EASTERN TUNNELLING PACKAGE
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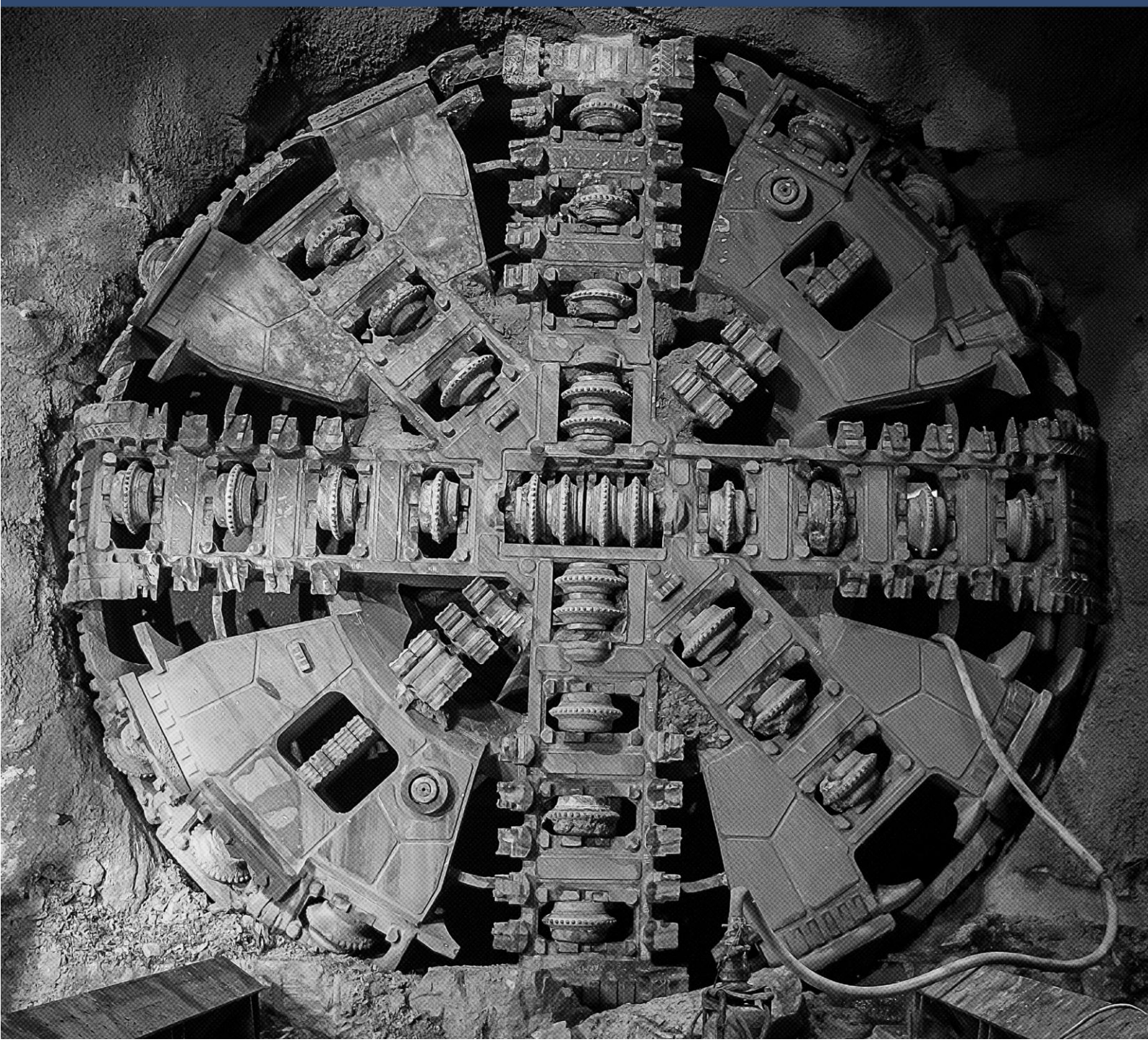
WASTE MANAGEMENT

SUB-PLAN



WASTE MANAGEMENT SUB-PLAN

Project number	7040
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Document approval

Rev	Date	Prepared by	Reviewed by	Comments	Approved by
[redacted]					
Signature:					[redacted]

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Compliance

Table 1: Compliance matrix

ID	Requirement[1]	Reference
C1	Construction Environmental Management Plans (CEMPs) and CEMP Sub-plans must be prepared in accordance with the Construction Environmental Management Framework (CEMF) included in the documents listed in Condition A1 to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 will be implemented and achieved during construction.	Section 1.1
C5	Of the CEMP Sub-plans required under Condition C1, the following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan. Details of issues raised by a government agency during consultation must be included in the relevant CEMP Sub-plan, including copies of all correspondence from those government agencies as required by Condition A6. Where a government agency (ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why: (a) Noise and vibration: Place Management NSW (in respect of The Bays) and Relevant Council(s) (b) Flora and fauna: DPHI Environment and Heritage Group, DPI Fisheries, and Relevant Council(s) (c) Heritage (Non-Aboriginal and Aboriginal): Heritage NSW, Place Management NSW (in respect of The Bays) and Relevant Council(s) (d) Spoil: Relevant council(s) (e) Soil and water: DPHI Water and Relevant Council(s)	The requirements of this Condition are not triggered by the Waste management Sub-plan
C6	The CEMP Sub-plans must state how: (a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved;	Part B, Table 18
	(b) the mitigation measures identified in the documents listed in Condition A1 will be implemented;	Part B, Table 17
	(c) the relevant conditions of this approval will be complied with; and	Part B, Table 16
	(d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles	Section 1.2 and Table 3
C7	With the exception of any CEMP Sub-plans expressly nominated by the Planning Secretary to be endorsed by the ER, all CEMP Sub-plans must be submitted to the Planning Secretary for approval.	Section 1.4
C8	The CEMP Sub-plans not requiring the Planning Secretary's approval must obtain the endorsement of the ER as being in accordance with the conditions of approval and all relevant undertakings made in the documents listed in Condition A1. Any of these CEMP Sub-plans must be submitted to the ER with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is phased no later than one (1) month before the commencement of that phase.	Section 1.4
C9	Any of the CEMP Sub-plans to be approved by the Planning Secretary must be submitted to the Planning Secretary with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is phased no later than one (1) month before the commencement of that phase.	Section 1.4
C10	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Planning Secretary or endorsed by the ER (whichever is applicable), unless otherwise agreed by the Planning Secretary. The CEMP and	Section 1.4

ID	Requirement[1]	Reference
	CEMP Sub-plans, as approved by the Planning Secretary or endorsed by the ER (whichever is applicable), including any minor amendments approved by the ER, must be implemented for the duration of construction. Where construction of the CSSI is phased, construction of a phase must not commence until the CEMP and CEMP Sub-plans for that phase have been approved by the Planning Secretary or endorsed by the ER upon nomination by the Planning Secretary (whichever is applicable).	

1. Other relevant compliance obligations are detailed in Part B of this Sub-Plan (Element 4).

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Acronyms

Table 2: Acronyms

Acronym	Definition
ASS	Acid Sulfate Soil
CEMP	Construction Environmental Management Plan
DPHI	Department of Planning, Housing and Infrastructure
E&SMS	Environment and Sustainability Management System
ECM	Environmental Control Map
EIS	Environmental Impact Statement
ENM	Excavated Natural Material
Environmental aspect	Defined by AS/NZS ISO 14001:2015 as an element of an organisation's activities, products or services that can interact with the environment.
Environmental impact	Defined by AS/NZS ISO 14001:2015 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
Environmental objective	Defined by AS/NZS ISO 14001:2015 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve.
Environmental target	Defined by AS/NZS ISO 14001:2015 as a detailed performance requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.
EP&A Act	Environmental Planning and Assessment Act 1979
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence
ETP Works	Eastern Tunnelling Package Works
ER	Environmental Representative
GSW	General Solid Waste
IC	Independent Certifier
JCG	John Holland CPB Ghella Joint Venture
OOHW	Out-of-hours work
PASS	Potential Acid Sulfate Soil
POEO Act	Protection of the Environment Operations Act 1997
Project, the	Eastern Tunnelling Package
REMM	Revised Environmental Mitigation Measure
RRE	Resource Recovery Exemption
RRO	Resource Recovery Order
RSW	Restricted Solid Waste
SCC	Specific Contaminant Concentrations
SM	Sydney Metro
SSI	State Significant Infrastructure
STP	Slurry Treatment Plant
TBM	Tunnel Boring Machine

Acronym	Definition
VENM	Virgin Excavated Natural Material
WARR Act	Waste Avoidance and Resource Recovery Act 2001
WRAPP	NSW Government's Waste Reduction and Purchasing Policy
WMP	Waste Management Sub-plan
WTP	Water Treatment Plant

Part A: Overview

1. Introduction

1.1. Purpose

This Waste Management Sub-plan (WMP or Sub-plan) is applicable to the construction of the Sydney Metro West - Eastern Tunnelling Package (ETP Works or the Project). This Sub-plan describes how John Holland CPB Ghella Joint Venture (JCG) will minimise and manage the waste impacts of the Project.

