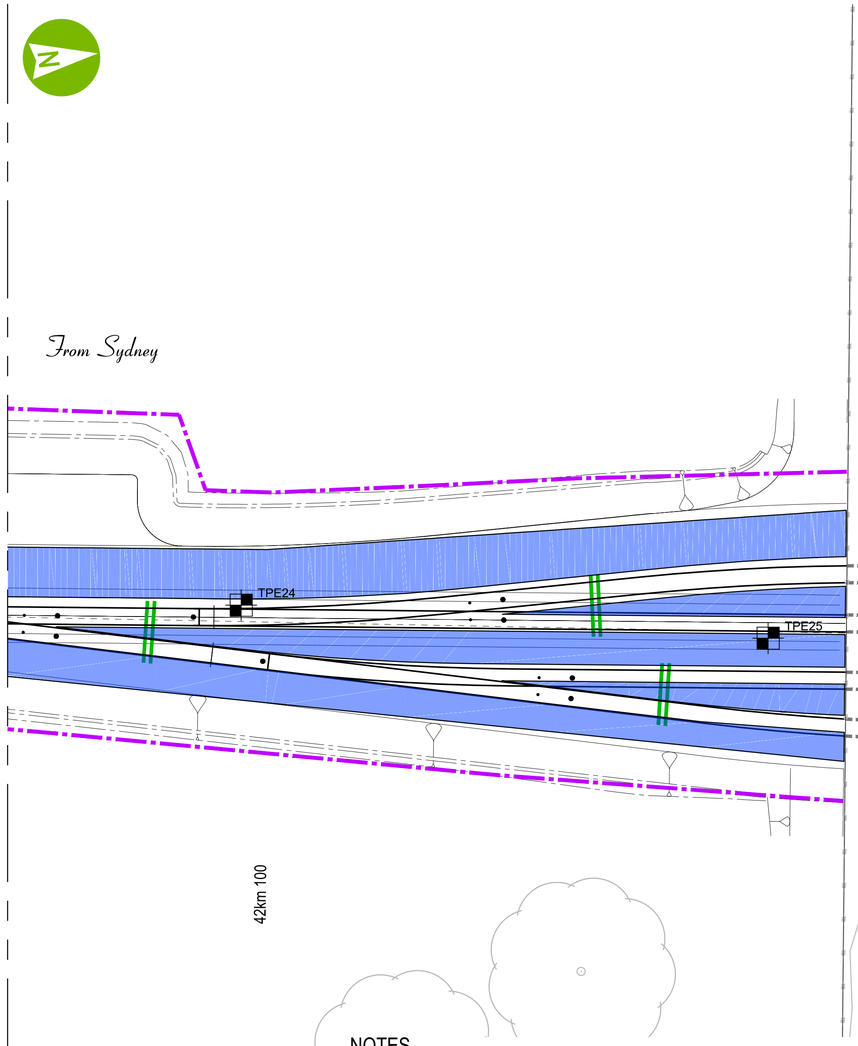
FOR CONSTRUCTION

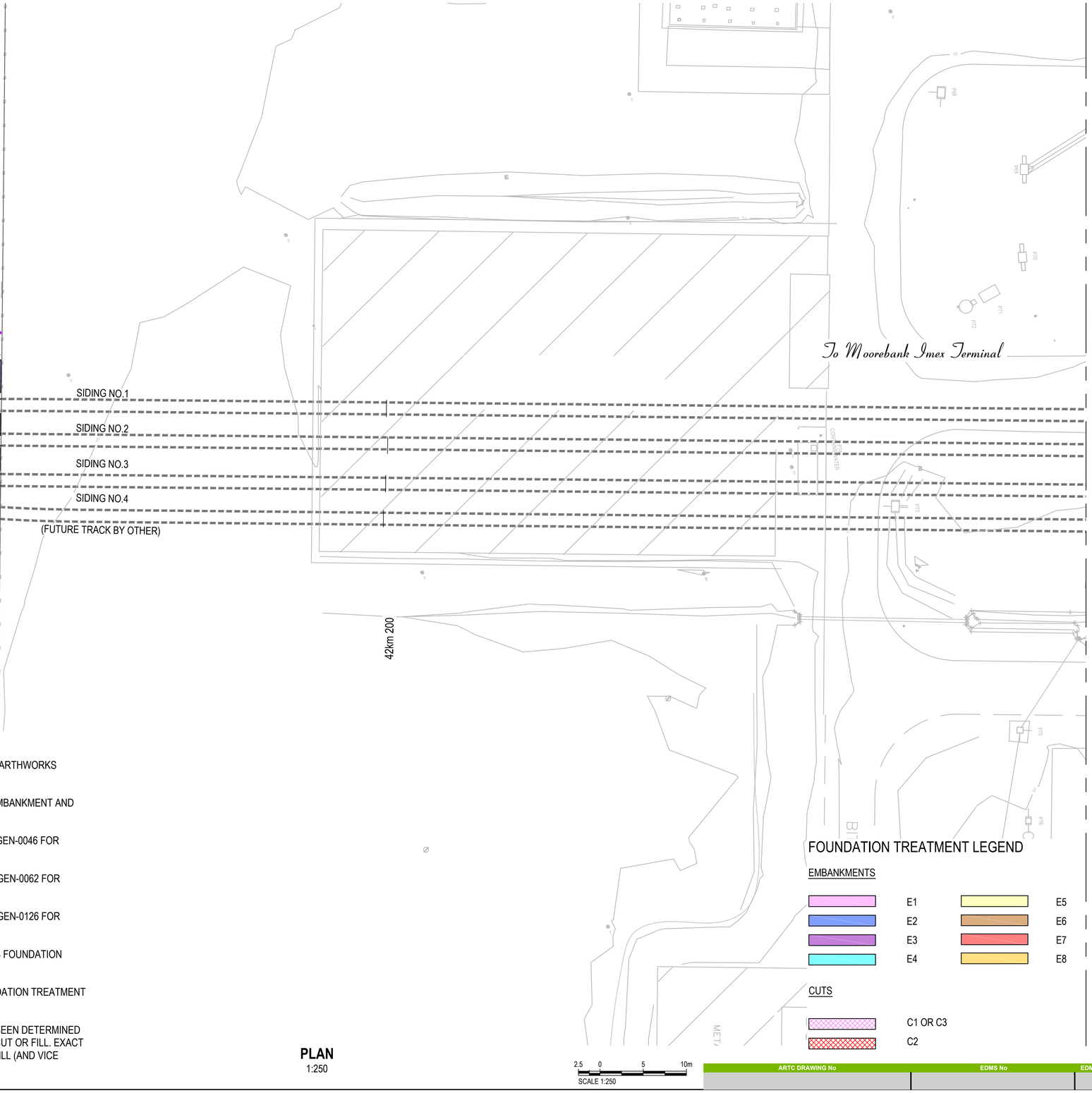
APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 14 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0123	01

Plot Date: 18/01/18 5:05:50 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ PROD\D0029277\TM\N0103-PWD-DRG-GEN-0123.DWG





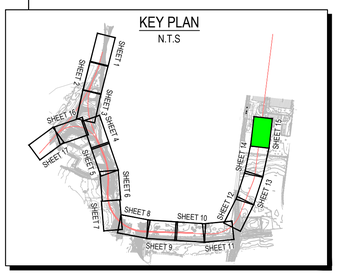
ADJOINS DRG N01031-PWD-DRG-GEN-000123

ADJOINS DRG N01031-PWD-DRG-GEN-00125

NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
3. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0020 TO N01031-PWD-DRG-GEN-0046 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0062 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.
8. THE EXTENT OF EACH FOUNDATION TREATMENT ZONE AS SHOWN HAS BEEN DETERMINED WITH REFERENCE TO EACH RAIL CONTROL LINE AND WHETHER IT IS IN CUT OR FILL. EXACT FOUNDATION TREATMENT ZONE EXTENTS AND TRANSITION FROM CUT FILL (AND VICE VERSA) TO BE DETERMINED ON SITE.

KEY PLAN
N.T.S



PLAN
1:250

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

	E1		E5
	E2		E6
	E3		E7
	E4		E8

CUTS

	C1 OR C3
	C2

2.5 0 5 10m
SCALE 1:250

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 15 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0124	01

Rel Date: 18/01/18 5:11:01 PM Office: AUSYD Filename: C:\PW_WORKSA\SHELEY.LITTLE\AZ_PROD\D0029370\N01031-PWD\DRG\GEN\0124.DWG

ADJOINS DRG N01031-PWD-DRG-GEN-00126

ADJOINS DRG N01031-PWD-DRG-GEN-00113

Plot Date: 18/2018 5:13:06 PM Office: AUSYD Filename: C:\PW_WORKSHARE\EY.LITTLEANZ_PROD\D0283777\N01031-PWD-DRG-GEN-0126.DWG

MAIN SOUTHERN RAILWAY LINE

MIT SOUTH CONNECTION

From Glenfield

To Moorebank Imex Terminal

AE GEN-0060

Q GEN-0059

R GEN-0058

C GEN-0061

TP32

TP33

TPE07b

TPE07a

BH2001

BH2002

BH2003

BH2004

BH2005

39km 800

40km 000

GENERAL NOTES

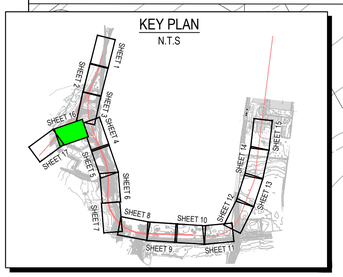
1. SCALE AS SHOWN.
2. CONCRETE EXPOSURE CLASSIFICATION: B1
3. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 40MPa.
4. EDGE SHALL BE CHAMFERED 20 x 20 AND RE-ENTRANT ANGLES FILLETED 20 x 20 UNLESS SPECIFIED OTHERWISE.
5. NOMINAL COVER TO REINFORCEMENT NEAREST TO THE CONCRETE SURFACE SHALL BE 40mm, UNLESS SPECIFIED OTHERWISE.
6. UNLESS OTHERWISE SPECIFIED THE MINIMUM DEVELOPMENT LENGTHS AND LENGTHS OF LAPS SHALL BE:

BAR SIZE:	N12	N16	N20	N24	N28	N36
a. HORIZONTAL BARS WITH >300mm OF CONCRETE CAST BELOW THE BAR:	500	650	850	1000	1150	1800
b. OTHER BARS:	400	550	650	800	950	1450

CLEAR DISTANCE BETWEEN LAPPED BARS SHALL NOT EXCEED 3 x THE BAR DIAMETER.
REINFORCEMENT MAY BE DISPLACED SLIGHTLY WHERE NECESSARY TO CLEAR PRECAST LIFTING LUGS.

EF DENOTES EACH FACE
FF DENOTES FAR FACE
NF DENOTES NEAR FACE
x DENOTES LENGTH VARIES
▲ DENOTES CONCRETE DIMENSION TO BE CHECKED AND ADJUSTED IF NECESSARY TO SUIT ACTUAL PRECAST CROWN UNITS.

KEY PLAN
N.T.S



NOTE

REFER DRG N01031-PWD-DRG-GEN-0111 FOR NOTES

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

E1 E2 E3 E4 E5 E6 E7 E8

CUTS

C1 OR C3
C2

PLAN
1:250

2.5 0 5 10m
SCALE 1:250

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

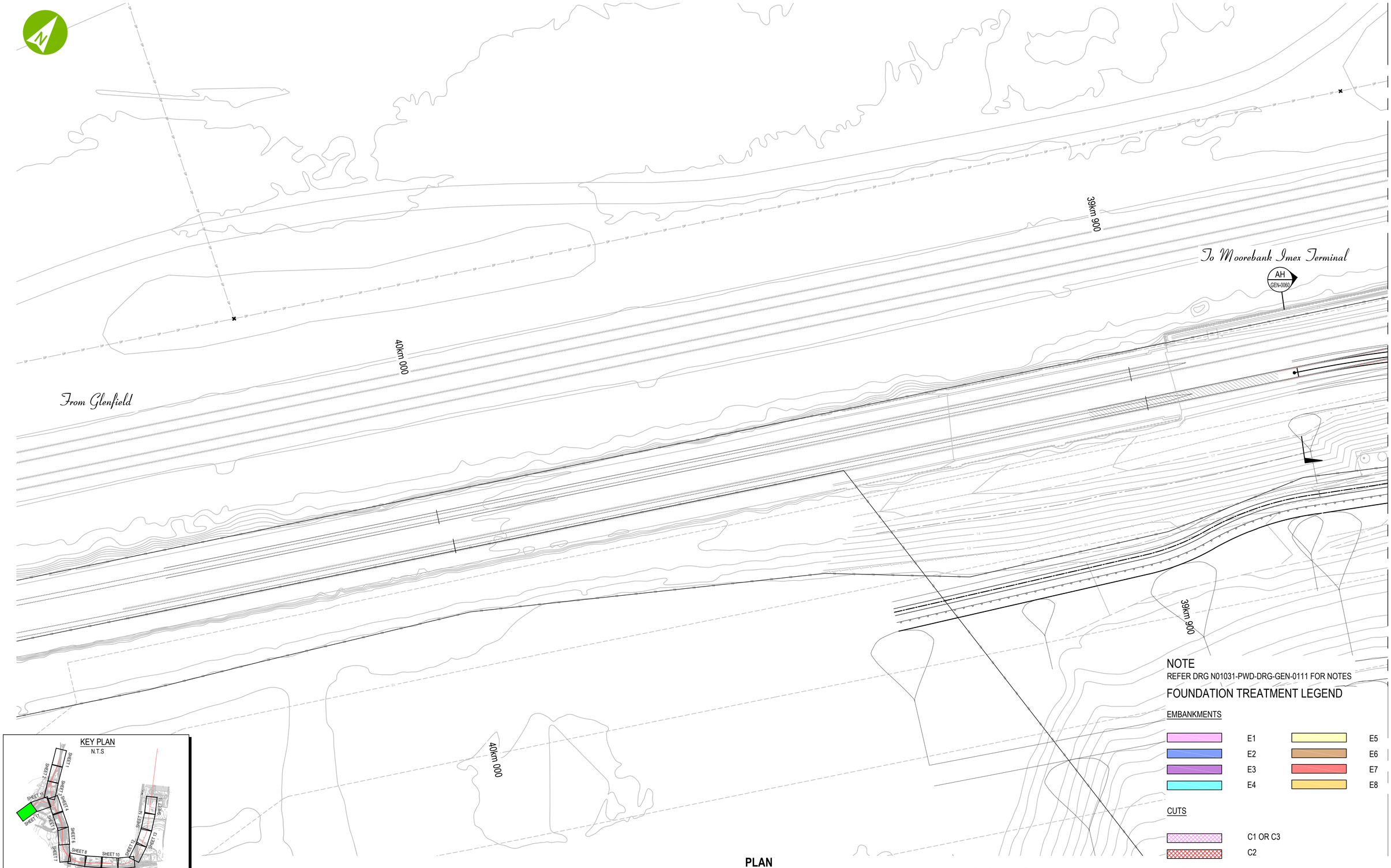
REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	J.RASAMEEMANEEPONG
DESIGNED	K.GIGGACHER
CHECKED	W.DENG

