



# Construction Environmental Management Plan

SMWSASSM-PLD-1NL-PC-PLN-000019 (Rev 01)

Parklife Metro D&C

# Document Approval

Revision	Author	Date	Comments	Reviewed by	Approved by
A	C. Kennedy	20/02/2023	Initial Draft	Mark Chilton	Richard Graham
B	C. Kennedy	4/04/2023	Issued for Sydney Metro and ER Review	Mark Chilton	Richard Graham
C	C. Kennedy	23/05/2023	Revised in response to comments	Mark Chilton	Richard Graham
D	J. Bradford	14/06/2023	Updated to address ER comments	Mark Chilton	Richard Graham
00	C. Kennedy	27/06/2023	Final for ER endorsement and DPE review and approval	Mark Chilton	Richard Graham
01	C. Kennedy	19/07/2023	Revised in response to DPE review comments	Mark Chilton	Richard Graham

<b>Signature</b>	
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# Acronyms and Definitions

Abbreviation	Expanded Text
<b>AEW</b>	Advanced and Enabling Works (prior Sydney Metro Western Sydney Airport package of works)
<b>AQMP</b>	Air Quality Management Plan
<b>CEMF</b>	Sydney Metro Construction Environmental Management Framework
<b>CEMP</b>	Construction Environmental Management Plan
<b>Condition</b>	Planning Ministers Conditions of Approval
<b>CSSI</b>	Critical State Significant Infrastructure
<b>CTMF</b>	Construction Traffic Management Framework
<b>CTMP</b>	Construction Traffic Management Plan
<b>DNVIS</b>	Detailed Noise and Vibration Impact Statement
<b>DPE</b>	NSW Department of Planning and Environment
<b>DSI</b>	Detailed investigation report
<b>ECM</b>	Environmental Control Map
<b>EIS</b>	Environmental Impact Statement
<b>EM</b>	Parklife Metro D&C Environment Manager
<b>EMP</b>	Environmental Management Plan
<b>EMS</b>	Environmental Management System
<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
<b>EPA</b>	NSW Environmental Protection Authority
<b>EPL</b>	Environmental Protection License
<b>ER</b>	Environmental Representative. Suitably qualified and experienced person independent of project design and construction personnel employed for the duration of construction.
<b>ESCP</b>	Erosion and Sediment Control Plan
<b>ESMS</b>	Sydney Metro's Environment and Sustainability Management System
<b>EWMS</b>	Environmental Work Method Statement
<b>FFMP</b>	Flora and Fauna Management Sub-plan
<b>Minister, the</b>	NSW Minister for the Department of Planning and Public Spaces (or delegate)
<b>NVMP</b>	Noise and Vibration Management Sub-plan
<b>OEMP</b>	Operational Environmental Management Plan
<b>Off-airport</b>	Land not within the boundary of the Western Sydney Airport.
<b>On-airport</b>	Land within the boundary of the Western Sydney Airport.
<b>OOHW</b>	Out-of-Hours Works (outside standard construction hours)
<b>Parklife Metro</b>	Consortium comprising entities of Plenary, Siemens, RATP Dev and Webuild as the Applicant for the Sydney Metro Western Sydney Airport SSTOM Works.
<b>Parklife Metro D&amp;C</b>	Parklife Metro Design and Construct. Consists of Webuild S.P.A, Siemens Mobility Pty Ltd and Richard Crookes Constructions Pty Ltd. Responsible for the construction of SSTOM Works
<b>PASS / ASS</b>	Potential Acid Sulfate Soils / Acid Sulfate Soils
<b>Project, the</b>	Sydney Metro Western Sydney Airport Project
<b>RAP</b>	Remedial Action Plan

Abbreviation	Expanded Text
<b>REMM</b>	Revised Environmental Management Measures
<b>SAS</b>	Site Audit Statement
<b>SAR</b>	Site Audit Report
<b>SBT</b>	Station Boxes and Tunnelling (prior Sydney Metro Western Sydney Airport package of works)
<b>SCAW</b>	Surface and Civil Alignment Works (prior Sydney Metro Western Sydney Airport package of works)
<b>SMWSA</b>	Sydney Metro Western Sydney Airport
<b>SSTOM</b>	Stations, Systems, Trains, Operations and Maintenance Package
<b>SWMP</b>	Soil and Water Management Sub-plan
<b>SRD SEPP</b>	<i>State Environmental Planning Policy (State and Regional Development)</i>
<b>WMP</b>	Waste Management Sub-plan
<b>WSA</b>	Western Sydney Airport

# 1 Introduction

## 1.1 Background

Sydney Metro is Australia's biggest public transport program comprising four main packages of work including Metro North West Line, Sydney Metro City and Southwest, Sydney Metro West and Sydney Metro Western Sydney Airport. The Sydney Metro Western Sydney Airport Project (the Project) will become the transport spine for Greater Western Sydney, connecting communities and travellers with the new Western Sydney International (Nancy-Bird Walton) Airport (referred to as Western Sydney International) and the growing region.

The Sydney Metro Western Sydney Airport Environmental Impact Statement (EIS) was prepared in October 2020, which assessed the impacts of the construction and operation of the Project. The Project EIS was placed on public exhibition for a period of six weeks from 21 October to 2 December 2020. The Project was declared a Critical State Significant Infrastructure (CSSI) Project and is listed in Schedule 5 of State Environmental Planning Policy (State and Regional Development).

The Sydney Metro Western Sydney Airport was approved by the Minister for Planning and Public Spaces on 23 July 2021 (SSI 10051) under section 5.19 of the Environmental Planning and Assessment Act 1997 (EP&A Act). Please note, the CSSI and SSI approval referenced within this plan refer to the same project instrument of approval, SSI-10051.

### 1.1.1 Sydney Metro Western Sydney Airport Delivery Strategy

The Project will be delivered through the following stages, which are described in further detail in the Staging Report:

- **Advanced and Enabling Works (AEW)** – Site investigations, modification of the existing transport network, power and water supply for construction sites, utility and stormwater diversions and some demolition works.
- **Station Boxes and Tunnelling (SBT)** – Two sections of twin running tunnels, constructed with the use of tunnel boring machines (TBMs), dive structures and station box excavations.
- **Surface and Civil Alignment Works (SCAW)** – Construction of bridges and viaducts to cross floodplains, watercourses and existing and proposed permanent infrastructure.
- **Stations, Systems, Trains, Operations and Maintenance (SSTOM)**, being the subject of this CEMP will include the following:
  - Station design and fit-out, urban and landscape design, precinct and transport integration works
  - Finishing works and testing and commissioning
  - Operation of the Western Sydney Airport metro service (operation of Sydney Metro WSA will be managed by separate Operational Environmental Management Plan (OEMP) and Sub-plans).
- **Finalisation Auxiliary Works.**

## 1.2 Purpose and Scope

This NSW (off-airport) Construction Environmental Management Plan (CEMP, this Plan) is applicable to the SSTOM Works of the Sydney Metro Western Sydney Airport (the Project) that will be carried out on land under New South Wales legislation, herein referred to as off-airport. This Plan describes how Parklife Metro Design and Construct contractor (Parklife Metro D&C) will minimise and manage the environmental impacts of the SSTOM Project.. Sydney Metro have prepared separate Construction Environmental Management Plans that will apply to construction activities to be carried out on Western Sydney International (Nancy-Bird Walton) Airport (WSI) land that is under Commonwealth legislation, The WSI Commonwealth land is herein referred to as on-airport.

This Plan has been prepared to address the requirements of the:

- State Significant Infrastructure (SSI) 10051 Planning Approval (dated 23 July 2021)



- State Significant Infrastructure (SSI) 10051 Modification 1 (dated 14 April 2022), which relates to Condition E4 to reduce the biodiversity offsets credit requirements
- Sydney Metro Western Sydney Airport – CSSI Staging Report
- AS/NZS ISO 14001:2016 Environmental Management Systems – Requirements with guidance for use
- Sydney Metro Construction Environmental Management Framework (CEMF)
- Environmental Impact Statement (EIS) and the Submissions Report, including the Revised Environmental Mitigation Measures (REMMs)
- Contractual requirements
- Applicable legislation (NSW and Commonwealth).

This Plan has been prepared in accordance with the requirements listed in Table 1.

TABLE 1 COMPLIANCE TABLE - ENVIRONMENTAL REQUIREMENTS FOR THE PREPARATION OF THIS CEMP

No.	Condition	Where addressed
<b>SSI 10051 Infrastructure Approval (dated 23 July 2021)</b>		
<b>C1</b>	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.	This Plan
<b>C2</b>	With the exception of any CEMPs expressly nominated by the Planning Secretary to be endorsed by the ER, all CEMPs must be submitted to the Planning Secretary for approval. Note: The Planning Secretary will consider the assessment of the predicted level of environmental risk and potential level of community concern required under Condition A11(e) when deciding whether any CEMP's may be endorsed by the ER	Section 2.2
<b>C3</b>	The CEMP(s) not requiring the Planning Secretary's approval must be submitted to the ER for endorsement no later than one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage. That CEMP must obtain the endorsement of the ER as being consistent with the conditions of this approval and all undertakings made in the documents listed in Condition A1.	Section 2.2
<b>C4</b>	Any CEMP to be approved by the Planning Secretary must be endorsed by the ER and then submitted to the Planning Secretary for approval no later than one (1) month before the commencement of construction or where construction is phased no later than one (1) month before the commencement of that phase.	Section 2.2
<b>Construction Environmental Management Framework</b>		
<b>3.1(a)</b>	Principal Contractors are required to have a corporate Environmental Management System certified under AS/NZS ISO 14001:2016.	Section 3.1
<b>3.1(b)</b>	Principal Contractors are required to develop a project-based Environment and Sustainability Management System (E&SMS). The E&SMS will:	
	i. Be consistent with the Principal Contractors corporate Environmental Management System and AS/NZS ISO 14001:2016;	Section 3.1
	ii. Be supported by a process for identifying and responding to changing legislative or other requirements;	Section 3.4.3
	iii. Include processes for assessing design or construction methodology changes for consistency against the planning approvals;	Section 1.10
	iv. Include processes for tracking and reporting performance against sustainability and compliance targets;	Section 3.3
	v. Include a procedure for the identification and management of project specific environmental risks and appropriate control measures; and	Section 3.4.2
	vi. Be consistent with the Sydney Metro – Western Sydney Airport Sustainability Plan and the Sydney Metro Environment and Sustainability Statement of Commitment.	Section 3.2
<b>3.1I</b>	All sub-contractors engaged by the Principal Contractor will be required to work under the Principal Contractor's Environment and Sustainability Management System.	Section 3.1
<b>3.4I</b>	Principal Contractors are required to prepare and implement a Construction Environmental Management Plan (CEMP) relevant to the scale and nature of their off-airport scope of	This Plan Section 3.1

No.	Condition	Where addressed
	works. The CEMP shall comprise of a main CEMP document, issue specific sub plans, activity specific procedures and site based control maps. The CEMP shall illustrate the relationship between other plans required by the contract, in particular those that relate to design management. The CEMP will address the specific requirements of scope of works and address the off-airport environmental requirements	
3.4(d)	Depending on the scope and scale of the works, Sydney Metro may decide to streamline the CEMP and sub-plan requirements for off-airport works. For example, depending on the risk associated with particular environmental issues it may be appropriate to remove the need for a sub plan, or replace with a procedure as part of the CEMP. The CEMP and sub-plan requirements from this CEMP for each construction stage / contract will be detailed in the Staging Report / Construction (Rail) Plan for the project.	Section 2.2
3.4(f)	The Principal Contractor CEMP will cover the requirements of the relevant planning approval documentation, the conditions of all other permits and licences, the Principal Contractor's corporate EMS, the environmental provisions of the contract documentation and this Construction Environmental Management Framework	This Plan
3.4(g)	As a minimum the CEMP will:	
i.	Include a contract specific environmental policy;	Appendix A
ii.	Include a description of activities to be undertaken during construction;	Section 1.3
iii.	For each plan under the CEMP include a matrix of the relevant Conditions of Approval or Consent referencing where each requirement is addressed;	Appendix B Sub-plans
iv.	For each plan under the CEMP, set objectives and targets, and identify measurable key performance indicators in relation to these;	Section 3.3
v.	For each role that has environmental accountabilities or responsibilities, including key personnel, provide a tabulated description of the authority and roles of key personnel, lines of responsibility and communication, minimum skill level requirements and their interface with the overall project organisation structure;	Section 3.4.10
vi.	Assign the responsibility for the implementation of the CEMP to the Environment Manager, who will have appropriate experience. The Principal Contractor's Project Director will be accountable for the implementation of the CEMP;	Section 3.4.10
vii.	Identify communication requirements, including liaison with stakeholders and the community;	Section 3.7
viii.	Include induction and training requirements and a summary of the Training Needs Analysis required in Section 3.10 (b);	Section 3.6
xi.	Management strategies for environmental compliance and review of the performance of environmental controls;	Section 3.9 Section 3.11
x.	Procedures for environmental inspections and monitoring, auditing and review, and reporting on environmental performance including environmental compliance tracking;	Section 3.9
xi.	Include an annual schedule for auditing the CEMP and Sub-Plans that is updated at least monthly;	Section 3.9.4
xii.	Include procedures for emergency and incident management, non-compliance management, and corrective and preventative action; and	Section 3.8 Appendix E
xiii.	Include procedures for the control of environmental records.	Section 3.10
3.4(h)	The Principal Contractor CEMP and associated sub-plans will be reviewed by Sydney Metro prior to any construction works commencing. For off-airport works approved under the CSSI, the independent environmental representative (see Section 3.13) will also review the CEMP.	Section 2.2

## 1.3 Project Description

The Project involves the construction and operation of a new metro railway line around 23km in length that extends from the existing Sydney Trains suburban T1 Western Line at St Marys in the north and the Aerotropolis in the south at Bringelly. The alignment includes a combination of tunnel, surface, bridges and viaduct sections, and comprises of six new metro stations between St Marys and the Aerotropolis Core precinct, as well as a stabling and maintenance facility and operational control centre to support the operation of the new metro railway line (Figure 1).

### 1.3.1 Key Project Features

Key features of the project include:

- Around 4.3km of twin rail tunnels (generally located side by side) between St Marys (the northern extent of the project) and Orchard Hills
- A cut-and-cover tunnel around 350 metres long (including tunnel portal), transitioning to an in-cutting rail alignment south of the M4 Western Motorway at Orchard Hills
- Around 10km of rail alignment between Orchard Hills and Western Sydney International, consisting of a combination of viaduct and surface rail alignment
- Around two kilometres of surface rail alignment within Western Sydney International
- Around 3.3km of twin rail tunnels (including tunnel portal) within Western Sydney International
- Around 3km of twin rail tunnels between Western Sydney International and the Aerotropolis Core
- Six new metro stations:
  - Four off-airport stations:
    - St Marys (providing interchange with the existing Sydney Trains suburban rail network)
    - Orchard Hills
    - Luddenham Road
    - Aerotropolis Core
  - Two on-airport stations:
    - Airport Business Park
    - Airport Terminal.
- Grade separation of the track alignment at key locations including:
  - Where the alignment interfaces with existing infrastructure such as the Great Western Highway, M4 Western Motorway, Lansdowne Road, Patons Lane, the Warragamba to Prospect Water Supply Pipelines, Luddenham Road, the future M12 Motorway, Elizabeth Drive, Derwent Road and Badgerys Creek Road
  - Crossings of Blaxland Creek, Cosgroves Creek, Badgerys Creek and other small waterways to provide flood immunity for the Project
- Modifications to the existing Sydney Trains station and rail infrastructure at St Marys (where required) to support interchange and customer transfer between the new metro station and the existing Sydney Trains suburban rail network
- A stabling and maintenance facility and operational control centre located to the south of Blaxland Creek and east of the proposed metro track
- New pedestrian, cycle, park-and-ride and kiss-and-ride facilities, public transport interchange infrastructure, road infrastructure and landscaping as part of the station precincts.