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

- State Significant Infrastructure (SSI) 19238057 Infrastructure Approval (dated 24 August 2022) and relevant conditions of the Sydney Metro West Concept Schedule 2 of SSI 10038 Infrastructure Approval (dated 11 March 2021) (Infrastructure Approvals)
- Environment Protection Licence 21784 (EPL)
- Sydney Metro West – Stage 2 – Phasing 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 including the ETP Deed and General and Particular Specifications
- Applicable legislation.

1.2. Objectives, targets and key performance indicators

The objectives, targets and key performance indicators for waste management are detailed in Table 3.

Table 3: Objectives, targets and key performance indicators

Objectives	Targets	Key Performance Indicators
Minimise waste throughout the project life cycle	100% re-use or recycling of re-usable spoil 95% recycling of construction and demolition waste	Waste disposal and diversion register
Waste management strategies will be implemented in accordance with the Waste Avoidance and Resource Recovery Act 2001 management hierarchy as follows: ▪ Avoidance of unnecessary resource consumption ▪ Resource recovery (including reuse, reprocessing, recycling and energy recovery) ▪ Disposal	95% recycling of construction and demolition waste >90% (by volume) of inert and non-hazardous waste diverted from landfill >60% (by volume) of office waste diverted from landfill	Waste disposal and diversion register
Ensure all waste is assessed, classified, managed, transported, and disposed of in accordance with the Waste Classification Guidelines.	100% of waste classified and documented in waste management reports 100% of waste disposal records retained	Waste disposal and diversion register Compliance Reporting Audits

1.3. Context and interface with other plans

To achieve the intended environmental performance outcomes of the Project, JCG have established an Environment and Sustainability Management System (E&SMS) in accordance with the requirements of ISO 14001:2016. Guided by the Environment and Sustainability Policy, the E&SMS consists of a Construction Environmental Management Plan (CEMP), issue-specific procedures, Sub-plans and monitoring programs as illustrated in Figure 1. Implementation of the E&SMS is achieved through tools, checklists and forms as detailed in the CEMP.

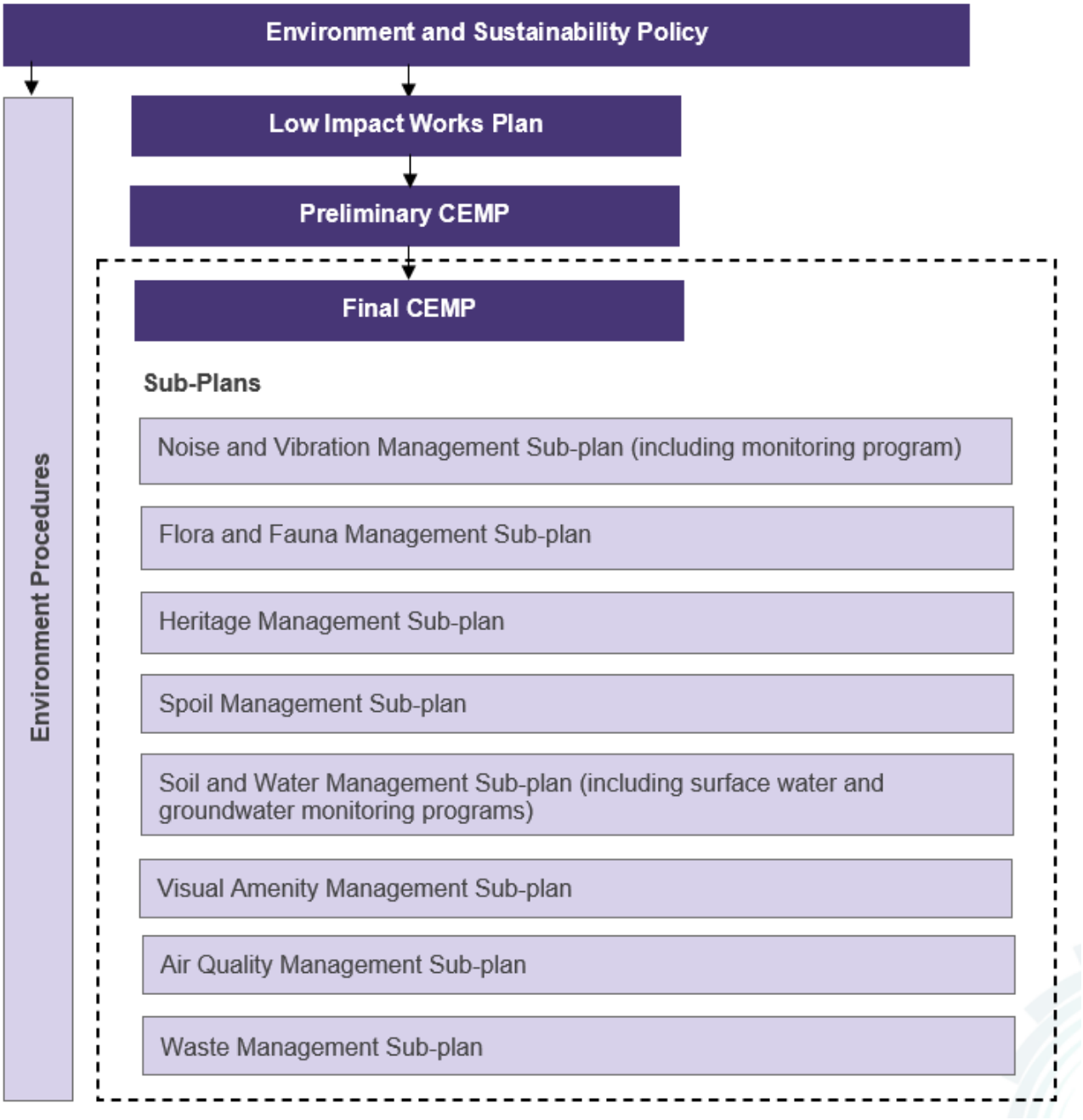

Figure 1: CEMP Framework

1.4. Consultation and approval

Reflecting the requirements of Conditions A6 and C5, there are no stakeholder consultation requirements associated with the preparation of this Sub-plan.

As nominated in the Phasing Report, this Sub-plan does not require the Planning Secretary's approval and has been endorsed by the ER as being in accordance with the conditions of approval and all relevant undertakings made in the EIS and Submissions Report. The CEMP, Sub-plans and monitoring programs were submitted to the ER no later than one month before the relevant construction phase.

Construction will not commence until the CEMPs, Sub-plans and monitoring programs have been approved by the Planning Secretary or endorsed by the ER (whichever is applicable). The CEMPs, Sub-plans and monitoring programs, as approved by the Planning Secretary or endorsed by the ER (whichever is applicable), including any minor amendments approved by the ER, will be implemented for the duration of the Project. In accordance with the Sydney Metro Phasing Report, construction of a phase will not commence until the CEMP and CEMP Sub-plans for that phase have been approved by

the Planning Secretary or endorsed by the ER upon nomination by the Planning Secretary (whichever is applicable).

1.5. Sub-Plan structure

Table 4: Plan structure

Part	Details
Part A: Overview	▪ Project overview ▪ Legal and other requirements ▪ People and collaboration ▪ Existing environment ▪ Environmental aspects and impacts ▪ Environmental control measures ▪ Compliance management ▪ Review and improvement
Part B: Implementation Systems and Tools	This section summarises the systems and tools that will be implemented to achieve compliance with the Infrastructure Approval, REMMs, CEMF and EPL.
Part C: Annexure	Further documents and information that support this Sub-Plan include: ▪ Appendix A: Procedures ▪ Appendix B: Register of Disposal Sites

2. Project overview

2.1. Background

Sydney Metro West a new 24-kilometre metro line that will connect Greater Parramatta with the Sydney CBD via stations at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays, Pyrmont and Hunter Street (Sydney CBD).

The planning process for Sydney Metro West was assessed as a staged infrastructure application under section 5.20 of the *Environment Planning and Assessment Act 1979* (EP&A Act).