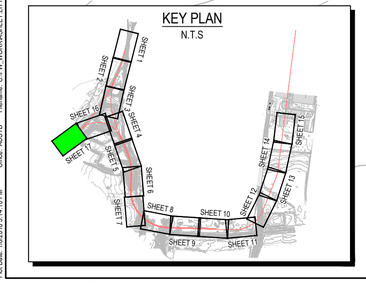
FOR CONSTRUCTION

APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 16 OF 17
DRAWING No.	N01031 – PWD – DRG – GEN – 0125 – 02
PROJECT No.	N01031
ZONE	PWD
TYPE	DRG
DISC	GEN
NUMBER	0125
REV	02



KEY PLAN
N.T.S



PLAN
1:250

2.5 0 5 10m
SCALE 1:250

ADJOINS DRG N01031-PWD-DRG-GEN-000125

Plot Date: 18/2018 5:14:10 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ_PROD\D0029277\N01031-PWD-DRG-GEN-0126.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

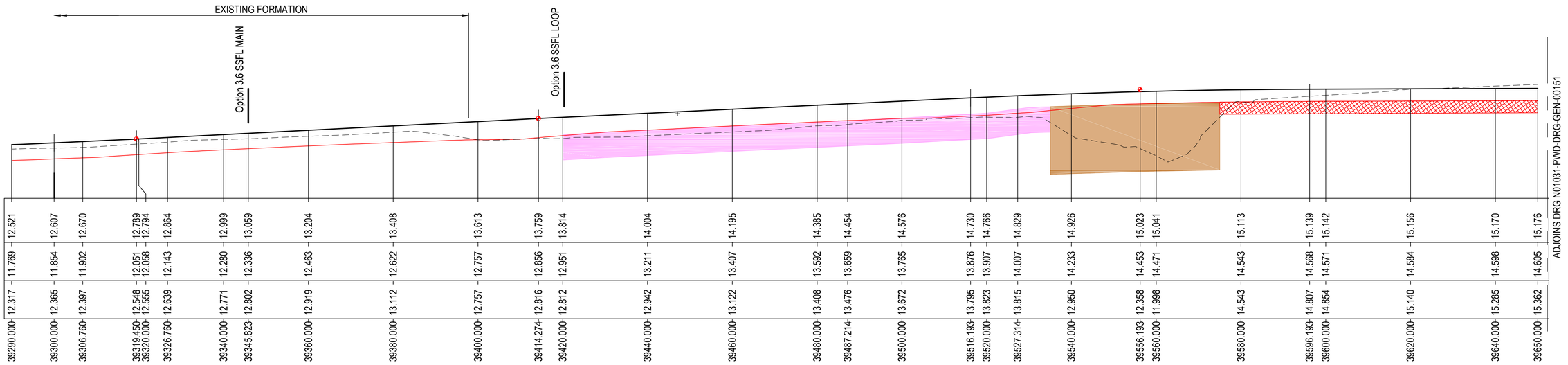
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT PLAN SHEET 17 OF 17

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0126	02



LONGITUDINAL SECTION ALONG - MB2N

SCALE 1:500 H
SCALE 1:100 V

GENERAL NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001[A3]).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
3. REFER TO DRAWINGS N01031-PWD-SPE-EWK-0025 TO N01031-PWD-DRG-GEN-0039 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0054 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.

LEGEND

- TOP OF RAIL
- TOP OF FORMATION
- EXISTING SURFACE

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

- E1
- E2
- E3
- E4
- E5
- E6
- E7
- E8

CUTS

- C1 OR C3
- C2

1 0 2 4m
VERTICAL 1:100

5 0 10 20m
HORIZONTAL 1:500

ARTC DRAWING No	EDMS No	EDMS REV

Rev Date: 18/2018 5:41:39 PM Office: AUSYD Filename: C:\PW_WORKS\ASHLEY LITTLE\AZ_PROD\D2007070\N01031-PWD\DRG\GEN\0150.DWG

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CLIENT
CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

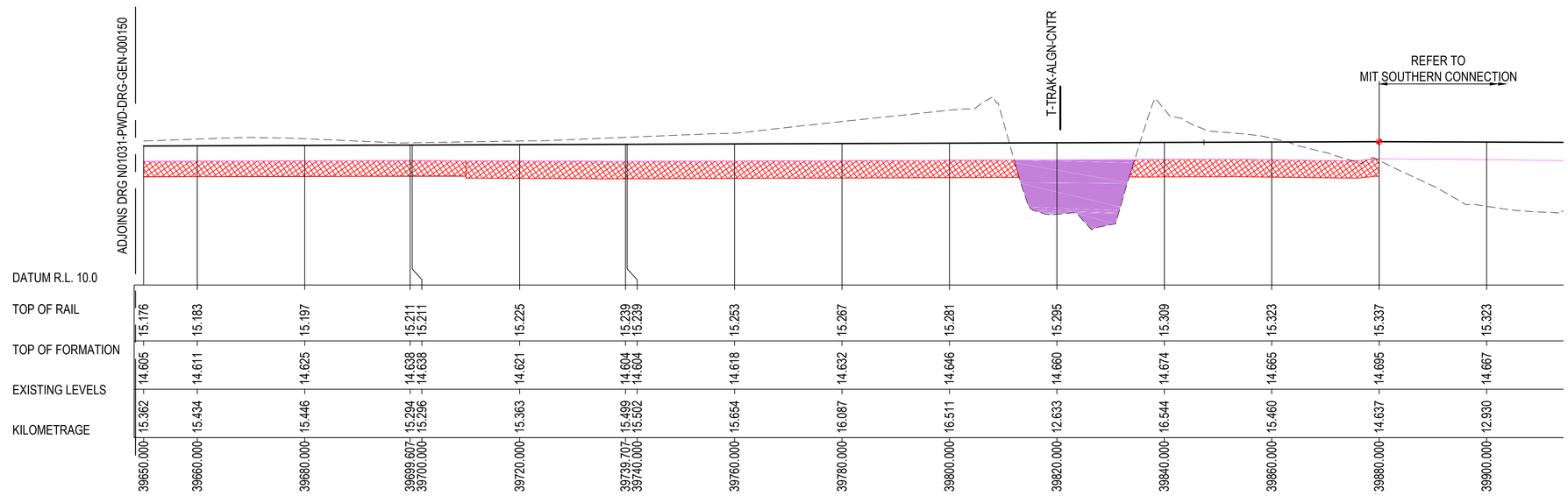
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT LONGSECTION SHEET 1 OF 9

DRAWING No. N01031 – PWD – DRG – GEN – 0150 – 02

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0150	02



LONGITUDINAL SECTION ALONG - MB2N

SCALE 1:500 H
SCALE 1:100 V

LEGEND

- TOP OF RAIL
- TOP OF FORMATION
- EXISTING SURFACE

NOTE

REFER DRG N01031-PWD-DRG-GEN-0150 FOR NOTES

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

E1 E2 E3 E4 E5 E6 E7 E8

CUTS

C1 OR C3
C2

VERTICAL 1:100 (1 0 2 4m)
HORIZONTAL 1:500 (5 0 10 20m)

ARTC DRAWING No	EDMS No	EDMS REV

Plot Date: 18/2018 5:14:59 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ_PROD\D0029277\N01031-PWD-DRG-GEN-0151.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

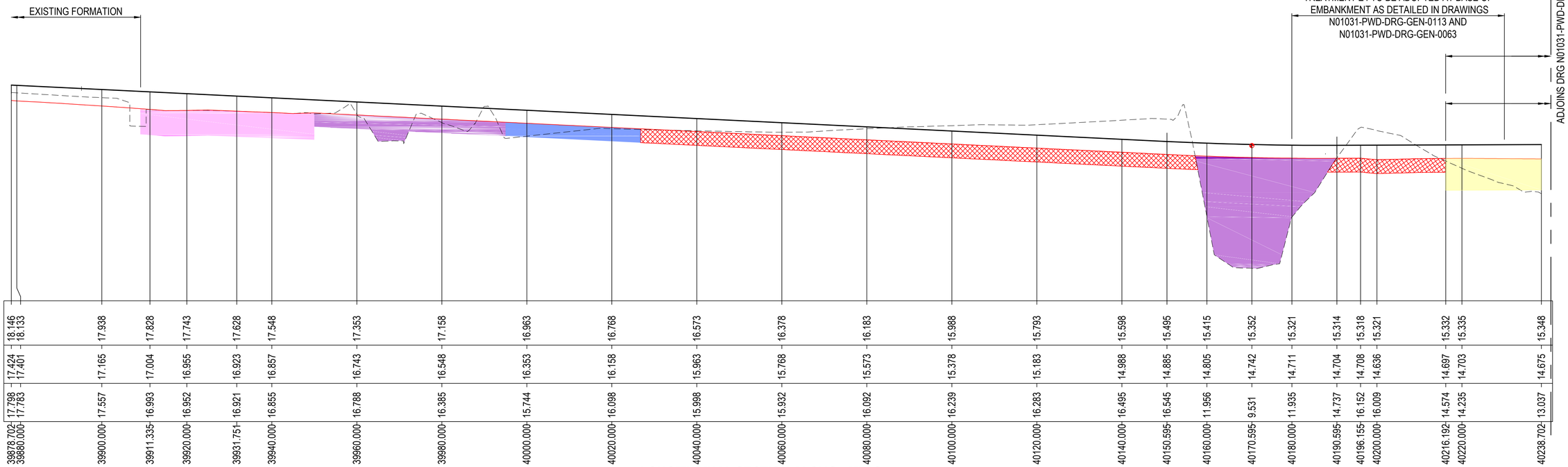
DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

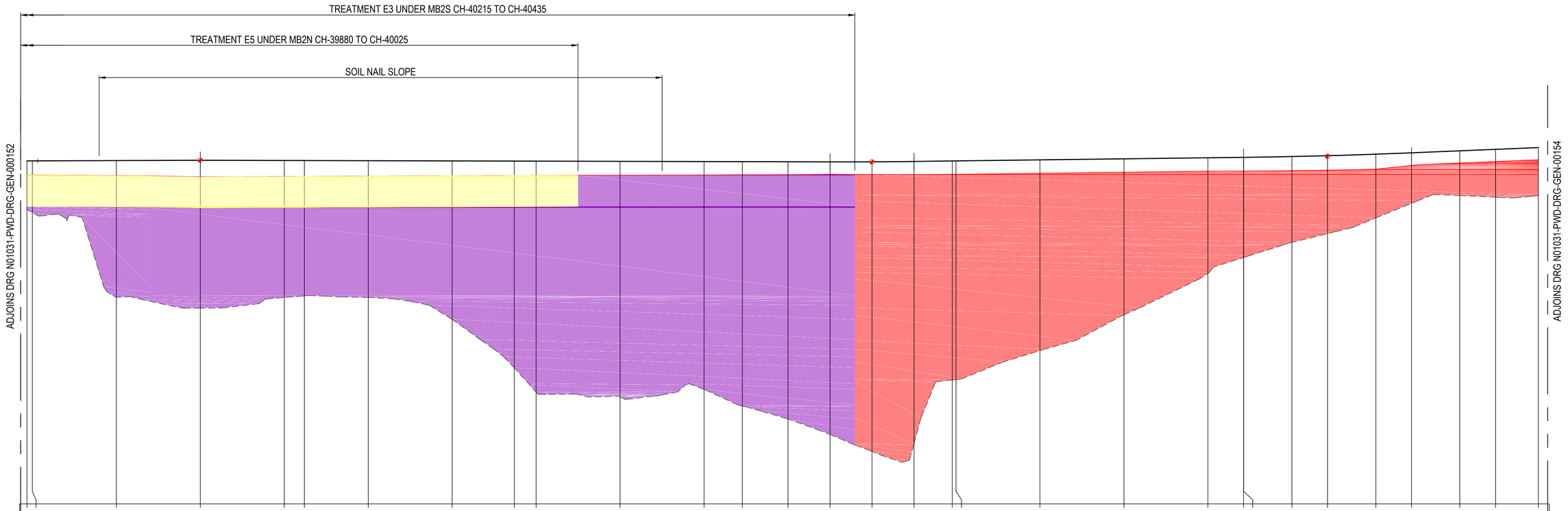
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GROUND TREATMENT LONGSECTION SHEET 2 OF 9

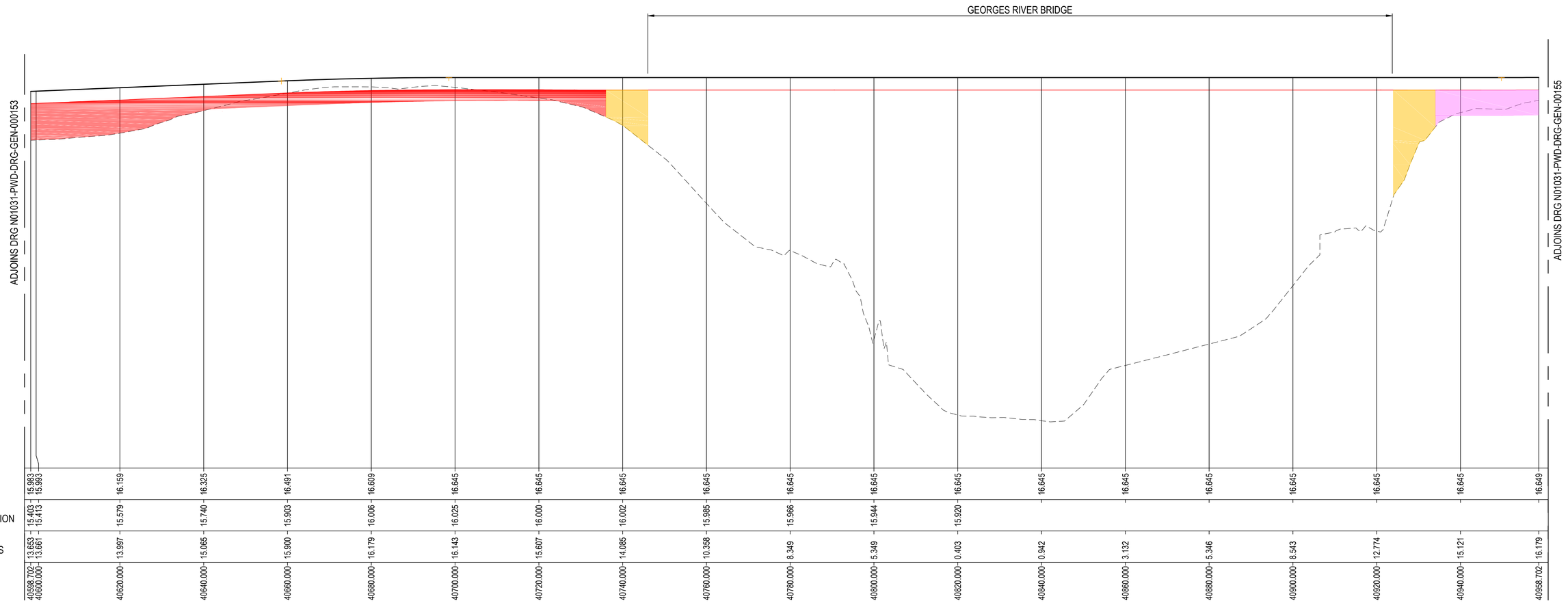
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0151	02


EXISTING FORMATION
TREATMENT E4 TO BE ADOPTED AT BASE OF EMBANKMENT AS DETAILED IN DRAWINGS N01031-PWD-DRG-GEN-0113 AND N01031-PWD-DRG-GEN-0063
ADJOINS DRG N01031-PWD-DRG-GEN-00153

| | | |


TREATMENT E3 UNDER MB2S CH-40215 TO CH-40435
TREATMENT E5 UNDER MB2N CH-39880 TO CH-40025
SOIL NAIL SLOPE
ADJOINS DRG N01031-PWD-DRG-GEN-000152
ADJOINS DRG N01031-PWD-DRG-GEN-00154

| | | |



LONGITUDINAL SECTION ALONG - MB2S

SCALE 1:500 H
SCALE 1:100 V

GENERAL NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001[A3]).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
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4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0054 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.