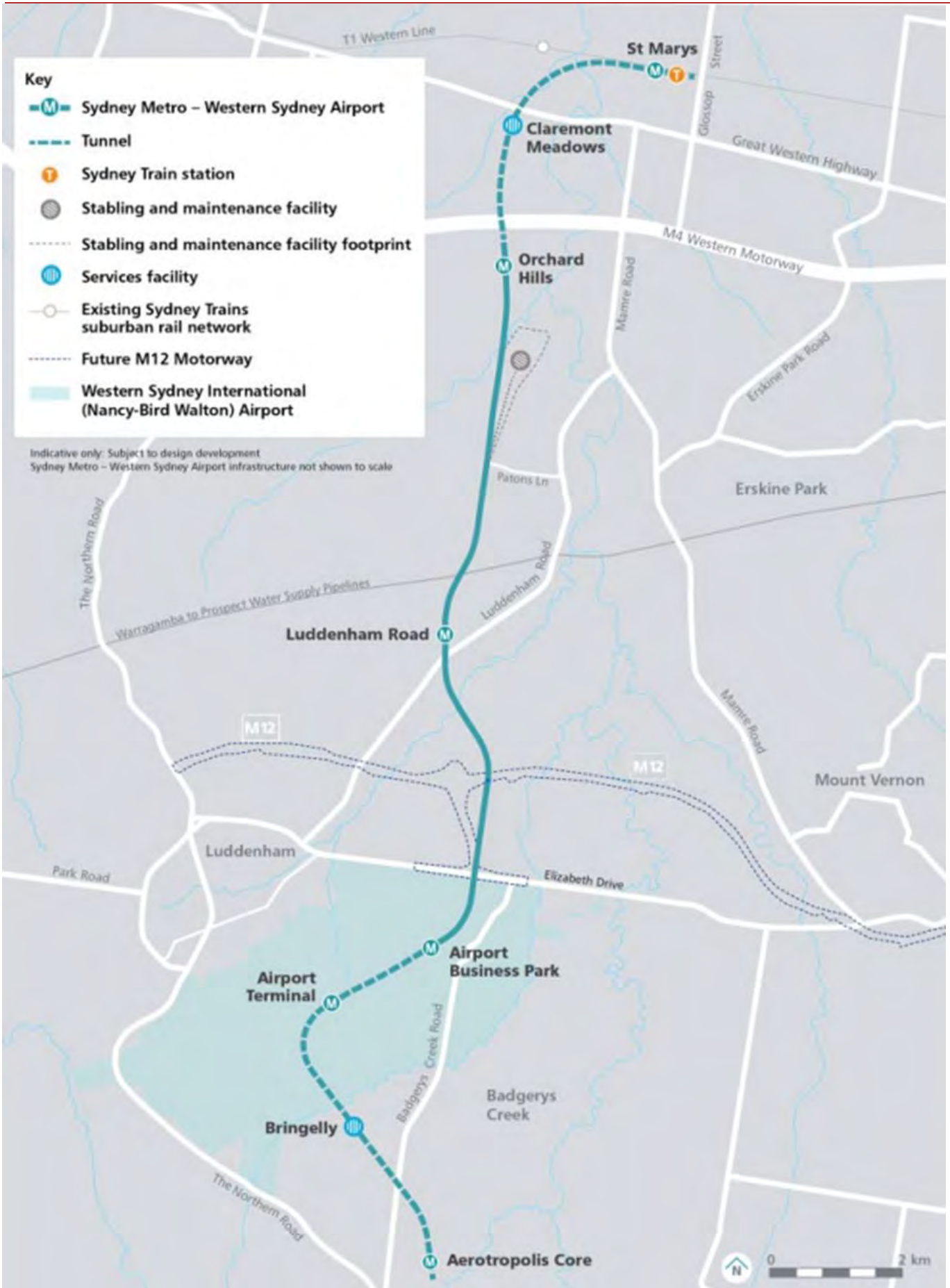


FIGURE 1 SYDNEY METRO WESTERN SYDNEY AIRPORT OVERVIEW



### 1.3.2 SSTOM Works Overview

The SSTOM Works, as shown in the simplified visual in Figure 2 and detailed in Table 2, can be summarised as:

- Installation of tracks, signalling, mechanical and electrical systems
- Construction of a stabling and maintenance facility at Orchard Hills
- Construction of the lower chamber of Bringelly shaft, along with capping and backfill
- Construction of the lower chamber of Claremont Meadows shaft, along with capping and backfill
- Construction of six stations, including:
  - A new metro station connecting to, and providing an interchange with, the T1 Western Line (part of the existing Sydney Trains suburban rail network) at St Marys
  - Two new metro stations between the T1 Western Line and Western Sydney International; one at Orchard Hills and one at Luddenham within the Northern Gateway Precinct
  - Two new metro stations within the Western Sydney International site; one at the Airport Terminal and one at the Airport Business Park, both of which are located on Airport land and are managed under a separate CEMP
  - A new metro station within the Aerotropolis Core precinct, south of Western Sydney International.

The SSTOM Works also includes supplying new driverless trains, and the operation and maintenance of the new metro railway line and its assets, which will be managed separately to this CEMP and its Sub-plans.

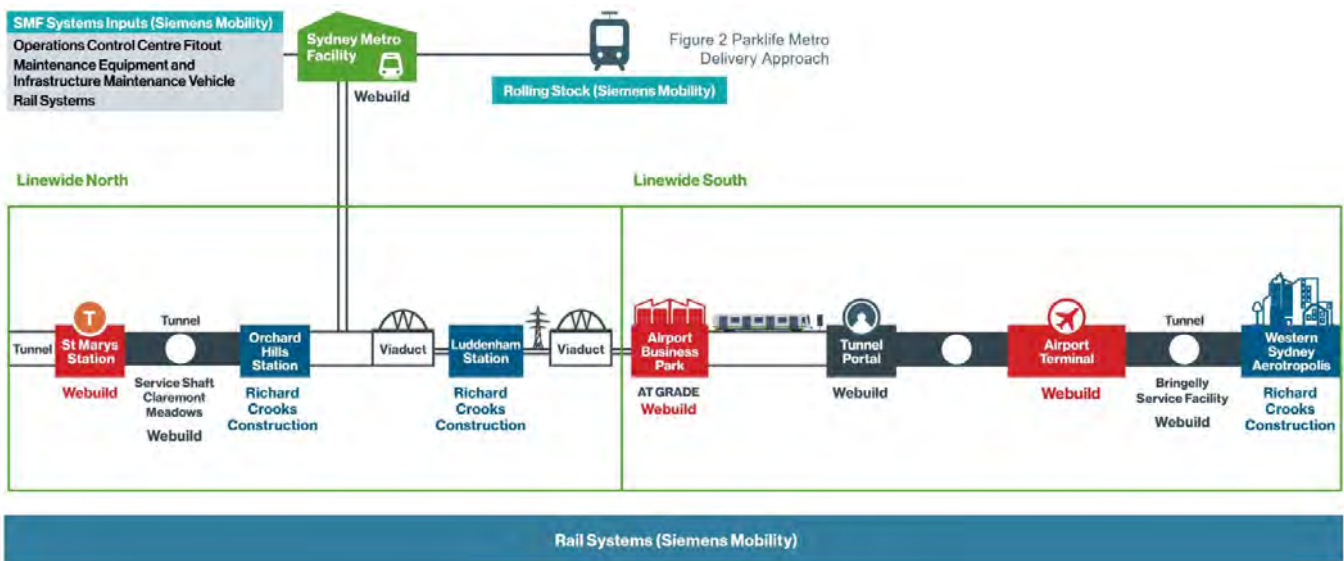


FIGURE 2 OVERVIEW OF SSTOM WORKS

TABLE 2 SSTOM KEY ACTIVITIES

Stage	Key activities
<b>Investigations and survey</b>	<ul style="list-style-type: none"> <li>– Design and other site investigations (e.g. geotechnical testing)</li> <li>– Carry out property condition surveys</li> <li>– Installation of monitoring instrument and survey points along the alignment</li> </ul>

Stage	Key activities
<b>Site establishment and local area works</b>	<ul style="list-style-type: none"> <li>- Erection of site fencing and hoarding</li> <li>- Local road works and traffic changes, such as site access and egress</li> <li>- Placement of pavements for temporary road diversions</li> <li>- Installation of site offices and amenities</li> <li>- Installation of acoustic enclosures</li> </ul>
<b>Underground Stations:</b>	
- St Mary Metro	
- Aerotropolis	<ul style="list-style-type: none"> <li>- Piling and ground improvements</li> <li>- Spoil management</li> <li>- Dewatering and Groundwater treatment</li> <li>- Shotcreting</li> <li>- Install water proofing</li> <li>- Install temporary works such as scaffolding and working platforms</li> <li>- Install or mobilise site craneage</li> <li>- Steel fixing and welding</li> <li>- Formwork</li> <li>- Concrete pumping placement and finishing</li> <li>- Installation of precast elements such as beams, slabs and columns</li> <li>- Construct portal canopy structure</li> <li>- Blockwork</li> <li>- External façade and cladding</li> <li>- Steel work and glazing to lift shafts</li> <li>- Install vertical transport such as lifts and escalators</li> <li>- Install pressure services (Fire, Potable Water, Grey Water Pump out)</li> <li>- Install HV/LV/Comms cabling to ladder/trays</li> <li>- Install HVAC system</li> <li>- Framing and doors to rooms for lockup</li> <li>- Finish rooms floor, wall, ceiling to first fix</li> <li>- Tiling</li> <li>- Architectural detailing to soffit</li> <li>- Photovoltaic panels</li> <li>- Ticketing and wayfinding</li> </ul>
<b>Stations at Grade or in Cut:</b>	
- Orchard Hills	<ul style="list-style-type: none"> <li>- Piling and ground improvements</li> <li>- Spoil management</li> <li>- Install temporary works such as scaffolding and working platforms</li> <li>- Install or mobilise site craneage</li> <li>- Steel fixing and welding</li> <li>- Formwork</li> <li>- Concrete pumping placement and finishing</li> <li>- Installation of precast elements such as beams, slabs and columns</li> <li>- Construct portal canopy structure</li> <li>- Construct pedestrian bridges</li> <li>- Blockwork</li> <li>- External façade and cladding</li> <li>- Steel work and glazing to lift shafts</li> <li>- Install vertical transport such as lifts and escalators</li> <li>- Install pressure services (Fire, Potable Water, Grey Water Pump out)</li> <li>- Install HV/LV/Comms cabling to ladder/trays</li> <li>- Install HVAC system</li> <li>- Framing and doors to rooms for lockup</li> <li>- Finish rooms floor, wall, ceiling to first fix</li> <li>- Tiling</li> </ul>



Stage	Key activities
	<ul style="list-style-type: none"> <li>- Architectural detailing to soffit</li> <li>- Photovoltaic panels</li> <li>- Ticketing and wayfinding</li> </ul>
<b>Elevated Station:</b>  <b>- Luddenham Road viaduct</b>	<ul style="list-style-type: none"> <li>- Piling and ground improvements</li> <li>- Spoil management</li> <li>- Install temporary works such as scaffolding and working platforms</li> <li>- Install or mobilise site craneage</li> <li>- Structural steel erection of platform structure</li> <li>- Structure steel erection of staircase structure</li> <li>- Installation of precast elements such as beams, slabs and columns</li> <li>- Construct cantilever canopy structure</li> <li>- Steel fixing and welding</li> <li>- Formwork</li> <li>- Concrete pumping placement and finishing</li> <li>- Blockwork</li> <li>- External façade glazing and cladding</li> <li>- Steel work and glazing to lift shafts</li> <li>- Install vertical transport such as lifts and escalators</li> <li>- Install pressure services (Fire, Potable Water, Grey Water Pump out)</li> <li>- Install HV/LV/Comms cabling to ladder/trays</li> <li>- Install HVAC system</li> <li>- Framing and doors to rooms for lockup</li> <li>- Finish rooms floor, wall, ceiling to first fix</li> <li>- Tiling</li> <li>- Architectural detailing to soffit</li> <li>- Photovoltaic panels</li> <li>- Ticketing and wayfinding</li> </ul>
<b>Stabling, Operational Control Centre and Maintenance Facility</b>	<ul style="list-style-type: none"> <li>- Construct substation and install HV electrical</li> <li>- Construct retaining walls</li> <li>- Excavate site, trim/box out road ways, trim building pads</li> <li>- Place level compact subbase to roadways</li> <li>- Place level compact engineered fill to building pads</li> <li>- Install trunk and pavement drainage including intertrack drainage/CESS</li> <li>- Install kerb and gutter</li> <li>- Install common services to back of kerb</li> <li>- Install building connections</li> <li>- Form, reinforce and pour concrete building slabs</li> <li>- Construct/Erect portal structure to buildings</li> <li>- Install roof and glazing</li> <li>- Install external façade</li> <li>- Internal blockwork</li> <li>- Install sewer and greywater pump out</li> <li>- Install pressure services (Fire, Potable Water, Grey Water Pump out)</li> <li>- Install HV/LV/Comms cabling</li> <li>- Install HVAC system</li> <li>- Framing and doors to rooms for lockup</li> <li>- Finish rooms floor, wall, ceiling to first fix</li> <li>- Trim and place basecourse top roadways</li> <li>- Primer seal to roadways</li> </ul>

Stage	Key activities
	<ul style="list-style-type: none"> <li>- Concrete paving to outside of building</li> <li>- Construct concrete OHE pedestals</li> <li>- Trim and place capping to stabling and maintenance rail roads</li> <li>- Place ballast</li> <li>- Install ballast track rail and sleeper including installation of points</li> <li>- Landscaping</li> <li>- Line marking and signage</li> </ul>
<b>Northern and Southern Tunnel</b>	<ul style="list-style-type: none"> <li>- Steel fixing and welding</li> <li>- Formwork</li> <li>- Concrete pumping placement and finishing</li> <li>- Construct squeeze way and infill concrete to outside</li> <li>- Install/construct sump pits</li> <li>- Install embedded track system</li> <li>- Pull rail, install to line and level</li> <li>- Pour track slab concrete</li> <li>- Install MEP brackets and racks to tunnel lining</li> </ul>
<b>Intermediate Service Shafts</b>  <b>- Claremont Meadows</b> <b>- Bringelly</b>	<ul style="list-style-type: none"> <li>- Steel fixing and welding</li> <li>- Formwork</li> <li>- Concrete pumping placement and finishing</li> <li>- Construct ring beam, head wall, perimeter wall lining and tunnel extension with cross passage</li> <li>- Waterproofing and grouting</li> <li>- Install fire rate doors to cross passage</li> <li>- Install precast roof panels</li> <li>- Complete concrete topping pour</li> <li>- Demolish top capping beam and pile wall to nominal level</li> <li>- Backfill and compact engineered fill to shaft</li> <li>- Landscaping to surface</li> </ul>
<b>Station Precinct Works</b>	<ul style="list-style-type: none"> <li>- Intersection modifications, including traffic signal changes</li> <li>- Intersection modifications, including traffic signal changes</li> <li>- Traffic signal works</li> <li>- Speed zoning</li> <li>- Safety infrastructure to protect vulnerable road users and manage vehicle speeds</li> <li>- Earthworks</li> <li>- Drainage works</li> <li>- Kerb and guttering</li> <li>- Surfacing including asphalt, concrete and pavers</li> <li>- Transport interchange facilities (for example bus shelters etc)</li> <li>- Public domain and placemaking infrastructure, including landscaping</li> <li>- accessibility infrastructure (e.g. accessible ramps and lifts)</li> <li>- Line marking, signage and other finishes.</li> </ul>
<b>Linewide Works</b>	<ul style="list-style-type: none"> <li>- Place lean mix concrete to formation</li> <li>- Install debonding layer</li> <li>- Install track slab block and cage</li> <li>- Fibre cement concrete with micro and macro fibres poured between the sleepers to form track slab</li> <li>- Delkor egg fasteners installed</li> <li>- Welded 120m lengths of rail pulled into position and fastened</li> <li>- Localised butt welding and grinding</li> <li>- Installation of points and crossovers as above</li> </ul>

Stage	Key activities
	<ul style="list-style-type: none"> <li>- Boundary and perimeter fencing</li> <li>- Construct concrete OHE pedestal</li> <li>- Install structural steel mast and outrigger</li> <li>- Install OHE catenary via high rail platform</li> <li>- Landscaping of formation</li> <li>- Install combined service route</li> <li>- Construct Accessible Transport Corridor (ATC) (shared use pathway)</li> <li>- Construct ATC bridges at waterways</li> <li>- Install Security provisions and cameras</li> </ul>
<b>MEP Interface in Tunnels (Linewide)</b>	<ul style="list-style-type: none"> <li>- MEP to be installed prior to track slabs</li> <li>- Squeezeway to be installed prior to track slabs</li> <li>- Gantry crane on wheels to assist with material, reinforcement, sleeper and rail placement</li> <li>- Cross Passage invert slab to be installed during track slab installation</li> </ul>

## 1.4 Construction Methodology

### 1.4.1 Station Works

The construction methodologies for the four stations include structural works and fit out and vary slightly based on the vertical alignment of the station location, based on works from previous contractors for the Sydney Metro WSA Project. Table 3 details the indicative station construction methodology for each station.