Stage 1 of the development, the Sydney Metro West Concept and major civil construction work for Sydney Metro West between Westmead and The Bays (SSI-10038 Schedule 2), was approved on 11 March 2021 and includes:

- Construction of a new passenger rail infrastructure between Westmead and The Bays, including:
  - Tunnels, stations (including surrounding areas) and associated rail facilities
  - Stabling and maintenance facilities (including associated underground and overground connections to tunnels)
- Modification of existing rail infrastructure, including stations and surrounding areas
- Ancillary development.

Stage 2 of the planning approval process (this Project) includes all major civil construction work including station excavation (at the Pyrmont Station and Hunter Street Station (Sydney CBD) construction sites) and tunnelling between The Bays and Sydney CBD (Figure 2).

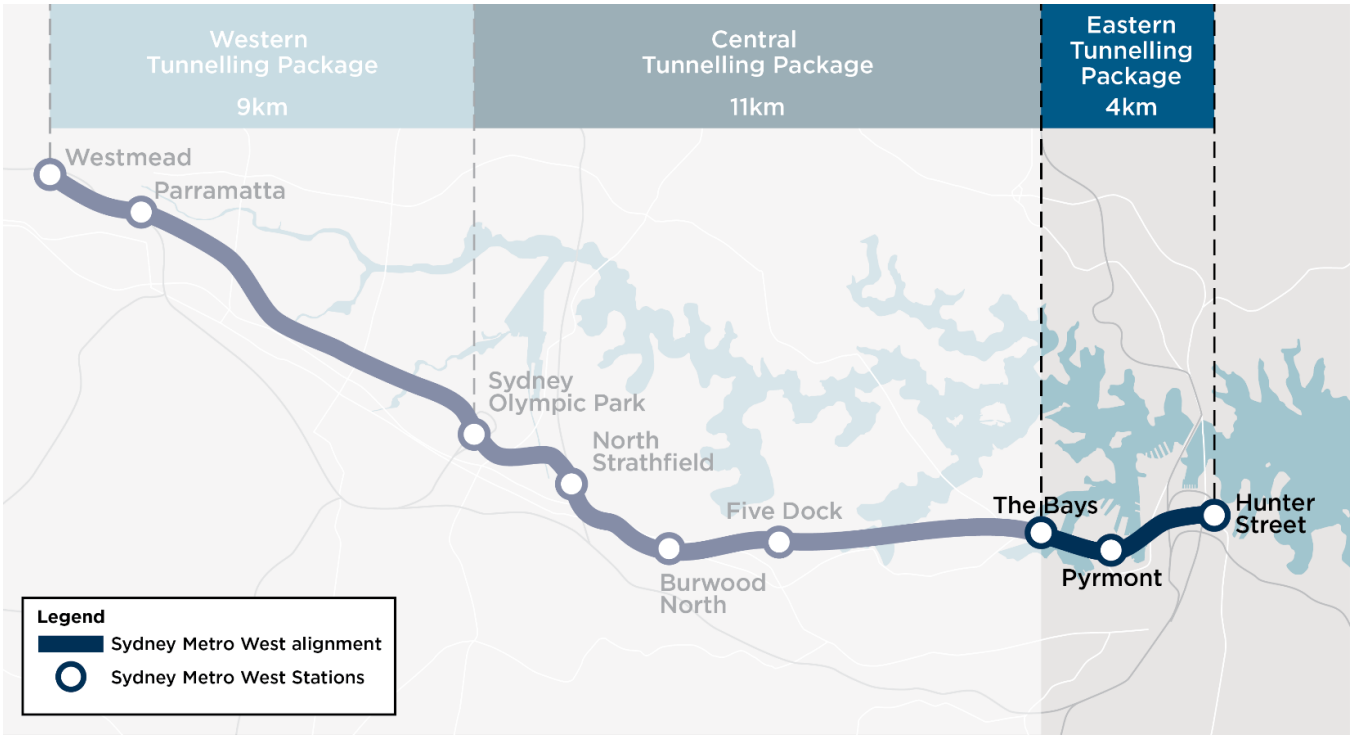

Figure 2: Overview of the Sydney Metro West alignment

2.2. Project scope

The ETP Works (construction) involves the delivery of:

- Enabling works such as demolition, utility supply to construction sites, utility adjustments and modifications to the existing transport network
- Mined crossover cavern construction
- 4.2 km of TBM tunnel excavation, 650m of mined tunnels and 12 cross passage excavation, from The Bays to Sydney CBD
- Excavation for two new underground metro stations at Pyrmont and Hunter Street
- Construction of a turnback, crossover tunnels and caverns at the eastern end of the tunnel section

- A concrete segment facility for use during construction located at Eastern Creek (outside of the scope of this Sub-plan).

2.3. Project phasing

Reflecting the outcomes of a detailed environmental risk assessment, the ETP Works will be delivered through a phased approach. This approach, detailed in the Phasing Report, includes Low Impact Works as defined under the SSI 19238057 Infrastructure Approval and the activity-based phases for construction (Table 5). Additional details on the phasing of construction activities at each worksite is provided in Table 6.

Table 5: Overview of ETP Works phasing

Phase	Description	Indicative timing	Environmental documentation	Consultation and approvals
Low Impact Works	Activities defined as Low Impact Works under SSI 19238057 Infrastructure Approval, including survey work, investigations, utility relocations, installation of environmental controls and initial demolition works	November 2022 to May 2023	▪ Low Impact Works Plan ▪ Low Impact Work Applications ▪ DNVIS[1]	▪ Sydney Metro review ▪ ER endorsement
Preliminary Works	Including works within the existing Hunter Street East acoustic shed, and critical enabling works which are required to be conducted outside of standard hours	March to May 2023	▪ PCEMP ▪ Environmental Procedures ▪ DNVISs[1]	▪ Sydney Metro review ▪ Stakeholder consultation (refer to Section 1.4) ▪ ER and AA endorsement
Tunnelling, Excavation and Associated Works (addressed in this Sub-plan)	Including the Preliminary Works (not completed prior to approval of the final CEMP), demolition of existing industrial premises, site establishment, piling and shaft excavation, tunnelling, and decommissioning	May 2023 onward	▪ CEMP ▪ Sub-plans ▪ Environmental Procedures ▪ DNVISs[1]	▪ Sydney Metro review ▪ Stakeholder consultation ▪ ER and AA endorsement ▪ DPHI approval (as determined by the Phasing Report)

NOTES:

1. DNVISs are allocated a title that is deemed to be appropriate at the time of preparation (e.g. Low Impact Works DNVIS). It is noted that the scope of works captured within this CEMP may be included in a DNVIS prepared for an earlier phase.

Table 6: Overview of ETP Works by worksite and work phase

Worksite	Site condition at handover to JCG	Low Impact Works	Preliminary Works	Tunnelling, Excavation and Associated Works
Project wide design survey and investigations	▪ N/A	▪ Survey control, instrumentation and monitoring including installation of benchmarks and installation of optical survey targets ▪ Geotechnical drilling (locations to be confirmed in Environmental Control Maps)	▪ Survey control, instrumentation and monitoring including installation of extensometers and piezometers (outside of standard construction hours) ▪ Geotechnical drilling (OOHW)	▪ N/A
The Bays	▪ Existing Central Tunnelling Package (CTP) Worksite ▪ Existing shaft (30 metres in depth) ▪ Existing high voltage construction power supply conduits ▪ Existing temporary buildings	▪ Installation of environmental controls[1] ▪ Use of existing offices and amenities for start-up[1] ▪ Secure site[1] ▪ Establishment of pedestrian bridge over site access road[1]	▪ Installation of environmental controls[1] ▪ Use of existing offices and amenities for start-up[1] ▪ Secure site[1] ▪ Establishment of pedestrian bridge over site access road[1]	▪ Installation of environmental controls[1] ▪ Use of existing offices and amenities for start-up[1] ▪ Secure site[1] ▪ Establishment of pedestrian bridge over site access road[1] ▪ Establishment of additional temporary offices amenities and car parking ▪ Establish high voltage construction power supply and water supply from existing Central Tunnelling Package substation ▪ Nozzle enlargements and TBM launch stub tunnels ▪ TBM assembly, launch and tunnelling support works from an existing shaft ▪ Cross passage construction ▪ Segment storage, temporary Water Treatment Plant (WTP) and Slurry Treatment Plant (STP) ▪ Principal spoil handling facility for ETP Works
Pyrmont West	▪ Existing buildings:	▪ Establish portable amenities ▪ Initial demolition works including:	▪ Initial demolition works including:	▪ Initial demolition works including:

Worksite	Site condition at handover to JCG	Low Impact Works	Preliminary Works	Tunnelling, Excavation and Associated Works
	– 26-32 Pyrmont Bridge Road, Pyrmont (five stories including two basement levels)	– Hazmat investigation and structural investigation – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip only)[1] ▪ Five archaeological test trenches and, if triggered, salvage excavations[1] ▪ Prepare archival recordings (subject to access)	– Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip only)[1] ▪ Five archaeological test trenches and, if triggered, salvage excavations[1] ▪ Utility adjustment works, including: – Appropriately 20m of trenching in the northern footpath of Pyrmont Bridge Road (day shift) – Approximately 50m of trenching in Paternoster Row (day shift) – Removal of overhead cabling from the northern footpath of Pyrmont Bridge Road (one OOHW shift) ▪ Adjustment of property utility connections	– Hazmat investigation and structural investigation – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip)[1] ▪ Five archaeological test trenches and, if triggered, salvage excavations[1] ▪ Establish site including new construction access driveways, site hoardings, instrumentation and monitoring ▪ Utility works, including establishment of temporary construction services, investigation and protection of existing assets, and decommissioning of redundant assets ▪ Demolition of existing buildings ▪ Archaeological monitoring during basement slab removal and investigations (if required) ▪ Establishment and use of temporary offices and amenities ▪ Excavation of temporary shaft within the station shaft footprint ▪ Installation of acoustic shed with gantry crane and steel bridging deck for excavation of station shaft, pedestrian and service adits and spoil handling for cross over cavern ▪ Permanent concrete lining of cavern and adit connections

Worksite	Site condition at handover to JCG	Low Impact Works	Preliminary Works	Tunnelling, Excavation and Associated Works
				▪ Installation of acoustic shed will support material handling outside standard hours of work
Pyrmont East	▪ Existing buildings – 37-69 Union St, Pyrmont (four stories with no basement)	▪ Establish portable amenities ▪ Initial demolition works including: – Hazmat investigation and structural investigation – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip only)[1] ▪ Detailed Site Investigation[1] ▪ Street tree removal[1]	▪ Initial demolition works including: – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip only)[1] ▪ Detailed Site Investigation[1] ▪ Street tree removal[1] ▪ Adjustment of property utility connections	▪ Initial demolition works including: – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip)[1] ▪ Detailed Site Investigation[1] ▪ Street tree removal[1] ▪ Establish site including new construction access driveways, site hoardings, instrumentation and monitoring ▪ Decommissioning of existing electricity kiosk ▪ Utility works, including establishment of temporary construction services, investigation and protection of existing assets, and decommissioning of redundant assets ▪ Establishment of high voltage construction power supply ▪ Demolition of existing buildings ▪ Contamination management based on DSI ▪ Establishment of high voltage construction power supply ▪ Establishment and use of temporary offices and amenities ▪ Excavation of temporary shaft within the station shaft footprint ▪ Installation of acoustic shed with gantry crane and steel bridging

Worksite	Site condition at handover to JCG	Low Impact Works	Preliminary Works	Tunnelling, Excavation and Associated Works
				deck for excavation of station shaft and cavern ▪ Permanent concrete lining of station cavern and nozzle enlargements ▪ Installation of acoustic shed will support material handling outside standard hours of work
Hunter Street West	▪ Existing buildings – 7-13 Hunter St, Sydney (9 Hunter St) (21 stories including one basement level) – 5 Hunter St, Sydney (304-408 George St, Sydney) (16 stories, including two basement levels) – 298-302 George St, Sydney (16 stories, including one basement level) – 312 George St, Sydney (one story with no basement) – 314-318 George St, Sydney (nine stories, including one basement level) – Heritage building at 296 George St directly (adjacent to Hunter Street West site)	▪ Establish portable amenities[1] ▪ Archaeological investigations of DeMestre Place (if access dates allow)[1] ▪ Initial demolition works including: – Hazmat investigation and structural investigation – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip only)[1] ▪ Prepare archival recordings (subject to access)	▪ Establish portable amenities[1] ▪ Archaeological investigations of DeMestre Place (if access dates allow)[1] ▪ Initial demolition works including: – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip only)[1] ▪ Establish construction access driveways at the Hunter Street East site and the Hunter Street West site ▪ Utility investigation potholes ▪ Adjustment of property utility connections	▪ Establish portable amenities[1] ▪ Archaeological investigations of DeMestre Place[1] ▪ Initial demolition works including: – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip)[1] ▪ Protection, adjustment and decommissioning of utility services ▪ Temporary services investigation and installation at DeMestre Place ▪ Relocate street lighting pole to allow site access ▪ Establish site including new construction access driveways, site hoardings, instrumentation and monitoring ▪ Demolition of existing buildings ▪ Archaeological monitoring during basement slab removal and investigations (if required) ▪ Establishment and use of temporary offices and amenities ▪ Excavation of station access shaft

Worksite	Site condition at handover to JCG	Low Impact Works	Preliminary Works	Tunnelling, Excavation and Associated Works
Hunter Street East	▪ Site hoarding ▪ Existing acoustic shed, spoil handling facilities and truck access ▪ Existing excavation within acoustic shed (approximately 5 metres below road level) ▪ Existing temporary WTP and high voltage power supply ▪ Existing temporary office and amenities ▪ Existing buildings: – 28-34 O'Connell St, Sydney (19 stories, including three basement levels) – 44-48 Hunter St, Sydney (16 stories, including one basement level) – 37 Bligh St, Sydney (16 stories, including one basement level) – 33 Bligh St, Sydney (steel shed, appropriately 20m in height)	▪ Use of existing offices and amenities ▪ Maintenance of existing temporary WTP ▪ Internal temporary fit-out within the existing Hunter St East acoustic shed[1]: – Reticulate high voltage power supply ready for decline excavation[1] – Site adjustments within the acoustic shed to facilitate the high voltage construction power reconfiguration[1] – Establish (including assembly) road header, dust scrubber, shotcrete and bolting equipment[1] – Site establishment within existing offices and amenities[1] ▪ Initial demolition works including[1]: – Hazmat investigation and structural investigation[1] – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip only)[1] ▪ Street tree trimming/removal[1] ▪ Prepare archival recordings (subject to access)	▪ Internal temporary fit-out within the existing Hunter St East acoustic shed[1]: – Reticulate high voltage power supply ready for decline excavation[1] – Site adjustments within the acoustic shed to facilitate the high voltage construction power reconfiguration[1] – Establish (including assembly) road header, dust scrubber, shotcrete and bolting equipment[1] – Site establishment within existing offices and amenities[1] ▪ Initial demolition works including[1]: – Hazmat investigation and structural investigation[1] – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip only)[1] ▪ Street tree trimming/removal[1] ▪ Preliminary excavation within the existing acoustic shed (works to be conducted 24 hours each day and 7 days each week) – Temporary declines using a road header – Ventilation-duct bores – Ventilation adits using a Brock excavator – Approximately 50 truck movements per day	▪ Internal temporary fit-out within the existing Hunter St East acoustic shed[1]: – Reticulate high voltage power supply ready for decline excavation[1] – Site adjustments within the acoustic shed to facilitate the high voltage construction power reconfiguration[1] – Establish (including assembly) road header, dust scrubber, shotcrete and bolting equipment[1] – Site establishment within existing offices and amenities[1] ▪ Initial demolition works including[1]: – Hazmat investigation and structural investigation[1] – Establishment of site security and hoardings[1] – Establishment of truck access[1] – Demolition work (soft strip)[1] ▪ Street tree trimming/removal[1] ▪ Upgrade of high voltage construction power supply ▪ Excavation of station cavern, nozzle enlargements and turnbacks from within an existing acoustic shed ▪ Establish site including new construction access driveways, site hoardings, instrumentation and monitoring ▪ Tree trimming and removal

Worksite	Site condition at handover to JCG	Low Impact Works	Preliminary Works	Tunnelling, Excavation and Associated Works
			(conducted in accordance with a Construction Traffic Management Plan) – Use of existing WTP (subject to the inclusion of alternative discharge criteria in the EPL) ▪ Load-out of excavated spoil ▪ Utility investigation potholes ▪ Adjustment of property utility connections	▪ Demolition of existing high-rise buildings and excavation of stage 1 of station access shaft ▪ Archaeological monitoring during basement slab removal and investigations (if required) ▪ Backfill of temporary decline prior to decommissioning ▪ Demolition of existing acoustic shed and amenities and excavation of stage 2 of station access shaft ▪ Concrete lining of station cavern and turnbacks ▪ TBM disassembly and retrieval
Eastern Creek	▪ Existing temporary precast facility	▪ N/A (site is not within the scope of SSI 19238057)	▪ N/A (site is not within the scope of SSI 19238057)	▪ N/A (site is not within the scope of SSI 19238057)

NOTES:

1. Subject to the construction program and the date of approval of the CEMPs, nominated activities that have been assessed as Low Impact Works in accordance with the Infrastructure Approval, may be included in the scope of the Preliminary Works phase or the Tunnelling, Excavation and Associated Works phase. As such, these activities have been included in all relevant phases.