LEGEND

- TOP OF RAIL
- TOP OF FORMATION
- EXISTING SURFACE

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

E1, E2, E3, E4, E5, E6, E7, E8

CUTS

C1 OR C3
C2

1 0 2 4m
VERTICAL 1:100

5 0 10 20m
HORIZONTAL 1:500

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS; SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

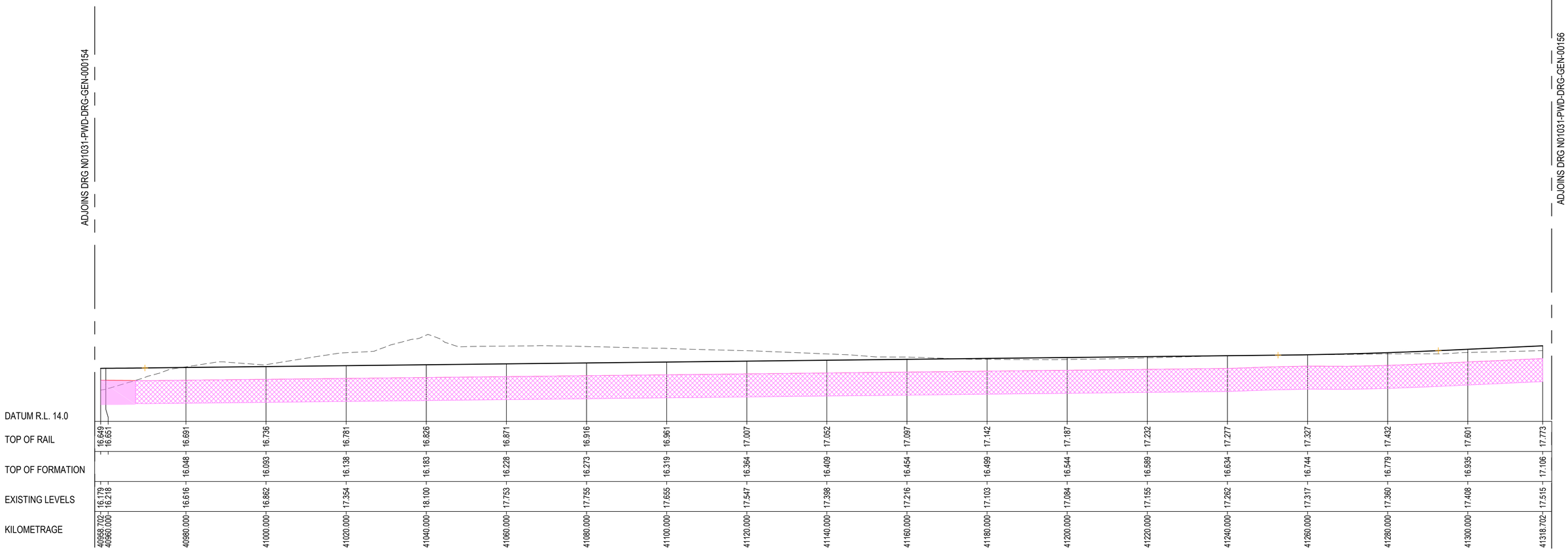
APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT LONGSECTION SHEET 5 OF 9

DRAWING No. N01031 – PWD – DRG – GEN – 0154 – 01
(PROJECT No. – ZONE – TYPE – DISC – NUMBER – REV)

Plot Date: 18/2018 5:17:12 PM Office: AUSYD Filename: C:\PV_WORKA\SALEY LITTLEANE_PROD\20202770\N01031-PWD-DRG-GEN-0154.DWG



LONGITUDINAL SECTION ALONG - MB2S

SCALE 1:500 H
SCALE 1:100 V

GENERAL NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001[A3]).
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4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0054 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.

LEGEND

- TOP OF RAIL
- TOP OF FORMATION
- EXISTING SURFACE

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

E1, E2, E3, E4, E5, E6, E7, E8

CUTS

C1 OR C3
C2

1 0 2 4m
VERTICAL 1:100

5 0 10 20m
HORIZONTAL 1:500

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

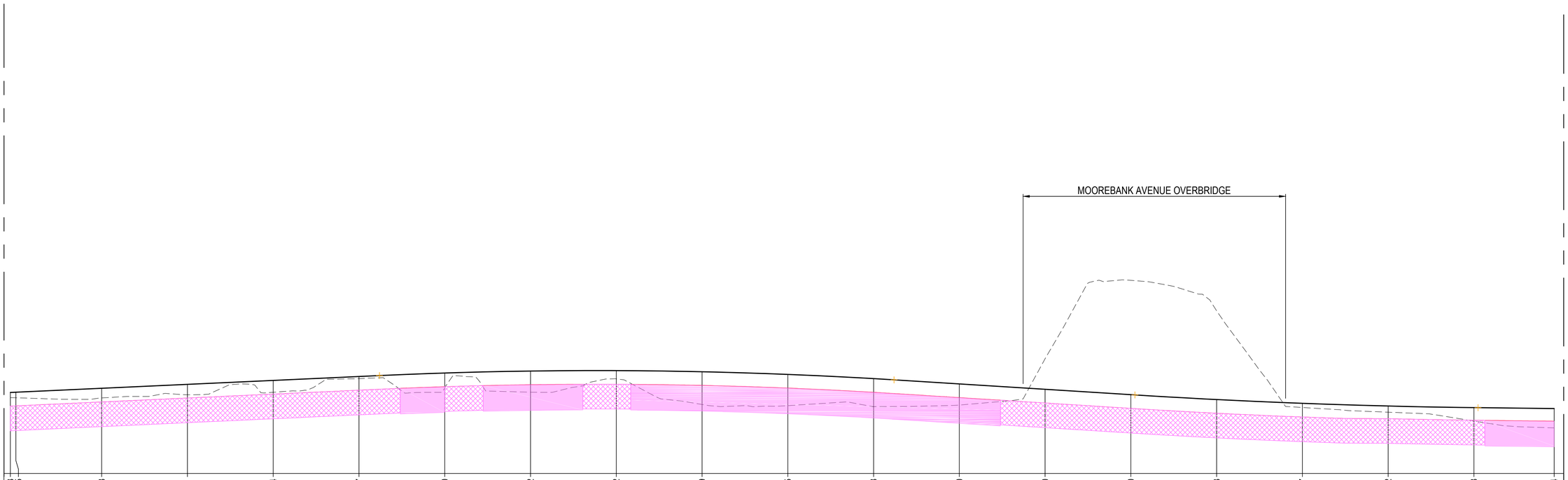
FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GROUND TREATMENT LONGSECTION SHEET 6 OF 9

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0155	01

Plot Date: 1/8/2018 5:17:38 PM Office: AUSYD Filename: C:\PV_WORKA\SALEY LITTLE\AUE_PROD\20020277\N01031-PWD-DRG-GEN-0155.DWG



DATUM R.L. 14.0																					
TOP OF RAIL	17.773	17.785	17.968	18.151	18.334	18.517	18.680	18.772	18.792	18.739	18.615	18.418	18.170	17.920	17.670	17.443	17.267	17.142	17.068	17.024	
TOP OF FORMATION	17.106	17.118	17.301	17.484	17.667	17.850	18.021	18.126	18.158	18.119	18.007	17.822	17.579	17.329	17.079	16.844	16.659	16.556	16.490	16.445	
EXISTING LEVELS	17.515	17.521	17.450	17.705	17.910	18.405	17.776	17.806	18.351	17.329	17.131	17.235	17.161	18.102	22.996	22.353	17.116	16.883	16.555	16.146	
KILOMETRAGE	41318.702	41320.000	41340.000	41360.000	41380.000	41400.000	41420.000	41440.000	41460.000	41480.000	41500.000	41520.000	41540.000	41560.000	41580.000	41600.000	41620.000	41640.000	41660.000	41678.702	

LONGITUDINAL SECTION ALONG - MB2S

SCALE 1:500 H
SCALE 1:100 V

GENERAL NOTES

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001[A3]).
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5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
7. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.

LEGEND

TOP OF RAIL
TOP OF FORMATION
EXISTING SURFACE

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

E1, E2, E3, E4, E5, E6, E7, E8

CUTS

C1 OR C3
C2

1 0 2 4m
VERTICAL 1:100

5 0 10 20m
HORIZONTAL 1:500

ARTC DRAWING No	EDMS No	EDMS REV

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CLIENT: CPB CONTRACTORS / SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

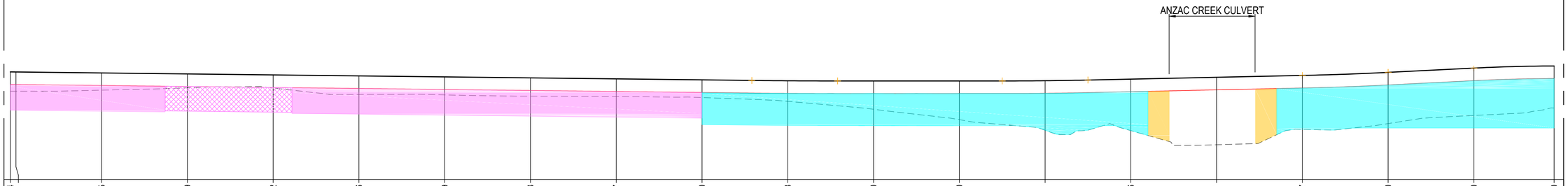
TITLE: BULK EARTHWORKS GROUND TREATMENT LONGSECTION SHEET 7 OF 9

DRAWING No. N01031 – PWD – DRG – GEN – 0156 – 01
(PROJECT No. – ZONE – TYPE – DISC – NUMBER – REV)

Plot Date: 18/2018 5:18:23 PM Office: AUSYD Filename: C:\PV_WORKASNLEY LITTLEANZ_PROD\2020277\N01031-PWD-DRG-GEN-0156.DWG

ADJOINS DRG N01031-PWD-DRG-GEN-000156

ADJOINS DRG N01031-PWD-DRG-GEN-00158



DATUM R.L. 12.0																			
TOP OF RAIL	17.024	17.021	16.975	16.929	16.882	16.836	16.789	16.743	16.697	16.650	16.608	16.600	16.600	16.611	16.686	16.771	16.857	17.000	17.200	17.300
TOP OF FORMATION	16.445	16.442	16.396	16.350	16.303	16.257	16.210	16.164	16.118	16.071	16.026	16.013	16.013	16.018	16.084	16.170	16.255	16.380	16.578	16.707
EXISTING LEVELS	16.146	16.137	16.153	16.254	16.335	15.969	15.966	15.894	15.879	15.848	15.699	15.355	14.895	14.456	14.495	13.602	14.292	14.505	14.954	15.222
KILOMETRAGE	41678.702	41680.000	41700.000	41720.000	41740.000	41760.000	41780.000	41800.000	41820.000	41840.000	41860.000	41880.000	41900.000	41920.000	41940.000	41960.000	41980.000	42000.000	42020.000	42038.702

LONGITUDINAL SECTION ALONG - MB2S

SCALE 1:500 H
SCALE 1:100 V

GENERAL NOTES

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LEGEND

TOP OF RAIL
TOP OF FORMATION
EXISTING SURFACE

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

E1, E2, E3, E4, E5, E6, E7, E8

CUTS

C1 OR C3
C2

1 0 2 4m
VERTICAL 1:100

5 0 10 20m
HORIZONTAL 1:500

ARTC DRAWING No	EDMS No	EDMS REV

Plot Date: 18/2018 5:19:16 PM Office: AUSYD Filename: C:\PV_WORKA\SALEY LITTLEAND_PROD\20202770\N01031-PWD-DRG-GEN-0157.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

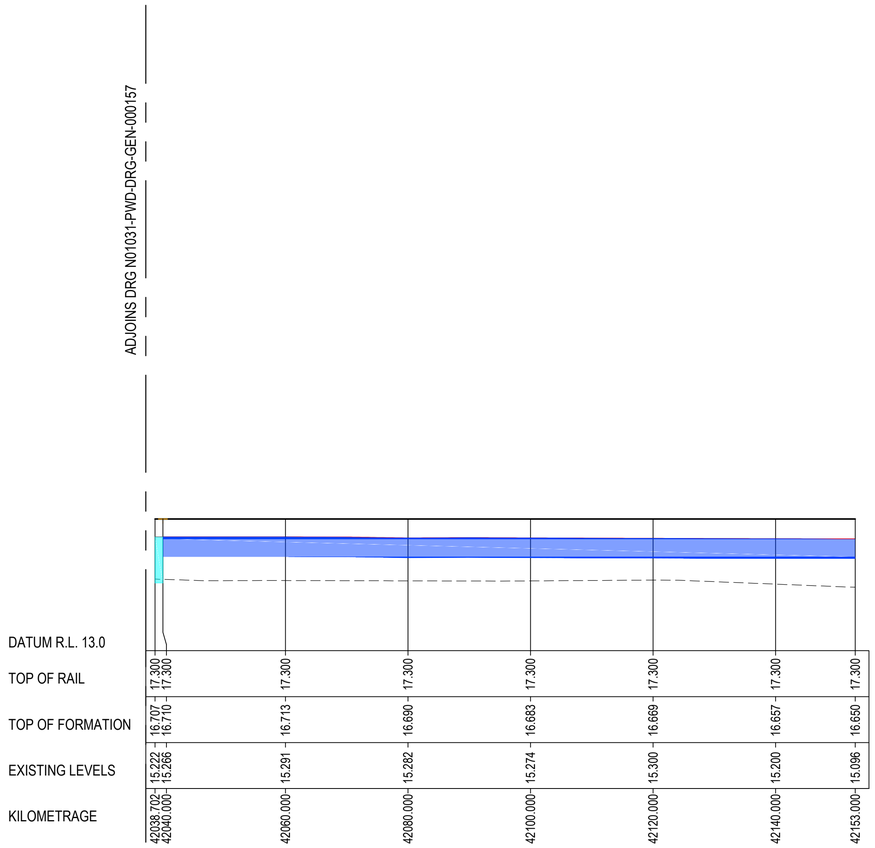
APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT LONGSECTION SHEET 8 OF 9

DRAWING No.

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0157	01



LONGITUDINAL SECTION ALONG - MB2S

SCALE 1:500 H
SCALE 1:100 V

GENERAL NOTES

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5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0160 FOR THE EARTHWORKS FOUNDATION TREATMENT SCHEDULE.
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LEGEND

- TOP OF RAIL
- TOP OF FORMATION
- EXISTING SURFACE

FOUNDATION TREATMENT LEGEND

EMBANKMENTS

E1, E2, E3, E4, E5, E6, E7, E8

CUTS

C1 OR C3
C2

1 0 2 4m
VERTICAL 1:100

5 0 10 20m
HORIZONTAL 1:500

ARTC DRAWING No	EDMS No	EDMS REV

Plot Date: 18/2018 5:19:54 PM Office: AUSYD Filename: C:\PV_WORKA\SALEY.LITTLEJA\E_PROD\20282770\N01031-PWD-DRG-GEN-0158.DWG

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CLIENT

CPB CONTRACTORS

SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A. O'SHEA

SCALE	SIZE
AS SHOWN	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT LONGSECTION SHEET 9 OF 9

DRAWING No.

