

Visual Amenity and Lighting Management Plan

Cross River Rail Project – Tunnel, Stations and Development
Package (TSD)

REV	DATE	PREPARED BY NAME & SIGNATURE	REVIEWED BY NAME & SIGNATURE	APPROVED BY NAME & SIGNATURE	REMARKS

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Revision: 3

Compliance Matrix

Table 1 Compliance matrix

CRRDA REFERENCE	REQUIREMENT	ADDRESSED IN SECTION
Coordinator-General's change report Appendix 1 – Part C. – Condition 20 & 21		
Condition 20. Landscape and Open Space	A. Project Works are designed and implemented to minimise impacts on landscape and open space values.	Section 5.2
	B. <i>Project works and worksites in Victoria Park must be designed, planned and implemented to avoid, or minimise the loss of trees and ornamental plantings, and must minimise the area of the park directly impacted during such works.</i>	Section 5.2
	C. <i>Worksites in Victoria Park must be enclosed with a visually solid screen and any night lighting including security lightning must be situated to minimise the spill of light beyond the worksite enclosures.</i>	Section 5.2
	D. <i>Existing pathways and recreational facilities in Victoria Park must be relocated within the park for the duration of the works, in consultation with Brisbane City Council. Upon completion go the project works, such pathways and facilities must be re-established in location in the park in consultation with Brisbane City Council.</i>	Section 5.2
Condition 21. Worksite Rehabilitation	A. Worksites for project infrastructure, such as the surface connections, stations and ancillary buildings must be rehabilitated as soon as practicable upon completion of the works.	Section 3.2.1
	B. All other worksites required to support commissioning activities must be rehabilitated as soon as practicable on completion of commissioning or sooner where possible.	Section 3.2.1
	C. Rehabilitation must address soil erosion and sedimentation, dust nuisance and landscape and visual impact.	Section 3.2.1
	D. Any planting, landscaping and streetscape works undertaken as part of rehabilitation must be undertaken in accordance with landscape and urban design plans prepared in consultation with the Brisbane City Council.	Section 3.2.1

Details of Revision Amendments

Document Control

The CBGU Project Director is responsible for ensuring that this Plan is reviewed and approved. The Project Environment & Sustainability Manager is responsible for updating this Plan to reflect changes to the Project, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the CBGU Project Director before being distributed / implemented.

Distribution and Authorisation

The CBGU Project Director is responsible for the distribution of this Plan. The controlled master version of this document is available for distribution as appropriate and maintained on TeamBinder. All circulated hard copies of this document are deemed to be uncontrolled.

All personnel employed on the Project will perform their duties in accordance with the requirements of this Plan, supporting management plans, and related procedures.

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Referenced Documents

The following provides a list of referenced documents either as a sub-plan to this plan or referenced from.

Table 2 *Referenced Documents*

Document Number	Document Name	Location of Controlled Version
Referenced Project Plans include:		
CRRTSD-EN-MPL-CBGU-000019	Construction Environment Management Plan	TeamBinder
CRRTSD-EN-ENMP-CBGU-000012	Nature Conservation Management Plan	TeamBinder
CRRTSD-CU-MPL-CBGU-000018	Communications and Stakeholder Engagement Management Plan	TeamBinder

Note: this Management Plan may not contain the current version of the documents listed above. Refer to the 'location of controlled version' for the most current version.

Glossary of Terms

Table 3 Terms

Acronym	Definition
All Staff	Means all employees, contractors and sub-contractors involved in the Project Works
CBD	Central Business District
CEMP	The Project's Construction Environmental Management Plan
CG	Coordinator-General
CGCR	Coordinator-General's Change Report
CGER	Coordinator-General's Evaluation Report
COEMP	The Project's Commissioning Environmental Management Plan
Contractor	The Contractors appointed to design, construct and commission the Project
Coordinator-General	The corporation sole preserved continued and constituted under section 8 of the SDPWO Act
CRR	Cross River Rail
CSEP	Community and Stakeholder Engagement Plan
DES	Department of Environment and Science
Directly Affected Persons	An entity being either the owner or occupant of premises for which predictive modelling or monitoring indicates the Project impacts would be above the performance criteria in the Imposed Conditions
EIS	Environmental Impact Statement
EMP	Environmental Management Plan (refers to the OEMP, CEMP, COEMP including any Project sub-plans)
EMS	Environmental Management System
Environmental Monitor	The Environmental Monitor engaged in accordance with Imposed Condition 7
GHG	Greenhouse gas
ISCA	Infrastructure Sustainability Council of Australia
Imposed condition/s	A condition/s imposed by the Coordinator-General under section 54B of the SDPWO Act for the Project
MRTS51	MRTS51 Environmental Management – TMR Specification
NCMP	Nature Conservation Management Plan
OEMP	The Project's Outline Environmental Management Plan

Acronym	Definition
Outline CEMP	The Project's Outline Construction Environmental Management Plan
Outline COEMP	The Project's Outline Commissioning Environmental Management Plan
Predictive Modelling	Means the use of appropriate analytical scenario testing, whether or not by numerical measurements, undertaken prior to the commencement of Project Works
PPE	Personal Protective Equipment
Project	The Cross River Rail Project
Project Works	As defined in the Imposed Conditions
Proponent	The Authority
QA	Quality Assurance
RfPC	EIS Request for Project Change
Rail Infrastructure Manager	A person who has effective management and control of rail infrastructure or proposed rail infrastructure, whether or not the person –
Rail Transport Operator	A rail infrastructure manager or rolling stock operator, or a person or organisation which is both
SDPWO Act	State Development and Public Works Organisation Act 1971
SEMS	Queensland Rail's Safety and Environment Management System
Sub-plan	Any sub-plan to an EMP
The Authority	The Cross River Rail Delivery Authority
TMR	Queensland Department of Transport and Main Roads
VLMP	Visual Amenity and Lighting Management Plan

1 Introduction

1.1 Background

The Design and Construction Joint Venture comprising of CPB Contractors Pty Ltd, BAM International Australia Pty Ltd, Ghella Pty Ltd and UGL Engineering Pty Ltd (CBGU D&C JV or CBGU) is responsible for delivering the Cross River Rail (CRR) Project (the Project) on behalf of the Cross River Rail Delivery Authority (the Delivery Authority).