3. Legal and other requirements

3.1. Legislation

This Sub-plan has been prepared in accordance with the:

- EP&A Act
- Protection of the Environment Operations Act 1997 (POEO Act)
- Waste Avoidance and Resource Recovery Act 2001 (WARR Act).

Additional details on legislative requirements are provided in Section 3.3 of the CEMP

3.2. Guidelines

The main guidelines, specifications and policy documents of relevance to this Sub-plan include:

- Waste Classification Guidelines, Part 1: Classifying Waste
- Waste Classification Guidelines, Part 4: Acid Sulfate Soils
- Addendum to the Waste Classification Guidelines – Part 1: classifying waste
- NSW Waste Avoidance and Resource Recovery Strategy 2014-2021
- NSW Government's Waste Reduction and Purchasing Policy (WRAPP).

3.3. Other environmental requirements

Other environmental requirements relevant to managing waste include the conditions of the EPL (refer to Element 4: Project Specific Requirements) and the Infrastructure Sustainability Council waste management requirements (Table 7).

Table 7: IS Rating Tool Waste Management Requirements

IS Credit	Level	IS Rating Tool Requirement	Document Reference
Was-1 Waste Management	Level 1	For achievement of Level 1: ▪ Predictions for waste quantities and types have been developed for construction; AND ▪ Measures to minimise waste during construction have been identified and implemented; AND ▪ Monitoring of all wastes is undertaken during construction.	▪ This Sub-plan (Element 2: Monitoring and reporting) ▪ Section 5 ▪ Waste disposal and diversion register
	Level 2	For achievement of Level 2, in addition to the above: ▪ Waste monitoring and management has been managed, reviewed, or audited by a suitably qualified professional; AND ▪ Waste handling and disposal/recycling all the way to final destination has been audited at appropriate intervals	▪ Waste audit schedule
Was-2 Diversion from Landfill (As-built only)	Level 1	For achievement of Level 1: All of the following targets for landfill diversion have been achieved or bettered: ▪ 70 to < 80% by volume of spoil; AND ▪ 25 to < 40% by volume of inert and non-hazardous waste; AND ▪ 25 to < 40% by volume of office waste	▪ This Sub-plan (Element 2: Monitoring and reporting) ▪ Waste disposal and diversion register
	Level 2	For achievement of Level 2: All of the following targets for landfill diversion have been achieved or bettered: ▪ 80 to < 100% by volume of spoil; AND ▪ 50 to < 90% by volume of inert and non-hazardous waste; AND	▪ This Sub-plan (Element 2: Monitoring and reporting) ▪ Waste disposal and diversion register

IS Credit	Level	IS Rating Tool Requirement	Document Reference
		▪ 40 to < 60% by volume of office waste	
	Level 3	For achievement of Level 3: All of the following targets for landfill diversion have been achieved or bettered: ▪ 100% by volume of spoil; AND ▪ > 90% by volume of inert and non-hazardous waste; AND ▪ > 60% by volume of office waste	▪ This Sub-plan (Element 2: Monitoring and reporting) ▪ Waste disposal and diversion register

4. People and collaboration

4.1. Our team

The roles and responsibilities of key JCG personnel with respect to waste management are detailed in Table 8.

Table 8: Key roles, authority and responsibility

Element	Description
Project Director	
Role	▪ Manage the delivery of the Project in accordance with the ETP Deed
Authority	▪ Hold the authority to direct personnel or subcontractors to carry out actions to avoid or minimise unintended environmental impacts ▪ Act as the Contractor's Representative
Responsibility	▪ Accountable for the environmental and sustainability performance of the Project ▪ Allocate sufficient resources to achieve environmental and approvals compliance
Minimum Skill Level	▪ Tertiary qualification in Engineering or other associated disciplines ▪ Relevant experience on similar projects and significant project delivery experience
Project Interface	▪ Lead the JCG Senior Leadership Team and interface with Sydney Metro team
Environment, Approvals and Sustainability Director	
Role	▪ Manage the delivery of environment and sustainability requirements
Authority	▪ Authority to produce any correspondence and documentation necessary for approvals, and environmental and sustainability management ▪ Authority to take all reasonable steps to achieve environmental compliance
Responsibility	▪ Accountable for environmental and sustainability performance ▪ Lead the creation of a consultative and proactive culture that ensures environmental compliance and 'No Harm' as a driver of work behaviour ▪ Lead and manage the development and implementation of a risk-based EMS ▪ Ensure environmental and sustainability participation at Value Engineering Workshops ▪ Provide specialist waste management advice to the Project Director and other functional managers to facilitate design and construction ▪ Oversee the preparation of environmental assessments on design changes and obtain any necessary planning approvals ▪ Oversee the reporting, investigation and response to environmental incidents or complaints ▪ Liaise with Sydney Metro and external stakeholders on performance and continual improvement ▪ Engage with the Environment Protection Authority (EPA) on EPL compliance
Minimum Skill Level	▪ Tertiary qualification in Environmental Engineering, Science, Sustainability or other associated discipline ▪ Recent relevant experience in environmental management on a similar project ▪ Minimum of 15 years' environmental management experience and 5 years' sustainability management
Project Interface	▪ Member of the JCG Senior Leadership Team and interface with Sydney Metro West Environment and Sustainability team
Environment Manager	
Role	▪ Manage day-to-day environmental compliance, including waste management
Authority	▪ Authority to stop works where a Hold Point has not been adequately released
Responsibility	▪ Assist the Environment, Approvals and Sustainability Director in the creation of a consultative and proactive culture ▪ Manage the implementation of the CEMP, including waste management ▪ Deliver the environmental induction and training program

Element	Description
	▪ Undertake environmental site monitoring and inspections ▪ Facilitate site inspections with Sydney Metro, the ER and the Acoustic Advisor (AA) ▪ Report and assist in incident management
Minimum Skill Level	▪ Tertiary qualification in Environmental Engineering, Science, Sustainability or other associated disciplines ▪ Minimum of 8 years' relevant experience
Project Interface	▪ Attend environment, sustainability, design and construction meetings
Sustainability Manager	
Role	▪ Provide sustainability strategy and performance advice
Responsibility	▪ Develop and implement the Sustainability Management System ▪ Manage the implementation, assessment and verification of waste minimisation initiatives and report on progress ▪ Provide sustainability advice to the Environment, Approvals and Sustainability Director and other functional managers ▪ Manage the sustainability induction and training program ▪ Assist the Commercial Director in the delivery of sustainable procurement, including subcontractor fulfillment of sustainability obligations ▪ Assist the Stakeholder and Community Relations Manager in the development and implementation of community education strategies with respect to sustainability.
Minimum Skill Level	▪ Tertiary qualification in Environmental Engineering, Science, Sustainability or other associated disciplines and IS Accredited Professional certification ▪ Minimum 10 years' relevant experience in sustainability management
Project Interface	▪ Liaise with Sydney Metro to discuss sustainability performance and ensure continual improvement ▪ Attend environment, sustainability, design and construction meetings as required
Environmental Advisor	
Role	▪ Support day-to-day environmental compliance, including waste management
Authority	▪ Authority to stop works where a Hold Point has not been adequately released
Responsibility	▪ Assist the Environment Manager in the creation of a consultative and proactive culture ▪ Support the implementation of the CEMP, including waste management ▪ Deliver the environmental induction and training program ▪ Undertake environmental site monitoring and inspections ▪ Facilitate site inspections with Sydney Metro, the ER and the Acoustic Advisor (AA) ▪ Report and assist in incident management
Minimum Skill Level	▪ Tertiary qualification in Environmental Engineering, Science, Sustainability or other associated disciplines ▪ Minimum of 2 years' relevant experience
Project Interface	▪ Attend environment, sustainability, design and construction meetings
Site Supervisor	
Role	▪ Assist the Project Director in implementing the requirements of this Sub-plan
Authority	▪ Authority to stop works where a Hold Point has not been adequately released
Responsibility	▪ Support the implementation of the CEMP, including waste management ▪ Deliver the environmental inductions where required ▪ Undertake environmental inspections ▪ Report and assist in incident management
Minimum Skill Level	▪ Qualification in relevant trade ▪ Minimum of 5 years' relevant experience
Project Interface	▪ Attend construction meetings

4.2. Collaboration with Sydney Metro, the ER and the AA

The Environment, Approvals and Sustainability team will openly communicate and consult with Sydney Metro, the ER and the AA. This will include:

- Working collaboratively to ensure appropriate strategies are identified and implemented
- Holding regular meetings with the Sydney Metro Environment Team to provide updates on the construction process and receive any feedback
- Facilitating regular inspections with Sydney Metro, the ER and the AA
- Recording and responding appropriately to environmental complaints and enquiries and reporting them to Sydney Metro and other stakeholders including the ER, the AA and the EPA in a timely manner
- Providing comprehensive information to manage incidents including details on preventative actions to avoid re-occurrence.