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0158	01

EARTHWORKS SCHEDULE FOR PROPOSED NEW RAIL LINE

Rail Line	Kilometrage start (km)	Kilometrage End (km)	Length (m)	Cut / Fill / Grade / Structure	Maximum Cut / Fill Height (m)	Formation Level (RL m AHD)	Indicative In-situ CBR (%)	Required Capping Material Thickness (mm)	Required Structural Zone Fill (with CBR = 8%) Thickness (mm)	Required Structural Zone Fill (with CBR = 20%) Thickness (mm)	Required Minimum Drainage Blanket Thickness (mm)	Foundation Treatment Type
NORTH	39.300	39.420	120	EXISTING FORMATION	-	-	-	-	-	-	-	-
NORTH	39.420	39.534	114	FILL	0.5	12.8 - 14.0	>1 AND <3%	150	1000	600	-	E1
NORTH	39.534	39.576	42	FILL	4.5	14.0 - 14.4	>3% (AFTER FOUNDATION TREATMENT)	150	500	300	-	E6
NORTH	39.576	39.812	236	CUT	2.0	14.5 - 14.6	>3%	150	500	300	-	C2
NORTH	39.812	39.835	23	FILL	2.5	14.6 - 14.6	>3%	150	500	300	-	E3
NORTH	39.835	39.880	45	CUT	2.0	14.6 - 14.7	>3%	150	500	300	-	C2
NORTH	39.880	40.025	145	VERTICAL WALL	4.5	14.8-14.7	>3%	150	500	300	300	E5
NORTH	40.025	40.910	1030	REFER TO SOUTHERN MIT CONNECTION								

EARTHWORKS SCHEDULE FOR PROPOSED NEW RAIL LINE

Rail Line	Kilometrage Start (km)	Kilometrage End (km)	Length (m)	Cut / Fill / Grade / Structure	Maximum Cut / Fill Height (m)	Formation Level (RL m AHD)	Indicative In-situ CBR (%)	Required Capping Material Thickness (mm)	Required Structural Zone Fill (with CBR = 8%) Thickness (mm)	Required Structural Zone Fill (with CBR = 20%) Thickness (mm)	Required Minimum Drainage Blanket Thickness (mm)	Foundation Treatment Type
SOUTH	39.878	39.911	33	EXISTING FORMATION	-	-	-	-	-	–	-	-
SOUTH	39.911	39.950	39	FILL	1.2	17.2 - 16.9	>1 AND <3%	150	1000	600	-	E1
SOUTH	39.950	39.995	45	FILL	2.5	16.9 - 16.3	>3%	150	500	300		E3
SOUTH	39.995	40.027	32	FILL	1.0	16.3 - 16.1	>3%	150	500	300	-	E2
SOUTH	40.027	40.157	130	CUT	2.0	16.1 - 14.7	>3%	150	500	300	-	C2
SOUTH	40.157	40.191	34	FILL	5.0	14.7 - 14.6	>3%	150	500	300	-	E3
SOUTH	40.191	40.217	26	CUT	1.8	14.6 - 14.6	>3%	150	500	300	-	C2
SOUTH	40.217	40.258	63	FILL	8.5	14.7 - 14.7	>3%	150	500	300	-	E3
SOUTH	40.258	40.390	90	SOIL NAIL SLOPE	10.5	14.7-14.7	>3%	150	500	300	-	E3
SOUTH	40.370	40.436	10	FILL	13.0	14.8 - 14.8	>3%	150	500	300*	-	E3
SOUTH	40.436	40.736	300	FILL	5.0	14.8 - 16.0	>3% (AFTER GROUND TREATMENT)	150	500		-	E7
SOUTH	40.736	40.746	10	FILL	1.0	16.0 - 16.0	>3%	150	500	300*	-	E8
SOUTH	40.746	40.924	178	GEORGES RIVER BRIDGE	-	-	-	-	-	-	-	-
SOUTH	40.924	40.934	10	FILL	1.2000	16.0 - 16.0	>3%	150	500	300*	-	E8
SOUTH	40.934	40.967	33	FILL	1.2	16.0 - 16.0	>1 AND <3%	150	1000	600	-	E1
SOUTH	40.967	41.410	443	CUT	2.2	16.0 - 17.8	>1 AND <3%	150	1000	600	-	C1 or C3
SOUTH	41.410	41.420	10	FILL	0.5	17.8 - 17.9	>1 AND <3%	150	1000	600	-	E1
SOUTH	41.420	41.429	9	CUT	0.6	17.9 - 18.0	>1 AND <3%	150	1000	600	-	C1 or C3
SOUTH	41.429	41.452	23	FILL	0.5	18.0 - 18.1	>1 AND <3%	150	1000	600	-	E1
SOUTH	41.452	41.465	13	CUT	0.5000	18.1 - 18.1	>1 AND <3%	150	1000	600	-	C1 or C3
SOUTH	41.465	41.550	85	FILL	1.0	18.1 - 17.3	>1 AND <3%	150	1000	600	-	E1
SOUTH	41.550	41.565	15	CUT	UP TO 4m FOR BRIDGE	17.3 - 17.2	>1 AND <3%	150	1000	600	-	C1 or C3
SOUTH	41.565	41.606	41	MOOREBANK AVENUE BRIDGE	UP TO 6m FOR BRIDGE	17.2 - 16.8	>1 AND <3%	150	1000	600	-	C1 or C3
SOUTH	41.606	41.663	57	CUT	UP TO 4m FOR BRIDGE	16.8 - 16.4	>1 AND <3%	150	1000	600	-	C1 or C3
SOUTH	41.663	41.713	50	FILL	0.3000	16.4 - 16.3	>1 AND <3%	150	1000	600	-	E1
SOUTH	41.713	41.745	32	CUT	0.3000	16.3 - 16.2	>1 AND <3%	150	1000	600	-	C1 or C3
SOUTH	41.745	41.840	95	FILL	0.3000	16.2 - 16.0	>1 AND <3%	150	1000	600	-	E1
SOUTH	41.840	41.944	104	FILL	2.0	16.0 - 15.9	>3%	150	500	300	300	E4
SOUTH	41.944	41.949	5	FILL	2.0	15.9 - 15.9	>3%	150	500	300*	300	E8
SOUTH	41.949	41.969	20	ANZAC CREEK CULVERT	-	-	-	-	-	-	-	-
SOUTH	41.969	41.974	5	FILL	2.0	15.9 - 15.9	>3%	150	500	300*	300	E8
SOUTH	41.974	42.040	66	FILL	2.0	15.9 - 15.9	>3%	150	500	300	300	E4
SOUTH	42.040	42.138	98	FILL	0.7000	15.9 - 15.9	>3%	150	500	300	-	E2
SOUTH	42.153	42.153	15	EXISTING FORMATION	-	-	-	-	-	-	-	-

NOTES

1. PROPOSED TREATMENT TYPES ARE AS PER THE PROJECT SPECIFICATION DESCRIPTIONS.
2. STRUCTURAL ZONE FILL THICKNESS WILL VERY DEPENDING ON THE QUALITY OF MATERIAL ADOPTED. THICKNESS HAVE BEEN PROVIDED FOR CBR > 8% AND CBR > 20%..
3. WHERE CONSTRAINTS APPLY A STRUCTURAL ZONE FILL COMPRISING DGB20 & DGS20 WITH A GEOFABRIC SEPARATOR MAY BE ADOPTED. THICKNESS AND LOCATIONS TO BE CONFIRMED BY THE GEOTECHNICAL ENGINEER. AS IT WILL NEED TO BE CONFIRMED USING MECHANISTIC DESIGN OF THE RAIL PAVEMENT.

NOTES FOR EARTHWORKS SCHEDULE

1. THIS DRAWING IS IN TO BE READ IN CONJUNCTION WITH THE PROJECT EARTHWORKS SPECIFICATION (DOCUMENT NUMBER NO1031-PWD-SPE-EWK-0001[A3]).
2. REFER TO THE EARTHWORKS SPECIFICATION FOR A DESCRIPTION OF EMBANKMENT AND CUT FOUNDATION TREATMENTS.
3. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0025 TO N01031-PWD-DRG-GEN-0039 FOR EARTHWORKS CROSS SECTIONS.
4. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0050 TO N01031-PWD-DRG-GEN-0057 FOR TYPICAL CROSS SECTIONS.
5. REFER TO DRAWINGS N01031-PWD-DRG-GEN-0110 TO N01031-PWD-DRG-GEN-0126 FOR GROUND TREATMENT PLANS.
6. REFER TO DRAWING N01031-PWD-DRG-GEN-0150 TO N01031-PWD-DRG-GEN-0158 FOR FOUNDATION TREATMENT LONG SECTIONS.
7. FOUNDATION TREATMENT TYPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER ON SITE BASED ON OBSERVED GROUND CONDITIONS.
8. C3 FOUNDATION TREATMENT MAY BE CONSIDERED IN LIEU OF C1 FOUNDATION TREATMENT AS INDICATED IN THE PROJECT EARTHWORKS SPECIFICATION.

Plot Date: 18/2018 8:47:50 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ACAD_PROD\D0927070N\N0103-PWD\DRG\GEN\0160.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
D1	18.05.18	GWS RE-DESIGN - 35% DEVELOPED DESIGN (INTERNAL)	
E1	27.06.18	GWS RE-DESIGN - 100% FINAL DESIGN (SIMTA SUBMISSION)	
02	31.07.18	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
NTS	A1

DRAWN: J.RASAMEEMANEEPONG
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

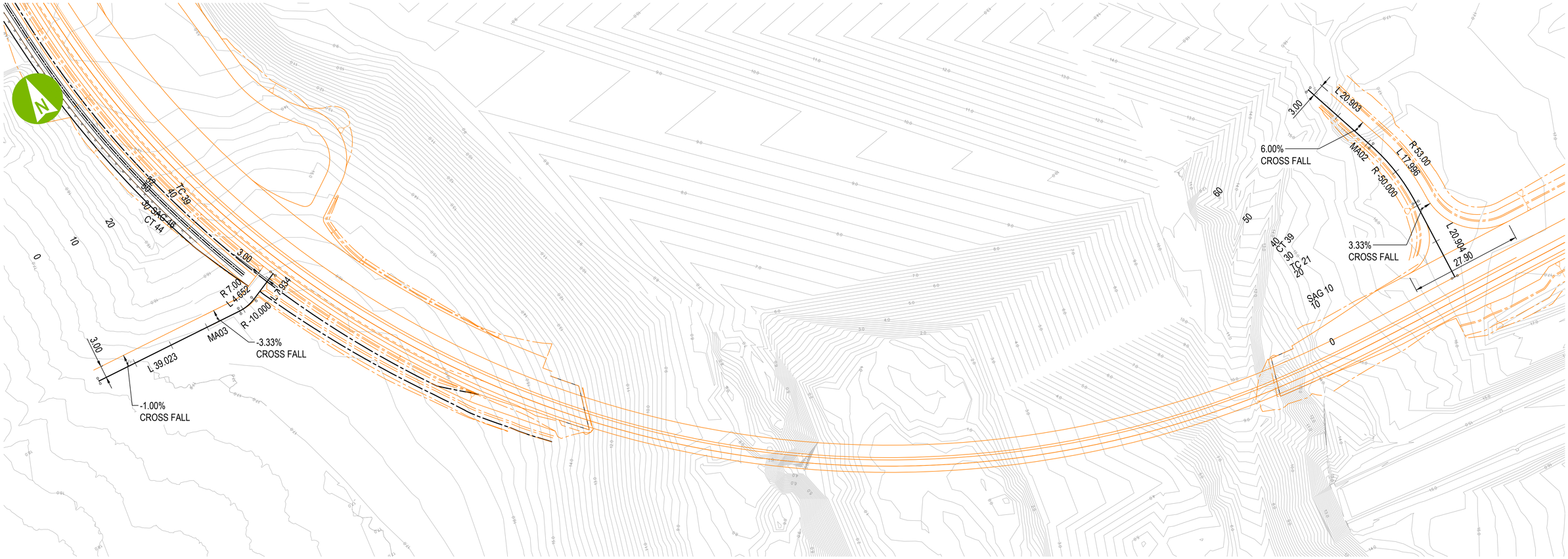
APPROVED
DATE 31.07.18
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GROUND TREATMENT SCHEDULE SHEET 1 OF 1

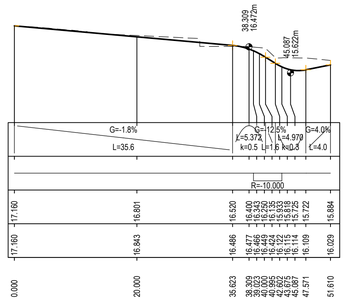
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0160	02



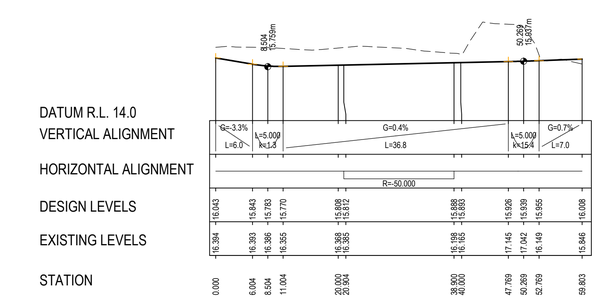
PLAN
1:500

LEGEND

- CONTROL LINE
- PROPOSED DESIGN
- EXISTING CONTOURS



LONGITUDINAL SECTION ALONG - MA03
SCALE 1:500 H
SCALE 1:1000 V



LONGITUDINAL SECTION ALONG - MA02
SCALE 1:500 H
SCALE 1:1000 V

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SCALE 1:500 (HORIZONTAL)
1 0 2 4m
SCALE 1:100 (VERTICAL)

Plot Date: 18/2018 5:21:04 PM Office: AUSYD Filename: C:\PW_WORKSHARE\KEY LITTLE\ANZ_PROD\D0039377\DWG\1031-PWD-DRG-GEN-0202.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	14.07.17	90% ARTC DESIGN ISSUE	A.O'SHEA

