

PROJECT MANAGEMENT PLAN

Visual Amenity Project Management Plan
Sydney Metro West – Western Tunnelling Package

Document Details

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DOCUMENT CONTROL

The current document version number and date of revision are shown in the document footer. All changes made to the Management Plan during its implementation on a live project are to be recorded in the amendment tables below.

Revision History

Revision	Date	Description of changes	Prepared by	Approved by
A	20/12/2021	Early Works Submission	Stephanie Mifsud	Simon Hussey
B	01/03/2022	Revised draft	Stephanie Mifsud	Simon Hussey
C	20/04/2022	Final	Stephanie Mifsud	Simon Hussey

Terms and Definitions

Term	Definition
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CPTED	Crime prevention through environmental design
CSSI	Critical State Significant Infrastructure
DPIE	Department of Planning, Industry and Environment (NSW)
EA	Environmental Advisor
ECM	Environmental Controls Map
EIS	Environmental Impact Statement
EM	Environmental Manager
EMS	Environmental Management System
EPA	Environmental Protection Authority
EPL	Environmental Protection License
ER	Environmental Representative
ESCP	Erosion and Sediment Control Plan
EWMS	Environmental Work Method Statement
IS	Infrastructure Sustainability
ISC	Infrastructure Sustainability Council
GALC	Gamuda Australia – Laing O’Rourke Consortium
MCoA	Ministers’ Condition of Approval
MSF	Maintenance and Stabling Facility
PM	Project Manager
POEO	Protection of the Environment Operations Act 1997 (NSW)
REMM	Revised Environmental Mitigation Measures
SM	Sydney Metro
WTP	Sydney Metro West Western Tunnelling Package works
VAMP	Visual Amenity Management Plan

1 INTRODUCTION

1.1 Project Description

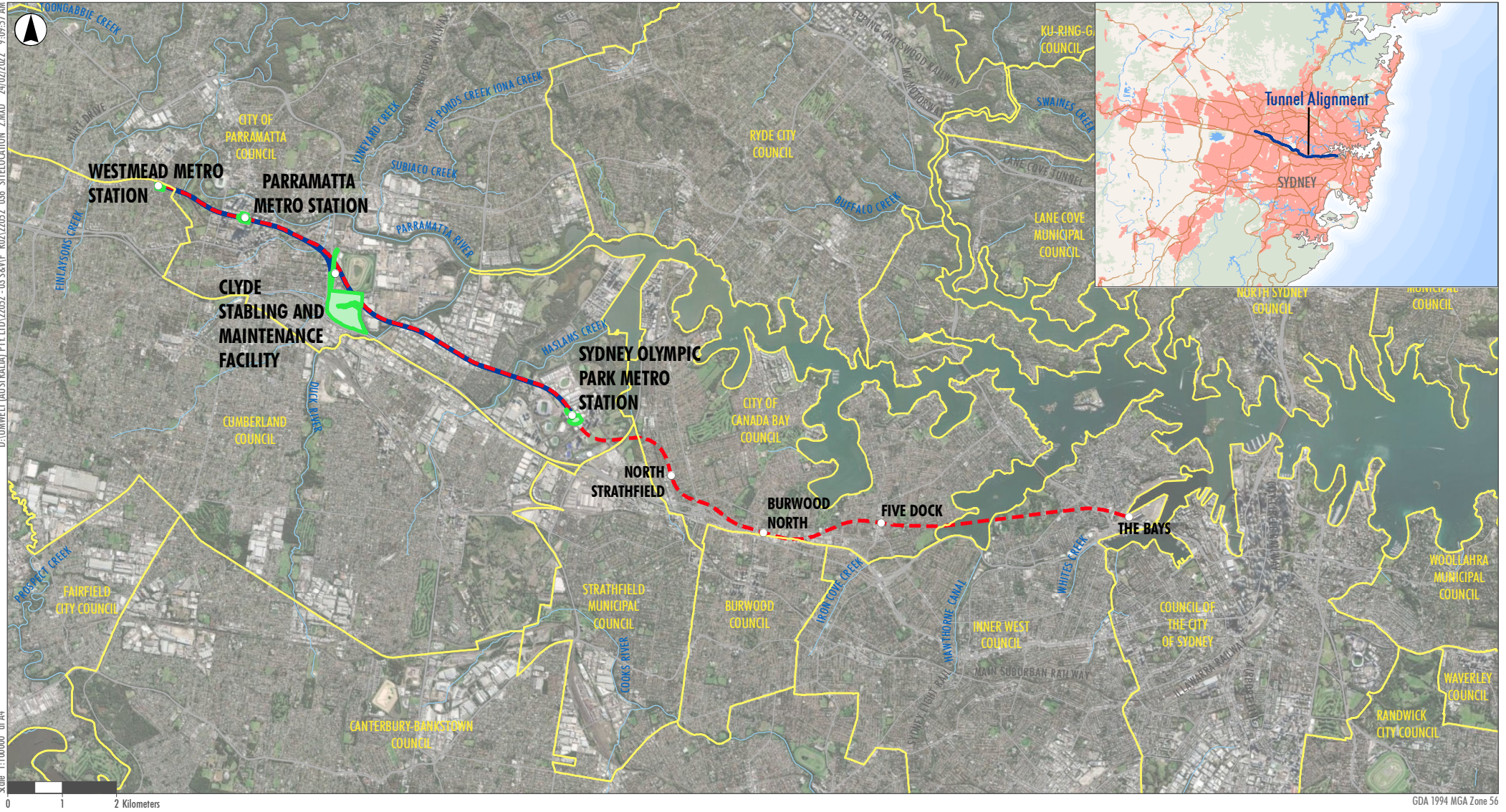
The scope of the work being undertaken under the Sydney Metro West Western Tunnelling Package works (WTP) (the Project) includes but is not limited to, the following:

- Westmead Station box excavation, including temporary support, stub tunnels, partially mined station cavern and crossover cavern including permanent lining and support
- Parramatta Station, including excavation of station box and associated support
- Clyde Maintenance and Stabling Facility (MSF), including permanent dive structure, portal, spur running tunnels, spur tunnel junction cavern, bulk earthworks, civil structures, utilities corridor, road crossing and creek diversion
- Rosehill Services Facility, including shaft excavation, permanent lining and lateral support
- A precast segment manufacturing facility at Eastern Creek
- Demolition and site clearance works
- Tunnelling between Sydney Olympic Park (SOP) and Westmead. Tunnelling will be undertaken by placing the tunnel boring machines (TBMs) at the Rosehill Services Facility box and retrieved out at the SOP Station Box and then placed back at the Rosehill Services Facility and retrieved at the Westmead Station Box. No surface works are proposed at SOP except for the retrieval of the TBM.

Refer to Figure 1 for the location of the WTP project.

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Scale 1:100,000 at A4



Legend

- Surface Construction Sites
- The Project (Western Tunnelling Package)
- Sydney Metro West Concept and Stage 1
- Approved Station Sites
- Local Government Boundary
- Road
- Drainage Line
- Railway Line

1.2 Context

The Construction Environmental Management Plan (CEMP) and sub-plans have been developed for the delivery of the WTP. It will be delivered by Gamuda Australia Laing O'Rourke Consortium (GALC). This Visual Amenity Management Plan (VAMP) forms part of the CEMP (GA-PLN-ENV-001-Construction Environmental Management Plan).

Sydney Metro West – Westmead to The Bays Concept and Stage 1 received planning approval on 11 March 2021 (SSI 10038). The Project comprises the WTP, which is the western portion of Stage 1 of SSI 10038, from Sydney Olympic Park to Westmead. This VAMP has been prepared to address requirements of the Minister's Conditions of Approval (MCoA), Revised Environmental Management Measures (REMMs) listed in the Sydney Metro West – Submissions Report, dated 20 November 2020, the Construction Environmental Management Framework (CEMF) requirements and all applicable legislation as they relate to the Project.

1.3 Environmental Management System Overview

An overview of the Environmental Management System (EMS) is provided in the CEMP Section 4.

Key interactions for this sub-plan with other management plans in the EMS include:

- Site Establishment Management Plan
- Flora and Fauna Management Sub-plan
- Heritage Management Sub-plan
- Soil and Water Management Sub-plan
- Waste Management Sub-plan
- Spoil Management Sub-plan
- Noise and Vibration Sub-plan
- Community Communications Strategy and Business Management Plan.

1.4 Consultation Requirements

In accordance with MCoA C5, consultation with relevant government agencies is not required for this VAMP.

1.5 Certification and Approval

Sydney Metro West – Westmead to The Bays Concept and Stage 1 was subject to environmental impact assessment under the NSW Environmental Planning and Assessment Act 1979 (EP&A Act). It was also declared a Critical State Significant Infrastructure (CSSI) by the Minister for Planning & Public Spaces (the Minister).

An Environmental Impact Statement (EIS) has been prepared under Division 5.2 of the EP&A Act and in accordance with Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000. Following exhibition of the EIS, an Amendment Report and Submissions Report were also prepared. After an assessment was carried out, the Minister determined that the Sydney Metro West – Stage 1 would be approved subject to conditions.

The planning approval (Infrastructure Approval SSI 10038) and related environmental assessment documents are located at: <https://www.planningportal.nsw.gov.au/major-projects/project/25631>.

In accordance with the requirement of CEMF 11.2 a (ii), this VAMP was reviewed for compliance by a suitably qualified landscape designer on 11 February 2022. Refer to Attachment 4 for the complete review.

This VAMP has been expressly nominated by the Planning Secretary to be endorsed by the ER. This VAMP will be submitted to the ER for endorsement and DPIE for information no later than one (1) month before the commencement of construction. Construction will not commence until this VAMP has been endorsed by the ER, unless otherwise agreed by the Planning Secretary.

This VAMP, as submitted to the ER, including any minor amendments approved by the ER, will be implemented for the duration of construction.

2 PURPOSE AND SCOPE

2.1 Purpose

The purpose of this VAMP is to describe the visual amenity management approach that will be employed by GALC employees and its subcontractors during construction of the Project. This sub-plan forms an integral part of the Project's CEMP and GALC's EMS. It applies to all works associated with Project works and establishes the environmental management controls to be implemented by GALC employees and its subcontractors.

This VAMP will address the visual amenity requirements of the:

- Sydney Metro Construction Environmental Management Framework (CEMF)
- Minister for Planning and Public Space's Conditions of Approval for the Project (MCoA)
- Revised Environmental Mitigation Measures (REMMs)
- Infrastructure Sustainability Council (ISC) Infrastructure Sustainability (IS) rating tool.

2.2 Scope

This sub-plan outlines the mitigation and management measures that GALC will use to address potential visual amenity impacts during construction of the Project, while complying with relevant approval, statutory and contract requirements.

Specifically, this sub-plan addresses environmental aspects and impacts that relate to:

- Site establishment
- Demolition of existing structures
- Vegetation clearing
- Excavations and earthworks
- Temporary road and intersection modification / site access
- Minor utility works and connections
- Tunnelling activities
- Spoil handling (including on-site truck movements)
- Construction of acoustic sheds, spoil sheds and water treatment plants
- Construction lighting
- Noise barriers and fencing/hoarding.

3 OBJECTIVES AND TARGETS

The key objectives of the VAMP are to ensure that impacts to visual amenity are minimised and are within the scope permitted by the MCoA. To achieve these objectives, the targets in Table 1 have been established for the management of visual amenity impacts during the Project construction.

Table 1: Visual amenity targets and performance criteria

Objective	Target	Performance Indicators
Minimise impacts on existing landscape features as far as feasible and reasonable	<ul style="list-style-type: none"> The Project will minimise adverse impacts to the existing landscape features. The Project will retain existing trees where practicable and replace any trees to be removed. 	Regular monitoring, Compliance Reporting
Ensure the successful implementation of the Landscape Design	Opportunities to improve the existing visual amenity for the Project will be investigated and implemented as part of the Landscape Design.	Compliance Reporting
Reduce visual impact of construction to surrounding community	The elements within construction sites, including hoardings, compounds, and lighting, will be designed and located to minimise visual impacts.	Regular monitoring, Compliance Reporting
Compliance with the MCoA, REMMs, CEMF requirements and relevant legislation as it applies to the Project	Full compliance	Compliance Reporting
Meet IS Rating Tool requirements and objectives in the Sustainability Management Plan	<ul style="list-style-type: none"> Level 2 for credit Hea-2 'Crime prevention', demonstrating likelihood of crime has been reduced through implementation of appropriate CPTED guidelines in design, construction, operation, temporary construction diversions, and lighting as well as all tunnels and underpasses having end-to-end visibility. Level 1 for credit Dis-5 'Light Pollution', demonstrating measures to prevent light spill during 	Compliance Reporting

Objective	Target	Performance Indicators
	construction have been identified and implemented.	