TABLE 3 STATION CONSTRUCTION METHODOLOGY

Station	Vertical Alignment	Construction Method
<b>St Marys</b>	Underground	Cut-and-cover box
<b>Orchard Hills</b>	In-cutting (open cut)	Similar to cut-and-cover box
<b>Luddenham Road</b>	Above ground	Prefab above ground construction
<b>Aerotropolis Core</b>	Underground	Cut-and-cover box

The major construction elements related to cut-and-cover station works will include:

- **Site Establishment:** It is assumed that all temporary services will be established by the previous contractor, although should this not be the case, services will be established along with other site establishment activities such as installation of hoarding, establishment of any parking and office facilities, and installation of access systems
- **Dewatering:** Consideration of handover of the Station Boxes and Tunnelling (SBT) dewatering systems, where applicable, and how this is modified as construction of the Station structures progress. Where handover of dewatering systems is not available, Parklife Metro D&C will install appropriate systems
- **Piling and Subgrade Foundation:** Piling and subgrade foundations will involve installation of bored tensions piles and concrete foundations, and will consider possible alternatives of micro piles or anchors which may be further explored during detailed design
- **Base Slabs, Perimeter Walls and Interior Walls:** Adoption of significant modularisation of formwork, reinforcement for optimised temporary works and program efficiency will be undertaken, along with waterproofing
- **Buildings and superstructure:** A range of techniques are adopted to improve efficiency based on modularisation and offsite manufacture of components to the maximise the efficiency of the build.

Luddenham Station will be constructed as a viaduct structure, which would involve piled substructure supports and superstructure construction using precast concrete segments where suitable.

Surface station construction method would be applicable to Airport Business Park, which is located on Commonwealth land, and is not applicable to this CEMP. Airport Terminal is also located on Commonwealth land and is managed separately to this CEMP and its Sub-plans.

## 1.4.2 Station Precinct Works

Station precinct areas would be constructed following completion of the station works, and would include the integration into surrounding transport modes. The station precinct works would consist of:

- Intersection modifications, including traffic signal changes
- Traffic signal works
- Speed zoning
- Safety infrastructure to protect vulnerable road users and manage vehicle speeds
- Earthworks
- Drainage works
- Kerb and guttering
- Surfacing, including asphalt, concrete and pavers
- Transport interchange facilities (for example bus shelters, etc)
- Public domain and placemaking infrastructure, including landscaping
- Accessibility infrastructure (e.g. accessible ramps and lifts)
- Line-marking, signage and other finishes.

## 1.4.3 Facilities and Associated Works

A stabling and maintenance facility (SMF) will be constructed at Orchard Hills, located to the south of Blaxland Creek and east of the proposed project alignment, with access via Patons Lane.

Buildings located at the stabling and maintenance facility would include Operations Control Centre (OCC), Administration Building, Maintenance Building and substation, and would be constructed using conventional methods. Access roads and car parking would also be required and would include surface works such as kerb and gutter, concrete or pavers, line marking, signage and other finishes. A back-up OCC will be constructed within the St Marys station.

The construction of the stabling and maintenance facility would also include the rail entry/exit structures to the facility from the main track alignment. The SSTOM Works would complete track works and stabling roads to accommodate the stabling of trains for initial and future operating scenarios for the project.

Two shaft locations installed and utilised by previous project contractors (SBT contractor) located at Bringelly and Claremont Meadows will require construction of the lower chambers, along with capping works and shaft backfill works. Urban design and landscaping will also be required at these two shaft locations.

## 1.4.4 Linewide Works

Linewide works form an integral part of the SSTOM works, which will largely consist of:

- **Trackwork:** The rail will be installed onto the track slab, which would be formed by mass concrete pours or ballast for the SMF and surface sections of track. Rail track would be delivered to existing access points, where possible, and welded together to form lengths of up to 120m, for transport along the alignment, or welded into final position where access allows.

- **Signalling and services:** Cable routes would be provided within the tunnel environment for signalling, communications and electricity, with signalling and communication rooms provided at every second cross passage, alternating with power equipment rooms within the other cross passages. Signal equipment rooms and communication rooms would be provided at the stabling and maintenance facility, at each station and alongside the surface alignment as required. Overhead power would be installed on overhead catenary systems, affixed to masts installed on concrete plinths. Other services to be installed include high voltage power, which will be installed within the rail corridor.
- **Corridor works:** Other ancillary works within the SSTOM Works boundary will include boundary and rail fencing and construction of the active transport corridor along with associated landscaping and bridging structures.

### 1.4.5 Construction Program

The indicative construction program is provided in Figure 3 below, which is largely dependent on the progress of previous contractors on the Project (SBT and SCAW) and the site access program. The construction program is expected to commence in early 2023 and continue for just under four years to late 2026.

Construction Phase	2023				2024				2025				2026			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Site Establishment																
Construction of Stabling and Maintenance Facility (SMF)																
Stations Construction																
Station Precinct Construction																
Linewide Works: Trackwork, Rail Infrastructure and Systems																
Testing and Commissioning																

FIGURE 3 INDICATIVE CONSTRUCTION PROGRAM

### 1.5 Ancillary Facilities

The main features and location of the proposed ancillary facilities for the project are described in Table 4 below and are illustrated in Appendix F.

TABLE 4 DESCRIPTION OF PROPOSED ANCILLARY FACILITIES

Location	Description
<b>St Marys</b> Located around the existing Sydney Trains station at St Marys	<ul style="list-style-type: none"> <li>- Double stacked offices and supporting buildings (ablutions, security, etc.)</li> <li>- On site car parking</li> <li>- Wheel wash</li> <li>- Water treatment plant</li> <li>- Substation and electrical infrastructure</li> <li>- Crane pads</li> </ul>
<b>Claremont Meadows</b> Located to the southeast of the intersection of the Great Western Highway and Gipps Street	<ul style="list-style-type: none"> <li>- Site offices and supporting buildings (ablutions, security, etc.)</li> <li>- On site car parking</li> <li>- Wheel wash</li> <li>- Workshop</li> <li>- Water treatment plant and water management controls</li> <li>- Substation and electrical infrastructure</li> </ul>

Location	Description
	<ul style="list-style-type: none"> <li>- Spoil handling area</li> <li>- Crane pads</li> </ul>
<p><b>Orchard Hills</b></p> <p>Located at Orchard Hills, south of the M4 Western Motorway, east of Kent Road and both north and south of Lansdowne Road</p>	<ul style="list-style-type: none"> <li>- Double stacked site offices and supporting buildings (ablutions, security, etc.)</li> <li>- On site car parking</li> <li>- Wheel wash</li> <li>- Materials laydown</li> <li>- Materials warehouse</li> <li>- Batch plant</li> <li>- Workshop and acoustic shed</li> <li>- Water treatment plant and water management controls</li> <li>- Substation and electrical infrastructure</li> <li>- Spoil handling area</li> </ul>
<p><b>Stabling and Maintenance Facility</b></p> <p>Located at Orchard Hills south of Blaxland Creek, to the east of the project alignment and to the north of Patons Lane</p>	<ul style="list-style-type: none"> <li>- Site offices and supporting buildings (ablutions, etc.)</li> <li>- On site car parking</li> <li>- Wheel wash</li> <li>- Materials laydown and warehouse</li> <li>- Workshops</li> <li>- Water treatment plant and water management controls</li> <li>- Substation and electrical infrastructure</li> <li>- Spoil handling area</li> </ul>
<p><b>Luddenham Road</b></p> <p>Located north of Luddenham Road at Luddenham</p>	<ul style="list-style-type: none"> <li>- Site offices and supporting buildings (ablutions, security, etc.)</li> <li>- On site car parking</li> <li>- Materials laydown and storage</li> <li>- Workshops</li> <li>- Water management controls</li> <li>- Substation and electrical infrastructure</li> </ul>
<p><b>Elizabeth Drive</b></p> <p>Located north of Elizabeth Drive at Luddenham</p>	<ul style="list-style-type: none"> <li>- Site offices and supporting buildings (ablutions, security, etc.)</li> <li>- On site car parking</li> <li>- Materials laydown and storage</li> <li>- Workshops</li> <li>- Water management controls</li> <li>- Substation and electrical infrastructure</li> </ul>
<p><b>Bringelly</b></p> <p>Located at the northern end (western side) of Derwent Road at Bringelly</p>	<ul style="list-style-type: none"> <li>- Site offices and supporting buildings (ablutions, security, etc.)</li> <li>- On site car parking</li> <li>- Wheel wash</li> <li>- Workshop</li> <li>- Material laydown and storage yard</li> <li>- Water treatment plant and water management controls</li> <li>- Substation and electrical infrastructure</li> <li>- Spoil handling area</li> <li>- Crane pads</li> </ul>
<p><b>Aerotropolis</b></p> <p>Located to the east of Badgerys Creek Road</p>	<ul style="list-style-type: none"> <li>- Double stacked site offices and supporting buildings (ablutions, security, etc.)</li> <li>- On site car parking</li> <li>- Wheel wash</li> <li>- Materials handling and laydown yard</li> <li>- Water treatment plant and water management controls</li> <li>- Generator and banded fuel storage</li> <li>- Spoil handling area</li> </ul>



## 1.6 Minor Ancillary Facilities

During construction of the SSTOM Works it is anticipated that minor ancillary facilities will be required to support construction. In accordance with Condition A22, additional minor ancillary facilities (eg lunch sheds, office sheds and portable toilet facilities) can be established as long as they satisfy the following criteria:

- Are located within or adjacent to the construction boundary, and
- Have been assessed by the ER to have:
  - Minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the Interim Construction Noise Guideline (Department of Environment and Climate Change, July 2009) (ICNG), traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts
  - Minimal environmental impact with respect to waste management and flooding
  - No impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of the SSI 10051 Planning Approval.

The ER will review the proposed minor ancillary facilities against the above criteria and make an approval determination prior to establishment of the respective minor ancillary facility. A separate application form and risk assessment may be used for assessment and endorsement of minor ancillary facilities if this requirement is triggered.

## 1.7 Additional Ancillary Facilities

During construction of the SSTOM Works it is anticipated that ancillary facilities will be required to support construction. These may include additional stockpiling areas, material handling or treatment areas, site compounds, batching plants or plant and equipment storage areas. Where these ancillary facilities have not been identified in the EIS, or included in this CEMP, the ancillary facilities will be assessed against Condition A17, specifically:

- a) they are located within or immediately adjacent to the Construction Boundary of the CSSI; and
- b) they are not located next to sensitive land use(s) (including where an access road is between the facility and the receiver), unless the landowner and occupier have given written acceptance to the carrying out of the relevant facility in the proposed location; and
- c) they have no impacts on Heritage items (including areas of archaeological sensitivity), threatened species, populations or ecological communities beyond the impacts approved under the terms of this approval; and
- d) the establishment and use of the facility can be carried out and managed within the outcomes set out in the terms of this approval, including in relation to environmental, social and economic impacts.

Where the proposed ancillary facility complies with Condition A17, this CEMP will be updated to include the ancillary facility. In accordance with Condition C3, the revised CEMP will be submitted to the ER for review and endorsement prior to establishment of the respective ancillary facility.

## 1.8 Hours of Work

Standard construction hours for the SSTOM Works are in accordance with Condition E38:

- Monday to Friday 7am to 6pm
- Saturday 8am to 1pm
- At no time on Sundays or NSW public holidays.

In accordance with Condition E39, except as permitted by an Environmental Protection Licence (EPL) or approved in accordance with the Out of Hours Work Protocol, highly noise intensive work that results in an exceedance of the applicable Noise Management Level at the same receiver must only be undertaken:

- Between the hours of 8:00 am to 6:00 pm Monday to Friday

- Between the hours of 8:00 am to 1:00 pm Saturday
- If continuously, then not exceeding three hours, with a minimum cessation of work of not less than one hour.

For the purposes of this condition, 'continuously' includes any period during which there is less than one hour between ceasing and recommencing any of the work.

Any works outside of standard working hours would be permitted in accordance with Condition E41, an EPL or on an approved Out of Hours Work Protocol under Condition E42, which is included in the Noise and Vibration Management Plan.

## 1.9 Cumulative Impact Management

The cumulative impacts associated with the Project were assessed as part of the EIS and are summarised as follows:

- **Transport** – Temporary increase in construction vehicles on the road network as a result of overlapping construction activities from the M12 Motorway, Elizabeth Drive and Western Sydney International
- **Noise and vibration** – Cumulative impacts on sensitive receivers at St Marys and Badgerys Creek would be affected by construction related to the St Marys Intermodal and M12 Motorway, respectively, and
- **Biodiversity** – Potential cumulative biodiversity impacts due the interaction of surrounding projects, including the St Marys Intermodal, The Northern Road, M12 Motorway and Western Sydney International.

When considered in isolation, the environmental and community impacts of an individual project or stage of project may not be significant; however, when combined with the effects of other developments, the resultant cumulative effects can potentially result in a greater extent, magnitude or duration of impacts.

Coordination and consultation with the following stakeholders will occur, as required and in accordance with relevant third-party agreements, to coordinate interfacing projects:

- NSW Department of Planning and Environment (DPE) (through Sydney Metro)
- Sydney Metro (with respect to other Sydney Metro packages of works)
- Western Sydney Airport
- TfNSW (via the Traffic and Transport Liaison Group)
- Western Parkland City Authority
- Sydney Water
- Local Councils (Liverpool City Council and Penrith City Council)
- Emergency service providers
- Utility providers.

Consultation with the above stakeholders will be undertaken via regular interface meetings and updates, which will aim to identify any potential clashes with concurrent works. When required, coordination of mitigation measures will be undertaken to manage the potential cumulative impacts and ensure the interface between other works is managed efficiently and effectively. This coordination may result in:

- Adjustments to the construction program, work activities or haul routes; or adjustments to the program, activities or haul routes of other construction projects
- Coordination of traffic management arrangements between projects or work zones
- Coordination of noise-generating activities and respite, such as out of hours works and highly noise intensive works.

Further details on the management of cumulative impacts across the Project are included in the Cumulative Construction Impacts Management Plan, as required by REMM CL1 and CEMF 3.8(a), which has been prepared by Sydney Metro.

## 1.10 Process for Changes to Approved Project

Detailed design, changed circumstances during construction, or variations to construction practices may result in changes to the SSTOM Works. In accordance with Section 3.1(b)(iii) of the Sydney Metro Construction Environmental Management Framework (CEMF), the Environmental Manager will undertake an additional environmental assessment in consultation with Sydney Metro to determine the consistency of the changes to the Approved Project and identify whether a project modification is required. In accordance with Section 3.7(a) of the CEMF, this Consistency Assessment will include:

- A description of the existing surrounding environment
- Details of the ancillary works and construction activities required to be carried out including the hours of works
- An assessment of the potential environmental impacts of the works, including, but not necessarily limited to, traffic, noise and vibration, air quality, soil and water, ecology and heritage
- Details of mitigation measures and monitoring specific to the works that would be implemented to minimise environmental impacts
- Identification of the timing for completion of the construction works, and how the sites would be reinstated (including any necessary rehabilitation).

Consistency Assessments will be prepared in accordance with Sydney Metro Planning Approval Consistency Assessment template. The assessment would be prepared in consultation with Sydney Metro and the ER. Sydney Metro would be the determining authority of the Consistency Assessment in accordance with Section 5.25 of the *Environmental Planning and Assessment Act 1979 (NSW)* (EP&A Act).

Should the consistency assessment determine that a project modification is warranted, the ER will be informed and a modification application under Section 5.25 of the EP&A Act will be prepared and lodged by Sydney Metro to the Planning Secretary for determination.

Following the approval of consistency assessments and/or project modifications, this CEMP will be reviewed to assess if an update is required. Where this CEMP requires revision, the process in Section 3.11 will be followed.

## 2 CEMP Endorsement and Approval

Consultation and approval requirements for this CEMP and Sub-Plans are defined within the Planning Approval (SSI-10051), as well as the Staging Report. Table 5 summarises the endorsement and approval approach for the SSTOM Works, which takes into account DPE advice received in response to the Staging Report.

### 2.1 External Consultation

Prior to lodgement of this CEMP and Sub-plans to the ER for endorsement, external consultation during the preparation of this CEMP sub-plans and construction monitoring programs was undertaken with relevant government agencies as prescribed by the Conditions. Refer to Table 5 for a summary of the consultation requirements in accordance with the relevant Conditions.

In accordance with Condition C5, details of issues raised by stakeholders during consultation are recorded and included with the relevant CEMP Sub-plan in the manner described in Condition A6.

Refer to Section 3.7 for more information regarding ongoing consultation during delivery of the SSTOM Works.

### 2.2 Endorsement and Approval

The CEMP Sub-plans and construction monitoring programs are to be submitted to the ER for endorsement and/or approval the Planning Secretary for approval no later than one month prior to commencement of construction. The SSTOM Works will not commence until the CEMP Sub-plans and construction monitoring programs have been endorsed by the ER and/or approved by the Planning Secretary in accordance with Condition C10 and Condition C20. At least seven days before the commencement of the SSTOM Works, written notification will be provided to the DPE and relevant Councils in accordance with Condition A35.

A risk assessment to determine the predicted level of environmental risk and community concern posed by the construction activities required to construct the SSTOM Works of the Project has been undertaken and is provided in Appendix C, which informs the Staging Report. The risk assessment and revised Staging Report also informs the approval authority for the CEMP and Sub-plans, which is summarised in Table 5. The approvals process, as detailed in the Staging Report (and accepted by the Planning Secretary), is commensurate with the environmental risk of the SSTOM Works and the level of community concern referenced in the Submissions Report.