SCALE	SIZE
1:500	A1

DRAWN: P.KHAIPRAPHAI
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

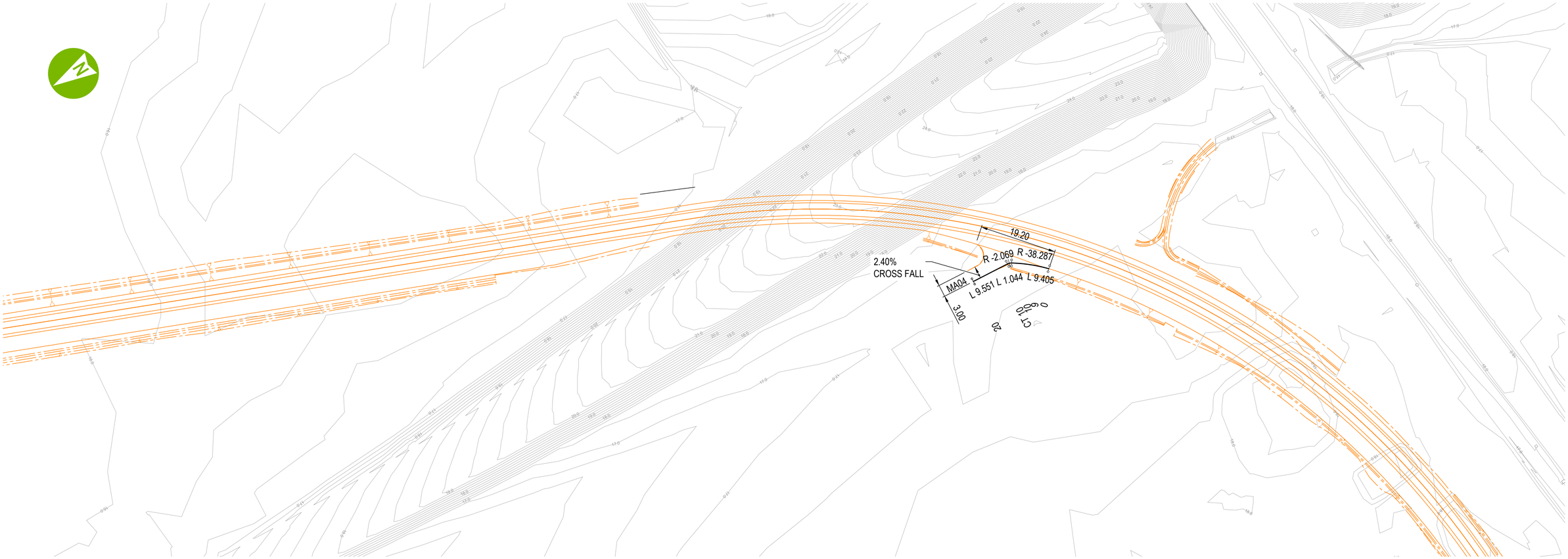
APPROVED
DATE 20.01.17
A.O'SHEA
A.O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

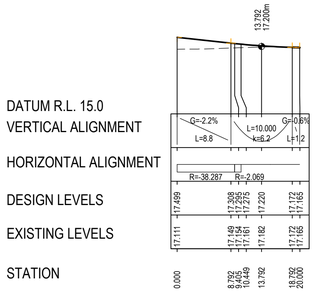
TITLE: BULK EARTHWORKS ACCESS ROAD PLAN & LONG SECTION SHEET 03 OF 08

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0202	02



LEGEND

- CONTROL LINE
- PROPOSED DESIGN
- EXISTING CONTOURS



LONGITUDINAL SECTION ALONG - MA04

SCALE 1:500 H

SCALE 1:1000 V

5 0 10 20m

SCALE 1:500 (HORIZONTAL)

1 0 2 4m

SCALE 1:100 (VERTICAL)

Plot Date: 18/2018 5:21:56 PM Office: AUSYD Filename: C:\PW_WORKING\HLEY.LITTLE\ANZ_PROD\D0039277\DWG\1031-PWD\DRG\GEN\0203.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA

SCALE	SIZE
1:500	A1

DRAWN: P.KHAIPRAPHAI

DESIGNED: K.GIGGACHER

CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED

DATE 20.01.17

A.O'SHEA

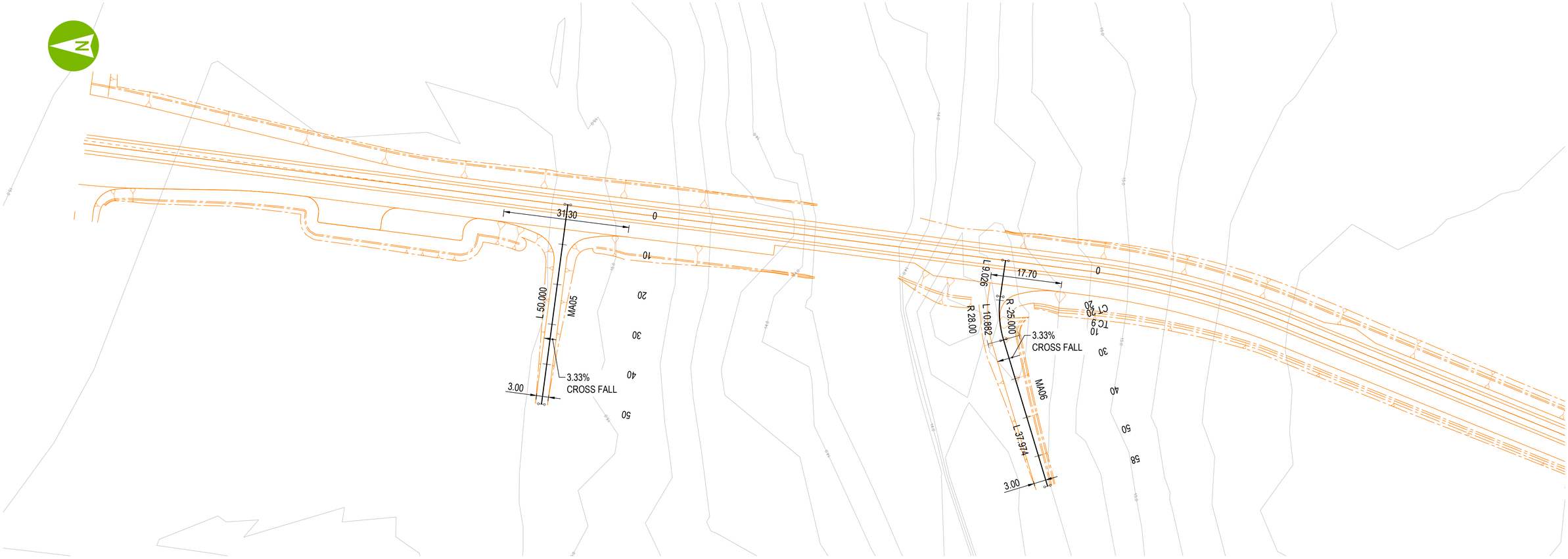
A.O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS ACCESS ROAD PLAN & LONG SECTION SHEET 04 OF 08

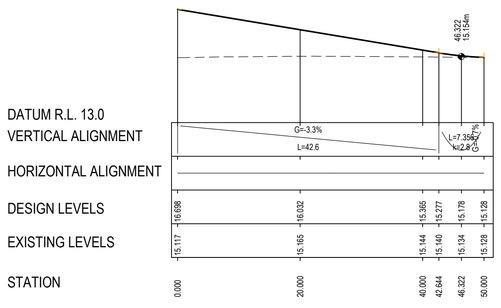
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0203	01



PLAN
1:500

LEGEND

- CONTROL LINE
- PROPOSED DESIGN
- EXISTING CONTOURS



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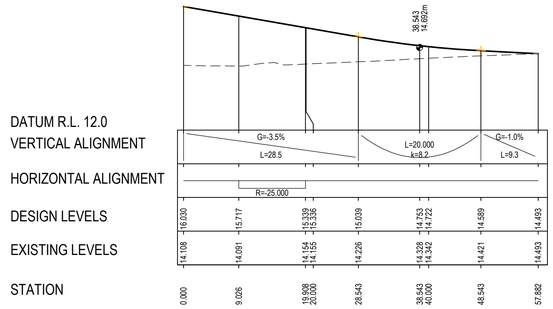
SCALE 1:500 H



LONGITUDINAL SECTION ALONG - MA06
SCALE 1:500 H

SCALE 1:500 (HORIZONTAL)
SCALE 1:100 (VERTICAL)

Ref Date: 18/2/18 3:13 PM Office: AUSYD Filename: C:\PW_WORKASHLEY.LITTLE\ANZ_PROJ\D0026270\TWM0101-PWD\DRG\GEN\0204.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA

SCALE	SIZE
1:500	A1

DRAWN: P.KHAIPRAPHAI
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A.O'SHEA
A.O'SHEA

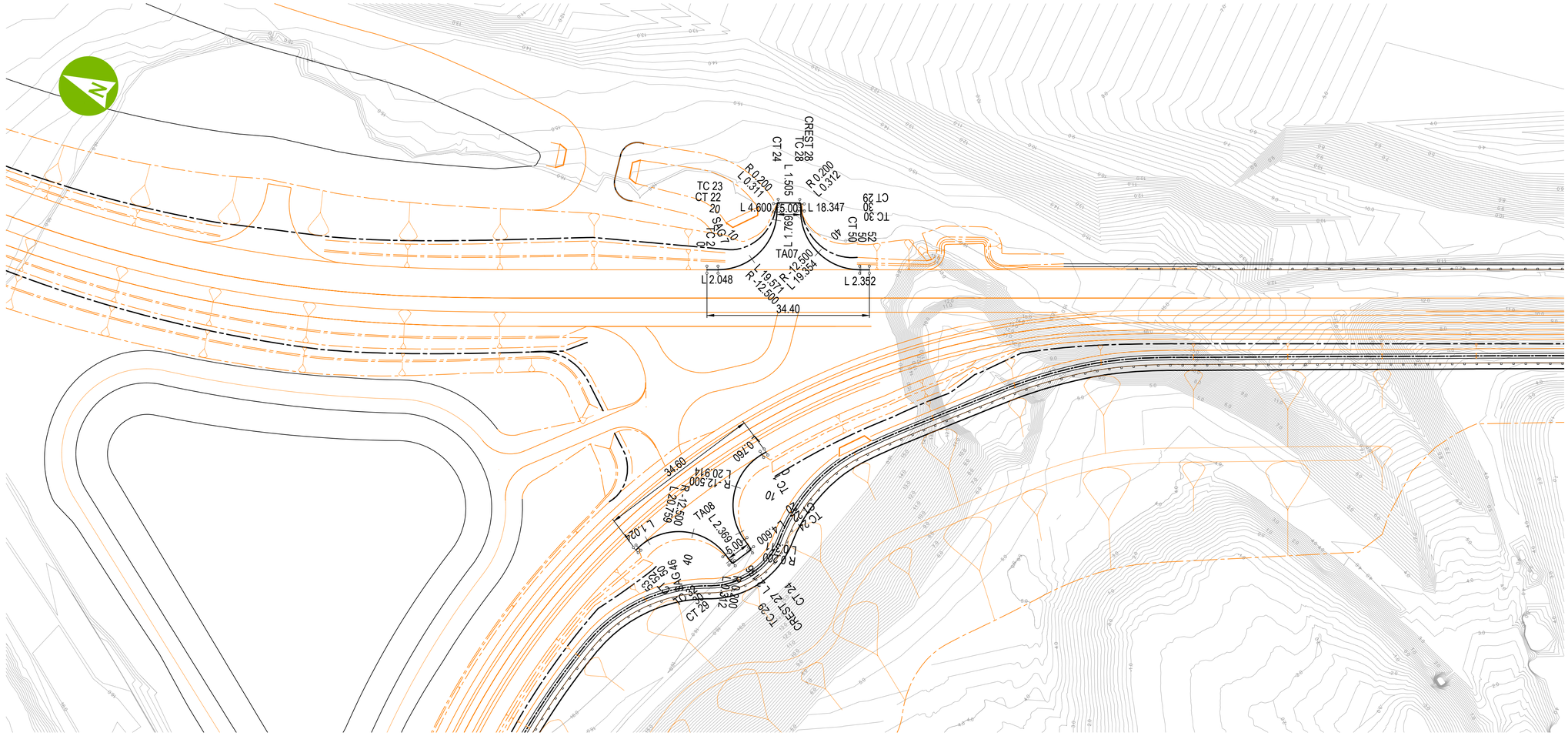
ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS ACCESS ROAD PLAN & LONG SECTION SHEET 05 OF 08

DRAWING No.

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	PWD	DRG	GEN	0204	01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TC 28
CT 24
L 1.505
R 0.200
L 0.311
R 0.200
L 0.312
TC 23
CT 22
20
SAG 10
TC 21
L 4.600
L 15.000
L 18.347
CT 29
TC 30
CT 50
52
40
L 7.769
TA07
R -12.500
L 19.354
L 19.571
R -12.500
L 2.048
L 2.352
34.40
0.760
34.60
R -12.500
L 20.914
L 20.159
L 1.024
TA08
L 2.369
TC 24
CT 22
30
10
L 4.600
R 0.200
L 0.312
CT 24
TC 29
CREST 27
CT 29
TC 22
CT 26
40
R 0.200
L 0.311
TC 25
CT 27
TC 26
CT 28
TC 27
CT 30
TC 31
CT 31
TC 32
CT 32
TC 33
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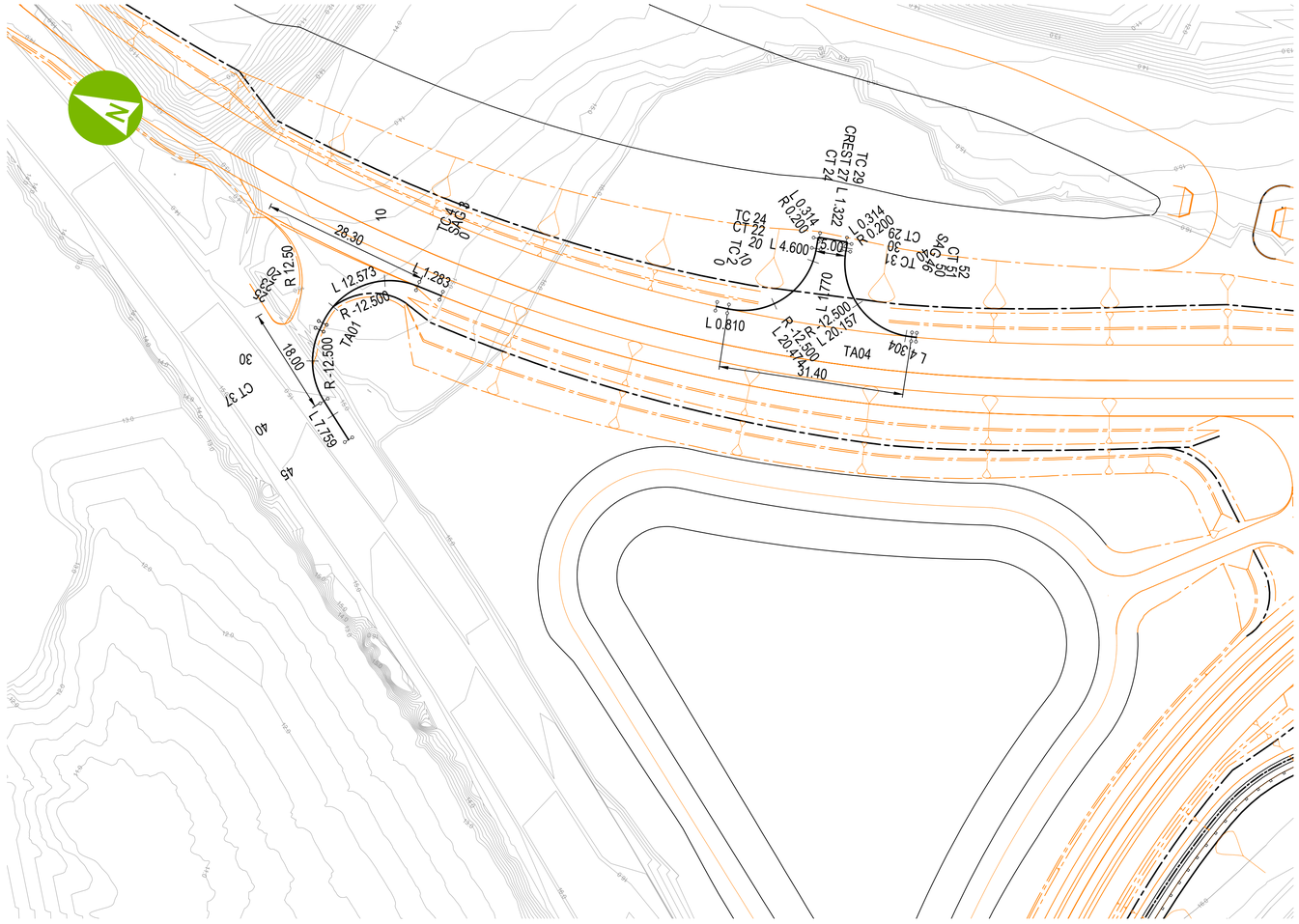
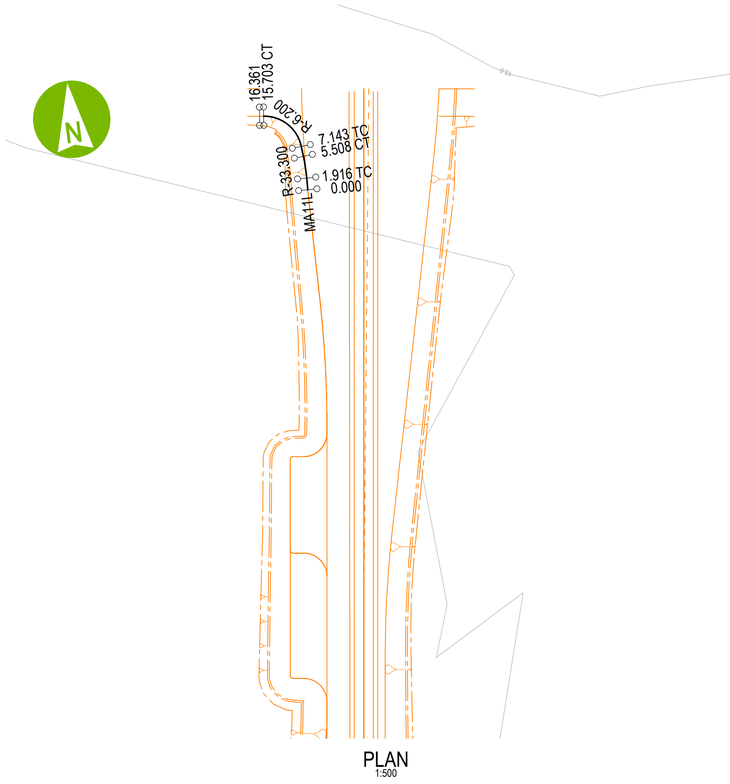
CT 37
TC 38
CT 38
TC 39
CT 39
TC 40
CT