4 ENVIRONMENTAL REQUIREMENTS

4.1 Legislation and Standards

GALC obligations include satisfying the requirements and complying with the provisions of the relevant legislation, guidelines, and policies, as well as international and Sydney Metro's standards. Details are provided in Table 2.

Table 2: Shows the legislation, standards, policies and guidelines relevant to the Project

Legislation	<i>Environment Protection and Biodiversity Conservation Act 1999</i> <i>Parramatta Park Trust Act 2001</i> <i>Environmental Planning and Assessment Act 1979</i> <i>Heritage Act 1977.</i>
Standards	AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting. AS/NZS 1158 – Lighting for Roads and Public Spaces.
Guidelines and Specifications	Convention Concerning the Protection of World Cultural and National Heritage (UNESCO World Heritage Centre, 1972) Transport for NSW Guidance note EIA-N04 Guidelines for Landscape Character and Visual Impact Assessment (TfNSW, 2018) Guidance for Landscape and Visual Impact Assessment (Landscape Institute and Institute of Environmental Management & Assessment, 2013) Guidance Note for Landscape and Visual Assessment (Australian Institute of Landscape Architects, 2018) Guidance for the reduction of obtrusive light (United Kingdom Institution of Lighting Engineers, 2011) Operational Guidelines for Implementation of the World Heritage Convention (UNESCO World Heritage Centre, 2017) Old Government House and Domain, Parramatta Park Management Plan (Parramatta Park Trust and The National Trust NSW, 2008) Development in Parramatta City and the Impact on Old Government House and Domain's World and National Heritage Listed Values: Technical Report (Planisphere, 2012) Parramatta Park Landscape Master Plan (Landscape Design Group, 2002).

4.2 Approvals, Licenses and Permits

This VAMP has been developed to satisfy the requirements of MCoA C1. A full list of applicable MCoAs, REMMs, CEMF requirements and EPL condition requirements is provided in Attachment 1.

Other legislation relevant to this VAMP is included in Attachment 2 of the CEMP.

4.3 IS Rating Tool Requirements

Table 3: IS rating tool requirements applicable to visual amenity

Credit	IS Rating Tool Requirement	Document Reference
Dis-5 L1	<ul style="list-style-type: none"> Measures to prevent light spill during construction have been identified and implemented 	Section 7.4
Hea-2 L1	<ul style="list-style-type: none"> The likelihood of crime has been reduced through implementing appropriate CPTED guidelines in design, construction and operation. All tunnels or underpasses have end-to-end visibility. 	Section 7.3
Hea-2 L2	<ul style="list-style-type: none"> Requirements for L1 are achieved. Temporary construction diversions and lighting are designed to meet CPTED guidance. 	Section 7.3

5 EXISTING ENVIRONMENT

A description of the existing visual amenity has been sourced from the Sydney Metro West – Stage 1 EIS Technical Paper 5 (Landscape and visual).

5.1 Westmead Metro Station

The Westmead Metro Station construction site is situated to the south of the existing Westmead Station and to the east of Hawkesbury Road and would extend south to Bailey Street and east to Hassall Street.

The existing rail corridor generally divides the landscape character of Westmead. Areas to the south of the rail corridor consist of leafy, low to medium density residential areas with scattered small scale commercial and community uses. This includes a shop on the corner of Alexandra Avenue and Hawkesbury Road, an automotive workshop on the corner of Alexandra Avenue and Hassall Street, and a two-storey terrace with shopfront on Hassall Street. The locally heritage listed Westmead Public School (c1917) is also located on Hawkesbury Road near to the site.

Mays Hill Precinct (formerly occupied by the Parramatta Golf Club) is located to the east of the site and forms part of the visual setting and green space buffer of Parramatta Park. There are no views between the Westmead metro station construction site and Mays Hill Precinct.

The northern side of the rail corridor includes more intensive retail and office development opposite the existing station and along Hawkesbury Road. There are mainly medium rise residential apartment buildings between this commercial area and Parramatta Park in the east.

There are residential properties along Railway Parade which face the station and have views across the rail corridor and to the construction site to the south. To the north-west of the existing station, on Hawkesbury Road, there are several major institutions including the Western Sydney University Westmead campus including the former Westmead Boys Home (local heritage listed in Parramatta Local Environmental Plan) and the Westmead health and medical research precinct.

Under the Greater Parramatta to Olympic Peninsula Strategy (Greater Sydney Commission, 2016), Westmead is intended to fulfil an important role within Greater Sydney as a 'health city and international innovator', based 'around a lively main street and urban village, served by rail, light rail and rapid bus'. Westmead is also identified as a state led strategic planning area and the NSW Government Department of Planning, Industry and Environment (Planning and Assessment) is intending to prepare a future precinct plan for the area. The NSW Government is currently working with the Cumberland Council to carry out precinct planning for the residential areas in the south of Westmead.

5.2 Parramatta Metro Station

The Parramatta Metro Station construction site is situated generally between Church, George, Smith and Macquarie Streets, in the heart of the Parramatta CBD.

The Parramatta CBD is characterised by a highly urban mix of contemporary and historic character-built form. Located on the Parramatta River floodplain, the Parramatta CBD contains numerous heritage items that reflect the nature and character of colonial settlement and historic development along the river. The landform is generally flat, with a grid street pattern, allowing the built form to channel views to the river via north-south aligned streets and to the World Heritage listed landscape of Parramatta Parkland via east-west streets.

The Church Street streetscape is narrow between George and Macquarie Streets, with one-way traffic and a more spacious public realm including wider footpaths, street furniture and streetscape planting. An overhead art installation 'Flock' spans the roadway, creating visual interest adjacent to the heritage character sandstone façade of the former Post Office and Commonwealth Bank buildings. This pedestrianised environment provides a transition to Centenary Square, located to the south of Macquarie Street. Formerly a busy traffic thoroughfare, Centenary Square is an important civic place within the Parramatta CBD, providing a setting to Parramatta Town Hall and St John's Anglican Cathedral. The square and spire of St John's Anglican Cathedral terminate views south along Church Street.

George, Macquarie and Phillip Streets are Parramatta's three main east-west streets aligned generally parallel to the river. These long straight streets traverse the city centre and channel views to Robin Thomas Reserve in the east and Parramatta Park in the west. The gatehouses and parkland setting of Parramatta Park terminate views along George and Macquarie Streets. Notable visual landmarks within the study area include the Brislington Medical and Nursing Centre Museum, St John's Anglican Cathedral, Centennial Memorial Clock, London plane trees in Centenary Square and along Macquarie Street, Kia Ora House and the Leigh Memorial Uniting Church.

The Greater Sydney Commission intends for Parramatta CBD to be revitalised as a commercial and civic centre with a distinctive CBD skyline as part of the Greater Parramatta to Olympic Peninsula Strategy. The Parramatta Light Rail (Stage 1) project forms a key part of this rejuvenation and is scheduled for completion in 2023. As part of that project, a future light rail stop ('Parramatta Square') will be located near the corner of Smith Street and Macquarie Street and light rail and pedestrian zones are proposed along both Church and Macquarie Streets.

5.3 Clyde Maintenance and Stabling Facility

The Clyde MSF construction site is situated generally between Unwin Street, Shirley Street, the Western Motorway M4 and James Ruse Drive.

The construction site includes the former Sydney Speedway and a mix of general and heavy industrial uses that have since been acquired by the Project. The site is located within an area mapped as "transport facilities" and "investigation site-potential future use by Sydney Metro or for social infrastructure or for urban services" according to the *Draft Camellia-Rosehill Place Strategy* (DPIE, 2021).

The site is divided by an east-west aligned section of Duck Creek, a tributary of the Duck River which flows into the Parramatta River. Mangroves line the eastern section of Duck Creek, to the east of the site, forming a visual and physical boundary through the industrial area. A'Becketts Creek, Duck Creek, and Duck River are identified as having local heritage value in the *Parramatta Local Environmental Plan* (2011). The sections of Duck Creek and A'Becketts Creek, which are located within the construction site, however, are largely dominated by weeds.

There are a range of manufacturing, processing, logistics, storage and warehouse uses to the north, east and west of the construction site. The north-western part of the construction site includes the heritage listed former depot (listed as 'RTA Depot') (City of Parramatta, 2018). The depot is representative of the historic importance of this area as a manufacturing centre during the second world war when the building was used as a machinery depot. Due to its size and function, the NSW Heritage Inventory identifies it as a local landmark and strongly contributes to the streetscape.

Rosehill Gardens racecourse is located immediately north of the site. One of the principles of the *Draft Camellia-Rosehill Place Strategy* is to enhance the Rosehill Gardens Racecourse as a

tourism, recreation and entertainment destination. The racecourse is contained to the east and south by vegetated embankments, however, there would be elevated east and south-eastward views from the grandstand across the industrial areas of Rosehill and Clyde. These views would include distant views to the Parramatta Light Rail stabling facility (currently under construction), former Clyde Refinery and the industrial areas of the site, filtered through the racetrack perimeter trees.

5.4 Sydney Olympic Park Metro Station

The SOP Metro Station construction site is located to the south of Herb Elliott Avenue, an east-west aligned street, south of the existing Olympic Park Station. The site is within a business park setting which has a leafy streetscape character which contrasts with the sporting, recreation, and entertainment areas adjacent to ANZ Stadium.

The International Olympic Committee selection of Sydney in 1993 to host the summer Olympics in 2000 provided the catalyst for the redevelopment of 640 hectares of land beside Homebush Bay in which Sydney Olympic Park is located. The derelict site was previously used for the State Brickworks and State Abattoirs and had a history of extensive wetland reclamation and landfilling. The urban renewal of Sydney Olympic Park represented one of the largest remediation projects in Australia and commenced with the construction of the Australia Centre, Sports Centre and Bicentennial Park.

The legacy of the Sydney 2000 Olympic and Paralympic Games at Sydney Olympic Park resulted in the creation of a series of iconic sporting and recreational facilities, including the ANZ Stadium, formerly known as the Olympic Stadium. The major event facilities are arranged around two principles axes; Olympic Boulevard and Dawn Fraser Avenue which provide grand ceremonial vistas between the various destinations. Built form and public realms areas within Sydney Olympic Park are required to exhibit design excellence. This is reflected in the high standard of architecture of the Olympic Park Station which contributes to the distinctive character and unique identity of Sydney Olympic Park.

Sydney Olympic Park is framed by extensive areas of green space which border two tributaries of the Parramatta River (Powells Creek and Haslams Creek). The parklands physically separate the development from nearby urban areas. A series of large-scale landform markers known as the Sydney Olympic Park Markers are located within the greenspace areas and provide iconic visual landmarks and reference points assisting with legibility within Sydney Olympic Park. This includes the Bicentennial Marker on Australia Avenue. In addition, a diverse range of public art is dispersed throughout Sydney Olympic Park reflecting previous industrial uses and referencing the Sydney 2000 Olympic and Paralympic Games.

The business park is intended to be converted into a high-density mixed-use town centre under the Sydney Olympic Park Master Plan 2030. This transformation is underway with the current construction of a mixed-use development at 2 Figtree Drive, which is identified as a State Significant Development. Four buildings ranging in height from nine to 35 storeys will be constructed together with a new access road, landscaped podium and involve significant tree relocation.

6 ASPECTS AND IMPACTS

6.1 Construction Activities

The Project will involve a range of construction activities incorporating various heavy machinery, plant and equipment that will operate in several locations across the Project. To assess the level of potential impact on visual amenity, the broad categories of construction activity likely to have an impact are identified below:

- Site establishment
- Site clearing as approved in the EIS
- Introduction of large plant and equipment, including cranes
- Earthworks
- Temporary road and intersection modification / site access
- Noise mitigation, including noise barriers and hoarding
- Minor utility works and connections
- Tunnelling excavation
- Tunnel supporting activities:
 - Spoil handling (including on-site truck movements)
 - Construction of acoustic sheds and other mitigation measures

6.2 Impacts

The potential for impacts on visual amenity will be dependent on the nature, extent and magnitude of construction activities and their interaction with the natural environment and the community.

Activities with the potential to impact on visual amenity during construction may include:

- Demolition of buildings and structures which contribute to the surrounding streetscape
- Removal of vegetation and trees, including street trees
- Realignment of Duck Creek and A'Becketts Creek, Clyde (to be partly enclosed in proposed culverts and remainder to be retained as a naturalised channel)
- Set up and use of material, plant and spoil storage areas during construction, although these may be screened by the acoustic sheds or other measures
- The use of machinery and equipment such as mobile cranes, excavators, concrete pumps, piling rigs
- Introduction of construction staff car parks, laydown areas, workshops, dangerous goods storage, wheel wash, site offices and staff amenities during construction
- Introduction of metal clad acoustic sheds
- Roadworks, road closures, footpath and bus stop relocation within the area surrounding the site
- Introduction of noise barriers and hoardings surrounding the construction sites
- Construction of an open dive structure at Rosehill
- General earthworks
- Unwin Street realignment activities
- Operation of construction lighting during night-time construction works.