5. Environmental aspects and impacts

5.1. Waste types

The key activities and anticipated waste streams to be generated as a result of the Project are detailed in Table 9.

Table 9: ETP activities and waste streams

Activity	Waste Type	Expected Waste Classification	Indicative Quantity (m^3)	Document Reference
Demolition and construction	General construction and demolition waste	General Solid Waste (GSW) Non-Putrescible	78,000	This WMP
	Hazardous waste including Asbestos Waste or Paint Containing Lead Paint	Hazardous Waste Restricted Solid Waste Special Waste (Asbestos)		This WMP
Clearing and grubbing of vegetation	Vegetation waste	GSW (Non-Putrescible)	1,000	This WMP
Tunnelling, excavation and general earthworks	Spoil	Virgin Excavated Natural Material (VENM)/Excavated Natural Material (ENM) Resource Recovery Order/Resource Recovery Exemption (RRO/RRE) material GSW (Non-Putrescible) Special Waste Restricted Solid Waste (RSW) Hazardous Waste	767,874	Spoil from station shaft excavations and general earthworks is addressed in the Spoil Management Sub-plan (SMWSTETP-JCG-SWD-SW000-EN-PLN-002023). Contaminated soil including PASS and ASS is addressed in the Soil and Water Management Sub-plan (SMWSTETP-JCG-SWD-SW000-EN-PLN-002024).
	TBM Wastes	Resource Recovery Order/Resource Recovery Exemption (RRO/RRE) material		Spoil Management Sub-plan (SMWSTETP-JCG-SWD-SW000-EN-PLN-002023)
	Wastewater	N/A – Treated for discharge Liquid Waste (where discharge criteria are not met)	2,000	Soil and Water Management Sub-plan (SMWSTETP-JCG-SWD-SW000-EN-PLN-002024)
Dust suppression, wash down of plant and equipment, and staff amenities	Wastewater	N/A – Treated for discharge Liquid Waste (where discharge criteria are not met)	1,000	Soil and Water Management Sub-plan (SMWSTETP-JCG-SWD-SW000-EN-PLN-002024)
Maintenance of plant, vehicles, and equipment	Mechanical wastes including waste oil and filters	Hazardous Waste Liquid Waste	500	This WMP
Site offices and crib rooms	General Waste	GSW (Non-Putrescible) GSW (Putrescible)	6,000	This WMP

5.2. Aspects and impacts

The key aspects of the ETP Works as relevant to waste management are detailed in Table 10 together with potential environmental impacts (in the absence of controls).

Table 10: ETP aspects and impacts

Aspect	Potential Impacts
Resources	Excessive volumes of waste directed to landfill from the inadequate collection, segregation, classification and disposal of waste
Contamination	Contamination of soil, surface and/or groundwater from the inappropriate storage, transport and disposal of liquid and solid wastes
Spoil	Spoil unsuitable for reuse generated during earthworks requiring treatment/disposal
Housekeeping	Potential for waste to not be placed in appropriate bins and result in litter around the construction worksites and potential to enter stormwater drains
Weeds/Pests	An increase in vermin and spreading weed species from the incorrect storage, handling, and disposal of wastes from construction sites
Waste tracking	Non-compliance with legal requirements including not knowing where waste is being disposed, not knowing volumes of waste being disposed, illegal dumping

The waste management strategy outlined in this Sub-plan has been developed taking into consideration the potential environmental impacts detailed above. During the ETP Works, Environmental Control Maps (ECMs) will be developed which consider these potential impacts and include waste management control measures.

As detailed in Section 3.5.3 of the CEMP, ECMs provide a practical translation of environmental risks and 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, disturbance areas, exclusion area and boundaries), identify environmentally sensitive receivers and detail control measures as derived from relevant procedures. ECMs will be prepared progressively for each stage of development, endorsed by the Environment Manager or delegate, and communicated to relevant workers prior to commencing works.

6. Waste management and recycling strategy

6.1. Waste hierarchy

Waste management for the ETP Works will be prioritised according to the principles of a resource management hierarchy embodied in the WARR Act. The hierarchy is as follows:

- Avoidance of unnecessary resource consumption
- Resource recovery including reuse, reprocessing, recycling and energy recovery
- Disposal.

JCG is committed to the management of waste in accordance with the objectives of the WARR Act (refer to Section 6.3).

6.2. Waste classification

All waste generated will be assessed, classified and managed in accordance with the EPA Waste Classification Guidelines (2014) prior to re-use or disposal. This document identifies six classes of waste: Special, Liquid, Hazardous, Restricted Solid, General Solid (putrescible) and General Solid (non-putrescible). The process to classifying waste is described in the sections that follow.

Step 1: Is it 'special waste'?

Establish if the waste should be classified as special waste. Special wastes are clinical and related, asbestos, waste tyres. Definitions are provided in the guidelines.

Note: Asbestos and clinical wastes must be managed in accordance with the requirements of Clauses 42 and 43 of the *Protection of the Environment Operations (Waste) Regulation 2005*.

Note: Where asbestos is mixed with other waste to form asbestos waste, the generator must continue to assess the waste in accordance with the remainder of the steps in this guide. Asbestos waste can only be disposed of at a waste facility that can lawfully receive asbestos and other class of waste with which it is mixed (if any).

If it is established that the waste is not special waste, progress to waste classification under Step 2: If not special, is it 'liquid waste'?.

Step 2: If not special, is it 'liquid waste'?

If it is established that the waste is not special waste it must be decided if it is 'liquid waste'. Liquid waste means any waste that: has an angle of repose of less than 5° above horizontal becomes free-flowing at or below 60° Celsius or when it is transported is generally not capable of being picked up by a spade or shovel.

Liquid wastes are sub-classified into:

- Sewer and stormwater effluent
- Trackable liquid waste according to *Protection of the Environment Operations (Waste) Regulation 2005* Schedule 1 Waste to which waste tracking requirements apply
- Non-trackable liquid waste.

If it is established that the waste is not liquid waste, progress to waste classification under Step 3: If not liquid, has the waste already been pre-classified by the NSW EPA?.

Step 3: If not liquid, has the waste already been pre-classified by the NSW EPA?

The EPA has pre-classified several commonly generated wastes in the categories of hazardous, general solid waste (putrescibles) and general solid waste (non-putrescibles). If a waste is listed as 'pre-classified', no further assessment is required.

Note: Wastes that have been classified by the EPA cannot be reclassified by any other party. A list of all the pre-classified waste streams is located in NSW EPA Waste Classification Guidelines – Part 1: Classifying Waste (pg. 7-10).

If it is established that the waste is not pre-classified waste, progress to waste classification under Step 4: If not pre-classified, is the waste hazardous?.

Step 4: If not pre-classified, is the waste hazardous?

If the waste is not special waste (other than asbestos waste), liquid waste or pre-classified, establish if it has certain hazardous characteristics and can therefore be classified as hazardous waste.

Hazardous waste includes items such as explosives, flammable solids, substances liable to spontaneous combustion, oxidizing agents, toxic substances and corrosive substances.

Waste classified as hazardous waste cannot be disposed of in NSW and must be treated prior to disposal.

If it is established that the waste is not hazardous waste, progress to waste classification under Step 5: If the waste does not have hazardous characteristics, undertake chemical assessment to determine classification.

Step 5: If the waste does not have hazardous characteristics, undertake chemical assessment to determine classification

If the waste does not possess hazardous characteristics, it needs to be chemically assessed to determine whether it is hazardous, restricted solid or general solid waste (putrescible and non-putrescible). If the waste is not chemically assessed, it must be treated as hazardous.

Chemical assessment of waste is undertaken by a suitably qualified and experienced contaminated land professional by comparing Specific Contaminant Concentrations (SCC) of each chemical contaminant, and where required the leachable concentration using the Toxicity Characteristics Leaching Procedure (TCLP), against Contaminant Thresholds (refer to the EPA Waste Classification Guidelines (2014) for SCC and TCLP criterion). Waste samples must be analysed by a NATA-accredited laboratory.

If it is established that the waste is not hazardous or restricted waste, it is then general solid waste. Progress to waste classification under Step 6: Is the general solid waste putrescible or non-putrescible? and determine whether the general solid waste is putrescible or non-putrescible.