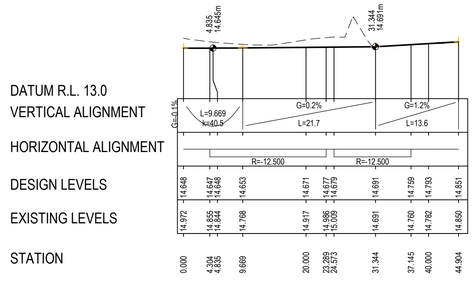
PLAN
1:500



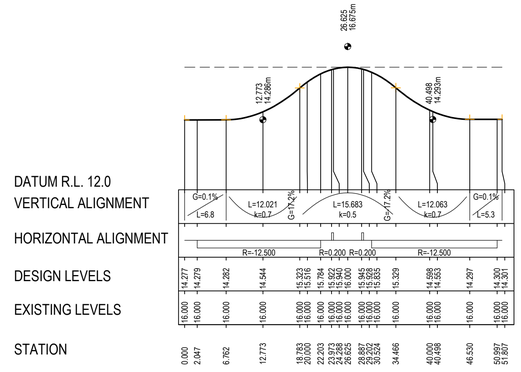
PLAN
1:500

LEGEND

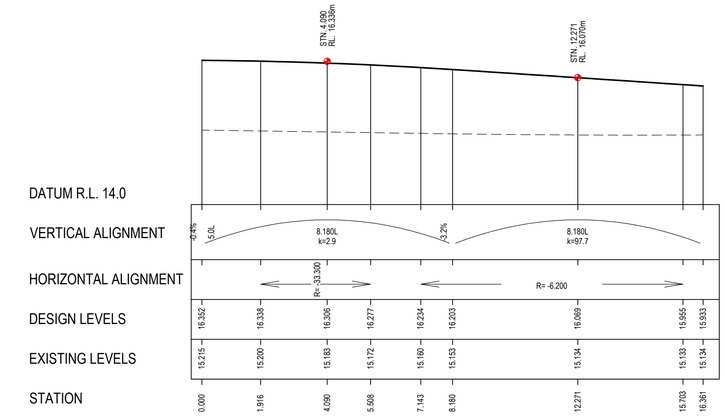
- CONTROL LINE
- PROPOSED DESIGN
- EXISTING CONTOURS



LONGITUDINAL SECTION ALONG - TA01
SCALE 1:500 H
SCALE 1:1000 V



LONGITUDINAL SECTION ALONG - TA04
SCALE 1:500 H
SCALE 1:1000 V



LONGITUDINAL SECTION ALONG - MA11L
SCALE 1:100 H
SCALE 1:50 V

5 0 10 20m
SCALE 1:500 (HORIZONTAL)
1 0 2 4m
SCALE 1:100 (VERTICAL)

ARTC DRAWING No	EDMS No	EDMS REV

Plot Date: 18/07/18 5:25:11 PM Office: AUSYD Filename: C:\PW_WORKSHARE\FLEY LITTLE\ANZ_PROD\D0302770N\T0031-PWD\DRG\GEN\0206.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A.O'SHEA
03	14.07.17	90% ARTC DESIGN ISSUE	A.O'SHEA

SCALE	SIZE
1:500	A1

DRAWN: P.KHAIPRAPHAI
DESIGNED: K.GIGGACHER
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A.O'SHEA
A.O'SHEA

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS ACCESS ROAD PLAN & LONG SECTION SHEET 07 OF 08

DRAWING No. | PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV
N01031 – PWD – DRG – GEN – 0206 – 03

ALIGN ACCESS ROAD->MA02 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	307332.248	6239779.778	16.043	1°50'00.00"			
TC	20.904	307332.917	6239800.671	15.812	1°49'60.00"			
	25.000	307332.880	6239804.766	15.829	357°08'21.17"			
IP 2	29.902	307333.208	6239809.763	15.850		R = -50.000	17.996	20°37'19.06"
CT	38.900	307330.278	6239818.375	15.888	341°12'40.94"			
	50.000	307326.703	6239828.884	15.937	341°12'40.94"			
IP 3	59.803	307323.546	6239838.164	16.008	341°12'40.94"			

ALIGN ACCESS ROAD->MA03 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	307026.541	6239923.688	17.160	93°09'19.53"			
	25.000	307051.503	6239922.312	16.711	93°09'19.53"			
TC	39.023	307065.506	6239921.540	16.343	93°09'19.53"			
IP 2	41.349	307067.871	6239921.410	16.090		R = -10.000	4.652	26°39'15.23"
CT	43.675	307070.043	6239922.354	15.818	66°30'04.30"			
	50.000	307075.843	6239924.876	15.820	66°30'04.30"			
IP 3	51.610	307077.320	6239925.518	15.884	66°30'04.30"			

ALIGN ACCESS ROAD->MA04 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	307868.050	6239817.053	17.499	46°58'48.69"			
IP 2	4.702	307871.506	6239820.277	17.397		R = -38.287	9.405	14°04'25.70"
IP 3	9.405	307874.073	6239824.245	17.295				
IP 4	9.927	307874.363	6239824.693	17.285		R = -2.069	1.044	28°55'15.31"
CT	10.449	307874.400	6239825.225	17.275	3°59'06.74"			
IP 5	20.000	307875.064	6239834.753	17.165	3°59'06.74"			

ALIGN ACCESS ROAD->MA05 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING
IP 1	0.000	308041.192	6240280.415	16.698	277°31'42.18"
IP 2	49.799	307991.823	6240286.939	15.128	277°31'42.18"

ALIGN ACCESS ROAD->MA06 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	308027.508	6240171.673	16.030	278°13'08.84"			
TC	9.026	308018.574	6240172.963	15.717	278°13'08.84"			
IP 2	14.467	308013.103	6240173.753	15.528		R = -25.000	10.882	24°56'20.37"
CT	19.908	308007.808	6240172.163	15.339	253°16'48.47"			
	25.000	308002.931	6240170.698	15.162	253°16'48.47"			
	50.000	307978.988	6240163.506	14.574	253°16'48.47"			
IP 3	57.882	307971.439	6240161.238	14.493	253°16'48.47"			

Plot Date: 18/2/18 5:23:44 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ_PROD\D0929770\N01031-PWD\DRG\GEN\0220.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	14.07.17	90% ARTC DESIGN ISSUE	A.O'SHEA

SCALE	NTS
SIZE	A1
DRAWN	P.KHAIPRAPHAI
DESIGNED	M.SAKIB
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A.O'SHEA
A.O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS SETOUT TABLE SHEET 01 OF 04

DRAWING No. N01031 – PWD – DRG – GEN – 0220 – 02

(PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV)

ALIGN TURN AROUND->TA01 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	306918.171	6240602.834	14.648	359°20'46.59"			
TC	4.304	306918.122	6240607.138	14.647	359°20'46.59"			
	10.000	306916.784	6240612.624	14.654	333°14'18.74"			
IP 2	13.797	306917.986	6240619.004	14.660		R = -12.500	18.985	87°01'20.21"
	20.000	306909.361	6240618.923	14.671	287°24'06.90"			
IP 3	23.289	306906.130	6240619.485	14.677				
IP 4	23.290	306906.129	6240619.485	14.677				
IP 5	24.573	306904.848	6240619.537	14.679				
IP 6	24.573	306904.848	6240619.537	14.679				
	30.000	306899.546	6240618.592	14.688	247°26'44.24"			
IP 7	30.859	306897.977	6240619.816	14.690		R = -12.500	12.573	57°37'44.66"
CT	37.145	306894.063	6240614.162	14.759	214°41'37.83"			
	40.000	306892.438	6240611.815	14.793	214°41'37.83"			
IP 8	44.904	306889.647	6240607.783	14.851	214°41'37.83"			

ALIGN TURN AROUND->TA04 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	306934.651	6240559.342	14.277	168°57'11.72"			
TC	2.047	306935.043	6240557.333	14.279	168°57'11.72"			
	10.000	306938.867	6240550.512	14.359	132°29'53.96"			
IP 2	12.125	306937.540	6240544.542	14.491		R = -12.500	20.157	92°23'27.76"
	20.000	306948.039	6240547.249	15.516	86°39'42.11"			
CT	22.203	306950.216	6240547.570	15.784	76°33'43.97"			
TC	23.973	306951.938	6240547.982	15.922	76°33'43.97"			
IP 3	24.130	306952.132	6240548.028	15.931		R = 0.200	0.314	90°00'01.75"
CT	24.288	306952.179	6240547.834	15.940	166°33'45.72"			
TC	28.887	306953.248	6240543.360	15.945	166°33'45.72"			
IP 4	29.045	306953.294	6240543.165	15.937		R = 0.200	0.314	89°59'57.40"
CT	29.202	306953.100	6240543.119	15.928	256°33'43.12"			
	30.000	306952.323	6240542.933	15.877	256°33'43.12"			
TC	30.524	306951.814	6240542.811	15.835	256°33'43.12"			
	40.000	306944.250	6240537.485	14.598	213°07'33.35"			
IP 5	40.761	306938.811	6240539.705	14.531		R = -12.500	20.474	93°50'40.28"
	50.000	306942.525	6240527.903	14.300	167°17'21.51"			
CT	50.997	306942.783	6240526.940	14.300	162°43'02.84"			
IP 6	51.807	306943.024	6240526.167	14.301	162°43'02.84"			

Plot Date: 18/01/18 5:26:56 PM Office: AUSYD Filename: C:\PW_WORK\ASHLEY.LITTLE\ANZ.PROD\D0028377\DWG\N01031-PWD-DRC-GEN-0221.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	14.07.17	90% ARTC DESIGN ISSUE	A.O'SHEA

SCALE	SIZE
NTS	A1

DRAWN: P.KHAIPRAPHAI
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A.O'SHEA
A.O'SHEA

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SETOUT TABLE SHEET 02 OF 04

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0221	02

ALIGN TURN AROUND->TA07 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	306971.657	6240455.140	14.427	157°02'59.69"			
TC	2.352	306972.574	6240452.975	14.426	157°02'59.69"			
	10.000	306977.462	6240447.247	14.601	121°59'30.71"			
IP 2	12.029	306977.340	6240441.720	14.772		R = -12.500	19.354	88°42'44.37"
	20.000	306987.076	6240445.712	15.442	76°09'18.86"			
CT	21.706	306988.699	6240446.232	15.585	68°20'15.32"			
TC	23.474	306990.342	6240446.884	15.734	68°20'15.32"			
IP 3	23.630	306990.526	6240446.957	15.747		R = 0.200	0.312	89°14'51.32"
CT	23.786	306990.601	6240446.775	15.760	157°35'06.64"			
TC	28.386	306992.355	6240442.522	15.936	157°35'06.64"			
IP 4	28.541	306992.430	6240442.340	15.935		R = 0.200	0.311	89°10'12.86"
CT	28.697	306992.249	6240442.262	15.933	246°45'19.50"			
	30.000	306991.052	6240441.748	15.898	246°45'19.50"			
TC	30.201	306990.867	6240441.669	15.889	246°45'19.50"			
IP 5	39.987	306979.440	6240436.760	15.056		R = -12.500	19.571	89°42'31.04"
	40.000	306984.197	6240434.834	15.055	201°50'32.02"			
CT	49.773	306984.290	6240425.308	14.458	157°02'48.45"			
	50.000	306984.378	6240425.099	14.457	157°02'48.45"			
IP 6	51.821	306985.088	6240423.423	14.451	157°02'48.45"			

ALIGN TURN AROUND->TA08 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	306940.968	6240428.534	14.973	306°21'32.86"			
TC	1.024	306940.143	6240429.141	14.979	306°21'32.86"			
	10.000	306931.690	6240431.531	15.220	265°12'59.88"			
IP 2	11.403	306929.128	6240437.250	15.292		R = -12.500	20.759	95°09'00.12"
	20.000	306923.070	6240427.006	15.736	219°22'48.03"			
CT	21.783	306922.041	6240425.552	15.828	211°12'32.74"			
TC	24.152	306920.814	6240423.526	15.942	211°12'32.74"			
IP 3	24.307	306920.711	6240423.357	15.948		R = 0.200	0.312	89°14'53.44"
CT	24.463	306920.541	6240423.457	15.953	300°27'26.18"			
TC	29.063	306916.576	6240425.789	15.951	300°27'26.18"			
IP 4	29.219	306916.406	6240425.889	15.946		R = 0.200	0.311	89°09'59.95"
CT	29.374	306916.504	6240426.060	15.940	29°37'26.13"			
	30.000	306916.813	6240426.604	15.914	29°37'26.13"			
TC	31.540	306917.574	6240427.943	15.848	29°37'26.13"			
	40.000	306919.049	6240436.110	15.486	350°50'51.58"			
IP 5	41.997	306924.420	6240439.982	15.400		R = -12.500	20.914	95°51'39.32"
	50.000	306913.880	6240444.360	15.284	305°00'39.74"			
CT	52.454	306911.745	6240445.562	15.315	293°45'46.81"			
IP 6	53.214	306911.049	6240445.868	15.324	293°45'46.81"			