This Visual Amenity and Lighting Management Plan should be read in conjunction with the Project's overarching Construction Environment Management Plan (CEMP).

- The CEMP provides specific details regarding the background of the Project, the scope of the Project and the staging and timing of key milestones associated with the construction of the Project.

1.2 Context

This Construction Visual Amenity and Lighting Management Plan (VLMP) forms part of the Construction Environmental Management Plan (CEMP) developed for the construction of the Project. The VLMP describes how the CBGU will manage visual amenity and lighting and minimise impacts during construction of the Project.

1.3 Objectives

The objectives of this VLMP are to achieve the environmental outcomes stated in the CEMP through the implementation of site-specific mitigation measures. This VLMP will also:

- Nominate the Project's monitoring and reporting requirements in relation to visual amenity and lighting
- Ensure controls and procedures are implemented during construction activities to avoid, minimise or manage adverse impacts to visual amenity and lighting from the Project
- Monitor the effects of management and mitigation measures.

1.4 Legislative Framework

Delivery and implementation of the Project must comply with the environmental legislation, guidelines and standards specified in the and CEMP (as updated to reflect any changes current at commencement of each Project phase) and any additional requirements specified in the conditions of approval.

Specific legislation relevant to this VLMP is detailed below.

1.4.1 Commonwealth Legislation

There is no Commonwealth legislation that is relevant to the Project and this VLMP.

1.4.2 State Legislation

State legislation that is likely to be relevant to the Project and this VLMP includes:

- *Economic Development Act 2012*
- *Queensland Heritage Act 1992*
- *State Development and Public Works Organisation Act 1971*
- *Planning Act 2016*
- *Transport Infrastructure Act 1994*
- *Vegetation Management Act 1999.*

1.4.3 Approvals, Permits and Licences

CBGU will obtain or ensure that sub-contractors have the relevant licences, permits and approvals as required by law and maintain them as required throughout the delivery phase of the project. No condition of the Infrastructure Approval removes the obligation for CBGU to obtain, renew or comply with such necessary licences, permits or approvals.

All relevant approvals, permits and licences have been identified in the CEMP.

1.4.4 Guidelines and Standards

The following guidelines and standards are relevant to the management of visual amenity and lighting for the Project:

- AS4282-1997: Control of the obtrusive effects of outdoor lighting
- Queensland Rail's Lighting Standard for Railway Stations guidelines.

2 Required Outcomes

The following Imposed Conditions and environmental outcomes must be achieved throughout construction of the Project. The environmental outcomes may be achieved by meeting the performance criteria in this VLMP.

2.1 Coordinator-General Conditions

The Imposed Conditions relating to visual amenity and lighting for the Project can be found on the Coordinator-General's website (<http://www.dsdmip.qld.gov.au/coordinator-general/assessments-and-approvals/coordinated-projects/completed-projects/cross-river-rail-project.html>).

2.2 Environmental Outcomes

The following environmental outcomes in relation to visual amenity and lighting are to be achieved for the Project:

- Construction activities minimise and mitigate impacts on the visual and landscape environment
- Construction activities avoid light nuisance for sensitive receivers and maintain safe driving conditions for motorists near to Project works.

2.3 Performance Criteria

The following performance criteria must be achieved throughout construction of the Project.

- Revegetation to be designed and constructed with consideration of TMR specification MRTS16 Landscape and Revegetation
- Impacts of Project Works, including worksite and spoil handling facilities, on existing visual amenity are minimised through the design and siting of screens and barriers, plant and equipment, buildings and other structures, and lighting and telecommunications infrastructure
- Construction worksites are rehabilitated progressively, and as soon as practicable, following Project Works
- Construction lighting is designed, constructed and operated to comply with the relevant standard such as AS4282-1997: Control of the obtrusive effects of outdoor lighting
- Avoid or minimise nuisance from construction lighting on sensitive receivers and onto nearby roads, pedestrians and cycle paths, and parklands
- Surface Project Works do not extend beyond designated worksite boundaries.

3 Impacts and Mitigation Measures

Excessive and poorly positioned lighting, as well as unmanaged impacts on local businesses due to construction of the Project have the potential to impact the visual amenity within and around the Project. Impacts that may occur as a result of construction activities are detailed in Section 3.1. A range of environmental mitigation measures and requirements to address potential impacts to visual amenity and lighting are outlined in Section 3.2.

3.1 Impacts

3.1.1 General Impacts

During the Project's construction period, the following sources have the potential to have impacts without controls on the visual amenity around the Project footprint (controls are discussed within Section 3.2):

- Worksite establishment and demolition activities
- Tunnelling and associated excavation works (cut and cover operations)
- Shaft excavation
- Spoil removal and replacement
- Above ground road and bridge works
- Construction of railway stations and other buildings
- Lighting towers used to illuminate night works.

Specific impacts are listed in more detail below.

3.1.2 Landscape and Physical Amenity

During construction, impact on the visual environment generally relates to construction worksites, including associated screening and noise barriers.

3.1.2.1 Northern Portal

- Landscape amenity
 - The construction site is approximately 35,000 m² in size and would require some areas of grassy open space and mature vegetation to be removed. Some existing mature trees and screening vegetation would be removed to allow construction of the Project in this area. Removal of these trees are not within the TSD scope and will be managed under the RIS scope of work.
- Residential amenity
 - The construction worksite may impact on the amenity for local residents. However, the residents in this area are situated on the south-east side of Gregory Terrace and are visually screened from views to the bottom of the park where it interfaces with Queensland Rail land. The primary impact would be for residents located near the access to the construction site at Gregory Terrace, due to increased construction traffic.
- Visual environment

- The worksite is located in a low lying portion of the park and as a result views to the worksite would be most visible to park users. There would be some transitory views to the construction site from the ICB, the land bridge, and users of York's Hollow and the Victoria Park golf club to the north.