TABLE 5 ENVIRONMENTAL REQUIREMENTS FOR AGENCY CONSULTATION

Document	Council	DPE EES	Heritage NSW	DPI Fisheries	EPA	Water NSW	DPE Water	ER	DPE
<b>Construction Environmental Management Plan (This Plan)</b>								E	A
<b>Noise and Vibration Management Sub-plan (C5)</b>	C						C	E	A
<b>Noise and Vibration Monitoring Program (C5)</b>								E	A
<b>Flora and Fauna Management Sub-plan (C5)</b>	C	C		C				E	A
<b>Soil and Water Management Sub-plan (C5)</b>	C			C				E	A
<b>Surface Water Quality Monitoring Program (C13)</b>	C			C			C	E	A
<b>Non-Aboriginal Heritage Management Sub-plan (C5)</b>	C		C			C		E	A
<b>Air Quality Management Sub-plan (CEMF)</b>								E	
<b>Air Quality Monitoring Program (C13)</b>	C							E	A
<b>Visual Amenity Management Sub-plan (CEMF)</b>								E	
<b>Waste Management Sub-plan (REMM)</b>								E	
<b>Groundwater Monitoring Program (C13)</b>							C	E	
<b>Unexpected Heritage Finds and Human Remains Procedure (E34)</b>			C						I
<b>Out-of-Hours Work Protocol (E42)</b>								C	A
<b>Water Pollution Impact Assessment (E130)</b>					C				

A-Approval, E – Endorsement, I – Information, C – Consultation

## 3 Environmental Management Plan

### 3.1 EMS Overview

Parklife Metro D&C will deliver the SSTOM Works using the WeBuild Corporate Environmental Management System (EMS), which is ISO14001:2016 certified as part of their Business Management System and has an excellent track record in environmental performance. The SSTOM Works EMS is fully integrated with Sydney Metro’s Environment and Sustainability Management System (ESMS), as demonstrated in Figure 4, and will build on these minimum standards in our approach to environmental management. The SSTOM Works will seek continual improvement in environmental performance through planning, implementation, evaluation and review, in line with the ISO14001 accredited EMS.

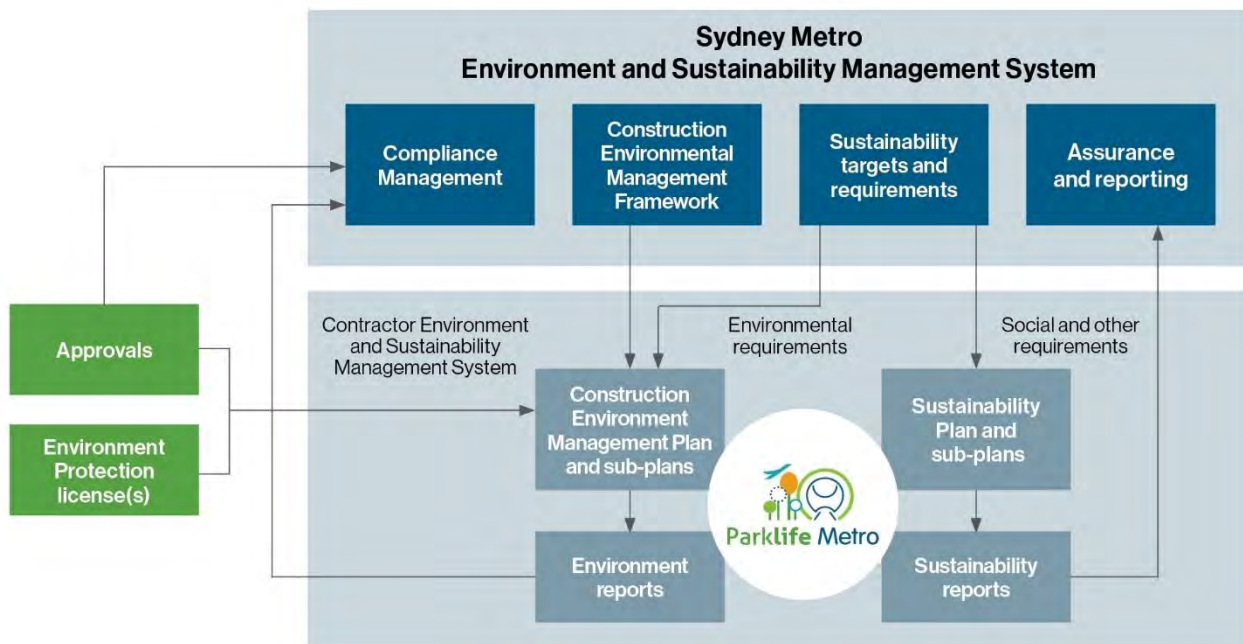


FIGURE 4 INTEGRATION WITH SYDNEY METRO ESMS

The EMS includes a suite of procedures including forms, registers and work instructions that will form the basis of the tools used on the SSTOM Works. Procedures and tools will be revised and amended as necessary or drafted new if required for the SSTOM Works. The EMS is supported and built upon the Parklife Metro D&C Environmental Policy, provided in Appendix A.

The Parklife Metro D&C Environment Manager shall be responsible for reviewing relevant environmental procedures, registers and tools, and developing new PMS documents as required. In the event that environmental procedures within the PMS are amended, this CEMP will be revised to reflect the changes, where required.

#### 3.1.1 Relationship Between CEMP and Other EMS Documentation

This CEMP has been prepared to document how the SSTOM Works will minimise and manage the environmental impacts on off-airport land. To ensure all aspects of the SSTOM Works are managed and completed in accordance with project approvals, there is a suite of other documentation that must also be referred to as having a relationship with this CEMP. The relationship between this CEMP and other relevant document is summarised in Table 6 below.



**TABLE 6 CEMP SUB-PLAN FRAMEWORK**

<b>CEMP Sub-plans</b>	<b>Associated plan or procedure</b>	<b>Relevant documents outside this CEMP</b>
<b>Noise and Vibration Management Sub-plan (C5)</b>	<ul style="list-style-type: none"> <li>- OOHW Permit and Protocol</li> <li>- Noise and vibration Monitoring Program</li> </ul>	<ul style="list-style-type: none"> <li>- Design Management Plan</li> <li>- Interface Management Plan</li> <li>- Incident Management Plan</li> <li>- Detailed Noise and Vibration Impact Statement(s)</li> <li>- Land Use Survey</li> <li>- Condition Survey Reports</li> <li>- Out-of-Hours Works Community Consultation Outcomes on Respite</li> </ul>
<b>Flora and Fauna / Biodiversity Management Sub-plan (C5)</b>	<ul style="list-style-type: none"> <li>- Tree Clearing and Grubbing Procedure</li> <li>- Fauna Handling Procedure</li> <li>- Weed Management Procedure</li> </ul>	<ul style="list-style-type: none"> <li>- Design Management Plan</li> <li>- Incident Management Plan</li> <li>- Tree Survey(s)</li> </ul>
<b>Soil and Water Management Sub-plan (C5)</b>	<ul style="list-style-type: none"> <li>- Unexpected Contaminated Land and Asbestos Finds Procedure</li> <li>- Emergency Spill Response Procedure</li> <li>- Water Reuse and Discharge Management Procedure and Permit to Dewater</li> <li>- Acid Sulfate Soil Management Procedure</li> <li>- Erosion and Sediment Control Management Procedure</li> </ul>	<ul style="list-style-type: none"> <li>- Design Management Plan</li> <li>- Incident Management Plan</li> <li>- Water Reuse Strategy</li> <li>- DSIs / RAPs / SASs / SARs / EMPs / Validation Reports</li> </ul>
<b>Non-Aboriginal Heritage Management Sub-plan (C5)</b>	<ul style="list-style-type: none"> <li>- Sydney Metro Unexpected Heritage Finds Procedure</li> <li>- Sydney Metro Exhumation Procedure</li> </ul>	<ul style="list-style-type: none"> <li>- Design Management Plan</li> <li>- Archival Recording Report</li> <li>- Non-Aboriginal Archaeological Excavation Report</li> <li>- Archaeological Method Statement(s) (AMS)</li> </ul>
<b>Sydney Metro Aboriginal Cultural Heritage Management Plan (prepared by Sydney Metro)</b>	<ul style="list-style-type: none"> <li>- Sydney Metro Unexpected Heritage Finds Procedure</li> <li>- Sydney Metro Exhumation Procedure</li> </ul>	<ul style="list-style-type: none"> <li>- Sydney Metro Heritage Interpretation Strategy</li> <li>- Sydney Metro Archaeological Salvage Report</li> </ul>
<b>Air Quality Management Sub-plan (CEMF)</b>	<ul style="list-style-type: none"> <li>- Air Quality Monitoring Program</li> <li>- Air quality and dust procedure</li> </ul>	<ul style="list-style-type: none"> <li>- Incident Management Plan</li> </ul>
<b>Visual Amenity Management Sub-plan (CEMF)</b>	<ul style="list-style-type: none"> <li>- Visual Amenity Management Procedure</li> </ul>	<ul style="list-style-type: none"> <li>- PUDCLP</li> <li>- Design Management Plan</li> </ul>
<b>Waste (and Recycling) Management Sub-plan (REMM)</b>	<ul style="list-style-type: none"> <li>- Waste Tracking Register</li> <li>- Waste and Recycling Management Procedure</li> <li>- Approved Waste Disposal Site Register</li> </ul>	<ul style="list-style-type: none"> <li>- Sustainability Management Plan</li> </ul>
<b>Groundwater Management Procedure</b>	<ul style="list-style-type: none"> <li>- Groundwater Monitoring Program</li> </ul>	<ul style="list-style-type: none"> <li>- Groundwater Modelling Report</li> <li>- Water Reuse Strategy</li> </ul>

### 3.1.2 Hold Point and Stop Works

The Hold Points identified in Table 7 are applicable to the SSTOM Works and works associated with the Hold Point will not proceed without approval from the nominated approver. These Hold Points have been developed with consideration of Section 3.10b of the CEMF. Stop works triggers, identified in the Sub-plans, have also been included in Table 7 below.

TABLE 7 INDICATIVE HOLD POINTS AND STOP WORKS

Item	Approval Required	Where Addressed	Approver
<b>Hold Points</b>			
<b>Prior to native vegetation clearing</b>	- Pre-clearing inspection	- Flora and Fauna Management Plan	- Qualified Ecologist
	- Erosion and sediment control plan		- Parklife Metro D&C Environmental Manager, or delegate
	- Pre-clearing Permit		
<b>Prior to demolition</b>	- Microbat Survey	- Flora and Fauna Management Plan	- Qualified Ecologist
			- Parklife Metro D&C Environmental Manager, or delegate
<b>Permit to Enter No-go Zone</b>	- Prior to accessing No-go zones	- Flora and Fauna Management Plan	- Parklife Metro D&C Environmental Manager, or delegate
		- Non-Aboriginal Heritage Sub-plan	
<b>Discharge or reuse of water</b>	- Water tested to verify with permitted water quality parameters	- Soil and Water Management Plan	- Parklife Metro D&C Environmental Manager, or delegate
	- Water Discharge or Reuse Permit		
<b>Out of hours works</b>	- Out of Hours Works Permit	- Noise and Vibration Management Plan	- Parklife Metro D&C Environmental Manager, or delegate
<b>Use of local roads by heavy vehicles</b>	- Road Dilapidation Report	- Construction Traffic Management Plan	- Parklife Metro D&C Traffic Manager, or delegate
<b>Construction identified as affecting buildings</b>	- Building Condition Survey by an appropriate professional nominated by the Construction Manager	- Noise and Vibration Management Plan	- Parklife Metro D&C Engineering Manager, or delegate
<b>Establishment of ancillary facility</b>	- Minor Ancillary Facilities Approval (Cond A22) or	- This Construction Environmental Management Plan	- Parklife Metro D&C Environmental Manager, or delegate
	- Update to this CEMP if required		
<b>Stop Work</b>			
<b>PCT or threatened species identified (including prior to clearing)</b>	- Biodiversity Offset Credits reviewed to ensure they have been retired	- Flora and Fauna Management Plan	- Parklife Metro D&C Environmental Manager, or delegate
<b>Native fauna encountered</b>	- (Bats & Fish) Qualified Ecologist	- Flora and Fauna Management Plan	- Qualified Ecologist
	- (Snakes) Snake handler		- Parklife Metro D&C Environmental Manager, or delegate
	- (Other) Site Supervisor / Environmental Coordinator		

Item	Approval Required	Where Addressed	Approver
<b>Unexpected heritage find</b>	<ul style="list-style-type: none"> <li>- Find investigated and management strategy developed as appropriate</li> </ul>	<ul style="list-style-type: none"> <li>- Non-Aboriginal Heritage Management Sub-plan</li> <li>- Sydney Metro Unexpected Heritage Finds Procedure</li> <li>- Sydney Metro Exhumation</li> </ul>	<ul style="list-style-type: none"> <li>- Project Heritage Specialist / Excavation Director</li> </ul>
<b>Contamination and Asbestos Unexpected Finds</b>	<ul style="list-style-type: none"> <li>- Find investigated and management strategy developed as appropriate</li> </ul>	<ul style="list-style-type: none"> <li>- Soil and Water Management Sub-plan</li> <li>- Contamination and Asbestos Unexpected Finds Procedure</li> </ul>	<ul style="list-style-type: none"> <li>- Parklife Metro D&amp;C Environmental Manager, or delegate</li> </ul>
<b>Spill incident</b>	<ul style="list-style-type: none"> <li>- Control and cleanup spill</li> </ul>	<ul style="list-style-type: none"> <li>- Soil and Water Management Sub-plan</li> <li>- Emergency Spill Management Procedure</li> </ul>	<ul style="list-style-type: none"> <li>- Parklife Metro D&amp;C Environmental Manager, or delegate</li> </ul>

## 3.2 Environment and Sustainability Policies

The Environment and Sustainability Policies describe the Parklife Metro D&Cs commitment to sound environmental management across the SSTOM Works. The Environment and Sustainability Policies have been formally endorsed by the Project Director and are binding for all SSTOM Works.

A copy of the Environment and Sustainability Policies are located in Appendix A of this document. The Environment and Sustainability Policies are communicated to all personnel and displayed in prominent positions around the SSTOM facilities.

## 3.3 Objectives and Targets

Objectives and Targets have been developed for the SSTOM Works to provide performance measures which align with the Environmental and Sustainability Policies and EMS. Environmental performance will be measured and regularly reported to Senior Management, as well as through the annual Management Review described in Section 3.11.1. Key environmental targets for the SSTOM Works include:

- Compliance with all legal requirements including the Conditions and all permits and licences
- No regulatory infringements (Penalty Infringement Notices or prosecutions)
- Inspection checklist on time and close out rate within agreed timeframes
- Implement, and continually improve, an EMS that meets the requirements of AS/NZS ISO 14001
- Regularly identify opportunities for improvement,
- Provide training that communicates key environmental issues and management controls
- Completion of internal audits on time to verify compliance with Planning Approvals, EPL and CEMP requirements.

The revised performance outcomes, identified in Section 7.2 of the Submission Report, that relate to construction of the SSTOM Works have been incorporated into the various CEMP Sub-plans.

## 3.4 Planning and Governance

This off-airport CEMP sits within the framework of the Webuild EMS certified to ISO14001:2015, and as discussed in Section 3.1 is supported by a series of environmental sub-plans, procedures and internal permits to maintain a high level of governance with SSTOM Works environmental requirements.

Environmental legislation will be monitored throughout the life of the SSTOM Works construction works to ensure the SSTOM Works remain current with changing environmental legislation or other requirements. The Environment Manager is responsible for reviewing the updates to determine the relevance of the change. When necessary, this CEMP, sub-plans and monitoring programs, and other management plans (required under the CEMF) will be amended to ensure compliance. Regulatory approvals will be obtained or amended as necessary and work practices altered to ensure compliance. All relevant Parklife Metro D&C personnel will be advised of the change (refer to Section 3.5). The EMS is supported by project risk assessments, regulatory and the Project environmental requirements and site-specific documentation.

### **3.4.1 Environmental Aspects and Impacts Risk Assessment**

Risk management processes are a key focus in developing and implementing EMS documentation and understanding the aspects and impacts associated with a project. The objectives of risk assessments are to:

- Identify environmental aspects and impacts that have the potential to adversely affect the local environment, human health or property
- Qualitatively evaluate and categorise each impact
- Assess whether impacts can be managed by environmental protection measures
- Qualitatively evaluate residual risk with implementation of measures.

An initial environmental risk assessment workshop was held on 13 February 2023 to ensure potential risks associated with the SSTOM Works construction activities has been properly considered and that appropriate and adequate controls have been identified. The outcomes of this initial risk assessment were used to inform the development of this plan and is reflected in the Aspects and Impacts Risk Register in Appendix C.