Plot Date: 18/2/18 5:27:53 PM Office: AUSYD Filename: C:\PW_WORKASHLEY LITTLE&NZ_PROD\0030377\N01031\PWD\DRG\GEN\0222.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	14.07.17	90% ARTC DESIGN ISSUE	A.O'SHEA

SCALE	SIZE
NTS	A1

DRAWN: P.KHAIPRAPHAI
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A.O'SHEA
A.O'SHEA

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS SETOUT TABLE SHEET 03 OF 04

DRAWING No. N01031 – PWD – DRG – GEN – 0222 – 02
(PROJECT No. | ZONE | TYPE | DISC | NUMBER | REV)

ALIGN RAIL XML⇒MB2S HORIZONTAL SEGMENTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	DEP.SEG	DEP.RAD	DEP.LEN
S	39878.702	306725.696	6240407.767	18.146	51°58'12.00"	ARC	190.000	32.632
CS	39911.335	306749.552	6240429.974	17.828	51°58'12.00"	TRANSITION		20.416
SC	39931.751	306766.321	6240441.598	17.628	58°45'46.80"	ARC	160.000	264.405
CS	40196.155	306992.416	6240376.320	15.318	153°26'45.60"	TRANSITION		20.037
ST	40216.192	307000.613	6240358.040	15.332	157°02'56.40"	LINE		88.599
TS	40304.791	307035.162	6240276.455	15.364	157°02'56.40"	TRANSITION		50.000
SC	40354.791	307053.040	6240229.786	15.338	163°00'00.00"	ARC	243.500	54.327
CS	40409.118	307063.021	6240176.498	15.310	175°46'58.80"	TRANSITION		50.000
ST	40459.118	307063.245	6240126.523	15.342	181°43'58.80"	LINE		69.400
TS	40528.519	307061.146	6240057.154	15.516	181°43'58.80"	TRANSITION		60.000
SC	40588.519	307062.002	6239997.208	15.898	174°07'04.80"	ARC	-230.000	23.459
CS	40611.978	307065.591	6239974.035	16.093	168°16'26.40"	TRANSITION		20.016
SC	40631.993	307070.487	6239954.634	16.259	163°28'01.20"	ARC	-250.000	287.383
CS	40919.376	307277.072	6239777.975	16.645	97°36'10.80"	TRANSITION		50.784
ST	40970.160	307327.727	6239774.712	16.668	91°43'04.80"	LINE		406.070
TC	41376.230	307733.615	6239762.537	18.300	91°43'04.80"	ARC	-200.000	242.968
CT	41619.199	307924.900	6239887.161	17.273	22°06'46.80"	LINE		230.718
TC	41849.917	308011.750	6240100.908	16.627	22°06'46.80"	ARC	-200.000	51.784
CT	41901.701	308024.849	6240150.858	16.600	7°16'40.80"	LINE		81.076
TC	41982.777	308035.120	6240231.281	16.870	7°16'40.80"	ARC	-3800.000	20.000
CT	42002.777	308037.602	6240251.127	17.028	6°58'33.60"	LINE		22.344
TC	42025.121	308040.315	6240273.305	17.245	6°58'33.60"	ARC	3800.000	20.000
CT	42045.121	308042.797	6240293.151	17.300	7°16'40.80"	LINE		780.241
E	42825.362	308141.638	6241067.106		7°16'40.80"			

ALIGN RAIL XML->MB2N HORIZONTAL SEGMENTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	DEP.SEG	DEP.RAD	DEP.LEN
S	39088.195	307044.747	6241110.958		177°52'01.94"	ARC	615.000	218.566
CS	39306.760	307014.306	6240895.682	12.670	198°13'46.66"	TRANSITION		20.000
SC	39326.760	307007.765	6240876.782	12.864	199°52'42.17"	ARC	800.000	19.063
CT	39345.823	307001.070	6240858.934	13.059	201°14'37.16"	LINE		141.391
TS	39487.214	306949.840	6240727.151	14.454	201°14'37.16"	TRANSITION		40.100
SC	39527.314	306936.230	6240689.441	14.829	197°03'08.22"	ARC	-275.652	172.293
CS	39699.607	306938.756	6240519.958	15.211	161°14'24.71"	TRANSITION		40.100
ST	39739.707	306953.483	6240482.670	15.239	157°02'55.78"	LINE		214.807
TS	39954.514	307037.246	6240284.868	15.334	157°02'55.78"	TRANSITION		60.000
SC	40014.514	307058.447	6240228.778	15.376	163°45'26.73"	ARC	260.000	56.319
CS	40070.833	307068.244	6240173.429	15.415	176°10'06.18"	TRANSITION		50.000
ST	40120.833	307068.354	6240123.450	15.450	181°44'00.13"	LINE		66.561
TS	40187.394	307066.341	6240056.920	15.497	181°44'00.13"	TRANSITION		60.000
SC	40247.394	307067.262	6239996.977	15.695	173°56'03.04"	ARC	-224.800	22.509
DIS	40269.903	307070.757	6239974.750	15.886	168°11'49.67"	ARC		19.994
DIS	40289.897	307075.693	6239955.375	16.056	165°42'25.08"	ARC	-244.800	280.360
CS	40570.257	307277.488	6239783.166	16.540	97°40'03.70"	TRANSITION		50.258
ST	40620.515	307327.616	6239779.917	16.605	91°43'05.28"	LINE		293.843
E	40914.358	307621.328	6239771.107	17.331	91°43'05.28"			

ALIGN ACCESS ROAD->MA11L HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	308045.376	6240385.426	16.352	1°45'31.77"			
TC	1.916	308045.435	6240387.341	16.338	1°45'31.77"			
IP 2	3.712	308045.490	6240389.138	16.313		R = -33.300	3.592	6°10'49.33"
CT	5.508	308045.352	6240390.930	16.277	355°34'42.44"			
TC	7.143	308045.225	6240392.560	16.234	355°34'42.44"			
IP 3	11.423	308044.831	6240397.666	16.097		R = -6.200	8.560	79°06'26.59"
CT	15.703	308039.743	6240398.243	15.955	276°28'15.85"			
IP 4	16.361	308039.089	6240398.317	15.933	276°28'15.85"			

Plot Date: 1/8/2018 5:28:17 PM Office: AUSYD Filename: C:\PV_WORKASHLEY LITTLE\ANZ_PROD\20282770\N01031-PWD\DRG-GEN\0223.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	20.01.17	ACCEPTED FOR CONSTRUCTION	A.O'SHEA
02	09.06.17	ACCEPTED FOR CONSTRUCTION RE-SUBMISSION	A. O'SHEA

SCALE	NTS
SIZE	A1
DRAWN	P.KHAIPRAPHAI
DESIGNED	M.SAKIB
CHECKED	W.DENG

FOR CONSTRUCTION

APPROVED
DATE 20.01.17
A. O'SHEA
A. O'SHEA

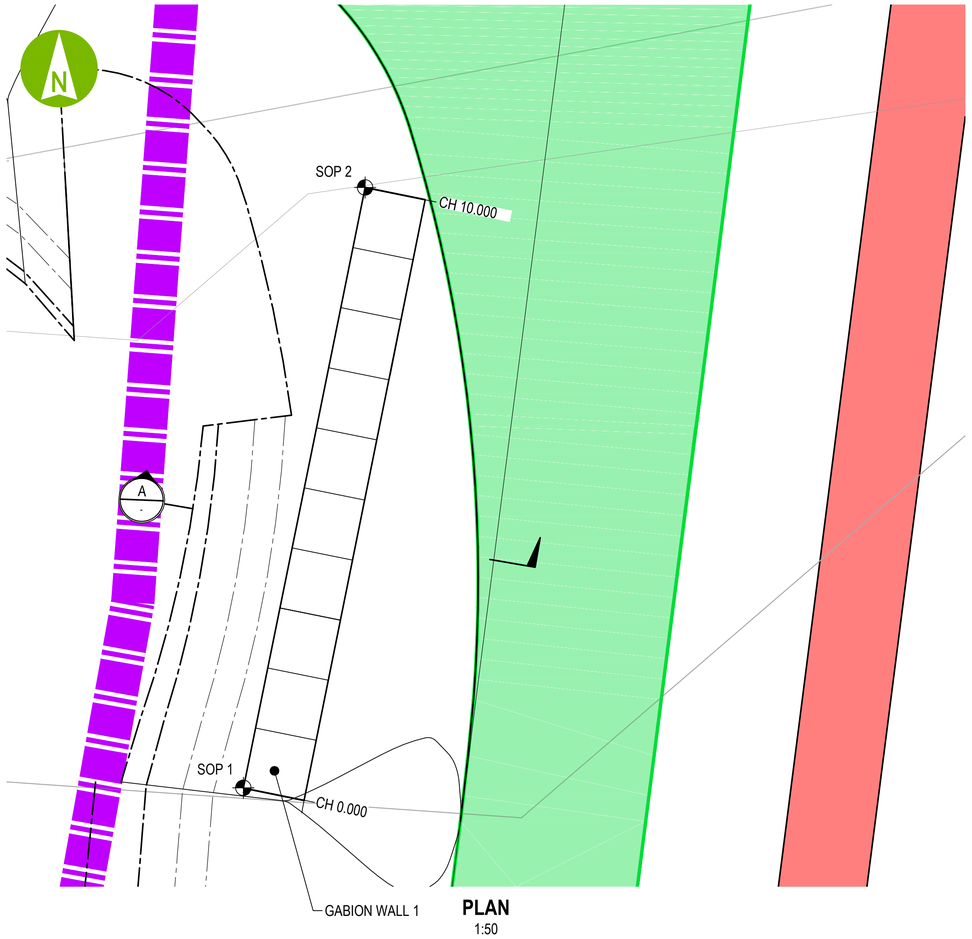
ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

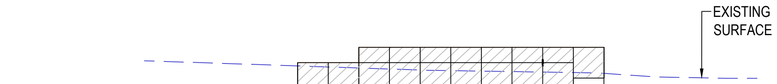
TITLE: BULK EARTHWORKS SETOUT TABLE SHEET 04 OF 04

DRAWING No. N01031 – 0000 – DRG – GEN – 0223 – 02

PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
N01031	0000	DRG	GEN	0223	02



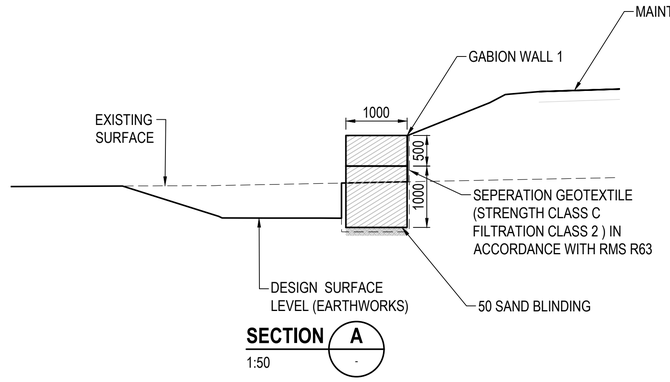
PLAN
1:50



DATUM R.L. 12.000

DESIGN SURFACE LEVEL (TOP OF WALL)	14.600																				14.600
EXISTING SURFACE LEVEL	14.494																				14.252
CHAINAGE	0.00																				10.00
		2.00																			

LONGITUDINAL SECTION ALONG GABION WALL 1
1:100



SECTION A
1:50

SETOUT POINTS	
SOP 1	E 308016.168
	N 6240158.529
SOP 2	E 308018.156
	N 6240168.330

NOTES:

1. FILL MATERIALS SHALL BE IN ACCORDANCE WITH EARTHWORKS SPECIFICATION.
2. BASE PREPARATION FOR THE RETAINING WALL SHALL BE CONFIRMED BY THE GEOTECHNICAL ENGINEER ON SITE TO ACHIEVE A FOUNDATION ALLOWABLE BEARING CAPACITY OF 200KPa.
3. SUPPLY AND INSTALLATION OF GABIONS SHALL BE AS PER RMS SPECIFICATION R55 AND IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

500 0 1000 2000mm
SCALE 1:50

1 0 2 4m
SCALE 1:100

ARTC DRAWING No	EDMS No	EDMS REV

Plot Date: 18/2018 5:29:56 PM Office: AUSYD Filename: C:\PW_WORKA\SALEY.LITTLE\ANZ.PROD\D09297770\N01031-PWD-DRG-GEN-0250.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	18.12.17	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

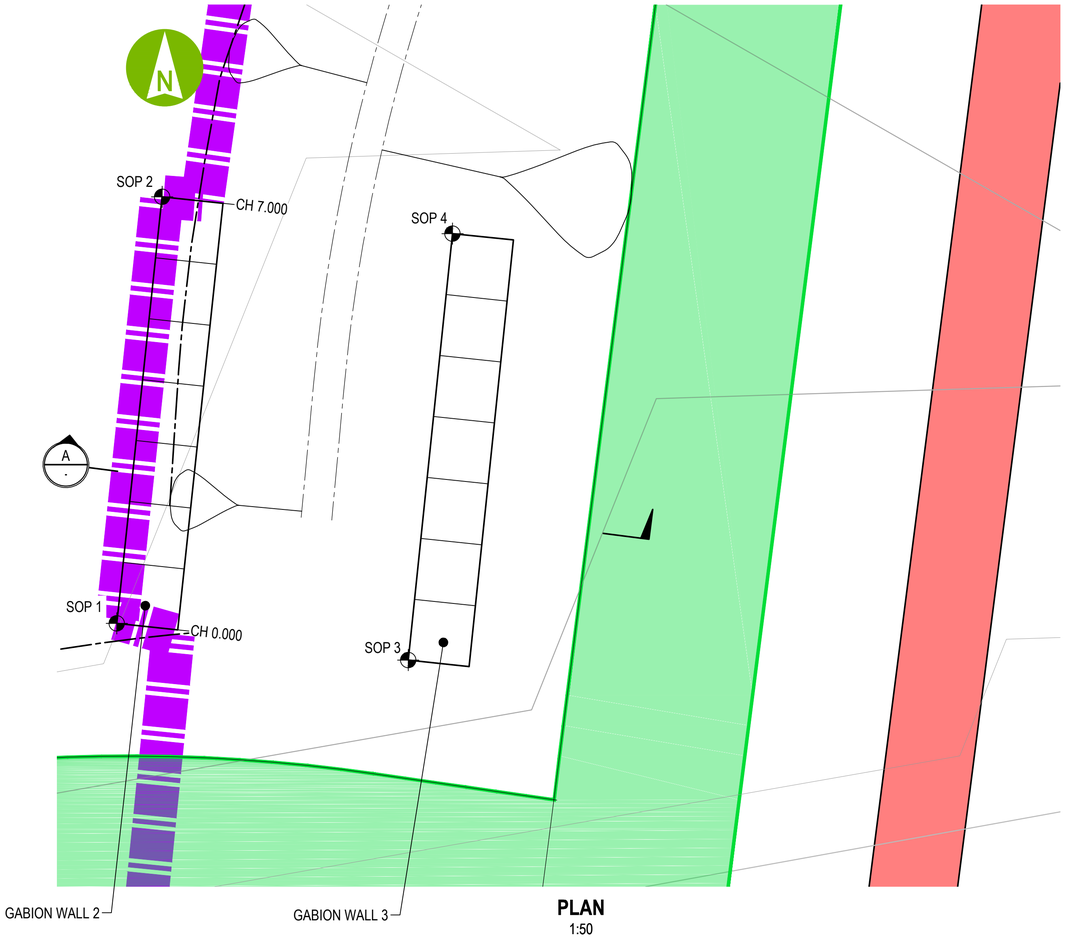
DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