Waste that includes paint containing lead (including scrap metal with paint containing lead) must be classified for waste disposal and handled in accordance with the ETP Deed, Schedule C01 (Particular Specification), clause 3.3.2 and Attachment H. Specifically:

- Scrap metal containing paint containing lead does not need to be tracked
- Ensure the recycling facility is licensed to receive scrap metal
- Scrap metal containing paint containing lead does not need to be segregated from scrap metal that does not contain lead paint for waste classification purposes
- Recycling facility is to be contacted regarding whether the facility has any specific requirements for segregation.

The ETP Deed is consistent with the requirements of Step 5 of the EPA Waste Classification Guidelines (2014).

Step 6: Is the general solid waste putrescible or non-putrescible?

If the waste is chemically assessed as general solid waste, a further assessment is available to determine whether the waste is putrescible or non-putrescible. The assessment determines whether the waste is capable of significant biological transformation. If this assessment is not undertaken, the waste must be managed as general solid waste (putrescible).

Further detail on the pre-classification of soils is outlined in the Waste and Spoil Management Procedure (Appendix A).

6.3. Waste avoidance and minimisation

Waste minimisation, reuse and recycling practices will be implemented in accordance with the waste hierarchy. Specific strategies to be implemented during the ETP Works to minimise the volume of waste generated and disposed are detailed in the sections that follow.

6.3.1. Reuse and recycling initiatives

To ensure the highest percentage of spoil, demolition and construction waste is re-used or recycled, JCG targets and requirements will be detailed in the Sub-contractor Tender Requirements Pack and incorporated into relevant subcontracts.

Mixed construction waste will be sorted for recyclables on site where feasible or off-site (at recycling yard) when using mixed recycling bins. Paper and cardboard recycling will be contained separately from other waste materials.

General recycling bins will be located adjacent to general waste bins in office and crib amenities blocks to maximise recycling.

Where structural demolition is required, JCG will reuse and then recycle materials to the greatest extent practicable. Site facilities and existing assets such as noise barriers, hoarding, site fencing, etc will be reused where practical between teams for the duration of the ETP Works. Those earmarked for handover upon project completion will be retained for subsequent contractors where practicable.

Dedicated office bins will be provided to maximise recycling (e.g. printer cartridges, paper and cardboard, mixed recyclables, coffee pods etc.).

JCG will continue to investigate opportunities for recycling and reuse of other non-putrescible general solid wastes, other than construction and demolition waste, and office waste. This may include onsite reuse of green waste, and recycling of items such as soft plastics, used oil, cigarette butts, and disposable ear plugs.

Waste recovery opportunities will be sought and maximised, including the application of Resource Recovery Exemptions and Orders to achieve reuse and diversion targets. Resource Recovery Exemptions and Orders of relevance to the ETP Works are detailed in Table 11.

Table 11 Waste Recovery Exemptions and Orders

Exemption/Order	Requirements
The excavated natural material exemption 2014 The excavated natural material order 2014	At the time the excavated natural material is received at the premises, the material must meet all chemical and other material requirements as detailed in the 'the excavated natural material order 2014'. This includes a written sampling plan, characterisation sampling, and analytical testing in accordance with defined test methods. The excavated natural material can only be applied to land as engineering fill or for use in earthworks. The consumer must keep a written record of the following for a period of six years: a) the quantity of any excavated natural material received; and b) the name and address of the supplier of the excavated natural material received. The consumer must provide any records required to be kept under this exemption available to authorised officers of the EPA on request. The consumer must ensure that any application of excavated natural material to land must occur within a reasonable period of time after its receipt.
The excavated public road material exemption 2014 The excavated public road material order 2014	The excavated public road material can only be applied to land within the road corridor for public road related activities including road construction, maintenance and installation of road infrastructure facilities. The excavated public road material can only be stored within the road corridor at the site where it is to be applied to land. The excavated public road material cannot be applied to private land. The consumer must ensure that any application of excavated public road material to land must occur within a reasonable period of time after its receipt. Records must be retained for a period of six years.

Exemption/Order	Requirements
The mulch exemption 2016 The mulch order 2016	The raw mulch can only be applied to land for the purposes of filtration or as a soil amendment material or used either singularly or in any combination as input material(s) to a composting process. At the time mulch is received at the premises, the material must meet all requirements as detailed in the 'the mulch order 2016'. Where written measures for the land application of mulch are required under 'the mulch order 2016', a processor must provide these to the consumer. The consumer must apply the mulch to land in accordance with the written measures. The consumer must ensure that they do not cause or permit the migration of leachate from the land application site. The consumer must not undertake further processing of the mulch at the land application site. The consumer must ensure that any application of mulch to land occurs within a reasonable period of time after its receipt.
The recovered aggregate exemption 2014 The recovered aggregate order 2014	The material must meet all chemical concentration and other material requirements for recovered aggregate under "the recovered aggregate order 2014". This includes a written sampling plan, characterisation sampling, and analytical testing in accordance with defined test methods. The recovered aggregate can only be applied to land for road making activities, building, landscaping and construction works. This approval does not apply to any of the following applications: ▪ Construction of dams or related water storage infrastructure ▪ Mine site rehabilitation ▪ Quarry rehabilitation ▪ Sand dredge pond rehabilitation ▪ Back-filling of quarry voids ▪ Raising or reshaping of land used for agricultural purposes Construction of roads on private land unless: the relevant waste is applied to land to the minimum extent necessary for the construction of a road, and a development consent for the development has been granted under the relevant Environmental Planning Instrument (EPI), or it is to provide access (temporary or permanent) to a development approved by a Council, or the works undertaken are either exempt or complying development.
The reclaimed asphalt pavement exemption 2014 The reclaimed asphalt pavement order 2014	The reclaimed asphalt pavement can only be: ▪ applied to land for road related activities including road construction or road maintenance activities being: a) use as a road base and sub base b) applied as a surface layer on road shoulders and unsealed roads and c) use as an engineering fill material. ▪ used as an alternative input into thermal processes for non-energy recovery purposes in the manufacture of asphalt. The consumer must ensure that any application of reclaimed asphalt pavement to land or any use of reclaimed asphalt pavement in connection with a process of thermal treatment must occur within a reasonable period of time after its receipt.

6.3.2. Purchasing and procurement

Reflecting the requirements of the JCG procurement strategy, all timber formwork will be reused before the timber is recycled. Reusability and capacity for recycling will be considered in the selection of construction materials and other products purchased for the ETP Works.

JCG will negotiate packaging take-back agreements with suppliers and include this as a criterion for consideration during selection of suppliers. Bulk purchases will be preferred within tender

documentation, and quantities of materials accurately calculated to limit the amount of associated packaging brought to site.

Where reasonably practicable, compostable, or at least reusable, temporary erosion sediment controls will be utilised onsite.

6.3.3. Minimising materials usage

The ETP Works will place a significant demand on a range of resources, including both primary and secondary materials that have undergone some degree of offsite processing. This demand has the potential to create a resource depletion risk. To manage this risk, JCG will adopt the waste management hierarchy as detailed in Section 6.1 and the Sustainability Management Plan, including specific strategies to sustainably manage materials use and minimise the materials footprint. This will include the accurate calculation of materials that are brought to the site and limiting materials packaging.

6.3.4. Hazardous waste

As per the EPA's Waste Classification Guidelines, the following waste types (other than special waste or liquid waste) have been pre-classified by the EPA as hazardous waste:

- Containers, having previously contained a substance of Class 1, 3, 4, 5 or 8 within the meaning of the Transport of Dangerous Goods Code, or a substance to which Division 6.1 of the Transport of Dangerous Goods Code applies, from which residues have not been removed by washing or vacuuming
- Coal tar or coal tar pitch waste (being the tarry residue from the heating, processing or burning of coal or coke) comprising of more than 1% (by weight) of coal tar or coal tar pitch waste
- Lead-acid or nickel-cadmium batteries (being waste generated or separately collected by activities carried out for business, commercial or community services purposes)
- Lead paint waste arising otherwise than from residential premises or educational or child care institutions
- Any mixture of the wastes referred to above.

JCG will endeavour to avoid the production of hazardous waste. This will involve implementing strategies such as:

- Avoiding the procurement and use of hazardous chemicals where other alternatives are available
- Where use of hazardous chemicals cannot be avoided, they are to be procured in sizes and types of containers that will minimise material losses
- Minimising the risk of spills and leaks through implementation of the spill prevention controls detailed in the Spill Management Procedure (Appendix A)
- Sorting all contamination and waste (including separating contamination from clean materials and waste)
- Preventing the contamination of clean material by intermixing contamination or waste
- Preventing the intermixing of contamination (or difference waste classifications) with clean material or any other type of contamination or waste (refer to the Soil and Water Management Sub-plan for details on the management and classification of contaminated soils)
- Delineating to the greatest extent practicable any hazardous waste spoil identified onsite and investigate opportunities to treat the material to a lower waste classification.