Each activity was assessed to identify associated environmental hazards of each aspect, initial risk levels, mitigation measures and how to avoid, manage and/or minimise risks and impacts and the residual risk following the implementation of the identified measures.

No activities were identified which resulted in a residual environmental risk identified as 'high'. This register is reviewed and updated as part of periodic review this CEMP, or when significant new works are due to commence. More information about CEMP review is provided in Section 3.11. If any risks are identified throughout construction that is considered to have a residual risk rating of high, then this work will undergo focused planning, with the development of an Environmental Work Method Statement (EWMS). The process for the development of EWMS is further discussed in Section 3.4.4.

The risk assessment determined the residual risk level, as provided in Appendix C, and resulted in revision to the SSTOM risk assessment included in the Staging Report, which also informs the approval authority for this CEMP and Sub-plans.

### **3.4.2 On-Going Risk Identification Management**

Ongoing environmental risk and opportunity identification is undertaken throughout project development and construction via the following environmental aspects and impacts risk assessment processes:

- Overarching SSTOM Works risk assessment undertaken and a SSTOM Works Risk Register maintained incorporating high-level environmental risks from the Environmental Risk Register
- Monthly review of the Environmental Risk Register to address construction changes or new risks identified – any new high level environmental risks to be included in the SSTOM Works Risk Register
- Environmental Work Method Statements (refer to Section 3.4.4)
- Risk assessment undertaken on site at pre-start meetings (refer to Section 3.6.4).

The Environment Manager, or their delegate, has approval authority for all risk assessment types to ensure environmental risks and opportunities are adequately identified and addressed.

Ongoing risk identification will be managed and communicated to all relevant personnel through site inductions, pre-start briefings, procedures, environmental control maps, EWMS, safe work method statements (SWMS), toolbox talks and EWMS training, and other general and targeted environmental awareness training. This CEMP and associated Sub-plans may also be revised in response to the ongoing environmental aspects and impacts risk assessments.

### 3.4.3 Relevant Legislation and Approvals

Legislation and regulations that are relevant to the construction of the SSTOM Works are identified in Table 10 below. This table will be regularly reviewed, and updated if legislative changes annually, in accordance with the management review described in Section 3.11.1.

TABLE 8 RELEVANT LEGISLATION OR REGULATIONS

Legislation	Applicability
<b>Environment Protection and Biodiversity Conservation Act 1999</b>	The EPBC Act provides a legal framework for the protection and management of nationally and internationally important flora, fauna, ecological communities, heritage places and matters of national environmental significance. Relevant assessments against the provisions of the EPBC Act were undertaken as part of the EIS and permit requirements are captured in the Flora and Fauna Management Sub-plan.
<b>National Greenhouse and Energy Reporting Act 2007</b>	The NGER Act provides data and accounting obligations in relation to greenhouse gas emissions, energy consumption, and energy production. Parklife Metro D&C will undertake reporting of the SSTOM Works greenhouse gas emission and energy production and consumption under the NGER Act, inclusive of 'material' Subcontractors in accordance with the Sustainability Management Plan.
<b>Biosecurity Act 2015</b>	Noxious and priority weeds are to be managed in a way to restrict their dispersal and establishment. Noxious weeds will be managed in accordance with the Flora and Fauna Management Sub-plan
<b>Biodiversity Conservation Act 2016</b>	Under the provisions of section 5.23(3) of the EP&A Act, directions, Orders or Notices that could otherwise be issued under Part 11 of the <i>Biodiversity Conservation Act 2016</i> cannot be issued for approved CSSI projects. A biodiversity assessment, in the form of a Biodiversity Development Assessment Report (BDAR), was prepared as part of the EIS. Management and mitigation measures as relevant to the SSTOM Works are detailed in the Flora and Fauna Management Sub-plan.
<b>Contaminated Land Management Act 1997</b>	Contaminated land impacted by the SSTOM Works must be assessed and managed in accordance with the <i>Contaminated Land Management Act 1997</i> . Relevant requirements and mitigation measures, including reporting obligations, are detailed in the Soil and Water Management Sub-plan
<b>Dangerous Goods (Road and Rail Transport) Act 2008</b>	<i>The Dangerous Goods (Road and Rail Transport) Act 2008</i> ensures that dangerous goods are transported in a safe manner. Relevant requirements and mitigation measures are detailed in the Overarching Construction Traffic Management Plan.
<b>Environmental Planning and Assessment Act 1979</b>	The EP&A Act is the primary land use planning statute in NSW. It governs matters such as planning administration, planning instruments, development assessments, building certification, infrastructure finance, appeals and enforcement. The Sydney Metro Western Sydney Airport was approved by the Minister for Planning and Public Spaces on 23 July 2021 (SSI 10051) under section 5.19 of the <i>Environmental Planning and Assessment Act 1997</i> (EP&A Act). Relevant Conditions of SSI 10051 Planning Approval are detailed in Appendix B.
<b>Fisheries Management Act 1994</b>	Under the provisions of section 5.23(1) of the EP&A Act, permits that would otherwise be required under sections 201, 205 and 219 of the <i>Fisheries Management Act 1994</i> are not required for approved CSSI projects. Similarly, under the provisions of section 5.23(3) of the EP&A Act, directions, orders or notices that could otherwise be issued under Division 7 of Part 7A of the <i>Fisheries Management Act 1994</i> cannot be issued for approved CSSI projects.
<b>Heritage Act 1977</b>	Under the provisions of sections 5.23(1) and 5.23(2) of the EP&A Act, an approval under Part 4, or an excavation permit under section 139 of the <i>Heritage Act 1977</i> do not apply to approved CSSI projects. In addition, Division 8 of Part 6 of the <i>Heritage Act 1977</i> does not apply to prevent or interfere with the carrying out of approved CSSI projects. Risks to heritage during the SSTOM Works will be managed in accordance with the Non-Aboriginal Heritage Management Subplan.
<b>National Parks and Wildlife Act 1974</b>	Under the provisions of sections 5.23(1) and 5.23(3) of the EP&A Act, permits under section 90 of the <i>National Parks and Wildlife Act 1974</i> and orders and directions pursuant to Part 6A are not applicable to approved CSSI projects. In response to identified Aboriginal heritage impacts, management and mitigation measures are detailed in the Non-Aboriginal Heritage Management Sub-plan and the SMWSA Aboriginal Cultural Heritage Management Plan (August 2021), prepared by Sydney Metro.
<b>Water Management Act 2000</b>	The POEO Act is a key piece of environmental protection legislation in NSW. In addition to defining licencing requirements, the POEO Act establishes the environmental protection framework for pollution (air, water and land), noise emissions, and waste management. Pollution event notification requirements are detailed in Section 7.10 and 7.11.



Legislation	Applicability
	<p>Parklife Metro D&amp;C is in the process of obtaining an Environment Protection Licence (EPL) for construction of railway infrastructure and concrete works, as required under Schedule 1 of the POEO Act, which will be applicable to parts of the SSTOM Works on NSW land.</p> <p>Ongoing review and updates of the EPL Premise Area will be undertaken in line with the Site Access Schedule and the EPL accordingly.</p> <p>Part 5.7A of the POEO Act requires licensees to prepare a Pollution Incident Response Management Plan (PIRMP). The PIRMP will be kept at the premises to which it relates and will be tested in accordance with the regulations and implemented when a pollution incident causes or threatens material harm to the environment.</p>
<b>Roads Act 1993</b>	The <i>Roads Act 1983</i> requires consent to be obtained from the appropriate road authority for the erection of a structure or the carrying out of works in, on or over a public road, or the digging up or the disturbance of the surface of a public road. The requirements of this Act are detailed in the Overarching Construction Traffic Management Plan.
<b>Waste Avoidance and Resource Recovery Act 2001</b>	This Act aims to encourage the most efficient use of resources to reduce environmental harm in accordance with the principles of ecologically sustainable development. Waste avoidance and resource recovery measures are detailed in the Waste Management Plan.
<b>Water Management Act 2000</b>	The objective of this Act is to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations. Under the provisions of section 5.23(1) of the EP&A Act, relevant requirements of the <i>Water Management Act 2000</i> do not apply to approved CSSI projects, including a water use approval (section 89), a work approval (section 90) and an activity approval (section 91).
<b>Water Act 1912</b>	The <i>Water Act 1912</i> is being progressively repealed by the <i>Water Management Act 2000</i> and does not apply where water sharing plans are in place. Groundwater and surface water within and near the SSTOM Works area are covered by the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources (2011). Permit not required.
<b>Liverpool Environment Plan 2008 (Liverpool LEP)</b>	The Liverpool LEP provides local environmental planning controls and standards for land in the Liverpool Local Government Area (LGA) in accordance with the standard environmental planning instrument under section 3.20 of the EP&A Act.
<b>Penrith Environment Plan 2010 (Penrith LEP)</b>	The Penrith LEP provides local environmental planning controls and standards for land in the Penrith LGA in accordance with the standard environmental planning instrument under section 3.20 of the EP&A Act.
<b>Greater Sydney Region Plan 2056</b>	The Greater Sydney Region Plan 2056 has been developed in accordance with Section 3.3 of the Environmental Planning and Assessment to inform district and local plans and the assessment of planning proposals, assist infrastructure agencies to plan and deliver for growth and change and to align their infrastructure plans to place-based outcomes and to inform the private sector and the wider community of the growth management and infrastructure investment intentions of government.
<b>Western Sydney Aerotropolis Plan 2020</b>	This Plan defines how the broader region's environment, waterways, strategic transport network, infrastructure and economy will combine to transform the Aerotropolis into a contemporary metropolitan city and introduces statutory mechanisms to implement the vision and objectives.
<b>State Environmental Planning Policy (Western Sydney Aerotropolis) 2020</b>	This policy will facilitate development in the Western Sydney Aerotropolis in accordance with the objectives and principles of the Western Sydney Aerotropolis Plan and ensure development is compatible with the long-term growth and development of the Western Sydney Airport and other critical transport infrastructure.
<b>Western Sydney Aerotropolis Development Control Plan 2020 – Phase 1</b>	This Phase 1 DCP identifies the precinct planning principles, objectives and performance outcomes to allow precinct planning to progress.

### 3.4.4 Environmental Work Method Statements

Environmental Work Method Statements (EWMS) will be prepared for all high-risk activities, where other risk assessment strategies are not already in place.

The EWMS will incorporate relevant mitigation measures and controls, including those from relevant CEMP Sub-plans and key procedures to be used concurrently with the EWMS. EWMS are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and written instructions. EWMS will be prepared progressively throughout construction, prior to the high-risk activities taking place.



### 3.4.5 Environmental Control Maps

Environmental Control Maps (ECMs) provide a practical translation of environmental risks and where possible, controls for workers, including training and competency requirements. ECMs are specific to a site or activity and incorporate an illustration of the site (including significant structures, work areas and boundaries), identify environmentally sensitive receivers and detail control measures as derived from relevant procedures.

ECMs will be prepared and updated progressively, endorsed by the Environment Manager or delegate, and communicated to relevant workers throughout the construction of the SSTOM Works. Observations made during weekly inspections will prompt ECM updates on an as needs basis.

Initial ECMs are provided in Appendix D, and whilst they have been included in this CEMP, they are separate documents that are edited independently of this CEMP.

### 3.4.6 Erosion and Sediment Control Plans

Erosion and Sediment Control Plans (ESCPs) are planning documents that identify the site layout, general locations of construction works and the approximate location of erosion and sediment control features onsite. ESCPs cover all construction stages from initial vegetation clearing through to rehabilitation when erosion and sediment control are no longer required and are removed.

ESCPs will be prepared and updated progressively, endorsed by the Environment Manager or delegate, and communicated to relevant workers throughout construction. Observations made during weekly inspections will prompt ESCP updates on an as needs basis.

### 3.4.7 Environmental Documentation

The Parklife Metro D&C EMS includes procedures, permits, registers and forms that provide instructions related to environmental management and monitoring of environmental performance. An indicative list of the procedures, permits, registers and forms relevant to the SSTOM Works is provided in Table 9. Additional procedures, permits, registers and/or forms will be developed on an as needs basis.

Parklife Metro D&C will publish relevant documents pertaining to the environmental requirements of the SSTOM Works, as well as up-to-date copies of each document required under the terms of the approval, to the Project Website in accordance with Condition B11. Documents will be published on the project website within one week of the works approved under each document, or prior to commencement of any work to which they relate or before their implementation, as the case may be.

### 3.4.8 Environmental management procedures

#### 3.4.8.1 Aboriginal heritage management

Sydney Metro prepared an Aboriginal Cultural Heritage Management Plan (ACHMP) in accordance with Condition E30. Reflecting the requirements of the ACHMP, Sydney Metro has completed archaeological surveys, test excavations and salvage activities and the final report on these activities is currently being prepared.. Parklife Metro D&C will implement the requirements of the ACHMP and undertake all reasonable steps so as not to harm, modify or otherwise impact Aboriginal objects or places of cultural significance except as authorised by SSI 10051 Planning Approval. This will be achieved through the implementation of the ACHMP, Sydney Metro Unexpected Heritage Finds Procedure and the Exhumation Management Procedure.

#### 3.4.8.2 Traffic and access

To ensure that Parklife Metro D&C minimise and manage traffic and access impacts during construction of the SSTOM Works, the following will be implemented:

- Attendance and participation at the Traffic and Transport Liaison Group (TTLG), which will be a forum to coordinate and manage construction staging and traffic operations, public transport impacts, pedestrian and cyclist route changes, community impacts and cumulative impacts with nearby projects.

- Prepare and implement site-specific Construction Traffic Management Plans (CTMPs), which will be prepared to manage access controls and management of construction traffic around the ancillary facilities and site access points. CTMPs will identify heavy vehicle routes on local roads and will be submitted to the Planning Secretary for information prior to commencement of construction in the area identified and managed within the relevant CTMP.
- Ongoing consultation to minimise pedestrian and access impacts, and to communicate any changes to pedestrian routes and access arrangements.
- Implement strategies to minimise impacts on parking in the local community, which will be developed through consultation with local council and potentially impacted residents.
- Undertake road safety audits to assess permanent road works, including vehicular access, signalised intersection works, and works relating to pedestrians, cyclists, and public transport users, which will be developed in consultation with the TTLG and be made available to DPE upon request.

### 3.4.8.3 Rehabilitation and Reinstatement

At the completion of works, construction sites and areas potentially impacted by construction will undergo handover inspections prior to completion. Handover inspections may utilise pre-construction condition surveys and dilapidation reports to measure the potential rehabilitation and reinstatement efforts required.

Mitigation measures required for reinstatement will include:

- Clear and clean working areas and accesses
- 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
- 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
- Reinstatement of community spaces, infrastructure and services will occur as soon as possible after completion of construction.

### 3.4.9 Groundwater Management

As the SSTOM Works have a low likelihood of negatively impacting groundwater during construction, a Groundwater Management Sub-plan has not been prepared. To manage residual risk and ensure groundwater impacts are duly considered, a Groundwater Management Procedure has been prepared, which is included as an appendix to the Soil and Water Management Sub-plan.

The Groundwater Management Procedure describes how Parklife Metro D&C will manage potential groundwater associated impacts of the SSTOM Works, and includes the Groundwater Monitoring Program, along with a framework for the ongoing implementation of groundwater monitoring on the project, in consultation with the SBT Contractor.

TABLE 9 INDICATIVE ENVIRONMENTAL PROCEDURES, PERMITS, REGISTERS AND FORMS

Record	Function
<b>Environmental Inspection Checklist</b>	To be utilised when completing environmental inspections
<b>Environmental Actions List / Register</b>	To be used in conjunction with the Environmental Inspection Checklist to identify actions that arise during inspection and identify responsibility and timeframe for rectification.
<b>Environmental Incident Register</b>	Used on an as needs basis in response to an environmental incident or non-compliance.
<b>Environmental Non-compliance Register</b>	Used on an as needs basis in response to an identified non-compliance.
<b>Pre-Clearing Procedure / Permit</b>	Used prior to clearing / trimming of vegetation. Refer to the Flora and Fauna Management Plan
<b>Tree Register</b>	Used to record vegetation removal for the purpose of informing revegetation requirements. Refer to the Flora and Fauna Management Plan.
<b>Out of Hours Work Permit</b>	Used in conjunction with the Out of Hours Work Protocol. Refer to the Noise and Vibration Management Plan

Record	Function
<b>Water Reuse and Discharge Management Procedure</b>	Used prior to discharge of water collected in water treatment plants, sediment basins, excavations and holding tanks. Refer to the Soil and Water Management Plan and the Groundwater Management Plan.
<b>Waste Tracking Register</b>	Used to track the disposal or reuse of waste materials and spoil. Refer to the Waste Management Plan.
<b>Waste Disposal Site Register</b>	Used to track active waste and spoil disposal sites. The register includes the site or project name, location, capacity, site owner and which tier the site is classified as under the spoil reuse hierarchy. Refer to the Waste Management Plan
<b>Unexpected Contaminated Land and Asbestos Finds Procedure</b>	Used when SSTOM Works unexpectedly encounter contamination, contaminated land, or asbestos. Refer to the Soil and Water Management Plan.
<b>Emergency Spill Response Procedure</b>	Utilised in response to inadvertent spills of harmful chemicals or hazardous material. Refer to the Soil and Water Management Plan.
<b>Acid Sulfate Soil Management Procedure</b>	Used when working in areas of known PASS/ASS. Refer to the Soil and Water Management Plan.
<b>Sydney Metro Unexpected Heritage Finds Procedure</b>	Used when potential unexpected heritage items, areas, materials are uncovered. Refer to the Non-Aboriginal Heritage Management Plan and SMWSA Aboriginal Cultural Heritage Management Plan.