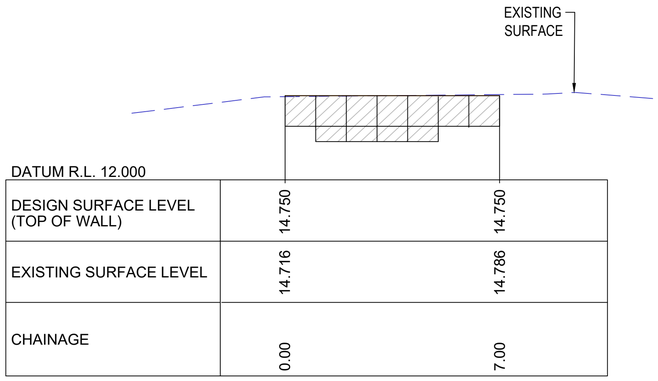
APPROVED
DATE 18.12.17
M.SAKIB
M.SAKIB

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GABION WALL 1 - DETAILS SHEET 01 OF 04

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0250	01

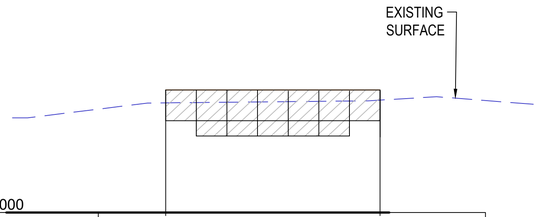


PLAN
1:50



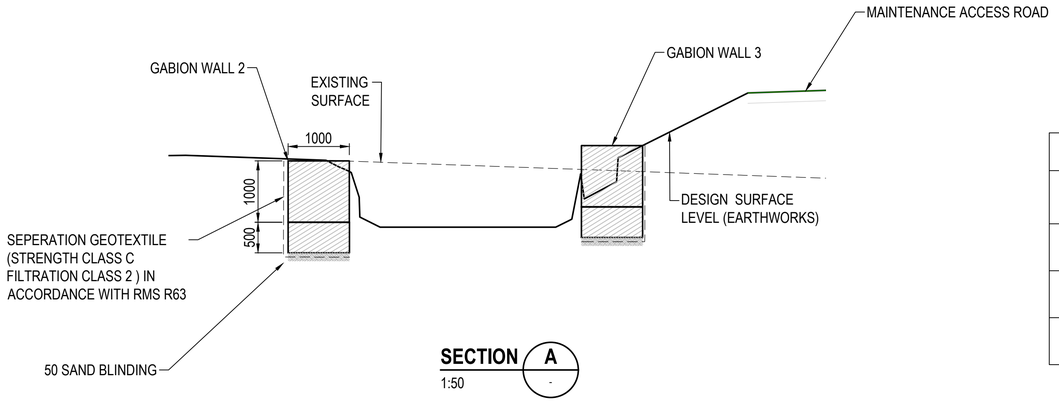
DESIGN SURFACE LEVEL (TOP OF WALL)	14.750	14.750
EXISTING SURFACE LEVEL	14.716	14.786
CHAINAGE	0.00	7.00

LONGITUDINAL SECTION ALONG GABION WALL 2
1:100



DESIGN SURFACE LEVEL (TOP OF WALL)	15.000	15.000
EXISTING SURFACE LEVEL	14.580	14.670
CHAINAGE	0.00	7.00

LONGITUDINAL SECTION ALONG GABION WALL 3
1:100



SECTION A
1:50

SETOUT POINTS

SOP 1	E 308014.814
	N 6240178.385
SOP 2	E 308015.554
	N 6240185.346
SOP 3	E 308019.571
	N 6240177.783
SOP 4	E 308020.298
	N 6240184.745

500 0 1000 2000mm
SCALE 1:50

1 0 2 4m
SCALE 1:100

NOTES:

1. FILL MATERIALS SHALL BE IN ACCORDANCE WITH EARTHWORKS SPECIFICATION.
2. BASE PREPARATION FOR THE RETAINING WALL SHALL BE CONFIRMED BY THE GEOTECHNICAL ENGINEER ON SITE TO ACHIEVE A FOUNDATION ALLOWABLE BEARING CAPACITY OF 200KPa.
3. SUPPLY AND INSTALLATION OF GABIONS SHALL BE AS PER RMS SPECIFICATION R55 AND IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

Plot Date: 18/2018 3:13:32 PM Office: AUSYD Filename: C:\PV_WORKASNLEY LITTLE\ANZ_PROJ\302002770\N01031-PWD\DRG\GEN\0251.DWG

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SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	18.12.17	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	W.DENG

FOR CONSTRUCTION

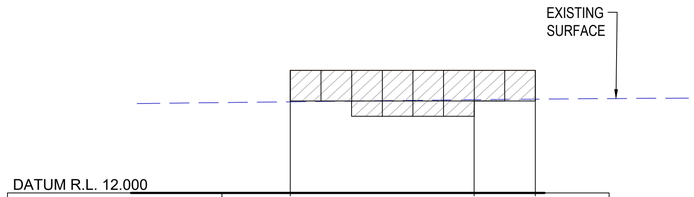
APPROVED
DATE 18.12.17
M.SAKIB
M.SAKIB

ARTC DRAWING No | EDMS No | EDMS REV

PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GABION WALL 2 & 3 - DETAILS SHEET 02 OF 04

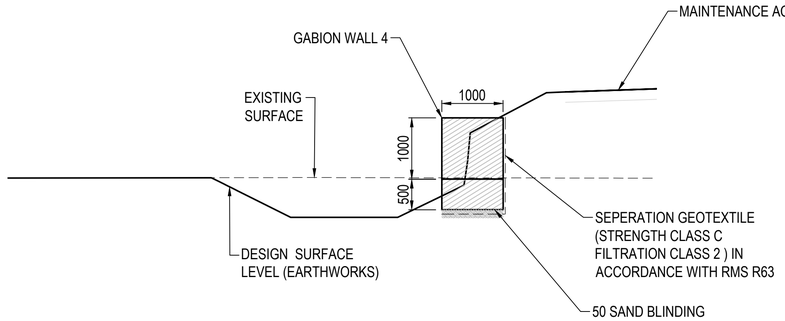
DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0251	01

PLAN
1:50



DESIGN SURFACE LEVEL (TOP OF WALL)	16.000	16.000	16.000
EXISTING SURFACE LEVEL		15.041	15.060
CHAINAGE	0.00	6.00	8.00

LONGITUDINAL SECTION ALONG GABION WALL 4
1:100



SECTION A
1:50

SETOUT POINTS	
SOP 1	E 308031.315
	N 6240266.037
SOP 2	E 308032.088
	N 6240271.987
SOP 3	E 308031.284
	N 6240273.818

NOTES:

1. FILL MATERIALS SHALL BE IN ACCORDANCE WITH EARTHWORKS SPECIFICATION.
2. BASE PREPARATION FOR THE RETAINING WALL SHALL BE CONFIRMED BY THE GEOTECHNICAL ENGINEER ON SITE TO ACHIEVE A FOUNDATION ALLOWABLE BEARING CAPACITY OF 200KPa.
3. SUPPLY AND INSTALLATION OF GABIONS SHALL BE AS PER RMS SPECIFICATION R55 AND IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

500 0 1000 2000mm
SCALE 1:50

1 0 2 4m
SCALE 1:100

Rel Date: 18/2/18 5:32:43 PM Office: AUSYD Filename: C:\PW_WORKASHLEY.LITTLE\ANZ_PROD\D0039270\N\N01031-PWD\DRG\GEN\0252.DWG

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CLIENT
CPB CONTRACTORS
SIMTA SYDNEY INTERMODAL TERMINAL ALLIANCE

REV	DATE	REVISION DETAILS	APPROVED
01	18.12.17	ACCEPTED FOR CONSTRUCTION	M.SAKIB

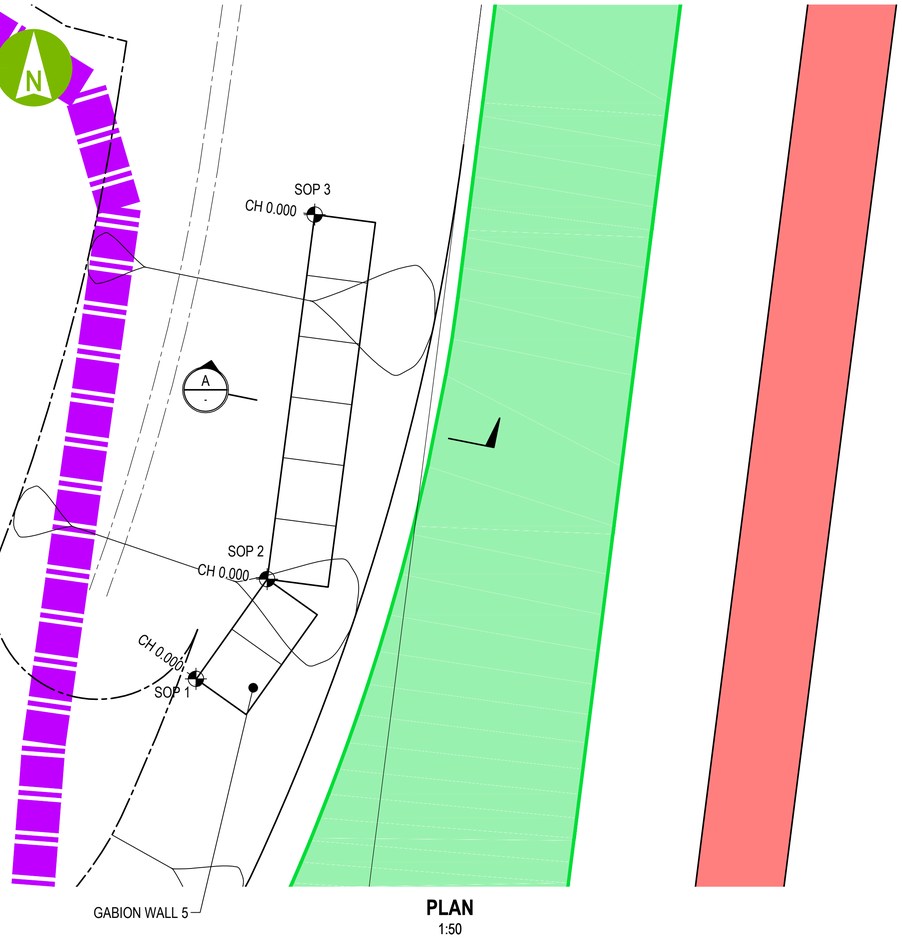
SCALE	AS SHOWN
SIZE	A1
DRAWN	A.LITTLE
DESIGNED	M.SAKIB
CHECKED	W.DENG

FOR CONSTRUCTION

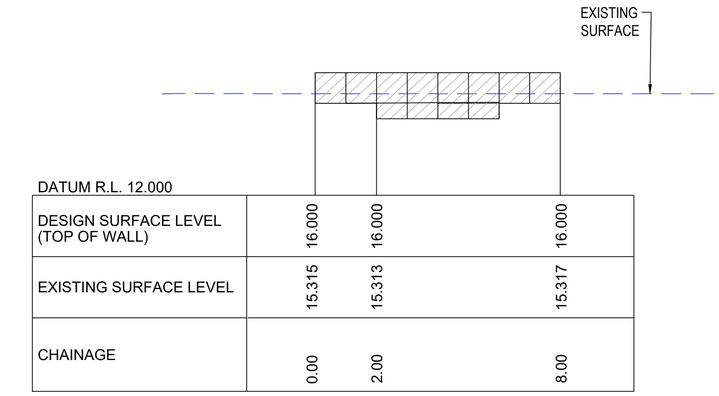
APPROVED
DATE 18.12.17
M.SAKIB
M.SAKIB

ARTC DRAWING No	
EDMS No	
EDMS REV	
PROJECT	MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1
TITLE	BULK EARTHWORKS GABION WALL 4 - DETAILS SHEET 03 OF 04

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0252	01

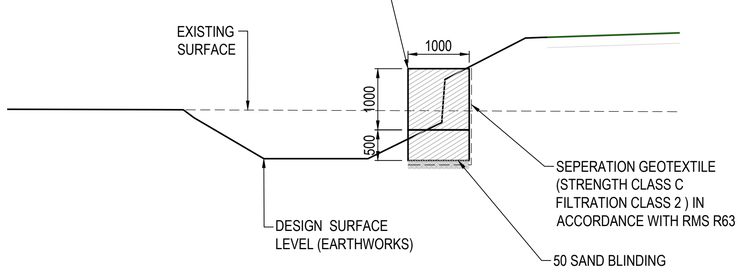


PLAN
1:50



DESIGN SURFACE LEVEL (TOP OF WALL)	16.000	16.000	16.000
EXISTING SURFACE LEVEL	15.315	15.313	15.317
CHAINAGE	0.00	2.00	8.00

ELEVATION
1:100



SECTION A
1:50

SETOUT POINTS	
SOP 1	E 308033.226
	N 6240291.026
SOP 2	E 308034.386
	N 6240292.655
SOP 3	E 308035.160
	N 6240298.605

NOTES:

1. FILL MATERIALS SHALL BE IN ACCORDANCE WITH EARTHWORKS SPECIFICATION.
2. BASE PREPARATION FOR THE RETAINING WALL SHALL BE CONFIRMED BY THE GEOTECHNICAL ENGINEER ON SITE TO ACHIEVE A FOUNDATION ALLOWABLE BEARING CAPACITY OF 200KPa.
3. SUPPLY AND INSTALLATION OF GABIONS SHALL BE AS PER RMS SPECIFICATION R55 AND IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

500 0 1000 2000mm
SCALE 1:50
1 0 2 4m
SCALE 1:100

Plot Date: 18/2018 5:33:53 PM Office: AUSYD Filename: C:\PW_WORKA\SHLEY.LITTLE\ANZ_PROD\D0039377\N01031-PWD\DRG\GEN\0253.DWG

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REV	DATE	REVISION DETAILS	APPROVED
01	18.12.17	ACCEPTED FOR CONSTRUCTION	M.SAKIB

SCALE	SIZE
AS SHOWN	A1

DRAWN: A.LITTLE
DESIGNED: M.SAKIB
CHECKED: W.DENG

FOR CONSTRUCTION

APPROVED
DATE 18.12.17
M.SAKIB
M.SAKIB

ARTC DRAWING No	EDMS No	EDMS REV

PROJECT: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT PACKAGE 1- RALP No.1

TITLE: BULK EARTHWORKS GABION WALL 5 - DETAILS SHEET 04 OF 04

DRAWING No.	PROJECT No.	ZONE	TYPE	DISC	NUMBER	REV
	N01031	PWD	DRG	GEN	0253	01