3.1.2.2 Roma Street Station

- Landscape amenity
 - The worksites would remove mature trees, vegetation and grassy open space at the Roma Street entrance to the Roma Street Parkland.
- Residential amenity
 - Due to the nature of high rise buildings within the Brisbane CBD, views of the construction worksites would occur.
 - The southern worksites would impact on amenity for residents of the eastern apartments within the Roma Street Parkland who overlook the worksite.
 - The northern worksite would impact on amenity for residents of the western apartments within the Roma Street Parkland who overlook the worksite.
- Landmarks and legibility
 - The worksite at the Roma Street entrance to the Roma Street Parkland would impact on this entrance and on Emma Miller Place.
- Visual Environment
 - The most visible worksite would be adjacent to Roma Street as it is exposed to passing traffic and overlooked by several office buildings.
 - Other worksites would be visible by station users, office workers in the transit centre complex and the eastern apartments within Roma Street Parkland.
 - The construction support site would be visible for people accessing the Roma Street Parkland apartments, visitors to Roma Street Parkland, transitory views from the rail corridor, and residents in the north-western apartments at Roma Street Parkland.

3.1.2.3 Albert Street Station

- Landscape amenity
 - Construction works may require the removal of some street trees.
- Residential amenity and visual environment
 - Construction works would change the visual environment in the vicinity of construction worksites.
 - Due to the nature of high rise buildings within the Brisbane CBD, views of the construction worksites are likely to occur from nearby high-rise residential and commercial buildings. These views will primarily be of acoustic sheds.

3.1.2.4 Woolloongabba Station

- Residential amenity

- Construction works are expected to be visible from some residential units in high rise buildings located north-west of the worksite.
- Visual environment
 - Changes the visual environment of this area, due to the establishment of site infrastructure such as acoustic sheds, site offices and noise barriers.

3.1.2.5 Boggo Road

- Landscape amenity
 - Surface construction activities are likely to impact on landscape amenity in this location, including temporary disruption to the landscaped pedestrian spine and the landscaped open space area at the corner of Annerley Road and Peter Doherty Street.
- Residential amenity
 - Potential impact may occur to future residents of the Boggo Road Urban Village, depending on the timing of this development.
- Visual environment
 - The construction worksite would be visible from Annerley Road and surrounding buildings, including the Ecosciences Precinct, Dutton Park State School and Police Station and may also be visible for some residents immediately south of the Boggo Road Urban Village.

3.1.3 Lighting

- Some lighting used during night works at external locations within the works sites may be visible from nearby sensitive receptor locations.
- Nocturnal fauna species may become disoriented as a result of lighting associated with night works and/or worksites.
- Lighting that impacts on operational signal lighting associated with active rail and road corridors may result in implications to train or traffic movements.
- Lighting on construction traffic entering and exiting work sites may generate impacts on sensitive receptor locations that front onto construction traffic routes.
- Residential properties with limited visual barriers (particularly those at T-intersections) to the roadway, such as high fences or vegetation, may be susceptible to light glare from passing construction vehicles.

3.2 Mitigation Measures

As required, the following mitigation measures shall be implemented to achieve the nominated environmental outcomes and performance criteria. These mitigation measures have been derived from the Outline Visual Amenity and Lighting Management Plan (from the Outline Construction Environmental Management Plan - Outline Visual Amenity and Lighting Management Plan (OVALMP)) and / or are consistent with achieving the required environmental outcomes and performance criteria having regard for the nature and scale for the impact associated with the works. See section 4.2 of the CEMP for further detail in the of Construction Area Plans.

3.2.1 Landscape and Physical Amenity

- A visual impact mitigation plan (consisting of signage plans that will be progressively updated by CBGU's community engagement team as the project progresses) will be prepared to mitigate potential visual impacts of noise barriers and hoardings, where appropriate (Outline Visual Amenity and Lighting Management Plan [OVALMP] p 8).
- Where possible, adopt pruning and selective trimming of mature trees instead of removing them (OVALMP p 8).
- Where possible, fence and protect trees of particular significance that fall within construction worksites and laydown areas (OVALMP p 8).
- A suitably qualified arborist will be consulted regarding the management of mature vegetation to be retained (OVALMP p 8) as detailed in the Nature Conservation Management Plan (NCMP).
- Hoardings and/or fencing will be provided around construction worksites to mitigate the views of construction works, where possible. The locations of these have been illustrated on the figures in Appendix A.
- Hoarding, fencing and/or visually impermeable barriers will be placed around worksites to minimise views of stockpiles and construction activities, particularly where worksites are visible to residential or recreational users (OVALMP p 8).
- Rehabilitation plans will be prepared to enhance open space and public areas disturbed by construction as soon as practicable following construction. As per the OVALMP rehabilitation works may include:
 - where practicable, replacement of cleared mature trees with plantings of advanced individuals
 - regrading of the surface to facilitate surface runoff without erosion, and to create a landform suitable for use consistent with City Plan designations
 - reinstatement of paths, street or park furniture, signage equipment and lighting
 - reinstatement of grassed areas and paved surfaces where practicable
 - introduction of interpretive signage relating to cultural heritage, historic heritage and way finding measures.

3.2.1.1 Northern Portal

- Works within Victoria Park are not within the TSD scope. Notwithstanding, the Construction Site Plan, prepared for the Northern Portal, will identify site features that will assist in mitigating potential impacts to visual amenity, such as hoardings and appropriate lighting.

3.2.2 Lighting

- During works where trains will be operating on adjacent lines, lighting positions within the rail corridor will be assessed and managed on a case by case basis to ensure driver visibility is not adversely impacted (OVALMP p 8).
- Construction lighting should be implemented in accordance with the relevant standards outlined in Section 1.4.4 (OVALMP p 8).

- Where appropriate, directionally-controlled, shielded lights mounted at a sufficient height may be used to minimise light spill to surrounding properties, maintain safe driving conditions for motorists on adjacent roads and minimise impacts on local fauna (OVALMP p 9).
- Rather than providing security lighting across the entire site during the night, it should be provided at specific locations, which may include:
 - entrances and exits to work sites, sheds and buildings
 - equipment and plant storage areas
 - particular areas of potential concealment, such as behind buildings or in the corners of the work sites.