### 3.4.10 Construction Planning

Construction planning is undertaken to ensure the SSTOM Works are constructed safely, while minimising environmental impacts and achieving compliance with approvals, licences and contractual obligations. Parklife Metro D&C will prepare and implement the construction planning documents in accordance with the Construction Management Plan to ensure a robust process is followed, which will include a cross-functional review and sign-off at key stages.

### 3.4.11 Environment and Sustainability in Design

The Parklife Metro D&C Environment and Sustainability Teams disseminate and communicate the environmental and sustainability requirements to the wider design and construction teams to ensure that environmental and sustainability requirements are identified, considered and fully integrated into the design and construction methodologies. Additional details on sustainability during the SSTOM Works are provided in the Sustainability Management Plan, which was prepared in accordance with Condition E100, in line with the Sydney Metro Sustainability Plan

### 3.4.12 Environment and Sustainability in Procurement

Ongoing involvement in the procurement process includes review and recommendations from the Parklife Metro D&C Environment Manager. Review of environmental performance of sub-contractors will be undertaken and environmental obligations will be included in sub-contracts.

Sustainability requirements in procurement will be detailed in the Sustainability Management Plan, which was prepared in accordance with Condition E100, in line with the Sydney Metro Sustainability Plan.

## 3.5 People, Responsibilities and Communication

The Parklife Metro D&C will ensure effective and open communication and engagement with external and internal stakeholders is established and maintained to create an environment of trust, openness and involvement. Through the central communication point of the Environmental Manager, Parklife Metro D&C will ensure opportunities to minimise impacts are explored and implemented where reasonable and feasible. The key relationships and lines of communication will be led by the Parklife Metro D&C Environment Manager, whilst a description of how environmental responsibilities relate to specific positions is detailed in Table 10. Figure 5 provides an organisational chart for the Parklife Metro D&C Environment and Sustainability Team.

**TABLE 10 AUTHORITY AND ENVIRONMENTAL RESPONSIBILITY**

<b>Position</b>	<b>Authority and Key Environmental Responsibility</b>
<b>Project Director</b>	The Project Director and Construction Managers are responsible for facilitating and enforcing compliance with the environmental requirements of the Contract and this CEMP, and providing sufficient resources to ensure that Parklife Metro D&C meets the environmental responsibilities for the Project. The Project Director and Construction Managers also have responsibilities with regards to environmental Objectives and Targets.
<b>Environment Manager (EM)</b>	<p>The EM is responsible for overall management and implementation of this CEMP, sub-plans, statutory requirements and the CEMF.</p> <p>Key duties include, but are not limited to:</p> <ul style="list-style-type: none"> <li>- Recruiting and managing resources as required to allow implementation of the SSTOM Works environmental requirements</li> <li>- Developing strategies to engage with all Project personnel and Subcontractors to improve awareness, improve compliance, and promote continual improvement and innovation</li> <li>- Developing, maintaining and continually improving the EMS</li> <li>- Developing, implementing and updating the CEMP in accordance with the environmental requirements of the Contract and the principles of ISO14001</li> <li>- Reporting on the adequacy and performance of Parklife Metro D&amp;C and the Sub-contractors, with a view to continually improve the environmental and sustainability performance of the SSTOM Works in accordance with the Objectives and Targets</li> <li>- Providing Sydney Metro with the information necessary to facilitate external communications and providing environmental documents and records as reasonably requested by DPE</li> <li>- Checking, approving and submitting environmental data and required supporting evidence as per the reporting requirements.</li> <li>- The right to stop works on environmental grounds if they expect imminent threat of non-compliance or environmental harm</li> </ul>
<b>Sustainability Manager</b>	<p>The Sustainability Manager is responsible for overall management and implementation of the Sustainability Plan (SP) and its sub-plans. Key duties include, but are not limited to:</p> <ul style="list-style-type: none"> <li>- Providing sustainability advice and leadership to the project team and ultimately responsible for the implementation of the IS Rating Tool and Green Star Buildings v.1 Framework within the Project</li> <li>- Developing strategies to engage with all Project personnel and Sub-contractors to improve awareness, improve compliance, and promote continual improvement and innovation</li> <li>- Reporting on the adequacy and performance of Parklife Metro D&amp;C and the Sub-contractors, with a view to continually improve the sustainability performance of the SSTOM Works in accordance with the Objectives and Targets</li> <li>- Managing submissions to the Infrastructure Sustainability Council (ISC) and the Green Building Council of Australia (GBCA) and management of the interface between ISC, GBCA and Parklife Metro D&amp;C.</li> </ul>
<b>Design Manager</b>	<p>The Design Manager is responsible for:</p> <ul style="list-style-type: none"> <li>- Ensuring that environment and planning requirements are addressed in design development</li> <li>- Providing input into any additional environmental assessments</li> </ul>
<b>Traffic Manager</b>	<p>The Traffic Manager is responsible for:</p> <ul style="list-style-type: none"> <li>- Preparation of site-specific CTMPs</li> <li>- Ensuring that environment and planning requirements are considered during traffic planning</li> <li>- Providing input into any additional environmental assessments</li> </ul>
<b>Work Health and Safety Manager</b>	<p>The Work Health and Safety Manager is responsible for:</p> <ul style="list-style-type: none"> <li>- Ensuring environment and planning requirements are addressed in relevant safety documentation</li> <li>- Working collaboratively with the Project Team and Environment Team for incident management and reporting during incidents that have the potential to cause environmental impacts</li> </ul>
<b>Interface Management Team</b>	<p>The Interface Management Team (IMT) includes the Project Services Manager (PSM), Interface and Approvals Coordinator (IAC), Stakeholder and Community Engagement Manager (SCEM), Construction Manager (CM) and Design Manager (DM). Key responsibilities of the IMT include, but are not limited to:</p> <ul style="list-style-type: none"> <li>- The development and management of key interfaces with stakeholders</li> <li>- The negotiation and coordination of stakeholder agreements</li> </ul>

Position	Authority and Key Environmental Responsibility
	<ul style="list-style-type: none"> <li>- Facilitation of the delivery of contractual obligations to stakeholders.</li> </ul> <p>Overall, the IMT will work to ensure a correct and timely coordination between the different activities required to progress the works.</p>
<b>Stakeholder and Community Engagement Manager</b>	<p>The Stakeholder and Community Engagement Manager is responsible for:</p> <ul style="list-style-type: none"> <li>- Assisting the Environmental Manager in consulting with regulatory agencies</li> <li>- Communicate sustainability initiatives and potential environmental impacts to the surrounding community</li> <li>- Work collaboratively with the Environmental Manager to resolve environmental complaints</li> </ul>
<b>Project Engineers</b>	<p>Project Engineers are responsible for the implementation of environmental requirements as required for their respective scope of works, including obtaining of all internal permits.</p>
<b>Site Supervisors</b>	<p>Site supervisors are responsible for the management of environmental aspects of construction in conjunction with the Environment Manager and Environment personnel, including directing personnel and/or subcontractors to carry out actions to avoid or minimise unintended environmental impacts as well as enforcing stop works and the execution of Hold Points.</p>
<b>Environment personnel</b>	<p>Environmental Advisors (EA) assist in the implementation and monitoring measures required within this CEMP, environmental sub-plans and Sustainability Plan.</p> <p>Key duties include, but are not limited to:</p> <ul style="list-style-type: none"> <li>- On-site implementation of the CEMP and sub-plans;</li> <li>- Advising the workforce and Sub-contractors on the required environmental management actions; including monitoring compliance;</li> <li>- Environmental monitoring/testing, site inspections and audits (including of Sub-contractors);</li> <li>- Communicating environment-related information (notice boards, pre-starts and toolbox talks);</li> <li>- Developing and delivering environmental awareness training/inductions to project personnel;</li> <li>- Compiling environmental data and supporting evidence for monthly and closure reporting;</li> <li>- Providing direction during clearing activities, and checking/validating ground disturbance boundaries before clearing works begin;</li> <li>- Reporting environmental incidents, undertaking incident investigation, developing corrective actions and monitoring their implementation; and</li> <li>- Facilitating engagement of Aboriginal monitors as required.</li> </ul>
<b>Construction personnel</b>	<p>Raising any environmental impacts, issues or concerns immediately to the relevant supervisor.</p>



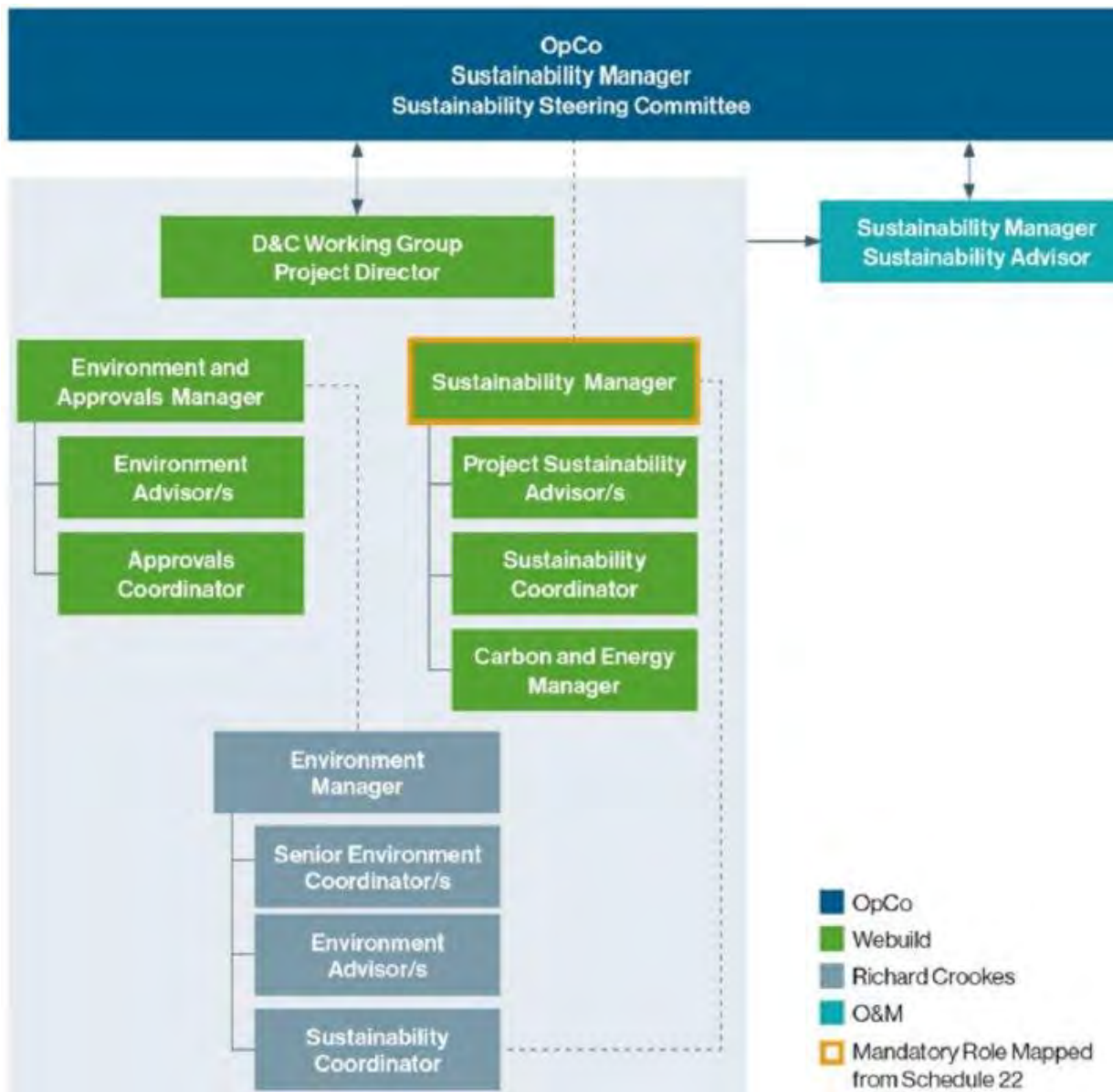


FIGURE 5 ENVIRONMENT TEAM ORG CHART

### 3.5.1 Subcontractors

All procurement for the Project will be conducted in accordance with relevant PMS procedures. The key contract requirements for the SSTOM Works will include:

- Procurement and contract documentation will include environmental management, specific environmental reporting, records and data requirements and sustainability requirements applicable to the product or service. Where relevant, product or service guarantees will be obtained
- Products, suppliers and sub-contractors will be evaluated as to their capability to meet specific environmental and sustainability requirements for the project
- Where applicable, sustainability targets will be included within High Impact Procurement Category contracts.

If required, subcontractors may be required to participate in a risk assessment workshop, facilitated by Parklife Metro D&C, prior to site mobilisation. This will ensure that subcontractors are adequately prepared with regards to environmental management.

All sub-contractors, suppliers and service providers, including significant subcontractors, such as Richard Crookes Construction, will perform works in accordance with this CEMP and Sub-plans. Subcontractors must monitor



compliance with this CEMP and participate in any Parklife Metro D&C inspection or audit, including third party audits of Parklife Metro D&C. It should be noted that significant subcontractors, such as Richard Crookes Construction, will be bound to the environmental requirements of this CEMP, Sub-plans and Project Requirements through way of contractual side deeds.

Parklife Metro D&C has engaged specialist consultants to support Project delivery, as detailed in Table 11.

TABLE 11 SPECIALIST CONSULTANTS SUPPORTING THE SSTOM WORKS

Aspect	Consultant	Scope
<b>Noise and Vibration</b>	VMS	Assist with preparation of Detailed Noise and Vibration Impact Statement (DNVIS), Land Use Surveys and provide acoustic advice
<b>Contamination</b>	ADE	Assist with soil and water sampling, contamination investigations, preparation of water discharge impact assessments, and provide general contamination advice
<b>Soil and Water</b>	Ochre	Prepare/review Erosion and Sediment Control Plan (ESCPs), provide advice on erosion and sediment control risks
<b>Flora and Fauna</b>	WolfPeak	Consulted during the preparation of the Flora and Fauna Management Plan (FFMP). Will support the Project in providing Pre-clearing Inspections and assist with flora and fauna reporting requirements.
<b>Heritage</b>	TBC	A heritage consultant will be appointed to fulfil the role of both archaeologist and heritage architect. The heritage consultant will assist with the classification of potential unexpected heritage finds, provide general heritage advice and manage the conservation / reuse of heritage items.
<b>Environmental Approvals and Support</b>	WolfPeak	Preparation of this CEMP and Sub-plans and environmental and sustainability support to the Parklife Metro D&C.
<b>Sustainability Support</b>	WolfPeak and various	Provide support to the preparation of the PUDCLP, provide design advice and general support to the Parklife Metro D&C Sustainability Team.

### 3.5.2 Sydney Metro

Sydney Metro is the Proponent under the EP&A Act and holds ultimate responsibility to DPE for compliance against the Planning Approval (SSI 10051). Personnel from the Sydney Metro project delivery team will:

- Ensure compliance with the SSI 10051 Planning Approval and Revised Environmental Management Measures (REMMs) held by Sydney Metro, as set out in Schedule 13 of the Deed
- Determine consistency assessments for the SSTOM Works under section 5.25 of the EP&A Act Release land in accordance with site access schedule
- Submit documents to the Planning Secretary in a timely fashion, in accordance with the Planning approval.