Table 4 summarises the potential landscape character and visual amenity impacts for each construction site for the Project, as identified in the EIS.

Section 7.1 includes a suite of mitigation and management measures that will be implemented to avoid or minimise impacts.

Table 4: Landscape Character and Visual Amenity Impacts

Construction Site	Landscape Character Impacts	Visual Amenity Impacts
Westmead Metro Station	<ul style="list-style-type: none"> The demolition of low and medium-density residential buildings and some small scale commercial properties undertaken prior to Project works, as well as the closure of Alexandra Avenue would result in a substantial change to the urban form and character of these streetscapes. 	<p>Daytime</p> <ul style="list-style-type: none"> There would be minor to moderate visual impacts due to the proposed construction activities associated with the Project, which is in context of the construction site location. Construction traffic would be visible entering and leaving the site. There would be a noticeable reduction in the amenity of views from streets, open space and properties which overlook construction of the power supply route. <p>Night-time</p> <ul style="list-style-type: none"> There would be negligible night-time visual impact from construction works around Westmead Station and Alexandra Avenue, as the station is well lit Bailey Street, Hawkesbury Road and Hassall Street residential area would experience moderate adverse night-time visual impacts from construction works, as night works would contrast with the existing lower levels of light.
Parramatta Metro Station	<ul style="list-style-type: none"> There would be changes to the existing streetscape in the Parramatta CBD from demolition works undertaken prior to Project works, including the removal of existing buildings and an existing multi-storey car parking structure, creating a 'gap' in the building form. The construction site would temporarily reduce pedestrian access and permeability within the city by removing laneways and restricting midblock pedestrian movements. 	<p>Daytime</p> <ul style="list-style-type: none"> Hoardings would be erected along the property boundary partially blocking views to the construction site. Regardless, the Project would temporarily result in visible construction activity in Parramatta. The site would also be viewed in the context of Parramatta Light Rail Stage 1, which would occupy views of Church Street and Macquarie Street. Construction traffic would be seen travelling along George Street, accessing the Parramatta metro station construction site. <p>Night-time</p>

Construction Site	Landscape Character Impacts	Visual Amenity Impacts
		<ul style="list-style-type: none"> The urban context of the Parramatta CBD comprises a high district brightness, featuring brightly lit buildings and public domain areas, as well as light from traffic. The well-lit nature of the surrounding area would mean that the Project would result in a negligible night-time visual impact, however it is expected there would potentially be some noticeable impacts. Night-time visual impacts of the lighting would generally be screened by surrounding buildings.
Clyde MSF	<ul style="list-style-type: none"> A'Becketts Creek and Duck Creek, where they pass through the site would be altered during construction. The vegetation would be removed and structures would be installed over both watercourses resulting in a noticeable reduction in the quality of A'Becketts Creek and Duck Creek landscape which is generally not publicly accessible. Extensive, large scale earthworks would be carried out across the Unwin Road and Shirley Road streetscapes including the removal of structures, buildings and vegetation, which would be undertaken prior to Project works. Embankments and retaining walls would be constructed along the perimeter of the site substantially changing the landscape character and transforming the scale and relationship of the site to the adjacent streets, Rosehill Gardens racecourse and Duck River. 	<p>Daytime</p> <ul style="list-style-type: none"> The Project construction works are generally in character with the existing and former heavy industrial character of the site and generally visual impacts would be minor. However, the proposed works would result in a changed visual amenity at the site, particularly in the context of the scale of works in this location. Removal of vegetation within the site would open up views from James Ruse Drive to the construction site. Works to realign Unwin Street including the construction of a bridge structure over the proposed future rail tracks to the stabling and maintenance facility would be visible from James Ruse Drive. <p>Night-time</p> <ul style="list-style-type: none"> Lighting visible at night would be associated with security lighting and lighting from deliveries. This would be readily absorbed into the existing moderately lit setting of adjacent industrial facilities.
Sydney Olympic Park Metro Station	<ul style="list-style-type: none"> Key changes to the landscape surrounding the site include the closure of Showground Road at the intersection with Dawn Fraser Avenue. The 	<p>Daytime</p> <ul style="list-style-type: none"> The proposed construction site would occupy much of the centre of views across Showground Road and Herb Elliott Avenue. The

Construction Site	Landscape Character Impacts	Visual Amenity Impacts
	<p>proposed construction site would be established over part of the Abattoir Heritage Precinct, and would involve the removal of a number of mature trees and shrubs from within the site.</p> <ul style="list-style-type: none"> The extension of the construction site to the north and south through the Abattoir Heritage Precinct gardens would have a considerable impact on landscape character. The gardens separating heritage buildings in the Abattoir Heritage Precinct would be partially removed, therefore the symmetrical design of the garden would be lost. 	<p>removal of trees would change the leafy streetscape character along these roads.</p> <ul style="list-style-type: none"> Temporary construction vehicles and access points, as well as acoustic sheds (or other acoustic measures) and barriers in the construction area would substantially change the character of the area within the site. This would also be affected by the closure of Showground Road at Dawn Fraser Avenue. However, these changes would occur in the context of ongoing development and changes within Sydney Olympic Park. The visual bulk of temporary structures is generally consistent with the changing visual context of the town centre more broadly, including other construction works. <p>Night-time</p> <ul style="list-style-type: none"> Although most night-time works would be contained and underground, there would be some lighting required outside these areas. This includes lighting associated with site offices, car parking and construction support areas. The proposed screening, as well as street trees and some adjacent buildings would provide screening of the site lighting. In the case of the Abattoir Heritage Precinct, this lighting would contrast with the lower light levels of the precinct. Removal of some vegetation would also contribute to impact through the loss of natural screening, however overall, the impact would be absorbed into the existing moderately lit night scene.

7 ENVIRONMENTAL MITIGATION AND MANAGEMENT MEASURES

Measures to manage visual amenity impacts and reduce the risk of impact to sensitive receivers will be implemented throughout construction of the Project.

7.1 Standard Mitigation and Management Measures

Specific measures and requirements to meet the objectives of this Plan and to address impacts on visual amenity are outlined Table 5. These measures have been developed in line with the requirements in the EIS. As a minimum, the following will be incorporated at each construction site and documented on the Environmental Controls Map in Attachment 8 of the CEMP, where applicable. Construction site layouts are located in Attachment 3 of this document.

Table 5: Environmental Mitigation and Management Measures

Item	Mitigation and Management Measure and Project site requirements	Responsibility	Timing	Reference
SEA – Senior Environmental Advisor, EA – Environmental Advisor, CM – Construction Manager, SS – Site Supervisor				
1.	All site staff, including subcontractors will attend an induction which details mitigation measures relevant to this visual amenity management procedure. Visual amenity management will be further communicated in toolbox talks and prestart briefings. Environmental Work Methods Statement will include mitigation measures for visual amenity.	EA	During construction	CEMF 11.1a(iii)
2.	Where feasible and reasonable, the elements within construction sites will be located away from sensitive receivers in order to minimise visibility of the construction site, including stockpiles, storage areas, site sheds and temporary site facilities.	SEA/EA/CM	Pre-construction / During construction	REMM LV1, CEMF 11.1a(i), CEMF 11.1a(iii)
3.	On each business day, inspections for graffiti and unauthorised advertising will be undertaken. Graffiti and unauthorised advertising identified will be removed in the following timeframes: <ul style="list-style-type: none"> Offensive graffiti will be cleaned, (removed) or covered within 24 hours Highly visible yet non-offensive graffiti will be cleaned (removed) or covered within one week Graffiti that is neither offensive nor highly visible will be cleaned (removed) or covered within one month; and Any advertising material including bill posters will be removed or covered within 24 hours 	CM/SS	During construction	REMM LV3, CEMF 11.1a(iii), CEMF 11.2a(iii)
4.	The construction site layouts will consider the location of noise intensive works, 24 hour activities, construction lighting and site access points, ensuring that these construction areas are located away from sensitive receivers, where practicable.	SEA/EA/CM	Pre-construction / During construction	CEMF 5.3a(i), CEMF 5.3a(ii)
5.	All structures (including acoustic sheds or other acoustic measures, site offices and workshop sheds) will be finished in Colorbond colouring, which provides neutral colours that blend in with the surrounding landscape. This	SEA/CM	Pre-construction	REMM LV4, CEMF 11.1a(iii)

Item	Mitigation and Management Measure and Project site requirements	Responsibility	Timing	Reference
SEA – Senior Environmental Advisor, EA – Environmental Advisor, CM – Construction Manager, SS – Site Supervisor				
	neutral finish will be applied to all visible fixtures and fittings (including exposed downpipes). The maximum height of the acoustic sheds will be 20 m to minimise visibility from surrounding areas. The width and length of the acoustic sheds will vary based on construction site location and will be located away from sensitive receivers, where practicable.			
6.	Architectural treatment and finishes will be incorporated within key elements of temporary structures that reflect the context within which the construction sites are located, wherever practicable. This may include hoarding designs that are sympathetic to the surrounding streetscape.	SEA/CM	Pre-construction / During construction	MCoA D110, CEMF 11.1a(iii)
7.	The design and maintenance of construction site hoardings (which are to be erected around construction sites for the duration of construction activities) would aim to minimise visual amenity and landscape character impact. They will be designed in accordance with Sydney Metro Brand Design Guidelines and opportunities for public art on hoardings will be considered in high pedestrian locations. The CSSI name, application number, telephone number, postal address and email address required under MCoA B3 will be available on the site hoardings before the commencement of construction.	EM/CM	Pre-construction / During construction	MCoA A22, MCoA A 23, MCoA D110, REMM LV2, REMM LV6, CEMF 11.1a(i), CEMF 11.1a(iii)
8.	Lighting of construction sites will be orientated to minimise glare and light spill impacts on adjacent sensitive receivers. Potentially affected landowners will be consulted prior to any night works.	CM/SS	During construction	MCoA D109, MCoA D110, REMM LV5, CEMF 11.1a(iii)
9.	Construction lighting, including all permanent, temporary and mobile light sources, will be managed in accordance with Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting and relevant Australian Standards in the series AS/NZ 1158 – Lighting for Roads and Public Spaces.	SEA/EA/CM	During construction	MCoA D109, CEMF 11.2a(iv)

Item	Mitigation and Management Measure and Project site requirements	Responsibility	Timing	Reference
SEA – Senior Environmental Advisor, EA – Environmental Advisor, CM – Construction Manager, SS – Site Supervisor				
10.	Hoarding and screening will minimise impact to the visibility of surrounding businesses, where feasible and reasonable, without compromising public safety or the effective management of construction airborne noise. Clear pathways and signage will be implemented around construction sites to maximise visibility of retained businesses, including sufficient lighting along pedestrian footpaths during night-time where relevant.	SEA/EA/CM	Pre-construction / during construction	MCoA BI3
11.	Construction works will be coordinated with relevant stakeholders to manage potential visual amenity impacts during large events. This will include coordination with the Department of Planning, Industry and Environment to manage the potential impact of construction on sporting events in other areas of Sydney Olympic Park.	SEA/CM	Pre-construction	CEMF 11.1a(iii)
12.	Any work required outside of the construction footprint will be referred to the Environmental Manager for advice on further assessment and approval requirements.	SEA/CM	Pre-construction	CEMF 11.1a(iii)
13.	Wayfinding information will be incorporated on temporary hoardings to guide pedestrians around ancillary facilities and enhance their understanding and experience of the locality and space.	SEA/EA/CM	Pre-construction / During construction	MCoA D103
14.	Stockpiles will be located in a hoarded area and will be managed at appropriate heights to minimise visual and dust impacts, where practicable.	CM/SS	Pre-construction / During construction	CEMF 11.1a(iii)
15.	Work vehicles will be parked in a designated area.	SS	During construction	CEMF 11.1a(iii)
16.	Rubbish bins will be available and easily accessible from all areas of the construction site to minimise loose rubbish / materials around the site.	CM/SS	During construction	CEMF 11.1a(iii)
17.	Rubbish and loose materials will be disposed of in a timely manner or stored in a designated area.	CM/SS	During construction	CEMF 11.1a(iii)