4 Compliance Management

4.1 Roles and Responsibilities

The organisational responsibilities and accountabilities in relation to environmental management throughout Project construction works are outlined in the overarching CEMP.

4.2 Induction and Training

4.2.1 Environmental Induction

All CBGU staff, subcontractors and visitors to worksites must attend general induction training that covers general environmental management requirements, site-wide controls and site-specific and work specific risks and mitigation measures. Further details regarding environmental induction requirements have been outlined in the overarching CEMP.

4.2.2 Environmental Training

Details regarding environmental training requirements, have been outlined in the overarching CEMP.

4.3 Communication

Communication strategies including internal communication, external and Government Authority consultation, and stakeholder and community liaison must be undertaken in accordance with the CEMP and the CSEP.

4.4 Incidents and Emergencies

4.4.1 Incident Notification

The immediate response to all incidents is to make the area safe and undertake measures to prevent further environmental harm. The Environment and Sustainability Manager, Shared Services Director and Project Director should be notified immediately in the event of an environmental incident.

Further details regarding Incident Notification, have been outlined in the overarching CEMP.

4.4.2 Incident Types

For the purpose of this VLMP, incidents include, but are not limited to:

- Any breach of the legislation or an approval or permit condition
- Complaint or notification in relation to visual amenity or lighting.

4.4.3 Incident Prevention Management

Incident Classification and Procedure has been identified within the overarching CEMP.

4.4.4 Incident Investigation

The Incident Investigation process has been specified in the overarching CEMP.

4.4.5 Complaint Management

All complaints are to be dealt with in accordance with the complaints management procedure outlined in the CEMP.

5 Inspections, Monitoring, Auditing and Reporting

This section outlines the compliance processes that have been adopted by CBGU to ensure compliance with the Coordinator-General Conditions and any other legislative requirements. The section below details specific requirements relating to Inspections, monitoring, auditing requirements have not been outlined in the overarching CEMP.

5.1 Environmental Monitoring

5.1.1 Performance Monitoring

Monitoring will be undertaken at various sensitive receptors to validate the impacts predicted for the Project to measure the effectiveness of environmental controls and implementation of this Outline VLMP. The monitoring also helps in addressing any potential Community Complaints that may be made. The monitoring requirements for visual amenity and lighting are outlined below.

- During worksite establishment and subsequent operation, maintain daily site inspections of protective measures for designated significant trees and vegetation, and of temporary visual barriers and hoardings for damage or graffiti.
- Weekly inspections of lighting during night works are to be conducted to ensure that construction lighting has been installed and operated in accordance with the relevant standard such as AS4282-1997.

5.1.2 Auditing

Audits will be undertaken to assess the effectiveness of environmental controls, compliance with the CEMP, compliance with Environmental Design Requirements, and other relevant permits, approvals, and guidelines. There will be a monthly internal audit undertaken by CBGU as per the CEMP, who is to report findings to the Environmental Monitor and the Authority. This includes reporting on compliance with the CEMP and the Imposed Conditions.

Audits will be undertaken in accordance with the CEMP.

5.1.3 Corrective Action

Corrective actions must be undertaken where monitoring or validated complaints indicate the environmental outcomes or Imposed Conditions are not achieved in relation to particular works, either because the performance criteria have not been met, or mitigation measures have not been implemented. Where corrective actions become necessary, the specific works that do not achieve the environmental outcomes or meet the Imposed Conditions must cease until the corrective actions have been developed and implemented.

The process for developing and implementing Correction Actions has been specified within the overarching CEMP.

5.2 Reporting

To ensure compliance with Coordinator-General Condition 6, CBGU will prepare and submit a monthly report within 6 weeks from the end of the month to the Delivery Authority.

Reporting requirements associated with this VALMP are outlined below:

- Reporting of visual amenity and lighting monitoring, and any complaints relating to visual amenity or lighting are to be included in the monthly construction compliance report, along with details of any incidents or complaints relating to visual amenity or lighting.

The specific requirements of the Monthly Report have been identified in the CEMP.

5.3 Documentation and Communication

Records in relation to visual amenity and lighting must be maintained in accordance with these requirements.

5.3.1 Document Control

Document control requirements have been specifically addressed within the overarching CEMP.

5.3.2 Review

In accordance with the General Requirements of the CEMP this construction VALMP must also be updated and revised on the basis of, changes to proposed spoil placement locations.

Revisions shall be reviewed and approved prior to issue. Updates to this VALMP are numbered consecutively and issued to holders of controlled copies

Revisions to this VALMP may also be required during the Project to reflect changing circumstances or identified deficiencies. Revisions may result from:

- Management Review
- Audit (either internal or by external parties)
- Complaints or non-conformance reports
- Changes to the Company's standard system.

5.3.3 Communication

All internal and external communication with all stakeholders including the public, Coordinator-General, government agencies and the Delivery Authority must be done in accordance with the requirements of the CEMP.

Appendix A

Landscape Plans

LEGEND

NOTE:
REFER TO MATERIALS AND FINISHES SCHEDULE FOR ALL ITEMS COVERED WITHIN THE LEGEND

HARDSCAPE

GENERAL

EXTENT OF DAY ONE WORKS

EXTENT OF SEPARABLE PORTIONS

ENTRY

STATION ENTRANCE

RETAIL

WALLS & RETENTION SYSTEMS

WALL - TYPE 1

WALL TYPE 2

WALL TYPE 3
PRECAST SEATING AND TIMBER BACK

WALL TYPE 4 [FINISH]
PRECAST FACE TO REINFORCED EARTH RETAINING WALL

WALL TYPE 5 [FINISH]
PRECAST FACE TO REINFORCED EARTH RETAINING WALL

WALL TYPE 6
PODIUM UPSTAND WALL

STRUCTURE

RETAIL POD
BESPOKE STRUCTURE

PASSIVE POD
WEATHER PROTECTION TO DDA REST POINTS

WAITING CANOPY
WAITING & PICK UP/DROP OFF AREAS

INTERCHANGE CANOPY
COVERED WALKWAYS BETWEEN MODES

DINING SHELTERS

PARCEL LOCKER 'STATION'