### 3.5.3 Environmental Representative

The Environmental Representative (ER) is an independent environmental professional engaged by Sydney Metro and approved by DPE in accordance with the Project Planning Approval (SSI 10051). In accordance with the requirements of Condition A32, the roles and responsibilities of the ER include, but are not limited to, the following:

- Receive and respond to communication from the Planning Secretary in relation to the environmental performance of the CSSI
- Consider and inform the Planning Secretary on matters specified in the terms of this approval
- Consider and recommend to Sydney Metro and Parklife Metro D&C any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community
- Review documents identified in Conditions A10, A18, A20, C1, C5 and C13 and any other documents that are identified by the Planning Secretary, to ensure they are consistent with requirements in or under this approval and if so:
  - Endorse the documents before submission of such documents to the Planning Secretary (if those documents are required to be approved by the Planning Secretary); or

- ii. Endorse the documents before the implementation of such documents (if those documents are only required to be submitted to the Planning Secretary / DPE for information or are not required to be submitted to the Planning Secretary / DPE)
  - iii. Provide a written statement to the Planning Secretary advising the documents have been endorsed.
- e) For documents that are required to be submitted to the Planning Secretary / DPE for information under (d)(ii) above, the documents must be submitted as soon as practicable to the Planning Secretary / DPE after endorsement by the ER, unless otherwise agreed by the Planning Secretary
  - f) Regularly monitor the implementation of the documents listed in Conditions A10, A18, A20, C1, C5 and C13 to ensure implementation is being carried out in accordance with the document and the terms of this approval
  - g) As may be requested by the Planning Secretary, help plan or attend audits of the development commissioned by DPE including scoping audits, programming audits, briefings and site visits, but not independent environmental audits required under Condition A36
  - h) As may be requested by the Planning Secretary, assist DPE in the resolution of community complaints received directly by DPE
  - i) Consider or assess the impacts of minor ancillary facilities comprising lunch sheds, office sheds and portable toilet facilities and the like as required by Condition A22
  - j) Consider any minor amendments to be made to the Site Establishment Management Plan, CEMP, CEMP Sub-plans and construction monitoring programs without increasing impacts to nearby sensitive land use(s), and are consistent with the terms of this approval and the Site Establishment Management Plan, CEMP, CEMP Sub-plans and construction monitoring programs approved by the Planning Secretary and, if satisfied such amendment is necessary, approve the amendment. This does not include any modifications to the terms of this approval
  - k) Prepare and submit to the Planning Secretary and other relevant regulatory agencies, for information, an Environmental Representative Monthly Report providing the information set out in the Environmental Representative Protocol under the heading “Environmental Representative Monthly Reports”. The Environmental Representative Monthly Report must be submitted within seven (7) days following the end of each month for the duration of the ER’s engagement for the CSSI or as otherwise agreed by the Planning Secretary; and
  - l) Assess the impacts of activities as required by the Low Impact Work definition.

With respect to (d) above, the ER is not required to endorse the specialist content in documents requiring specialist review and / or endorsement.

Parklife Metro D&C will work collaboratively with the ER in order to facilitate the requirements of Condition A32 listed above, and will respond to feedback and requests from the ER in a timely and constructive manner.

### **3.5.4 Independent Certifier**

The role of the Independent Certifier (IC) with respect to the environmental management of the SSTOM Works with include, but is not limited to, overseeing the implementation of environmental controls in accordance with this CEMP and Sub-plans.

## **3.6 Training, Awareness and Competency**

The SSTOM Works training needs will be determined on an ongoing basis throughout the life of the works program. As a minimum this will include site induction, regular toolbox talks and topic specific environmental training. A summary of the Training Needs Analysis undertaken for the SSTOM Works is provided in the Training Needs Matrix in Table 12. Evidence and record of training will be maintained in the Competency Management System which will inform the project of any training renewal needs. In the instance a training certificate is no longer valid, or a staff member does not complete required training, they will not be permitted to undertake the work activity in question until competency is confirmed.

### 3.6.1 Project Induction

All personnel working on the SSTOM Package must undertake their work in accordance with this CEMP and generally in a manner that minimises environmental harm. Environmental training / induction shall be delivered to the entire SSTOM workforce before commencing work. The following key environmental and heritage issues are included in the induction:

- Contamination management and unexpected contamination and asbestos finds procedures
- Noise and vibration management
- Flora and fauna management, including ground disturbance protocols
- Aboriginal and non-Aboriginal heritage management requirements
- Hydrocarbon and chemical storage, transport, handling and spill response
- Incident management and reporting
- Environmental due diligence and responsibility for care of the environment.

### 3.6.2 Environmental Awareness Training

Additional training will target specific environmental aspects and risks and will be delivered to the broader workforce to improve general environmental awareness and to specific audiences to manage specific tasks and activities. All environmental awareness training shall be documented by Parklife Metro D&C to ensure that the relevant personnel have received the necessary awareness training. Parklife Metro D&C will maintain Competency Management System to track training needs, completion of training and any renewal due dates. This will inform the overarching environmental training schedule.

### 3.6.3 Toolbox and EWMS Training

Toolbox talks will be delivered throughout the SSTOM Works to educate personnel on environmental issues, recurring hazards and procedural requirements. Toolbox talk topics are risk and/or aspect focussed, delivered on site and may include the following topics:

- Incident response and reporting procedures
- Waste management, minimisation and recycling
- Environmental control maps and identification of environmentally sensitive areas
- Erosion and sediment control
- Out of hours works (OOHW) procedures
- Dust control procedures
- Specific targeted training for activities with an increased risk of environmental impact (EWMS training).

Toolbox talk attendance is mandatory and attendees will sign an attendance form and the records will be maintained. The timing schedule and topic of toolbox talks will be linked to the construction program and associated environmental risks. In addition to toolbox talks. Environmental training will be enhanced through posters, booklets, or alerts, which will be visible around prominent locations around the SSTOM package work areas, from time to time.

### 3.6.4 Daily Pre-Starts

The Supervisor will conduct a pre-start meeting with the site workforce before the commencement of each shift. The pre-start meeting will be used to inform the workforce of activities to be undertaken during the shift, and will include information on environmental protection practices, work area restrictions, hazards and risks and other relevant information. All attendees will be required to sign on to the pre-start and acknowledge their understanding of the issues explained. The environmental component of pre-start meetings will be determined by relevant Supervisor and environmental personnel.

TABLE 12 TRAINING NEEDS MATRIX

Topic	Project Director	Senior Managers	Superintendents	Engineers	Safety	Traffic engineers	Quality	Environmental	Sustainability	Comms team	Supervisors	Leading hands	Labourers	Subcontractors	Design	Administration
<b>Project / Site induction</b>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Incident response</b>	X	X	X	X	X	X		X	X	X	X	X	X	X		
<b>Waste management, minimisation and recycling</b>		X	X	X			X	X	X		X	X			X	
<b>Environmental control maps and sensitive areas</b>		X	X	X				X			X	X	X	X	X	
<b>Erosion and sediment controls</b>			X	X				X			X	X	X	X		
<b>Heritage management</b>			X	X				X			X	X	X	X	X	
<b>Out of hours works procedures</b>		X	X	X		X		X		X	X	X	X	X		
<b>Dust management</b>			X	X				X			X	X	X	X		
<b>EWMS targeted training</b>	X	X	X	X				X		X	X	X	X	X		
<b>Environmental monitoring</b>								X								

## 3.7 Communication

### 3.7.1 Sydney Metro

Communication of environmental issues on the SSTOM Package between Sydney Metro and Parklife Metro D&C must be undertaken through TeamBinder.

Environment and Planning Meetings will be attended by Sydney Metro and Parklife Metro D&C on a weekly basis (unless jointly agreed otherwise), where all relevant environmental and heritage information shall be discussed. Minutes of the weekly meetings will be issued via TeamBinder to all attendees.

Parklife Metro D&C will provide environment-related information as and when requested by the Sydney Metro through TeamBinder, at any progress meeting or contract meetings. Sydney Metro will disseminate environmental-related information to Parklife Metro D&C's during the weekly meeting, or via TeamBinder, in a timely manner.

### 3.7.2 Government Agencies

Consultation with government agencies will be undertaken in accordance with the Planning Approval, statutory requirements and the CEMF. Records of consultation will be maintained and all issues will be given due consideration throughout the SSTOM Works. Effective communication with government agencies will be supported through the implementation of workshops and regular meetings to discuss relevant comments or feedback raised during consultation.

Additionally, Parklife Metro D&C commit to liaising with Sydney Metro to provide appropriate responses to all written requirements or directions received from DPE, which will be complied with at all times in accordance with Condition A5.

### 3.7.3 Project Team Communications

Communication within the internal team on the SSTOM Works will primarily be undertaken utilising emails, but this will be supplemented through the following communication means:

- **Site inductions** – Information to be utilised from the Parklife Metro D&C Project Environmental and Heritage Induction Material
- **Risk assessment workshops** – Describe work-area and/or subcontractor-specific environmental/ heritage hazards
- **Pre-start meetings** – Identify risks to the environment from the day's scheduled activities and set expectations for environmental management and communicate these to personnel
- **Toolbox meetings** – Present a topic relating to environmental management and convey the outcomes of learnings and corrective actions to ensure all personnel are familiar with organisational environmental requirements
- **Noticeboards** – Communicate project-specific environmental information visually through posting on noticeboards
- **Environment and Sustainability Team Meetings** – Internal team meeting to identify key risks or areas of concern, plan upcoming works and activities and ensure that resources are adequate.

### 3.7.4 Community Communications

Community communications will be undertaken in accordance with the Overarching Community Communications Strategy, which is developed in accordance with Condition B1 and is prepared and maintained by Sydney Metro.

The Construction Communications Strategy (CCS) has been developed by Parklife Metro in order to facilitate communication between all parties involved in a construction project, including stakeholders and the local community. Additionally, a plan has been put in place to minimise the impact of construction activities on small businesses in St Marys.

The CCS and sub-plans follow the requirements of Planning Approval SS1 10051, the General Specification, Sydney Metro's Construction Environment Management Framework, Overarching Community Communications Strategy, Construction Complaints Management System, and Transport for NSW's Use of Social Media Policy.

The CCS will include relevant notification and information being distributed to nearby residents and potentially impacted stakeholders, and may include the following:

- OOHW Notifications
- Construction progress updates
- Utilities disruptions
- Changes to pedestrian and/or vehicle access around the work areas.

Parklife Metro D&C will publish relevant documents pertaining to the environmental requirements of the SSTOM Works, as well as up-to-date copies of each document required under the terms of the approval, to the Project Website in accordance with Condition B11. Documents will be published on the project website within one week of the works approved under each document, or prior to commencement of any work to which they relate or before their implementation, as the case may be.

### 3.7.5 Complaints Management

During SSTOM Works, all complaints will be managed in accordance with the Complaints Management System, which will be prepared and maintained by Sydney Metro and has been developed in accordance with Condition B2. The Complaints Register will be maintained, with details in accordance with Condition B4 to be included within the Register. In accordance with Condition B6, the Complaints Register will be provided to the Planning Secretary by Sydney Metro, upon request.

The Sydney Metro Environment and Community Communications Teams and the Parklife Metro D&C Environment Manager and Stakeholder and Community Engagement Manager will ensure:

- The Complaints Register will be provided to the ER on a weekly basis and/or as requested by the ER, in accordance with Condition A33.
- Corrective actions arising from community complaints are applied in consultation with the appropriate construction staff.
- Complaints are managed in accordance with the complaint management conditions of the EPL, Section 4.3 of the CEMF and Parklife Metro D&C's Community Complaints Strategy.

Sydney Metro will include the Collection Statement on the Project website to make prospective complainants aware of their rights under the *Privacy and Personal Information Protection Act 1998* (NSW). For any complaints made in person, the complainant will be made aware of the Collection Statement.

### 3.7.6 Third Party and Contractor Communication

Ongoing communication and consultation with other contractors working on the SMWSA Project will be conducted to ensure construction planning and project coordination is managed effectively. Effective communication with third parties and contractors will be supported through the implementation of regular meetings, site meetings and inspections, and coordinated review of documentation via Teambinder.

This communication will be integral to the handover of construction areas from previous contractors, to ensure the condition of site and environmental controls are satisfactory. The dates of the transfer of construction work areas from other contractors to Parklife Metro D&C, and vice versa, will be scheduled as per the site access schedule, which is subject to change. Handover planning meetings will be held jointly between Parklife Metro D&C and the relevant contractor leading up to the handover date, where Parklife Metro D&C will assume responsibility and control of the construction work area.



## 3.8 Environmental Incident Management

An incident, as defined in the SSI 10051 Planning Approval, is an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance with the terms of the Planning Approval.

Material harm is defined in the Planning Approval as harm that:

- Involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or
- Results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good the harm to the environment).

In accordance with the Sydney Metro Environmental Incident and Non-compliance Reporting Procedure, provided in Appendix E, 'Environmental harm' includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission that results in pollution.

Incidents will be classified and reported in accordance with the Sydney Metro Environmental Incident and Non-compliance Reporting Procedure, which describes specific requirements based on the incident classification. Internally, within Parklife Metro D&C, incidents will be reported, managed and tracked through the use of Glaass Pro, which is a software platform used to manage project management systems.

### 3.8.1 Emergency Planning and Incident Preparedness

Parklife Metro D&C will undertake emergency planning and incident preparedness by implementation of the Emergency Response Plan, as well as ensuring:

- The Emergency Response Plan includes the PIRMP, required in accordance with section 153A of the POEO Act and Section 3.12 of the CEMF
- Emergency response is appropriately resourced and relevant personnel are adequately trained
- Emergency drills are conducted regularly, including annual testing of the PIRMP in accordance with section 133 of the POEO General Regulation
- Siting of spill kits and emergency response equipment at work sites, at dangerous goods storage locations and in accordance with ESCPs.

### 3.8.2 Internal Reporting

All reportable incidents that cause or threaten to cause material harm are to be reported immediately (verbally) and via written communication within 48 hours to the Sydney Metro Environment Lead and ER, in accordance with the Sydney Metro Environmental Incident Classification and Reporting Procedure. Incident notification for specific classes is as follows:

- Class 1 or 2 incidents require immediate verbal notification to the Sydney Metro Environment Lead, contract Environment Manager and the ER as soon as possible after the observer becomes aware of the Class 2 incident.
- Class 3 incidents will be reported to the Sydney Metro Environment Lead within 48 hours verbally and in writing, in accordance with the Sydney Metro Environmental Incident Classification and Reporting Procedure.

Incident reports will be provided to Sydney Metro Environment Manager and the ER, including lessons learnt and proposed measures to prevent the re-occurrence of a similar event. All reasonable efforts will be implemented to avoid and reduce impacts of incidents, with suitable controls enacted. Incidents will be closed out as quickly as possible, taking required action to resolve each environmental incident.

### **3.8.3 External Reporting**

#### **3.8.3.1 DPE Reporting**

In accordance with Condition A41, DPE will be notified via phone or in writing via the major projects website immediately after the Proponent. Any notification via phone must be followed up by a notification in writing within 24 hours of the initial phone call. In accordance with Condition A44, a written report of the incident will be provided to DPE within seven (7) days after the Proponent (Sydney Metro) becomes aware of any non-compliance. Parklife Metro D&C will provide incident report to Sydney Metro to facilitate reporting to DPE within the specified timeframe. . The notification will identify the CSSI (including the application number and the name of the CSSI if it has one), and set out the time, date, location and nature of the incident. It will also describe any consequent non-compliance with the SSI 10051 Planning Approval.

Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Proponent will provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements detailed in Appendix A of the Project Approval, and such further reports as may be requested.

#### **3.8.3.2 EPA pollution incidents**

The NSW EPA is the governing authority for pollution incidents on government projects. In accordance with the Sydney Metro Environmental Incident Classification and Reporting Procedure, where any work or activity is regulated by an Environment Protection License (EPL), notification of a pollution Incident to the EPA should be made by the licensee.

The EPA will be notified immediately of pollution incidents which satisfy the definition of material harm, in accordance with the EPL, where applicable. Notification will be completed via the EPA Environment Line (telephone 131 555) in accordance with Part 5.7 of the POEO Act. In addition, the following agencies will be notified:

- Ministry of Health (NSW Health) (02 9391 9000)
- SafeWork NSW (131 050)
- Penrith City Council (where relevant) (02 4732 7777)
- Liverpool City Council (where relevant) (1300 362 170)
- Fire and Rescue NSW (1300 729 579).

A PIRMP will be available in accordance with section 153A of the POEO Act, and as per the requirements of the EPL. The PIRMP will be included in the project Emergency Response Plan.

For any work or activity that is not regulated by an EPL, notification of pollution Incidents to EPA shall be made by Sydney Metro, unless the contractor is instructed otherwise by Sydney Metro. This includes pollution Incidents that occur as a result of pre-construction activities which may be undertaken prior to an EPL being required for a project.

#### **3.8.3.3 Department of Climate Change, Energy, the Environment and Water**

Incidents associated with unauthorised impact to EPBC Act listed flora and fauna species and/or vegetation communities will be notified to the Department of Climate Change, Energy, the Environment and Water (via the Sydney Metro Environment Manager). The notification will be given in writing as soon as practicable, and no later than two business days after becoming aware of the incident. The notification will specify any condition which is or may be in breach a short description of the incident the location (including co-ordinates), date, and time of the incident.

Within 10 business days, Parklife Metro D&C will provide the Department of Climate Change, Energy, the Environment and Water (via the Sydney Metro Environment Manager) with additional details of the incident, including any corrective action or investigation which Parklife Metro D&C has already taken or intends to take in the immediate future, and the potential impacts of the incident, and the method and timing of any remedial action that will be undertaken by Parklife Metro D&C.