Item	Mitigation and Management Measure and Project site requirements	Responsibility	Timing	Reference
SEA – Senior Environmental Advisor, EA – Environmental Advisor, CM – Construction Manager, SS – Site Supervisor				
18.	Opportunities for the retention and protection of existing street trees and trees within the site will be identified during detailed construction planning, which may include revising construction boundaries and location of construction elements.	SEA/CM	Pre-construction	REMM LV11, CEMF 11.1a(i), MCoA D9
19.	Existing trees to be retained would be protected prior to the commencement of construction in accordance with Australian Standard AS4970 the Australian Standard for Protection of Trees on Development Sites and Adjoining Properties.	SEA/EA/CM	Pre-construction / During construction	REMM LV12, CEMF 11.1a(i)
20.	Environmental controls to minimise light (refer to Section 7.4) and dust will be in place at all compound sites, particularly compounds operating on a 24-hour basis.	SEA/EA/CM	Pre-construction / During construction	CEMF 11.1a(iii)
21.	Dust management measures will include suitable dust suppression and/or collection techniques during cutting, grinding or sawing activities likely to generate dust in close proximity to sensitive receivers.	SEA/EA/CM	Pre-construction / During construction	CEMF 11.1a(iii)
22.	Any trees to be retained will be fenced off from construction works.	CM/SS	During construction	CEMF 11.1a(i)
23.	Plant and equipment will be maintained regularly and cleared of dust/ mud when required to minimise visible leaks and track marks.	CM/SS	During construction	CEMF 11.1a(iii)
24.	Outward facing elements of site hoarding or noise barriers will be regularly maintained, including the removal of weeds	EA/CM	During construction	CEMF 11.2a(iii)
25.	External banners will be replaced every 12 months if their condition has deteriorated such that they are no longer appropriate for their intended use e.g. if images are faded, wording no longer legible or banners are ripped. The renewal of public art content (new or replacement content) is to be allowed for every two years at a minimum throughout the construction contract	CM	During construction	WTP GS cl 6.9.1

Item	Mitigation and Management Measure and Project site requirements	Responsibility	Timing	Reference
SEA – Senior Environmental Advisor, EA – Environmental Advisor, CM – Construction Manager, SS – Site Supervisor				
26.	During construction, hoarding will be maintained so that: <ul style="list-style-type: none"> • Hoardings are kept free of snagging or sharp protrusions on both the worksite side and the public side • No gaps are evident between the edge of the hoarding and any permanent structure 	CM/SS	During construction	WTP PS cl 3.2.4
27.	At the close of construction works for the Project, the construction sites will be appropriately cleared of construction elements, equipment, vehicles and materials no longer needed for the site. Working areas and access points will be cleaned.	SEA/CM/SS	Post-construction	CEMF 5.4a(i), CEMF 5.4a(ii)
28.	All land, including roadways, footpaths, loading facilities or other land having been occupied temporarily will be returned to their pre-existing condition or better. This will include removal of dust, mud and loose materials, as well as removal of any temporary fencing, traffic controls and signage.	SEA/CM/SS	Post-construction	CEMF 5.4a(i), CEMF 5.4a(iii)
29.	Reinstatement of community spaces, infrastructure and services will occur as soon as possible after completion of construction, where applicable. This will include removal of site hoardings and temporary access detours.	SEA/CM	Post-construction	CEMF 5.4a(iv)
30.	Detailed construction planning will aim to reduce the area of vegetation clearing required for each construction site, where practicable, and retain as many mature trees as possible. Tree canopy trimming will be considered as an alternative to tree removal.	SEA/CM	Pre-construction	REMM LV11, CEMF 11.1a(i), MCoA D9

7.2 Placemaking, Urban Design and Landscaping

7.2.1 Placemaking and Urban Design

Temporary placemaking initiatives will be undertaken by Sydney Metro for the benefit of the community, such as commercial “pop up” spaces, information booths, art installations, around the perimeter or in the vicinity of the construction site at Parramatta with the objective of temporarily enhancing visual amenity, providing gathering places in the local area and creating temporary active frontages to the site during construction of the Project.

Temporary construction works will consider enhancing the urban design and visual amenity of the construction sites, including:

- Artwork, graphics and images to enhance the visual appearance of temporary works in high visibility locations
- Project information to raise awareness on benefits, explain the proposed works at each site and provide updates on construction progress
- Community information, including contact numbers for enquiries / complaints
- Signage and information to mitigate impacts on local businesses which may be obscured by the construction site
- Sydney Metro advertising / public awareness campaigns
- Logos / branding, including Sydney Metro, NSW Government, and Contractor branding.

The design of all temporary works will be approved by Sydney Metro prior to being implemented. Sydney Metro will stipulate the design of hoarding artwork for Sydney Metro advertisements, public awareness campaigns and logos / branding.

7.2.2 Landscaping

Potential opportunities for temporary landscaping, vegetative screening and architectural treatments at each site have been identified in Table 6, which may be refined in consultation with local stakeholders.

Table 6: Landscaping and Architectural Treatment Opportunities

Construction Site	Landscaping and Architectural Treatment Opportunities
Westmead Metro Station	<p>The Westmead Metro Station construction site is primarily surrounded by residential and commercial properties, with the exception of Westmead Public School, which is located on the western side of Hawkesbury Road. Several opportunities exist to reduce potential amenity impacts of the presence of the construction site including: adjustments to the hoarding height around the perimeter of the construction site (except for entry/exit gates); architectural treatments to hoardings and the inclusion of banners on hoarding.</p> <p>Consultation with local stakeholders may be undertaken to identify potential opportunities for community involvement in the design of banner artwork for the hoarding.</p>
Parramatta Metro Station	<p>The Parramatta Metro Station construction site is enclosed by high-density/multi-storey commercial land uses with a high level of visibility in upper stories of surrounding buildings. Opportunities for landscaping and vegetative treatments to the hoarding around the site have not been considered due to the highly urbanised setting of the site. There are</p>

Construction Site	Landscaping and Architectural Treatment Opportunities
	opportunities to incorporate architectural treatments to the boundary hoarding for the site, including increasing the height of the hoarding and the inclusion of banners with appropriate artwork and/or information including heritage interpretation for the site.
Clyde MSF	Opportunities for landscaping and vegetative screening is limited at the Clyde MSF construction site, due to the surrounding industrial landscape and construction activities required (including levelling of the whole site). There is an opportunity to include vegetative screening around the Flood Retention Basin along Unwin Street, which will be investigated further during construction design development. There are opportunities to incorporate architectural treatments to the boundary hoarding for the site, including adjustments to the height and inclusion of banners. Consultation with relevant stakeholders may be undertaken to identify potential opportunities for landscaping and architectural treatment for the site.
Sydney Olympic Park Metro Station	The Sydney Olympic Park construction site will be handed over from the Central Tunnelling Package contractor, therefore landscaping and architectural treatments would be implemented prior to WTP works.

A Landscaping Plan will be prepared and implemented for the renaturalisation of parts of Duck Creek and A'Becketts Creek and rehabilitation of the riparian corridor. All other Landscaping Plans will be delivered by the Stations Contractor.

When the Project is handed over to the Stations Contractor, opportunities will be investigated with the relevant local council to provide plantings in proximity to the impacted areas prior to construction commencing where feasible and reasonable. Complementary landscaping using endemic species (as first preference) and locally native species will be undertaken to reduce the extent of exposed soils and sediments and improve visual amenity.

As such, landscaping and plantings for each site are out of scope for this VAMP.

7.3 Crime Prevention Through Environmental Design (CPTED)

The principles of CPTED (active surveillance, access control, natural surveillance, and territorial reinforcement) have been considered throughout the design phase for the Project and will continue to be applied through the construction of temporary works. The CPTED principles and prevention measures that will be applied to the Project works are detailed in Table 5. The mitigation measures detailed in Table 5 incorporate the CPTED principles.

Table 7 CPTED principles relevant to Project construction works

CPTED Principle	Prevention	How Addressed
Surveillance	The potential for crime to occur can be reduced through the provision of opportunities for natural, technical and formal surveillance. This principle recognises that criminals are often	Construction sites will be provided with CCTV security systems and a security patrol.

CPTED Principle	Prevention	How Addressed
	<p>deterred from committing a crime where a place is well supervised. Throughout construction, the following surveillance opportunities will be investigated:</p> <ul style="list-style-type: none"> • CCTV at all construction sites covering the complete site as reasonable and feasible as well as entry and exit points • Onsite security where possible • Adequate lighting of construction sites so that activity onsite is visible. 	<p>Construction site access and exit points will be managed by a gate person and/or be in the view of CCTV surveillance cameras. The full extent of CCTV cameras and their need will be determined through a security risk assessment.</p> <p>Layouts of construction sites will be reviewed by suitably qualified persons in consideration of CPTED principles.</p>
Lighting	<p>Adequate lighting can improve visibility of construction sites, increase pedestrian activity around sites, reduce fear of crime and increase the likelihood that offenders will be detected.</p>	<p>Lighting will be provided within all construction sites to provide adequate visibility during night time periods which will increase the likelihood of crime detection via active, passive or technical surveillance and deter criminals from committing offences.</p> <p>In addition, lighting will be provided around construction sites to provide well-lit pedestrian footpaths as per Revised Environmental Management Measure (REMM) B13.</p>
Territorial Reinforcement	<p>The NSW Police <i>Safer by Design Guidelines</i> note that public areas make people feel safe where they are able to see and interact with others. The guidelines further note that criminals are often deterred from committing crime in places that are well supervised.</p> <p>In addition, the guidelines recognise that actual boundary markers and environmental cues encourage communal responsibility for facilities and communicate to people where they can and cannot be.</p>	<p>Westmead Metro Station, Parramatta Metro Station and Sydney Olympic Park Station provide an existing level of territorial reinforcement due to their locations near key roads and public infrastructure precincts. Those locations will provide an increased level of passive community surveillance of the sites, which will be enhanced through technical surveillance and adequate lighting.</p> <p>The Clyde MSF is located in an area where pedestrian traffic and community interaction is considered to be low. In the absence of pedestrian and community reinforcement around those sites, adequate lighting, technical</p>

CPTED Principle	Prevention	How Addressed
		<p>surveillance and the provision of guards will be implemented.</p> <p>All construction sites will have adequate hoarding and security fencing, access control and adequate signage to prevent trespassing and clearly delineate site boundaries.</p>
Environmental Maintenance	<p>The appearance of the Project construction sites can influence perceptions of safety, danger and level of crime likely to occur. Construction sites where vandalism, graffiti and other crimes are able to occur without control are likely to cause people to avoid those locations and surrounds.</p>	<p>In accordance with REMM LV3, graffiti will be removed promptly from hoardings and any other aspects of construction sites.</p> <p>In addition, through the implementation of other CPTED principles such as technical surveillance and lighting, the likelihood of vandalism occurring may be reduced.</p>
Space/Activity Management	<p>Managing construction sites is important to maintain control over each site and prevent trespassing and crimes from occurring. Construction sites infrequently used may be subject to increased crime and vandalism.</p>	<p>Reduced construction site redundancies and prolonged periods of inactivity at sites has been considered in selection of sites and programming of key activities.</p> <p>In addition, construction sites will be maintained throughout the construction period so that vandalism and graffiti are repaired and removed as soon as reasonable and feasible.</p>
Access Control	<p>Controlling access to construction sites restrict, channel and encourage people and vehicles in, out and around construction sites. The guidelines note that effective access control can be achieved through physical and symbolic barriers.</p>	<p>All construction sites will have adequate hoarding or security fencing as well as clearly demarcated access points for people and vehicles. Access points for vehicles will be controlled by a guard or boom gate as feasible and reasonable.</p>

7.4 Control of the Obtrusive Effects of Outdoor Lighting

Lighting of construction sites, including lighting on hoardings will achieve an adequate balance to control unwanted, obtrusive impacts on surrounding properties, while maintaining the ability to achieve adequate surveillance in night time periods so as to reduce incidences of crime. The construction sites where the obtrusive effects of lighting are likely to be experienced by sensitive receivers are:

- Westmead Metro Station
- Parramatta Metro Station
- Clyde MSF
- Sydney Olympic Park Station.

There are a number of medium and high-density residential properties around those construction sites that will have visibility of the lighting at and around those sites. To minimise the potential obtrusive impacts of lighting, the following measures will be in place:

- Spotlights will be pointed directly to pathways around construction sites and to the surfaces of construction sites
- Movement of construction vehicles to and from the construction sites will be limited during night-time works, where practicable, to minimise light spill from headlights
- Lights will not be angled above the horizontal line
- Where feasible, lights will be mounted on existing concrete barriers and internal walls of hoarding instead of on lighting towers
- Lighting will be directed away from Unwin Street
- Internal pedestrian access.

Site-specific mitigation measures will be implemented in consultation with affected landowners. Mitigation and management measures will be included in this VAMP once consultation is undertaken, with evidence of consultation in Attachment 2.

All lighting associated with the construction of the Project will be consistent with the requirements of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting and relevant Australian Standards in the series AS/NZ 1158 – Lighting for Roads and Public Spaces.

8 COMPLIANCE MANAGEMENT

8.1 Roles and Responsibilities

The GALC Project Team's organisational structure and overall roles and responsibilities are outlined in Section 7 of the CEMP. Key roles with regards to the management of visual amenity are identified in Table 8.