PAVEMENT

PAVEMENT TYPE 1

PAVEMENT TYPE 1 - VEHICLE GRADE

PAVEMENT TYPE 2

PAVEMENT TYPE 2 - VEHICLE GRADE

PAVEMENT TYPE 3

PAVEMENT TYPE 3 - VEHICLE GRADE

PAVEMENT TYPE 4

PAVEMENT TYPE 5

PAVEMENT TYPE 6

PAVEMENT TYPE 6 - VEHICLE GRADE

PAVEMENT TYPE 7

PAVEMENT TYPE 9 [FINISH]

PAVEMENT TYPE 10

TIMBER DECK

TYPE 1 TACTILE

TYPE 2 TACTILE

TYPE 3 TACTILE

STAIR-1
UP

STAIRS TYPE 1
with handrails

STAIR-2
UP

STAIRS TYPE 2
with handrails

WATER FEATURES & STORAGE

WATER FEATURE

FURNITURE

SEAT TYPE 1

SEAT TYPE 2

SEAT TYPE 3

DUAL RUBBISH & RECYCLE BIN TYPE 1

BOLLARD TYPE 1

BALUSTRADE

FENCE TYPE 1

FENCE TYPE 2

FENCE TYPE 3

TREE GRATE 1
BBC 1600 X 1600

TREE GRATE 2
BBC 1600 X 1200

TREE GRATE 3
1600 X 1200

TREE GRATE 4
ROUND TREE GRATE

BICYCLE HOOPS

CITY CYCLE STATION

PICNIC SETTING

LONG TABLES & CHAIRS

CAFE TABLE AND CHAIRS
(SUPPLIED BY RETAIL OPERATOR)

LOUNGE CHAIR

GRADING AND LEVELS

FALL AND SLOPE
1 IN 50

EXISTING LEVEL

FINISHED SURFACE LEVEL

TOP OF WALL

TOP OF KERB

SOFT

TURF

PLANTING

EXISTING TREES

EXISTING TREE TO REMOVE

EXISTING TREE TO RELOCATE

EXISTING TREE TO RETAIN

TREE TYPE 1
2000 litre Stock / ex Ground 7-8mts high

TREE TYPE 2
1000 Litre Stock / ex Ground 6-7mts high

PALM
EX-GROUND - Clear Trunk - 6-8mts high

DRAINAGE

STRIP DRAIN - 200mm WIDE
CAST IRON

STRIP DRAIN - 300mm WIDE
CAST IRON

SOFTSCAPE

TREES AND PALMS

TREE TYPE 1
2000 litre Stock / ex Ground 7-8mts high

TREE TYPE 2
1000 Litre Stock / ex Ground 6-7mts high

PALM
EX-GROUND - Clear Trunk - 6-8mts high

STRUCTURAL TREE TRENCH - SOIL VOLUME (DASHED)

TRELLIS/CLIMBING PLANTS TO FACADE

PLANTING TYPE 1: ON PODIUM

PLANTING TYPE 2: ON PODIUM

PLANTING TYPE 1: ON GRADE

PLANTING TYPE 2: ON GRADE

GREEN ROOF

TURF: ON GRADE

TURF: ON PODIUM

HYDROSEED BATTER

SCALES

CONCEPT ONLY. NOT AUTHORIZED FOR CONSTRUCTION

JOB No	REVISIONS				
SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING	B	CONCEPT - FINAL COSTING	KW	MM	20.07.18
	A	PRELIMINARY CONCEPT - TAN	KW	MM	09.07.18
	REV	DESCRIPTION	BY	APPO	DATE

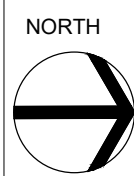
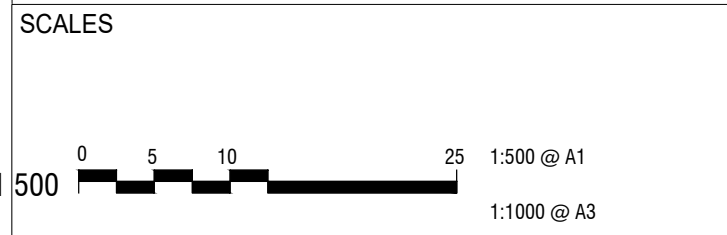


DESIGNED	TL		ORIGINAL ISSUE BY QUEENSLAND RAIL
DES CHK	MM		
DRAWN	KW		
DRG CHK	DK		
DESIGN APPROVAL / CERTIFICATION			
PROFESSIONAL QUALIFICATION	DATE	RESPONSIBILITY FOR THIS DESIGN REMAINS WITH THE DESIGN APPROVER / CERTIFIER	

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BOGGO STATION AND PRECINCT
CROSS RIVER RAIL - TSD
URBAN DESIGN AND PUBLIC REALM
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DRAWING NUMBER		ISSUE
055002		B
CONSULTANT CRR-TSD-HSL-SKT-TUN-300-910-10-055002		



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	ISSUE	DESCRIPTION	NAME	REQ	DATE	
013216	A	FOR PROPOSAL	MM	TL	03.10.18	
	B	ISSUE FOR INFORMATION	MM	TL	19.06.19	
	C	ISSUE FOR INFORMATION	MM	TL	28.06.19	
SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING						