### **3.8.3.4 Heritage NSW**

Where an incident involves a potential impact to an Aboriginal site, relevant authorities such as Heritage New South Wales, and Registered Aboriginal Parties will be notified, and their input sought in closing out the incident. Parklife Metro D&C will liaise with Sydney Metro to facilitate consultation with Heritage New South Wales, as required. Parklife Metro D&C will include the Sydney Metro Heritage Advisor in all correspondence with Registered Aboriginal Parties and maintain records of all consultation and notification.

### **3.8.3.5 WaterNSW**

In accordance with Condition E121 and REMM HR4, Parklife Metro D&C will implement all practical measures to protect the Warragamba to Prospect Water Supply Pipelines infrastructure, as determined as appropriate in consultation with WaterNSW. Any incident within or potentially affecting the Controlled Areas of the WaterNSW Pipelines corridor will also be reported to WaterNSW by Parklife Metro D&C, using the WaterNSW 24-hour Incident Notification Number 1800 061 069, in accordance with Condition A42.

### **3.8.3.6 Department of Primary Industries – Fisheries NSW**

In the event of any fish kill in the vicinity of the works DPI Fisheries will be notified immediately (1800 043 536) in addition to notification to the EPA. Parklife Metro D&C will liaise with DPI Fisheries to investigate and rectify the issue. Work will not recommence in the area until approval is given by DPI Fisheries. NSW Fisheries will also be notified of water quality monitoring exceedances that are determined to be attributable to SSTOM Works.

## **3.8.4 Investigation of Incidents**

All incidents will be investigated to the level required to address the incident classification. Incident investigation reports for Class 1 and 2 incidents will address the requirements of Condition A43 (including the requirements detailed in Appendix A of the Project Approval) and will be provided to Sydney Metro within a timeframe that enables Sydney Metro to provide the incident report to the Planning Secretary in accordance with Condition A43.

## **3.8.5 Preventative and Corrective Actions**

The Environment Manager will maintain an Environmental Incident Register for the duration of the SSTOM Works. All Parklife Metro D&C personnel and subcontractors are required to report environment incidents, non-compliances and near misses to their supervisor and assist in the completion of an Environment Incident Report as directed or required. Subcontractors may be asked to initially prepare an incident report in accordance with their company procedures.

The Environmental Incident Report will identify the corrective and preventative actions required in order to avoid a repeat occurrence of the incident. Actions, responsibilities and timeframes for rectification will be managed within the Environmental Incident Register.

The Parklife Metro D&C EMS is applied to internally report on environmental performance and track environmental compliance. The Glass Pro software platform will be used to record all environmental incidents. This includes:

- Reporting incidents, hazards and near misses, which must be reviewed and closed out by senior management
- Conducting and recording of audits and inspections, and generation of reports
- Tracking non-compliance and corrective actions
- Assigning actions to responsible parties as a result of audits, incidents and inspections.

## 3.9 Monitoring, Inspection and Auditing

### 3.9.1 Compliance Monitoring and Reporting

Parklife Metro D&C will utilise a modular construction management software, Glaass Pro, to manage safety, quality and environmental compliance requirements for the SSTOM Works. The Glaass Pro environmental module provides the following benefits:

- Increases efficiency by eliminating the need for paper-based processes (spreadsheets, paper forms and emails)
- Provide a flexible modular system that is easily configured to individual project and client requirements
- Enables access to real-time information for field teams and all users through cloud-based systems
- Improves project team collaboration and communication, which significantly reduces incidents and improves close-out rates
- Provides ease of use, approved practices, performance monitoring and visible leadership
- Streamlines monitoring, auditing and reporting, saving time and reducing errors
- Ensures data security with project information stored in Australia.

The Glaass Pro system will have the capability to integrate Sydney Metro's Integrated EMS and will allow Parklife Metro D&C to:

- Report incidents, hazards and near misses
- Conduct and record inspection audits and generate reports and analytics
- Track non-compliances and corrective actions
- Assign actions to responsible parties as a result of audits, incidents and inspections
- Implement workflows as a result of environment procedures and the permit/approval process, including hold points.

Compliance with the Project Approval (SSI 10051) and the Revised Environmental Management Measures (REMMs) will be reviewed regularly, with a formal review undertaken annually as part of the Management Review described in Section 3.11.1. This annual review will form the Compliance Tracking Program, which will result in the preparation of Compliance Reports detailing the status of compliance against the environmental requirements. These reports will be made available to Sydney Metro.

Compliance management and reporting may also be facilitated utilising a system to be implemented by Sydney Metro (eg. SAI Global 360 software).

Parklife Metro D&C will satisfy ongoing environmental reporting requirements, which will assist with the management of compliance against the project requirements. Table 13 provides a summary of the indicative environmental reporting applicable to the SSTOM Works.

TABLE 13 INDICATIVE ENVIRONMENTAL REPORTING REQUIREMENTS

Report	Frequency	Source	Responsibility
<b>Environmental Inspection Report</b>	Weekly	– CEMF 3.16 a. – CEMF 12.2 e.	– Environment Manager
<b>EPL Reporting</b>	As per EPL	– EPL	– Environment Manager
<b>EPL Annual Return</b>	Annually	– EPL	– Environment Manager
<b>Construction Monitoring Reporting</b> Reports on the outcomes of monitoring undertaken as per the Air Quality Monitoring Program, Noise and Vibration Monitoring Program, Surface Water Quality Monitoring Program	As per the frequency reported in the applicable Monitoring Program.	– Condition C22	– Environment Manager

Report	Frequency	Source	Responsibility
<b>Environment Performance Report</b> Provides a report on the environmental performance of the SSTOM Works, progress of KPIs, incidents, non-compliances and issues	Quarterly	– Project requirement	– Environment Manager

### 3.9.2 Environmental Monitoring

Parklife Metro D&C will use web-based management solutions to provide a real-time environmental monitoring and management for the SSTOM Works. Whilst specific monitoring requirements are detailed in the Sub-plans and Monitoring Programs in accordance with the applicable Conditions and REMMs (see Table 14), generally the environmental monitoring will target:

- Construction noise and vibration
- Dust
- Weather
- Water quality analysis data.

TABLE 14 CONSTRUCTION ENVIRONMENTAL MONITORING

Source	Description	Relevant Sub Plan
<b>C13, REMM NV2</b>	Noise and Vibration Monitoring Program	Noise and Vibration Management Sub-plan (NVMP)
<b>C13, REMM WQ1</b>	Surface Water Quality Monitoring Program	Soil and Water Management Sub-plan (SWMP)
<b>C13, REMM AQ3</b>	Air Quality Monitoring Program	Air Quality Management Sub-plan (AQMP)
<b>C13, GW5</b>	Groundwater Monitoring Program	Groundwater Management Procedure in the SWMP

### 3.9.3 Environmental Inspections

The Environment Manager will ensure that the SSTOM Works are compliant with the environmental requirements, which will be confirmed via regular inspections. Site environmental inspections will be undertaken to assess the ongoing effectiveness and suitability of the project’s environmental controls, and will include:

- Specific environmental aspects as described in the relevant Sub-plans
- High risk activities and processes
- Work undertaken in environmentally sensitive areas
- Site preparedness inspections to ensure work sites are prepared for emergencies, including adequacy of environmental controls and availability of emergency equipment
- A record of the condition of the environmental controls and mitigations being implemented
- Following significant rainfall events (greater than 20mm in 24 hours).

Evidence of all Environmental Inspection will be kept with the project records. If required, an environmental action list will then be issued to the relevant Supervisor for actioning. Table 15 provides an indicative list of environmental inspections that may be undertaken during the delivery of the SSTOM Works.

TABLE 15 INDICATIVE INSPECTIONS

Inspections	Frequency	Source	Reporting	Who
<b>Regular environmental inspections</b>	Weekly	– CEMF 3.16 a. – CEMF 12.2 e. – CEMF 14.2 b.	– Environmental Inspection Report – Environmental Actions List	– Parklife Metro D&C Environment Team

Inspections	Frequency	Source	Reporting	Who
<b>Pre and Post-rainfall inspections</b>	Prior to heavy rainfall (> 20mm predicted in 24 hours)	– CEMF 12.2 e.	– Environmental Inspection Report (targeting ESC) – Environmental Actions List	– Parklife Metro D&C Environment Team
	Following rainfall >20mm in 24 hours			
<b>Issue specific environmental monitoring</b>	As required	– CEMF 3.16 a.	– Environmental Inspection Report – Environmental Actions List – EWMS	– Parklife Metro D&C Environment Team – Project Managers – Supervisors
<b>ER and Sydney Metro Inspections</b>	Weekly, or as determined by Sydney Metro/ER	– Condition A32 – CEMF 3.16 d.	– Inspection Report	– Sydney Metro – ER
<b>Daily inspections</b>	Daily	– Best practice (including before commencement of works after prolonged shutdowns)	– Supervisors Diary – Environmental Observations Report	– Supervisors
<b>Shutdown inspections</b>	Prior to shutdowns >4 days	– Best practice	– Environmental Inspection Report – Environmental Actions List	– Parklife Metro D&C Environment Team – Project Managers – Supervisors

### 3.9.4 Auditing, Review and Improvement

Parklife Metro D&C will continually improve environmental systems and performance through the implementation of an audit and review program. An indicative audit schedule is provided in Table 16, which will include:

- **Internal auditing** – Risk-based internal audits will be undertaken to ensure ongoing compliance with approval requirements and to assess the effectiveness of site-specific environmental management controls, and provide improvements where possible. This internal audit will be undertaken annually, targeting a specific aspect or risk area of this CEMP and Sub-Plans. The annual schedule of internal audits will be updated at least monthly
- **External audits** – Parklife Metro D&C will provide assistance during independent environmental audits, which will be conducted in accordance with Condition A36, as per the audit schedule prepared by Sydney Metro
- **Reporting** – Reporting on environmental performance and trends in accordance with the SSI 10051 Planning Approval and contractual requirements
- **Management Review** – Undertaking an annual review of environmental performance trends and implementing corrective actions as required, as further described in Section 3.11.1
- **Continual Improvement** – Achieving continual improvement of environmental performance through policy implementation, construction planning, risk management, corrective and preventive actions auditing, design review and auditing/review processes.

TABLE 16 INDICATIVE AUDIT SCHEDULE

Audit	Scope	Timing	Responsibility
<b>Independent audit (Condition A36)</b>	Verify compliance with Project approval and legal requirements, Sydney Metro specifications, construction documentation and any other commitments	12 weeks after commencement of construction and at six-monthly intervals thereafter	Sydney Metro
<b>Independent Audit (EPBC Act Approval)</b>	Verify compliance with EPBC Act Approval	Conducted as requested in writing by the Minister.	Sydney Metro



<b>Sydney Metro Audit (CEMF 3.16 f)</b>	Verify compliance with CEMP, environmental aspects of contract documentation and the CEMF.	Periodically as determined by Sydney Metro	Sydney Metro
<b>Internal audit</b>	Verify compliance with SSI 10051 Planning Approval and legal requirements, EPL and the CEMP and Sub-plans. Assess the adequacy of community consultation and complaint response, environmental training, environmental monitoring and inspections	Annually	Environment Manager

### 3.9.5 Non-Compliance

A non-compliance is a breach of the Parklife Metro D&C EMS which requires a system improvement action. The Parklife Metro D&C Environment Manager will record any non-compliances that are identified during observations, inspection or audits or as a result of a complaint or environmental incident in an Environmental Non-Compliance Register. Where rectification works are required, an appropriate person will be identified by the Environment Manager who will be issued a corrective or preventative action to implement, and a timeframe by when this should be completed. The action will remain open until the Environment Manager has reviewed the supplied evidence and confirmed the non-compliance has been adequately addressed. Environmental non-compliances will form part of the ongoing EMS continual review and improvement process.

In the event that a non-compliance is identified, Sydney Metro, the ER, and the appropriate regulatory agency will be notified immediately. Sydney Metro is responsible for notifying the Planning Secretary of a non-compliance.

#### 3.9.5.1 Planning Approval non-compliance

Reflecting the requirements of Condition A44 and Appendix A of the SSI 10051 Planning Approval, the Planning Secretary will be notified in writing via the Major Projects website within seven days after the Proponent (Sydney Metro) becomes aware of any non-compliance with the Planning Approval (SSI 10051). The non-compliance notification will identify:

- The CSSI number
- The Condition associated with the non-compliance
- Details of the non-compliance and the reasons for the non-compliance (if known)
- Details of what actions have been or will be undertaken to address the non-compliance.

For each non-compliance, suitable corrective or preventative action(s) will be identified and implemented to rectify the event and prevent reoccurrence. Corrective / preventative action(s) and improvement opportunities will be entered into the Environmental Non-compliance Register, which will include details of the issue, action required, timing and responsibilities. The record will be updated with date of close out and any necessary notes. The database will be reviewed regularly to ensure actions are closed out as required.

The ER will also be notified of environmental non-compliances associated with the Planning Approval.

#### 3.9.5.2 EPBC Act Approval non-compliance

A non-compliance against EPBC Act Approval conditions will be notified to the Department of Climate Change, Energy, the Environment and Water (via the Sydney Metro Environment Manager). The notification will be given in writing as soon as practicable, and no later than two business days after becoming aware of the non-compliance. The notification will specify:

- The condition which is or may be in breach
- A description of the non-compliance, including location, date and time.

Within 10 business days, Parklife Metro D&C will provide the Department of Climate Change, Energy, the Environment and Water (via the Sydney Metro Environment Manager) with additional details of the non-compliance, including details of any corrective or preventative action(s), additional details that have become known during

investigations, or details of investigations that Parklife Metro D&C intend to undertake in response to the non-compliance.

## 3.10 Records of Environmental Activities

The Parklife Metro D&C Environment Manager is responsible for maintaining all environmental management documents and records and ensuring they are current. These include:

- All environmental monitoring, inspection and compliance reports/records
- Environmental monitoring data
- Reports on environmental incidents, other environmental non-compliances and follow-up actions
- Results of internal and external audits
- Remedial actions
- Minutes of environmental management system review meetings and evidence of any actions taken
- Induction and training records
- Procedures and protocols
- Checklists, forms and templates
- Correspondence with public authorities and government agencies
- Complaints and enquiries received, and follow-up actions
- Notifications received by regulators
- Community engagement information
- The CEMP and associated Sub-plans
- EWMS.

Parklife Metro D&C will retain compliance evidence detailing the outcomes of environmental inspections, internal Parklife Metro D&C audits and external Sydney Metro audits. These records will be reviewed by the Environment Manager in accordance with the Sydney Metro Compliance Tracking Program and will be utilised in the preparation of Compliance Reports detailing the outcome of any surveillance activities. These reports will be made available to Sydney Metro.

Parklife Metro D&C will publish relevant documents pertaining to the environmental requirements of the SSTOM Works, as well as up-to-date copies of each document required under the terms of the approval, to the Project Website in accordance with Condition B11. Documents will be published on the project website within one week of the works approved under each document, or prior to commencement of any work to which they relate or before their implementation, as the case may be.

## 3.11 CEMP Revision

### 3.11.1 Management Review

Management reviews of the EMS will be undertaken as part of our rigorous continual improvement process. The purpose is to periodically examine the effectiveness and proper implementation of the CEMP and sub-plans to ensure that the system is meeting the requirements of the standards, policies and objectives and, if not, to amend the CEMP to ensure compliance.

Management reviews will be undertaken annually by the Environmental Manager and include:

- A review of the aspects and impacts register and environmental risk assessment
- Analysis of the causes of non-compliances
- Consideration of incidents and lessons learnt
- A review of the adequacy and effectiveness of environmental controls, resources and training programs
- Identification of potential improvements to the environmental management documentation
- A review of compliance with legal and other requirements and consideration of new issues
- Issues raised during environmental surveillance and monitoring

- Review of any Modifications to the Infrastructure Approval to determine potential considerations required by the Project and identify any revisions to the CEMP or Sub-plans

The Senior Management Team will contribute to the annual performance review. The outcomes of the management review will be documented. Any corrective / preventative actions or improvement opportunities will be entered into the Parklife Metro D&C quality system database, including details of the issue, action required, timing and responsibilities.

The Environmental Manager will determine when this Plan is required to be updated, which may occur as a result of an annual performance review, or as a result of project changes, construction updates, risk reviews, or general observations throughout construction. Whilst Section 2 provides information on the process for endorsement and approval of the CEMP, the ER may approve necessary minor amendments in accordance with Condition A32(j).

Minor changes to this CEMP and the Sub-plans and Monitoring Program that will be approved by the ER would generally comprise changes that are of an administrative or minor nature, which do not increase impacts to nearby sensitive land use(s) and are consistent with the terms of the Infrastructure Approval and the documents as approved by the Planning Secretary. Where the ER deems it necessary (ie. where the change is not considered to be minor), the amended CEMP, Sub-plans or Monitoring Program will be provided to the Planning Secretary for approval.