Table 8: Roles and responsibilities

Role	Authority and Responsibility
Environmental Manager	<ul style="list-style-type: none"> Develop and implement the VAMP Oversee visual amenity monitoring in accordance with this sub-plan Oversee compliance tracking and reporting Oversee the keeping of all environmental records Engage suitably qualified consultants to support implementation of this sub-plan In consultation with the Project Director and Construction Director, oversee the investigation and reporting of environmental incidents arising from visual amenity impacts Regularly engage with the key stakeholders and other interface contractors to achieve environmental alignment
Stakeholder and Community Engagement Manager	<ul style="list-style-type: none"> Manages key stakeholder relationships, including in relation to any visual amenity impacts throughout construction Provision of strategic advice to the leadership team Identify and mitigate reputational risks, including any relating to visual and amenity impacts Accountable for crisis and incident communications
Senior Environmental Advisor	<ul style="list-style-type: none"> Complete inspections and monitoring, particularly of No-Go zones and site clearing limits (refer to Section 8.3) Complete reporting (refer to Section 8.3) Prepare ECMs to outline the controls in this sub-plan relevant to each work activity, particularly the identification of No-Go Zones and all site clearing limits Respond to environmental incidents and non-conformances
Environmental Advisor	<ul style="list-style-type: none"> Delivery of toolbox / prestart presentation (or other specific training) to inform work crews of the controls documented in the ECMs Perform regular on-site liaison and inspections Provide environmental advice and assistance to construction personnel Manage implementation of VAMP Respond to environmental incidents and non-conformances
Construction Manager	<ul style="list-style-type: none"> Ensures compliance with this VAMP, procedures and ECMs

Role	Authority and Responsibility
	<ul style="list-style-type: none"> Work collaboratively with environment teams to ensure the mitigation and management measures in this VAMP are integrated into construction works Ensure that visual amenity impacts are always considered in forward planning and scheduling
Site Supervisor	<ul style="list-style-type: none"> Install and maintain environmental controls in accordance with ESCPs and ECMs, including clear delineation of site boundaries and protection of No-Go Zones Attend inspections with the Environmental Representative, Sydney Metro / ER, or other stakeholders Implement corrective actions raised during environmental inspections in agreed timeframes Notify the Environmental Advisor of any observed impacts on visual amenity, including vegetation removal, light spill, littering and stockpile management etc.
All personnel	<ul style="list-style-type: none"> Notify Environmental Advisor of any observed impacts on visual amenity, including vegetation removal, light spill, littering and stockpile management etc.

8.2 Training

The general project induction will include a component on visual amenity management to ensure that personnel understand the potential impacts from construction and the proposed mitigation measures.

The site induction training will address elements related to visual amenity management including:

- Existence and requirements of this VAMP
- Site layout
- Stockpile management
- Dust suppression management
- Construction lighting requirements
- The location of potentially sensitive receivers
- Construction employee parking areas
- Details of the complaints handling procedure
- Details of the environmental incident procedures
- Relevant legislation
- Roles and responsibilities for visual amenity management.

Targeted training in the form of toolbox talks or tailored training sessions will also be provided to personnel with a key role in visual amenity management. Specific mitigation and management measures discussed during training sessions may include:

- Obligations and specific responsibilities under the Project MCoA, including site layout (design and location of construction elements and acoustic sheds), light spill management etc
- Locating site equipment and construction elements away from sensitive receivers
- Ensuring stockpiles and storage areas are covered and/ or located away from sensitive receivers

- Positioning construction lighting away from sensitive receivers during night works.

Specific training will be provided to personnel likely to work within or in proximity (<50 m) to sensitive receivers. Where required, toolbox /pre-start talks will also include dust suppression methods and air quality management.

Further details regarding inductions and training are outlined in Section 9 of the CEMP.

8.3 Monitoring, Inspections and Reporting

Monitoring, inspection, and reporting requirements are outlined in Table 9.

Table 9: Inspection, monitoring and reporting requirements

Type of Inspection	Frequency	Standards	Reporting	Responsibility
Construction site layout inspection	Periodic inspections during site set up of each phase of construction	Pre-construction site layout inspections for sensitive receivers potentially impacted by visual impacts.	Pre-construction inspection report	Senior Environmental Advisor
Periodic inspections for construction works	Periodic inspections (at least once a month) during construction	Periodic inspections of the construction site to identify potential visual amenity impacts from: <ul style="list-style-type: none"> • The condition of site hoardings and fencing • Vegetation maintenance and health of retained vegetation • Position of lighting equipment during night works • General landscaping 	Monthly construction inspection report	Senior Environmental Advisor
Weekly inspections	Once a week during environmental inspections	Weekly inspections which, as part of the weekly environmental inspection further outlined in the CEMP, will include inspection of the environmental controls and mitigation measures outlined in Section 4 and Section 7.	Weekly environmental inspection	Environmental Advisor
Daily inspections	Once a day walk through the construction site	Daily walk through of the construction site to identify potential visual impacts, including: <ul style="list-style-type: none"> • Littering • Graffiti • Visible stockpiles or storage areas • Light spill during night works • Condition of construction elements and equipment • Location of site elements and equipment 	Daily environmental checklist	Site Supervisor

Specific reports prepared in response to visual amenity monitoring will capture detail including, but not limited, to:

- Within one working day of receiving a complaint, notify Sydney Metro
- Within 5 working days provide Sydney Metro with a final report regarding the complaint
- Detail of any corrective actions and confirmation of successful implementation
- Records of compliance with the MCoA, REMMs, CEMF requirements and management measures in this VAMP
- Records of any management measures implemented
- Records of visual amenity inspections undertaken.

8.4 Auditing

Audits (both internal and independent) will be undertaken to assess the effectiveness of environmental controls, compliance with this sub-plan, MCoA and other relevant approvals, licenses, and guidelines. These audits will be undertaken at planned intervals to provide information on whether the Project:

- Is meeting its compliance obligations
- Conforms to this sub-plan
- Determines if this sub-plan is effectively implemented and maintained.

GALC will undertake an internal audit within the first three months from commencement of construction and then annually for the VAMP.

The approach to internal and independent audits, including auditing schedule, is outlined further in Section 11.3 of the CEMP.

8.5 Environmental Incidents

Management of environmental incidents is detailed in Section 12.2 of the CEMP.

Examples of incidents as they relate to visual amenity may typically include:

- Light spill in the vicinity of sensitive receivers
- Generation and dispersion of dust during uncontrolled construction activities
- Damage to buildings or structures
- Unapproved vegetation clearing.

8.6 Complaints Register

All complaints made by the community and stakeholders will be managed in accordance with the Sydney Metro's requirements, the Overarching Community Communication Strategy, including the Sydney Metro Construction Complaints Management System (CCMS) (2021), as well as relevant MCoAs (B1 – B6).

The CCMS will be implemented before the commencement of any construction works and maintained for the duration of construction. The CCMS will be available for a minimum for 12 months following completion of construction of Project.

The following information will be available to facilitate community enquiries and manage complaints before the commencement of work and for 12 months following the completion of construction:

- a) A 24- hour telephone number for the registration of complaints and enquiries about the Project
- b) A postal address to which written complaints and enquires may be sent
- c) An email address to which electronic complaints and enquiries may be transmitted
- d) A mediation system for complaints unable to be resolved.

This information will be accessible to all in the community regardless of age, ethnicity, disability or literacy level.

An electronic complaints register will be maintained on-site at all times. This register will record information on all complaints received about the Project during construction works and for a minimum of 12 months following the completion of construction. This register will include the following information:

- a) Number of complaints received
- b) Date and time of the complaint
- c) Number of people in the household affected in relation to a complaint, if relevant
- d) Method by which the complaint was made
- e) Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect
- f) Issue of the complaint
- g) Means by which the complaint was addressed and whether resolution was reached, with or without mediation
- h) If no action was taken, the reason(s) why no action was taken.

Community members and stakeholders making a complaint will be advised of the following information before, or as soon as practicable after, providing personal information:

- a) the complaints register may be forwarded to government agencies, including the Department (Department of Planning Industry and Environment, 4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150), to allow them to undertake their regulatory duties
- b) by providing personal information, the complainant authorises GALC to provide that information to government agencies
- c) the supply of personal information by the complainant is voluntary
- d) the complainant has the right to contact government agencies to access personal information held about them and to correct or amend that information (Collection Statement).

The Collection Statement will be included on the GALC or Project website to make prospective complainants aware of their rights under the *Privacy and Personal Information Protection Act 1998*. For any complaints made in person, the complainant will be made aware of the Collection Statement.

In accordance with the CCMS, GALC will submit the complaints register to Sydney Metro for upload on the community engagement database. The Complaints Register will be provided to the Planning Secretary upon request, within the timeframe stated in the request.

9 REVIEW AND IMPROVEMENT

9.1 Continuous Improvement

The Project Management Team will review the status and adequacy of the EMS including the CEMP and Sub-plans. The objective of the review will be to ensure that it meets current Sydney Metro and GALC requirements as well as relevant environmental standards.

Continuous improvement of this VAMP will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives, and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

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

In order to ensure continual improvement and prevent recurring issues, this sub-plan will be reviewed in response to:

- Corrective actions arising from non-conformance, incidents, or audits
- Opportunity for improvement in environmental management performance which may be identified by the project team, ER or Sydney Metro
- Changes to the Gamuda Australia EMS.

Review of this sub-plan will occur as needed in consultation with Sydney Metro and the ER. A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure as outlined in the CEMP.

9.2 Document Updates

The processes described above may result in the need to update or revise this sub-plan. This will occur as needed and may only be approved by the Environmental Manager, or delegate.

Where minor amendments are required to this VAMP, the revised VAMP will be issued to the ER for review and endorsement in accordance with MCoA A30(j).

9.3 Distribution

All GALC personnel and contractors will have access to this VAMP via the project document control management system.

The approved VAMP will be published on the GALC website within one week of being approved and be publicly available until the end of the Construction Period.

A copy of the VAMP will be published and maintained on the Project website, in accordance with MCoA B11. The VAMP will be published within one week of its approval or before the

commencement of any work to which they relate or before their implementation, as the case may be.

The document is uncontrolled when printed.

ATTACHMENTS

Attachment 1 - Compliance Matrix

The MCoA, REMMs, CEMF requirements and EPL requirements that relate to this FFMP are detailed in the following tables.

MCoAs

ID	Conditions of Approval	Document Reference
A2	Stage 1 of the CSSI must only be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in the documents listed in Condition A1 of this schedule unless otherwise specified in, or required under, this approval.	CEMP
A22	Boundary screening must be erected around ancillary facilities that are adjacent to sensitive land user(s) for the duration that the ancillary facility is in use unless otherwise agreed with relevant affected residents, business operators or landowners.	Table 5, the CEMP
A23	Boundary screening required under Condition A22 of this schedule must minimise visual impacts on adjacent sensitive land user(s)	Table 5, Attachment 8 of the CEMP
A48	The CSSI name, application number, telephone number, postal address and email address required under Condition B3 of this schedule must be available on site boundary fencing / hoarding at each ancillary facility before the commencement of construction. This information must also be provided on the website required under Condition B11 of this schedule.	Table 5, Attachment 8 of the CEMP
C1	Construction Environmental Management Plans (CEMPs) and CEMP Sub-plans must be prepared in accordance with the Construction Environmental Management Framework (CEMF) included in the documents listed in Condition A1 of this schedule to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 of this schedule will be implemented and achieved during construction.	CEMP and this document
C6	The CEMP Sub-plans must state how:	

ID	Conditions of Approval	Document Reference
	a) the environmental performance outcomes identified in the documents listed in Condition A1 of this schedule will be achieved	This document
	b) the mitigation measures identified in the documents listed in Condition A1 of this schedule will be implemented	This document
	c) the relevant conditions of this approval will be complied with	This document
	d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles.	Section 6.2, Section 7 and the CEMP
C7	With the exception of any CEMP Sub-plans expressly nominated by the Planning Secretary to be endorsed by the ER, all CEMP Sub-plans must be submitted to the Planning Secretary for approval.	Section 1.5
C9	Any of the CEMP Sub-plans to be approved by the Planning Secretary must be submitted to the Planning Secretary with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is phased no later than one (1) month before the commencement of that phase.	Section 1.5
C10	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Planning Secretary or endorsed by the ER (whichever is applicable), unless otherwise agreed by the Planning Secretary. The CEMP and CEMP Sub-plans, as approved by the Planning Secretary or endorsed by the ER (whichever is applicable), including any minor amendments approved by the ER, must be implemented for the duration of construction. Where construction of Stage 1 of the CSSI is phased, construction of a phase must not commence until the CEMP and CEMP Sub-plans for that phase have been approved by the Planning Secretary or certified by the ER upon nomination by the Planning Secretary (whichever is applicable).	Section 1.5