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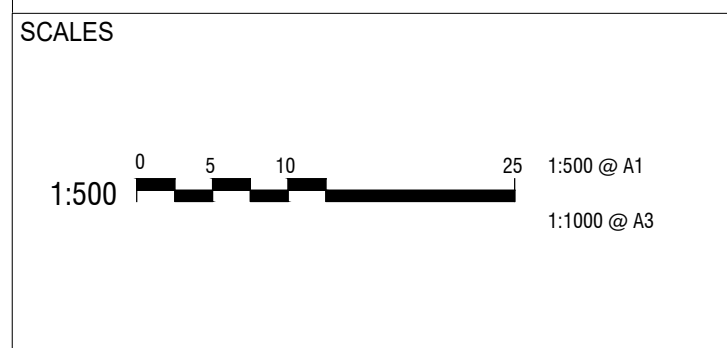
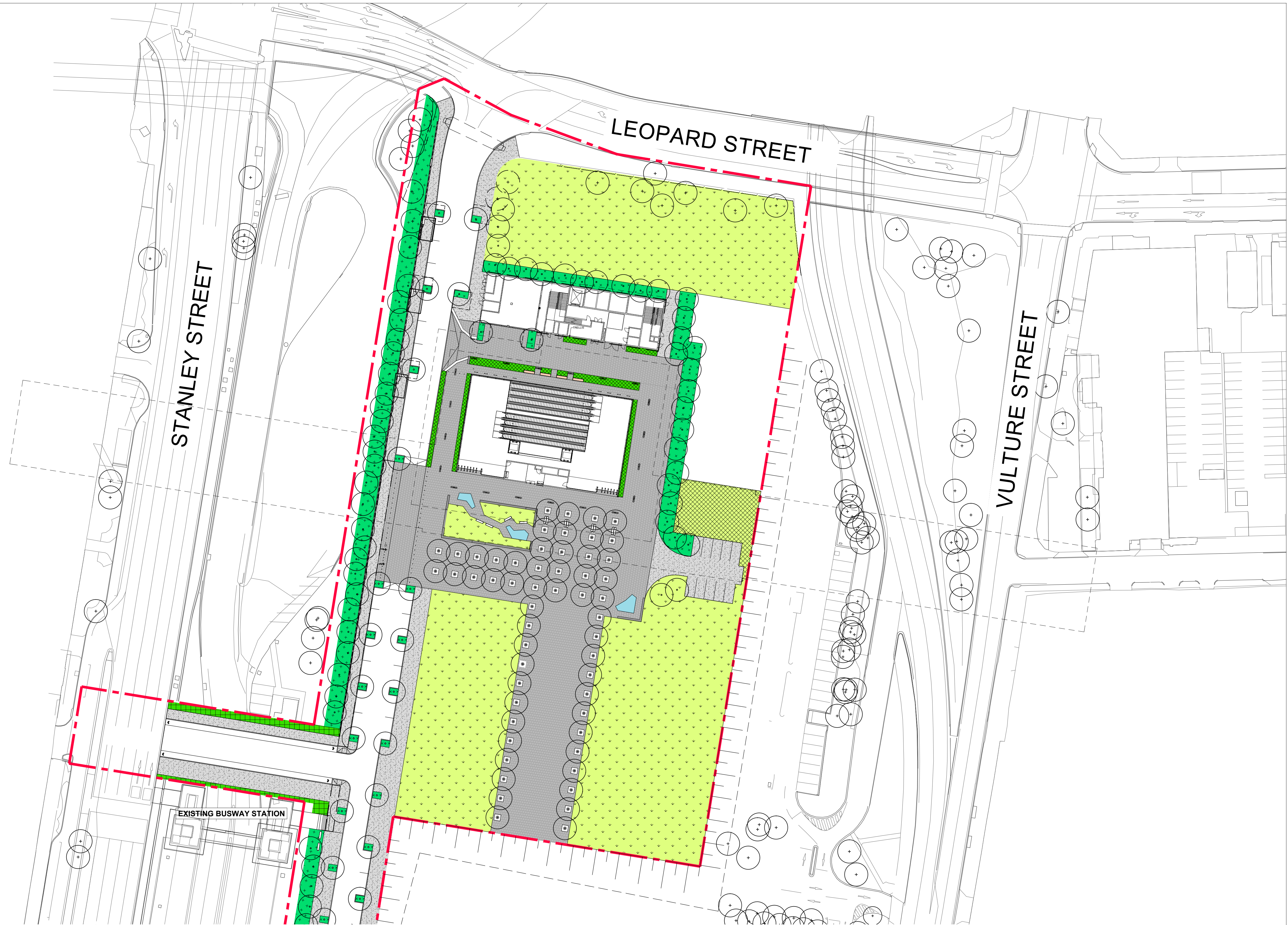
CROSS RIVER RAIL
DELIVERY AUTHORITY

URBAN DESIGN AND PUBLIC REALM
WOOLLOONGABBA STATION AND PRECINCT
CROSS RIVER RAIL - TSD

SITE PLAN - SHEET 2

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DRAWING NUMBER	ISSUE
R1.4.7_PULS_TUN_Woolloon_UPR-Gen_DRG_ 054521	C
CONSULTANT DWG No. CRR-TSD-HSL-DRG-TUN-400-910-10-054521	



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	C	ISSUE FOR INFORMATION	MM	TL	28.06.19	
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PROFESSIONAL QUALIFICATION		DATE

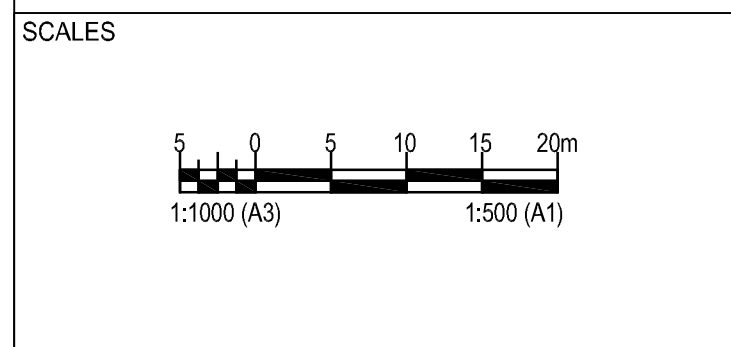
CROSS RIVER RAIL
DELIVERY AUTHORITY

URBAN DESIGN AND PUBLIC REALM
WOOLLOONGABBA STATION AND PRECINCT
CROSS RIVER RAIL - TSD

SITE PLAN - SHEET 1

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CONSULTANT DWG No. CRR-TSD-HSL-DRG-TUN-400-910-00-054520	



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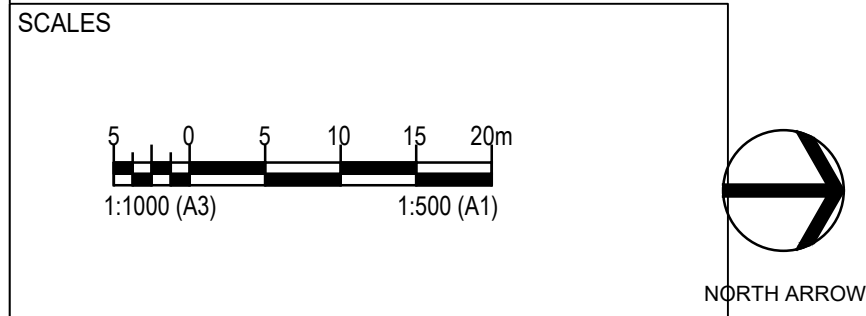
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CROSS RIVER RAIL
DELIVERY AUTHORITY

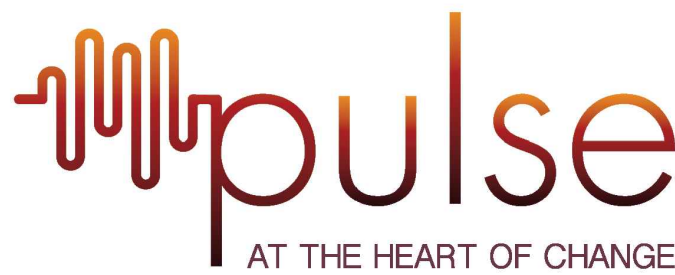
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BOGGO ROAD STATION AND PRECINCT
CROSS RIVER RAIL - TSD

SITE PLAN - SHEET 2

DRAWING NUMBER		ISSUE
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CONSULTANT DWG No.	CRR-TSD-HSL-DRG-TUN-300-910-10-053521	



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Approver		
PROFESSIONAL QUALIFICATION		
DATE		

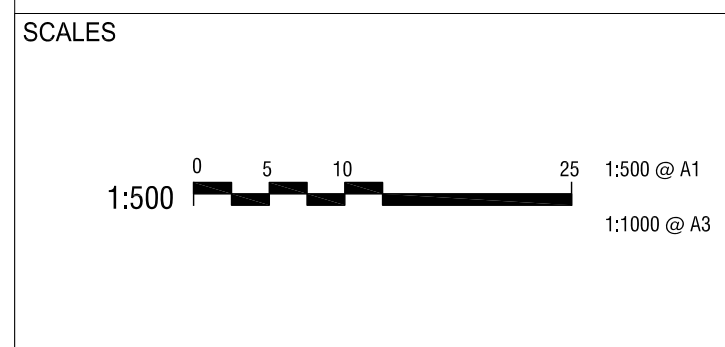
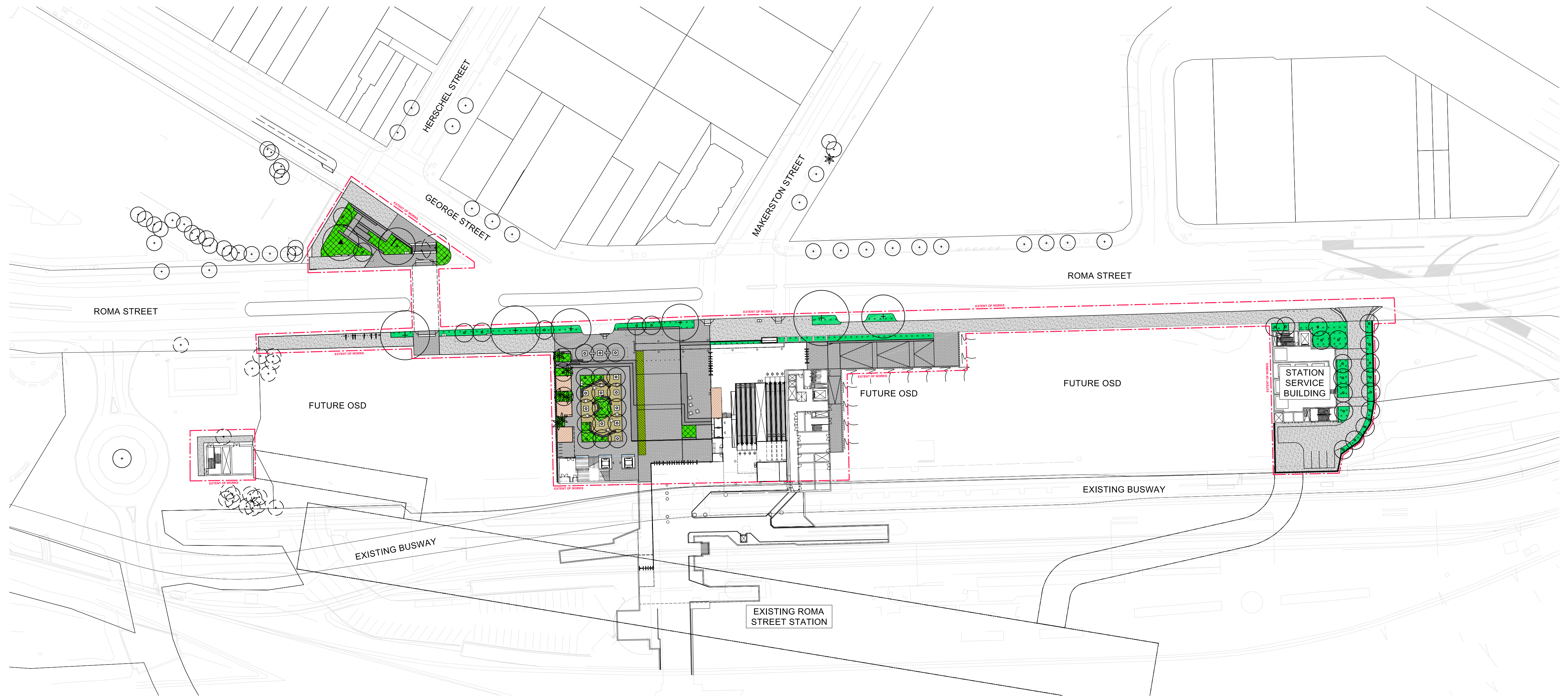
CROSS RIVER RAIL
DELIVERY AUTHORITY