ID	Conditions of Approval	Document Reference
D9	As many mature trees and as much urban canopy as practicable must be retained during construction. Canopy trimming should be considered where practicable prior to any mature tree removal.	Table 5
D98	Safe pedestrian and cyclist access must be maintained around construction sites during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, a proximate alternate route which complies with the relevant standards, must be provided and signposted before the restriction or removal of the impacted access.	Traffic Management Plan
D103	Wayfinding information must be incorporated on temporary hoardings to guide pedestrians around ancillary facilities and enhance their understanding and experience of the locality and space.	Table 5
D104	Nothing in this approval permits advertising on any element of Stage 1 of the CSSI.	Table 5
D105	The Proponent must undertake temporary placemaking initiatives for the benefit of the community, such as commercial “pop up” spaces, information booths, art installations, around the perimeter or in the vicinity of construction sites at Parramatta and Five Dock with the objective of temporarily enhancing visual amenity, providing gathering places in the local area and creating temporary active frontages to construction sites during Stage 1 of the CSSI.	Section 7.2, as it relates to Parramatta
D109	Stage 1 of the CSSI must be constructed with the objective of minimising light spill to surrounding properties including from headlights of construction vehicles. All lighting associated with the construction of Stage 1 of the CSSI must be consistent with the requirements of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting and relevant Australian Standards in the series AS/NZ 1158 – Lighting for Roads and Public Spaces. Additionally, mitigation measures must be provided to manage any residual night lighting impacts to protect properties adjoining or adjacent to the CSSI, in consultation with affected landowners.	Section 7.4 and Section 4.1
D110	Stage 1 of the CSSI must be constructed in a manner that minimises visual impacts of construction sites including, providing temporary landscaping and vegetative screening, minimising light spill, minimising impacts to identified significant view lines in respect of The Bays metro station construction site and incorporating architectural treatment and finishes within key elements of temporary structures that reflect the context within which the construction sites are located, wherever practicable.	Section 7.2, Table 5

REMMs

ID	Revised Environmental Management Measure	Document Reference
LV1	Where feasible and reasonable, the elements within construction sites would be located to minimise visual impacts (for example storing materials and machinery behind fencing).	Table 5, Attachment 3 Refer to indicative ECMs showing site elements in the CEMP
LV2	The design and maintenance of construction site hoardings would aim to minimise visual amenity and landscape character impact.	Table 5
LV3	Graffiti would be removed promptly from hoardings and any other aspects of construction sites.	Table 5
LV4	All structures (including acoustic sheds or other acoustic measures, site offices and workshop sheds) would be finished in a colour which aims to minimise their visual impact, if visible from areas external to the construction site. This finish is to be applied to all visible fixtures and fittings (including exposed downpipes).	Table 5
LV5	Lighting of construction sites would be orientated to minimise glare and light spill impacts on adjacent receivers.	Section 7.4
LV6	Construction site hoardings would be designed in accordance with Sydney Metro Brand Design Guidelines and opportunities for public art on hoardings would be considered in high pedestrian locations.	Table 5
LV7	Works would be coordinated with the Department of Planning, Industry and Environment to manage the potential impact of construction on sporting events in other areas of Sydney Olympic Park.	Table 5
LV11	Opportunities for the retention and protection of existing street trees and trees within the site would be identified during detailed construction planning.	Table 5
LV12	Existing trees to be retained would be protected prior to the commencement of construction in accordance with Australian Standard AS4970 the Australian Standard for Protection of Trees on Development Sites and Adjoining Properties.	Table 5

ID	Revised Environmental Management Measure	Document Reference
LV14	Opportunities would be investigated with the relevant local council to provide plantings in proximity to the impacted areas prior to construction commencing where feasible and reasonable	Section 7.2
BI3	Hoarding and screening impacting the visibility of business would be minimised where feasible and reasonable, without compromising public safety or the effective management of construction airborne noise. Clear pathways and signage would be implemented around construction sites to maximise visibility of retained businesses, including sufficient lighting along pedestrian footpaths during night-time where relevant.	Table 5

CEMF Requirements

Clause	Requirement	Document Reference
3.4d	iii. For each plan under the CEMP include a matrix of the relevant Conditions of Approval or Consent reference where each requirement is addressed	Attachment 1
3.4d	iv. For each plan under the CEMP, set objectives and targets and identify measurable key performance indicators relevant to these	Section 3
4.4 a	i. Temporary construction works consider urban design and visual impacts, including: <ul style="list-style-type: none"> • Artwork, graphics and images to enhance the visual appearance of temporary works in high visibility locations; • Project information to raise awareness on benefits, explain the proposed works at each site and provide updates on construction progress; • Community information, including contact numbers for enquiries / complaints; • Signage and information to mitigate impacts on local businesses which may be obscured by the construction site; • Sydney Metro advertising / public awareness campaigns; and • Logos / branding, including Sydney Metro, NSW Government, and Contractor branding. 	Section 7.2
4.4 a	ii. The design of all temporary works will require Sydney Metro approval in relation to urban design and visual impacts and Sydney Metro will stipulate the design of hoarding artwork, including:	Section 7.2

Clause	Requirement	Document Reference
	<ul style="list-style-type: none"> Sydney Metro advertising / public awareness campaigns; and Logos / branding, including Sydney Metro, NSW Government, and Contractor branding. 	
4.4 b	Construction hoardings, scaffolding and acoustic sheds will be regularly inspected and kept clean and free of dust build up. Graffiti on construction hoardings, scaffolding or acoustic sheds will be removed or painted over promptly.	Table 5
4.4 c	The principles of Crime Prevention Through Environmental Design will be applied to all works, including temporary works, that have a public interface.	Section 7.1
5.3 a	Principal Contractors will consider the following in the layout of construction sites: i. The location of noise intensive works and 24 hour activities in relation to noise sensitive receivers;	Attachment 8 of the CEMP and the NVMP
5.3 a	ii. The location of site access and egress points in relation to noise and light sensitive receivers, especially for sites proposed to be utilised 24 hours per day	Attachment 8 of the CEMP and the NVMP
5.3 a	iii. The use of site buildings to shield noisy activities from receivers;	Attachment 8 of the CEMP and the NVMP
5.3 a	iv. The use of noise barriers and / or acoustic sheds where feasible and reasonable for sites proposed to be regularly used outside of daytime hours	Attachment 8 of the CEMP and the NVMP
5.3 a	v. Aim to minimise the requirement for reversing, especially of heavy vehicles; and	The NVMP
5.3 a	vi. Any applicable requirements of the Construction Traffic Management Framework (CTMF).	Traffic Management Plan
5.4 a	Mitigation measures required for reinstatement will be incorporated into the CEMP and will include as a minimum: i. Principal Contractors will clear and clean all working areas and accesses at project completion;	Table 5
5.4 a	ii. At the completion of construction all plant, temporary buildings or vehicles not required for the subsequent stage of construction will be removed from the site;	Table 5
5.4 a	iii. All land, including roadways, footpaths, loading facilities or other land having been occupied temporarily will be returned to their pre-existing condition or better; and	Table 5

Clause	Requirement	Document Reference
5.4 a	iv. Reinstatement of community spaces, infrastructure and services will occur as soon as possible after completion of construction	Table 5
10.2 c	The Principal Contractor's regular inspections will include a check on the ecological mitigation measures and project boundary fencing.	FFMP and Section 8.3
11.1a	The following visual and landscape management objectives will apply to the construction of the project:	
	i. Minimise impacts on existing landscape features as far as feasible and reasonable;	Section 7.2
	ii. Ensure the successful implementation of the Landscape Design; and	Section 7.2
	iii. Reduce visual impact of construction to surrounding community.	Section 7.2
11.2a	Principal Contractors will develop and implement a Visual Amenity Management Plan for temporary works which will include as a minimum:	
	i. The visual mitigation measures as detailed in the environmental approval documentation for construction;	Table 5 and this document
	ii. Input from an experienced Landscape or Urban Designer;	Section 1.5
	iii. The maintenance of outward facing elements of site hoarding or noise barriers, including the removal of graffiti and weeds;	Table 5, FFMP
	iv. Apply the principles of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting and relevant safety design requirements and detail mitigation measures to minimise lighting impacts on sensitive receivers for all permanent, temporary and mobile light sources;	Section 7.4
	v. Identify the processes and procedures that will be used for the incorporation of the principles of Crime Prevention Through Environmental Design (CPTED) in the design and construction of any temporary site facilities; and	Section 7.3

Clause	Requirement	Document Reference
	vi. Compliance record generation and management.	Section 8.3
11.2b	Visual and landscape measures will be incorporated into the Principal Contractor's regular inspections including checking the health of retained vegetation around site boundaries, checking the condition of any site hoarding and acoustic sheds, and checking the position and direction of any sight lighting.	Section 8.3
11.2c	The Contractor will retain compliance records of any inspections undertaken in relation to visual and landscape measures.	Section 8.3

Environment Protection Licence

The Project construction activities are designated as '***Railway activities—railway infrastructure construction***' under Schedule 1 of the POEO Act. Scheduled activities under clause 48 of the POEO Act, require an Environmental Protection Licence (EPL) for the premise at which a scheduled activity is carried on. The EPL typically regulates the emissions of potentially offensive odours and dust.

The VAMP will address the following EPL requirements (**placeholder**):

[illegible]

Attachment 2 - Stakeholder Consultation

To be included following consultation with affected landowners.

Attachment 3 - Indicative Site Layout

Preliminary construction site layouts at each construction site are provided below, which are generally in accordance with the EIS. However, the Project construction sites are subject to final detailed design and may change after the preparation of this document, based on opportunities for improvement and considerations of access, worker, and public safety, environmental and community (such as noise or light) impacts, COVID 19 Health Orders and other pertinent factors.

In consideration of this, at the completion of the detailed design process, final layouts will be reviewed for consistency against the Infrastructure Approval in accordance with Section 5.25 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). At this time, layout changes following completion of detailed design will be captured in a revision to this document along with responses to Project requirements updated where applicable.

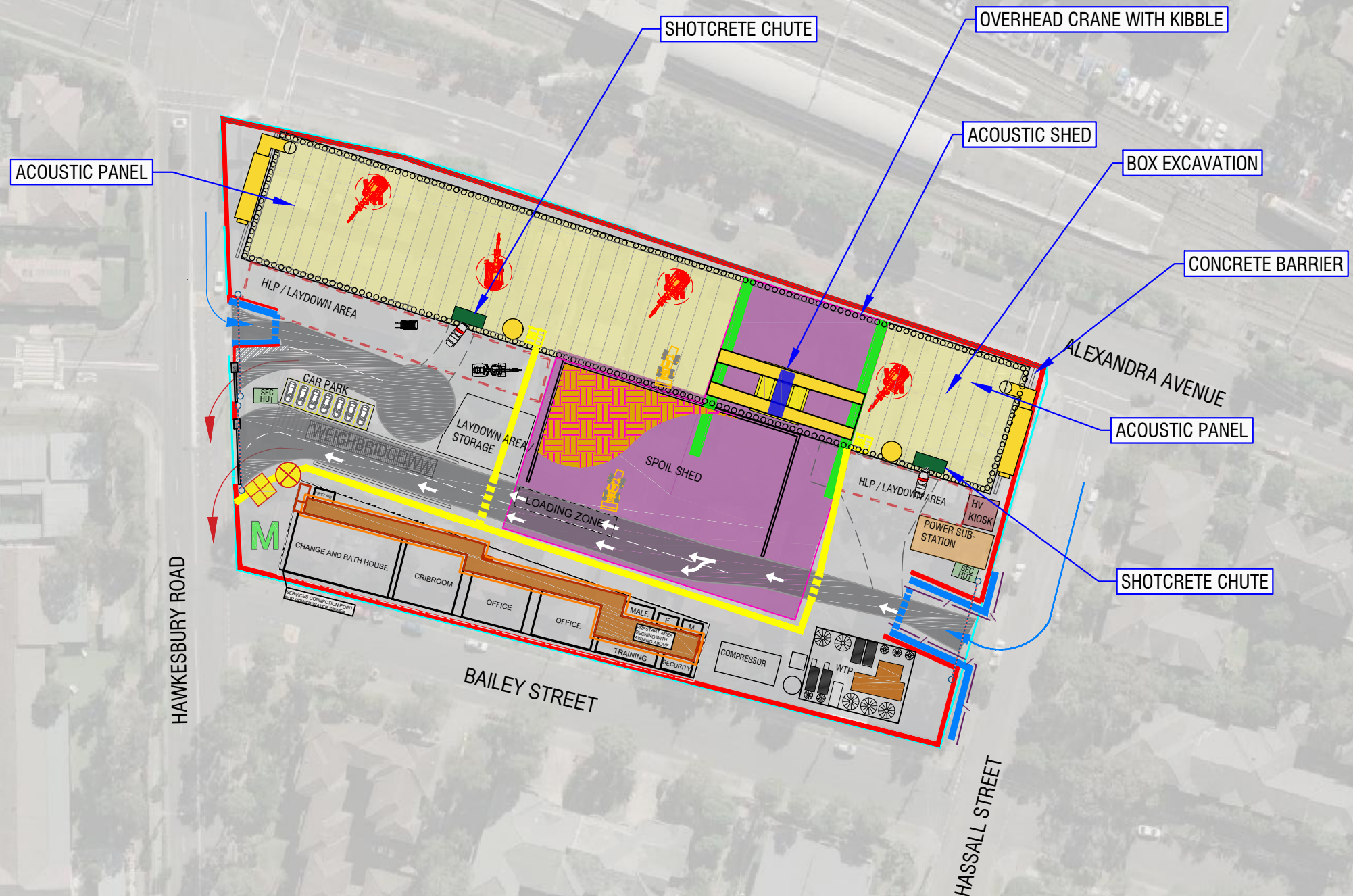
The construction site layouts provided below show the indicative final (i.e. during operation of the site for the purpose of Project construction) layout of each construction site. It is noted that sites will progress through interim phases of site establishment prior to this final state being achieved.