URBAN DESIGN AND PUBLIC REALM
BOGGO ROAD STATION AND PRECINCT
CROSS RIVER RAIL - TSD

SITE PLAN - SHEET 1

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R1.4.7_PULS_TUN_BoggoRd_UPR-Gen_DRG_053520	C
CONSULTANT DWG No. CRR-TSD-HSL-DRG-TUN-300-910-10-053520	



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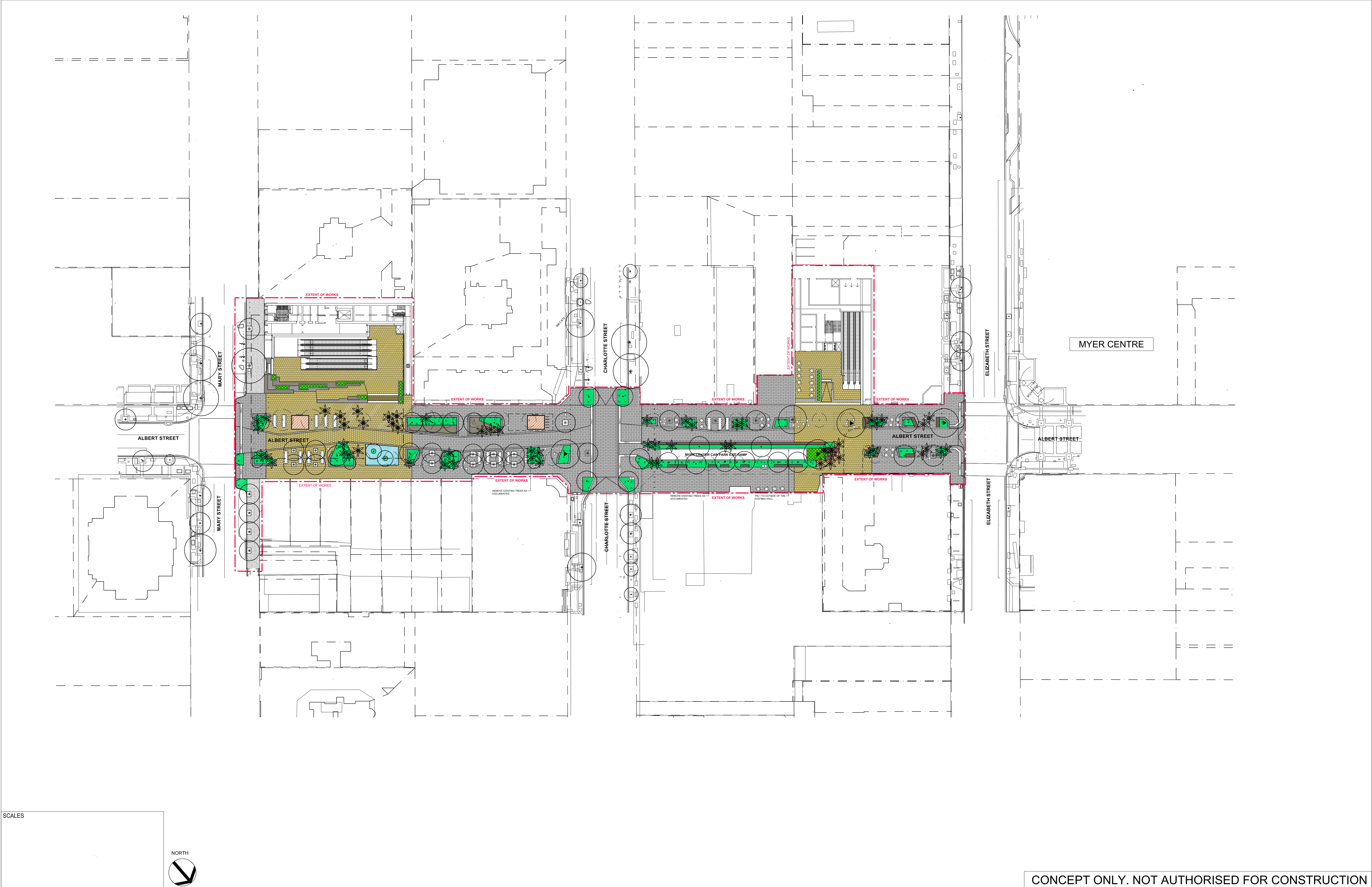
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DELIVERY AUTHORITY

URBAN DESIGN AND PUBLIC REALM
ROMA STREET STATION AND PRECINCT
CROSS RIVER RAIL - TSD

SITE PLAN

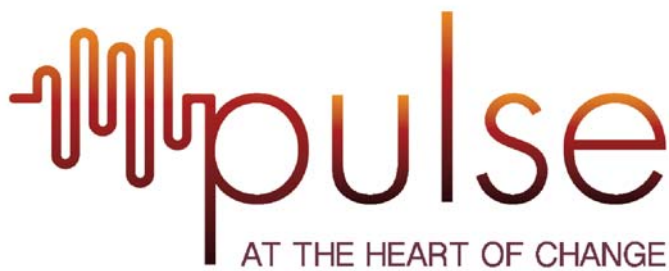
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DRAWING NUMBER	ISSUE
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CONSULTANT DWG No.	CRR-TSD-HSL-DRG-TUN-600-910-10-056520



SCALES

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	B	ISSUED FOR INFORMATION	WW	DK	19.06.19	
	C	FOR INFORMATION	WW	DK	28.06.19	
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DRAWN	WW	
DRG CHK	DK	
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CROSS RIVER RAIL
DELIVERY AUTHORITY

URBAN DESIGN AND PUBLIC REALM
ALBERT STREET STATION AND PRECINCT
CROSS RIVER RAIL - TSD

SITE PLAN SHEET 1

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DRAWING NUMBER	ISSUE
R1.4.7_PULS_TUN_AlbertSt_UPR-Gen_DRG_055520	C
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