Interim site layouts are generally short in nature, and it is proposed final site layouts will be achieved within about six months of the commencement of construction.

Following completion of detailed design, final site layouts may be updated during construction to reflect a change in methodology or optimisation of available space. In the case of such adjustments to site layouts as provided below, where these have no greater impact to the environment, community or compliance as described herein, these changes will not necessitate an update to this document.

- STAGE 3 - BOX EXCAVATION (5 MONTHS)
- PERIMETER FOR TRAFFIC PROTECTION
- ACOUSTIC SHED
- STATION BOX EXCAVATION
- VENTILATION INSTALLATION
- SUPPORT EQUIPMENT INSTALLATION
- SERVICES RETICULATION

- PERIMETER FOR TRAFFIC PROTECTION
- ACOUSTIC SHED
- STATION BOX EXCAVATION
- VENTILATION INSTALLATION
- SUPPORT EQUIPMENT INSTALLATION
- SERVICES RETICULATION













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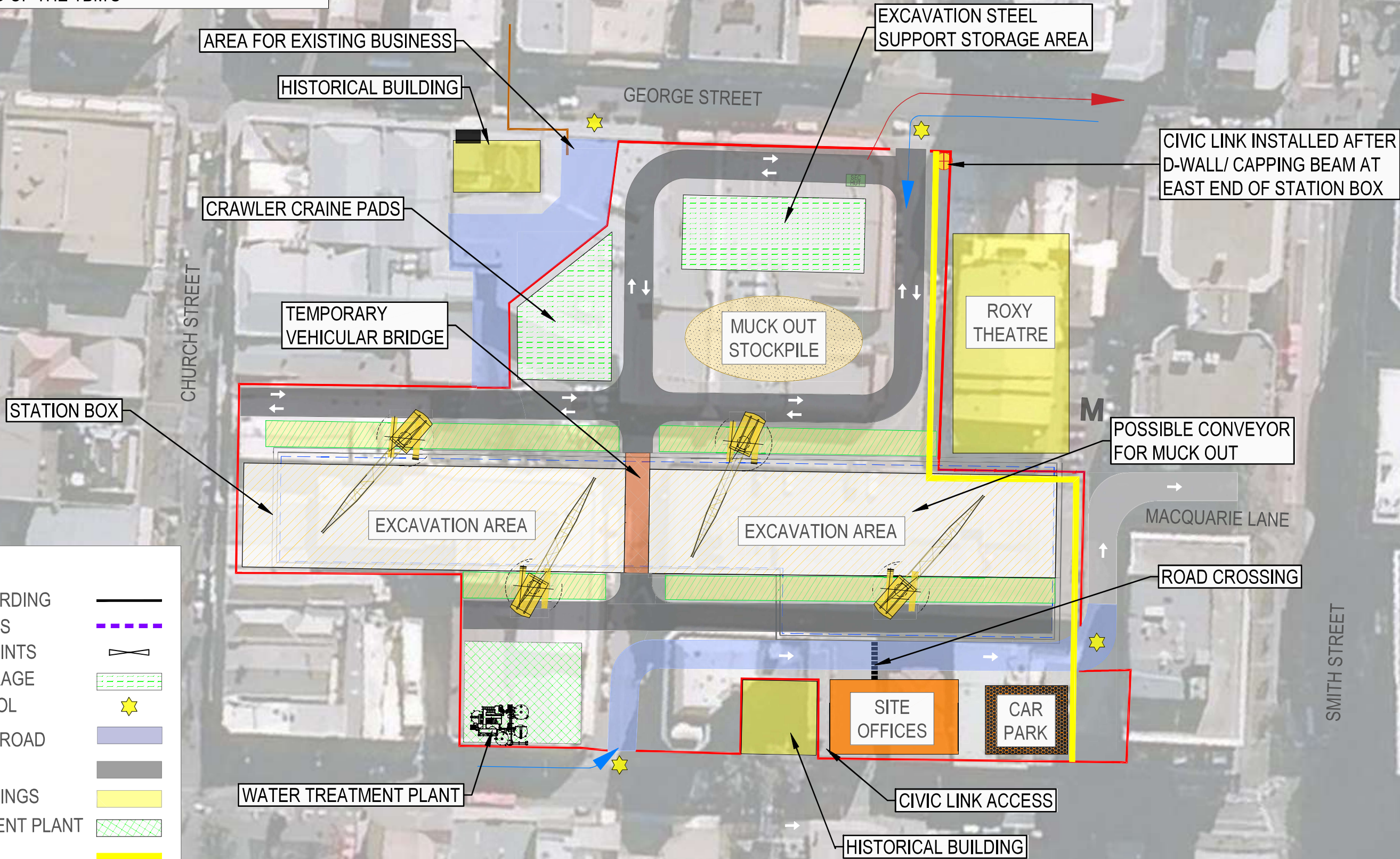
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LEGEND

STAIR TOWER	
CONCRETE BARRIER	
CONCRETE DROP CHUTE	
MATERIAL HOIST	
SPOIL	

								<p>SCALES</p> <div><p>1:1000 FULL SIZE A3</p></div>				<p>CLIENT</p> <div></div>				<p>The information shown on this drawing is for the purposes of the Sydney Metro Project only. No warranty is given or implied as to its suitability for any other purpose. The Service Providers accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Sydney Metro Project.</p> <p>SERVICE PROVIDERS</p> <p>DRAWN <u>JESSIE LI</u></p> <p>DESIGNED <u>SAVANNAH SANG</u></p> <p>DRG CHECK <u> </u></p> <p>DESIGN CHECK <u> </u></p> <p>APPROVED <u> </u></p> <div></div>												<p>SYDNEY METRO</p> <p>THE WESTMEAD STATION</p> <p>MOBILISATION & SITE ESTABLISHMENT - STAGE 3</p> <p>BOX EXCAVATION</p> <p>SITE LAYOUT</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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- STAGE 3 - (BOX AND NOZZLES EXCAVATION - 13 MONTHS)
- STATION BOX NOZZLE EXCAVATION
 - INSTALLATION OF TEMPORARY SUPPORT FRAMES
 - FRP WORKS TO NOZZLE AND BOX INVERT
 - TRAVERSING OF THE TBM'S



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REV.	BY	DATE	DESCRIPTION	APPD.
C	M.J.	12.04.2022		
B	M.S.	19.11.2021	ISSUE FOR TENDER	H.G.
A	J.L.	07.10.2021	ISSUE FOR TENDER DESIGN	

A1 Original Co-ordinate System: MGA Zone 56 Height Datum: A.H.D. This sheet may be prepared using colour and may be incomplete if copied

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	DESIGNED	HUW GRIFFITHS
	DRG CHECK	
	DESIGN CHECK	
	APPROVED	

SYDNEY METRO		
THE PARRAMATA STATION		
MOBILISATION AND SITE ESTABLISHMENT - STAGE 3		
BOX EXCAVATION AND NOZZLES EXCAVATION		
SITE LAYOUT		
STATUS: TENDER DESIGN	SHEET 3 OF 6	©
DRG No: SMWSTWTP-GALC-PTA-SN700-MB-DRG-000003	REV.	C

STAGE 3 - PEAK PRODUCTION (6 MONTHS)

- COMPLETE FRP FOUNDATIONS FOR RETAINING WALLS AND FINAL INSTALLATION
- CULVERTS COMPLETION
- OVERPASS CONSTRUCTION ONGOING
- START BACKFILL WITH TUNNEL SANDSTONE ROSEHILL TO SOP SPUR TUNNEL SPOIL
- COMPLETE RETAINING WALL
- CONSTRUCT KAY STREET DIVERSION
- COMPLETE ROAD TIE IN WORKS FOR FUTURE TRAFFIC SWITCH
- DRAINAGE OUTLET INSTALLATION

LEGEND

SPOIL COMING FROM ROSEHILL AND CLYDE DIVE

EARTHWORKS IN PROGRESS

CULVERTS

UTILITY CORRIDOR COMPLETED

UNWIN STREET DIVERSION AND
OVERPASS WORK IN PROGRESS

ROSEHILL STAGING
DRAWINGS SHOWN
SEPARATELY IN OTHER SET
OF DRAWINGS

SEDIMENT BASIN

START BACKFILL MSF PLATFORM

WATERMAIN TO BE GROUTED
ONCE NEW WATERMAIN IS
COMISSIONED

INTERNAL HAUL ROAD AND SPOIL
COMING FROM ROSEHILL SHED AND
CLYDE DECLINE SHED

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DRAWN JESSIE LI

DESIGNED JEAN-FRAN

DRG CHECK_____

DESIGN CHECK____

SYDNEY METRO

CLYDE MSF CLYDE DECLINE AND ROSEHILL
MOBILISATION AND SITE ESTABLISHMENT - STAGE 3
PEAK PRODUCTION
SITE LAYOUT

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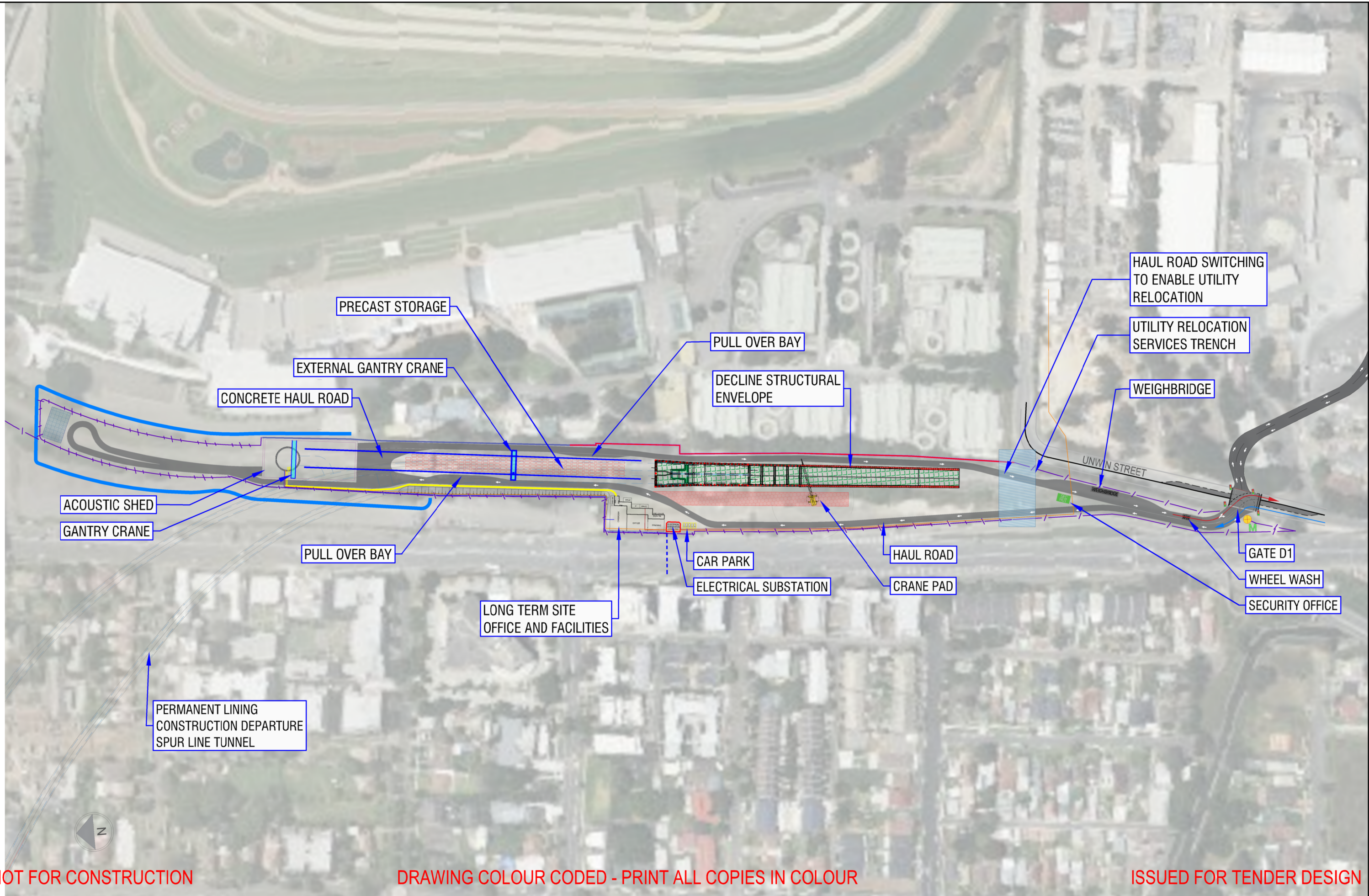
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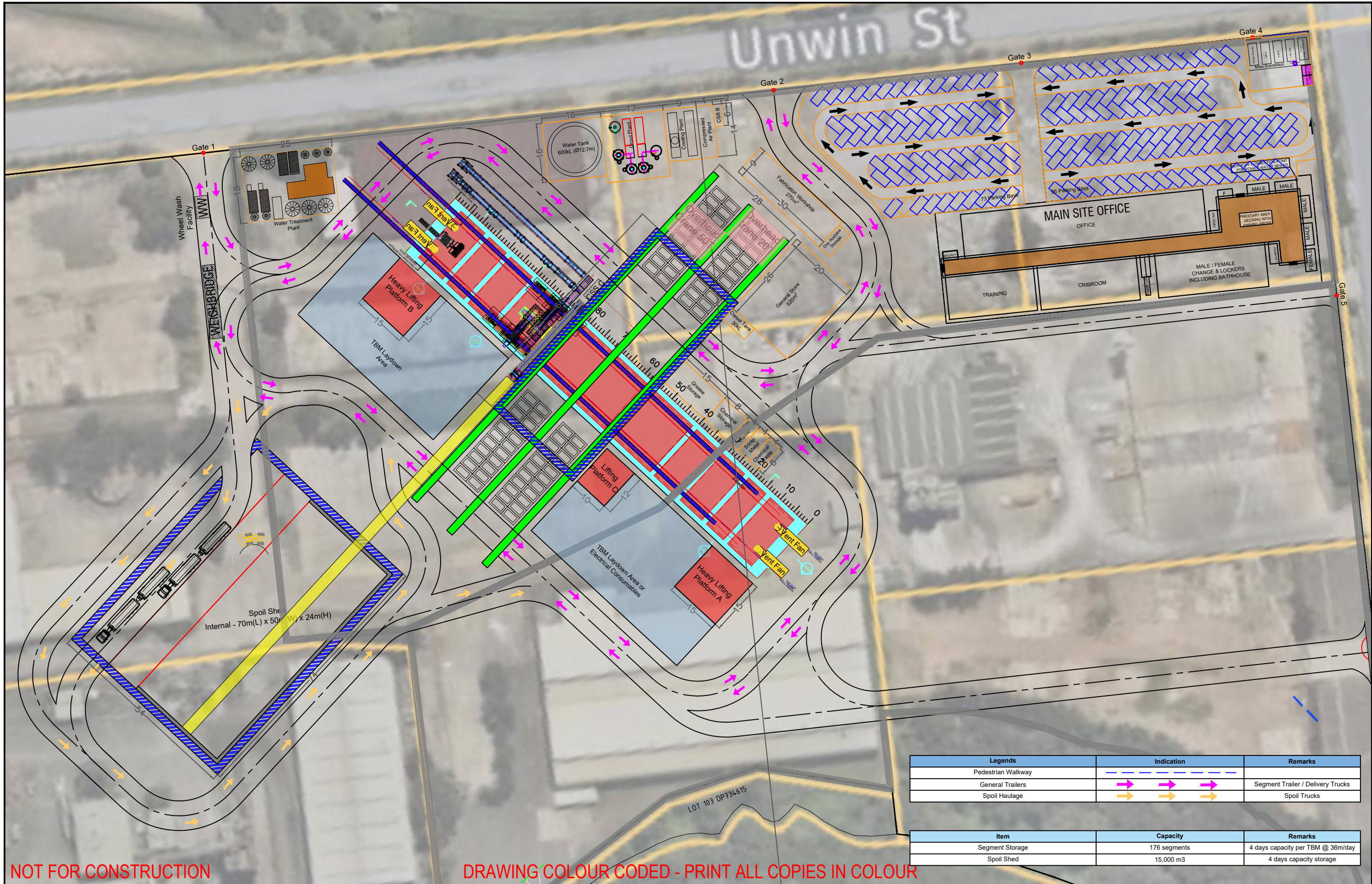


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A1 Original				NOTE: Do not scale from this drawing.		ALT. DRG No. [Alt. Drg. No.]		STATUS: TENDER DESIGN		SHEET 14 OF 14		
Co-ordinate System: MGA Zone 56				Height Datum: A.H.D.		This sheet may be prepared using colour and may be incomplete if copied		DRG No. SMWSTWTP-GALC-SWD-TD700-MB-DRG-003014		REV. A		





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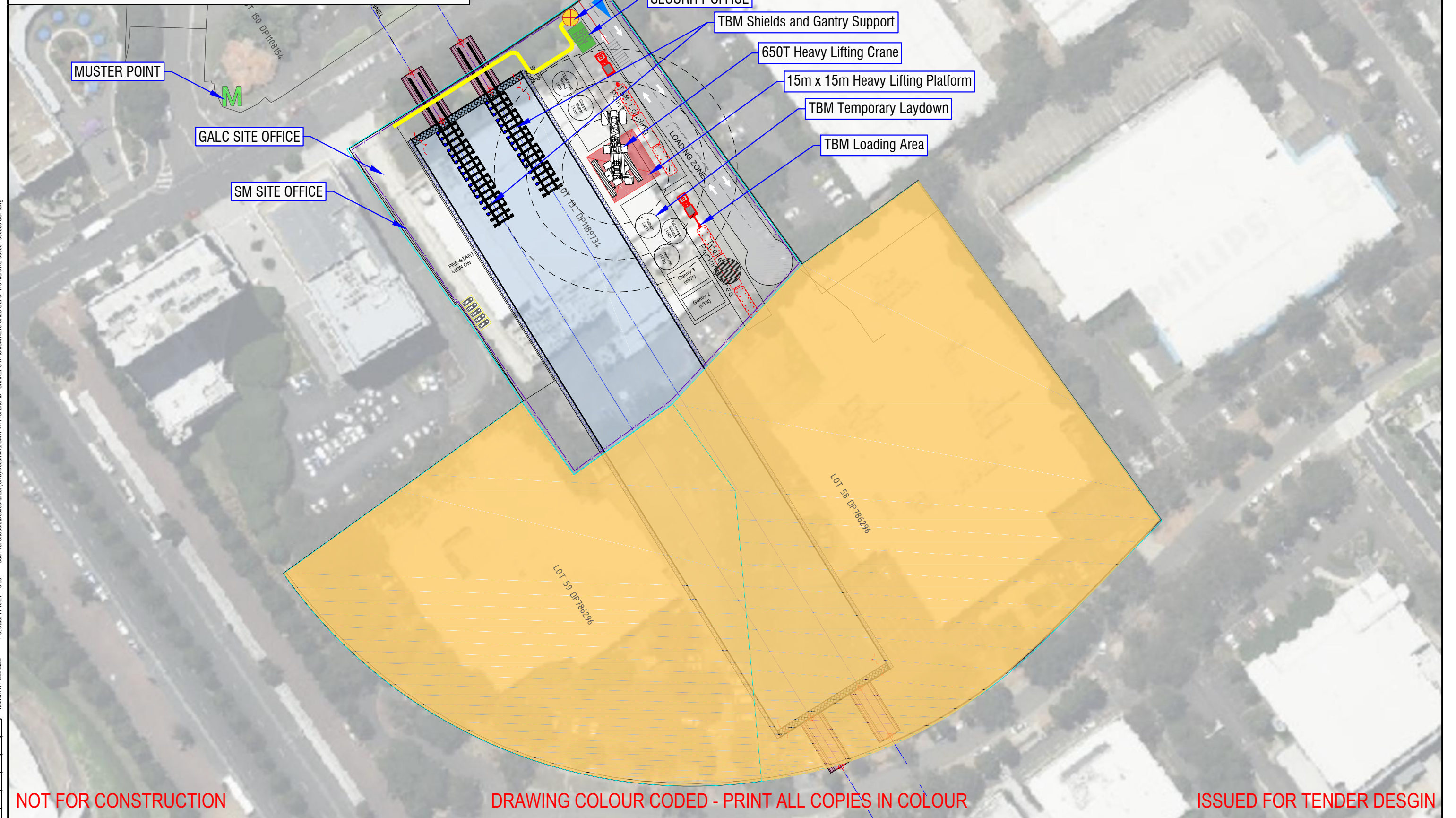
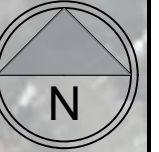
Legends	Indication	Remarks
Pedestrian Walkway	---	
General Trailers	→ → →	Segment Trailer / Delivery Trucks
Spoil Haulage	→ → →	Spoil Trucks

Item	Capacity	Remarks
Segment Storage	176 segments	4 days capacity per TBM @ 36m/day
Spoil Shed	15,000 m3	4 days capacity storage

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							 		SERVICE PROVIDERS		ROSEHILL STATION SITE LAYOUT OPTION (AWAY FROM HANDOVER AREA) TBM ESTABLISHMENT SITE LAYOUT	
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- STAGE 2 - TBM RETRIEVAL (2 MONTHS)
- MOBILISE 650T HEAVY LIFTING CRANE
 - ERECT THE TBM SHIELDS AND GANTRY SUPPORT
 - RETRIEVE TBM FROM THE SHAFT ONTO THE TRAILER
 - DEMOBILISATION



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A	D.P	30.09.2021	DRAFT																																				
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Attachment 4 – Landscape Architect Review

Steph Mifsud (GAB)

From: Shaun King <sking@emmconsulting.com.au>
Sent: Friday, 11 February 2022 2:32 PM
To: Hayley Young (GAB); Steph Mifsud (GAB)
Cc: Ian Shenton
Subject: VAMP review

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Hayley and Steph,

I have undertaken a review of the Visual Amenity Plan (VAMP). The VAMP addresses the relevant sections of the Sydney Metro Construction Environmental Management Framework.

11.1 a

- 11.1 i Is addressed in Sections 3 Objectives and targets, Section 4.2.2 Approvals, licenses and permits LV1, LV11, LV12, LV13, Section 7.3 Standard management and mitigation measures, notes tree protection to be in accordance with AS4970 protection of trees on development sites.
- 11.1 ii Is addressed in sections 7.3 Standard management and mitigation measures and 8.3 monitoring, inspections and reporting.
- 11.1 iii Is addressed in 7.3 Standard management and mitigation measures.

11.2 a

- 11.2 i Is addressed in Section 4.2.2 Approvals, licenses and permits, Section 7.3 Standard management and mitigation measures.
- 11.2 ii Review has been undertaken.
- 11.2 iii Is addressed in Section 7.3 Standard management and mitigation measures.
- 11.2 iv Is addressed in Section 7.2 Control of the Obtrusive effects of outdoor lighting. In accordance with AS 4282-1997 Control of the obtrusive effects of outdoor lighting and relevant Australian Standards in the series AS/NZ 1158 – Lighting for Roads and Public Spaces.
- 11.2 v Is addressed in Section 7.1 Crime prevention through environmental design (CPTED).
- 11.2 vi Is addressed in Section 8 Compliance management.
- 11.2 b Is addressed in Section 8 Compliance management.
- 11.2 c Is addressed in Section 8 Compliance management.


11.3 a

- 11.3 i Is addressed in Section 7.3 Standard management and mitigation measures and Section 8 Compliance management.
- 11.3 ii Is addressed in Section 7.3 Standard management and mitigation measures.
- 11.3 iii Is addressed in Section 7.2 Control of the Obtrusive effects of outdoor lighting. In accordance with AS 4282-1997 Control of the obtrusive effects of outdoor lighting and relevant Australian Standards in the series AS/NZ 1158 – Lighting for Roads and Public Spaces.

Shaun King

Senior Landscape Designer, Consulting Arborist, ECAD
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