A hazardous material survey will be completed for those buildings and structures suspected of containing hazardous or special waste materials (particularly asbestos) prior to their demolition. If hazardous waste or special waste (e.g. asbestos) is encountered, it would be handled and managed in accordance with relevant legislation, codes of practice and Australian standards.

6.3.5. Office furniture and items

As detailed in the Waste and Spoil Management Procedure (Appendix A), JCG will inspect buildings prior to demolition and consider opportunities to reuse or recycle abandoned furniture or items. Specifically, the Sustainability Manager (or nominated delegate) will contact relevant organisations (e.g. Re-Love, Green Furniture Hub, Sydney Recycle Office Furniture and Equipment, etc) prior to demolition works to assess the feasibility of reuse or recycling of abandoned furniture or items. JCG will also seek to reuse furniture and appliances within Project site offices.

6.4. Storage, transportation and disposal

6.4.1. On-site storage

Prior to demolition works, a collection/delivery plan process be established in collaboration with the Environment team and sub-contractors. Key requirements, including on-site separation of materials for reuse and recycling, will be communicated to the construction team through toolbox talks and pre-start meetings.

General waste and recyclables will be stored in containers/ bins and collected on a regular basis. As a minimum, ETP Worksites will have the following labelled skip bins onsite:

- General waste
- General mixed recycling
- Paper/cardboard recycling
- Scrap steel (where required for the scope of works).

Additional containers/bins that may be required during demolition works include concrete, plastic pipes/cables, damaged office furniture and fluorescent tubes.

Worksites will be free of litter and maintain good standards of housekeeping throughout construction. Regular inspections by both the Environment and Sustainability Team and the Health and Safety teams will be undertaken to ensure a high standard is maintained.

Where spoil is to be stockpiled, stockpiles will be labelled, managed, and segregated to avoid cross contamination or intermixing between different waste streams. Records of stockpile classifications and locations onsite will be kept by site teams and stockpiles will be managed in accordance with the requirements of this Sub-plan.

Waste classified as special waste or hazardous waste (EPA, 2014) will be carefully segregated (or excavated and placed as separate stockpiles) at demarcated and contained locations. These areas will be appropriately bunded and stockpiles will be covered with geotextile or impermeable plastic sheeting. Where practicable, hazardous waste will be stored in an appropriate container (e.g. a waste skip). Should the hazardous waste have the potential to produce contaminated leachate, the material will be stored in an area with an appropriate leachate collection system. All stockpiles will be clearly identified.

Specialist waste streams, including waste fuel, oils and other hazardous chemicals will be stored separately in well ventilated, bunded areas prior to removal by licenced waste contractors. Storage vessels must be compliant with relevant Australian Standards.

6.4.2. Waste transportation and disposal

Where waste produced from the ETP Works cannot be reused on site and must be disposed offsite, the most sustainable and cost-effective disposal site will be prioritised.

Waste will be transported from site using an appropriately licensed waste management contractor. Contractors will be required to provide disposal receipts, tracking documentation and reports of waste quantities in accordance with contract requirements. Specialist licenced waste contractors must be used when removing 'hazardous waste' in accordance with the *Protection of the Environment Operations (Waste) Regulation 2005*. Waste truck loads will be covered, and tailgates secured prior to trucks leaving the worksite.

Asbestos containing material will be managed by appropriately qualified and licensed contractors, in accordance with the requirements of the *Work Health and Safety Regulation 2011* and the *Protection of the Environment Operations (Waste) Regulations 2014*. In addition, all asbestos waste over 10m^3 will be tracked through EPA's WasteLocate service.

Waste will only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the *Protection of the Environment Operations (Waste) Regulation 2014*, or to any other place that can lawfully accept such waste.

Prior to waste being taken to a waste facility, the Environment, Approvals and Sustainability Director (or delegate) must review and approve the proposed waste facility. Contractors will be required to submit

the relevant documentation for review including a completed copy of a Spoil Receival Site Approval Checklist.

The locations of heavy vehicles will be monitored in real time as follows:

- JCG managed vehicles – JCG has adopted the tracking software *Virtual Superintendent Spoil Control and Management System* to provide real-time tracking of all spoil haulage vehicles and materials
- Tunnel segment transport – The haulier of tunnel segments will undertake real-time tracking of heavy vehicles and provide all records to JCG
- Concrete vehicles – Concrete supplier will undertake real-time tracking of concrete vehicles and provide all records to JCG.

Records of monitoring will be made available electronically to the Planning Secretary and the EPA upon request for a period of no less than one year following the completion of the ETP Works.

A register of waste disposal sites and relevant documentation will be kept for the duration of the Project. The register will be reviewed and updated on a regular basis. Prior to a disposal site accepting waste from the ETP Works, the following information must be received and approved by the Environmental Manager:

- A signed Section 143 certificate
- A copy of the disposal sites EPL or other approval mechanism allowing them to accept the relevant waste stream (such as DA approval).

Some receival facilities have licence acceptance limits for specific chemicals which exceed the acceptance limits detailed in the Waste Classification Guidelines (EPA, 2014). Site teams must gain approval from the Environment, Approvals and Sustainability Director (or delegate) prior to taking spoil to such receiving facilities.

Appendix B provides a register of licensed waste disposal sites, including details of the EPL held by each waste disposal company. Where there are changes to waste disposal locations used during the ETP Works, updates will be made to Appendix B.

6.5. Importation of waste or fill

JCG will not cause, permit or allow any waste generated outside the licensed premises to be received at the licensed premises, except:

- VENM
- As expressly permitted by a condition of the EPL
- As permitted by a resource recovery order and/or resource recovery exemption under the *Protection of the Environment Operations (Waste) Regulation 2014*.

Excavated material suitable for re-use within the premises as outlined above may be transported to another part of the premises.

Refer to the Waste and Spoil Management Procedure (Appendix A) and the Spoil Management Sub-plan (SMWSTETP-JCG-SWD-SW000-EN-PLN-002023) for additional details on the importation of waste or fill.

6.6. Waste tracking and reporting

JCG will keep complete, accurate and up to date digital records of all materials that are treated and reused, disposed of or otherwise removed from the ETP Worksites.

Waste (including spoil) removed from site will be tracked using a waste disposal and diversion register. This register will be completed by engineering staff at each Worksite, and will capture information including:

- Applicable waste classification report number
- Waste classification consignment authorisation (from disposal facility)
- Date transported
- Haulage contractor
- Material type
- Waste classification
- Quantity
- Source location
- Waste receival location (see Section 6.4.2)
- Truck registration
- Docket numbers (haulage, receival, weighbridge).

Waste classification reports and tip dockets associated with removal and disposal of waste (including spoil) from the ETP Works are to be retained and referenced in the waste disposal and diversion register. Detailed and careful records of spoil movement within the boundaries of the ETP Works will also be retained including tracking of onsite material movements.

The ETP Works spoil reuse strategy is addressed in the Spoil Management Sub-plan (SMWSTETP-JCG-SWD-SW000-EN-PLN-002023). In addition, waste reporting requirements (including reporting of spoil reuse and recycling statistics) are addressed in the Sustainability Management Plan.

JCG will supply data on waste and recycling to Sydney Metro in the agreed Sustainability Reporting template and within an agreed timeframe. It is noted that reporting will be undertaken with a one-month lag, to ensure the accuracy of data. Further records can be provided to Sydney Metro upon request.

6.7. Compliance checks

Quarterly compliance checks will be undertaken for the duration of the ETP Works to ensure that all waste is being managed, transported, reused, recycled or disposed in a lawful manner. The compliance check will take the form of:

- Desktop investigations
- Contacting reuse, recycling or disposal facilities directly
- Reviewing waste disposal dockets and waste transport tracking documentation and requirements
- Reviewing waste characterisation and classification information
- Reviewing exemption requirements against particular loads of waste

- Reviewing environment protection licences, authorisations or approvals of facilities that receive waste generated by the project)
- Site inspections of reuse, recycling or disposal locations.

All compliance checks conducted will be recorded and provided to an authorised EPA officer upon request.

7. Compliance management

7.1. Hold points

The activity detailed in Table 12 is recognised as hold points and will not proceed without objective review and approval by the nominated authority.

Table 12: Hold points

Hold point	Sub-plan Reference	Release of Hold Point	Responsibility
Disposal of waste under a Resource Recovery Exemptions and Orders	Section 6.3.1	Preparation of the Spoil Receival Site Approval Checklist all records in accordance with the relevant Resource Recovery Exemption and Order	Environment, Approvals and Sustainability Director (or delegate)

7.2. Complaints

Environmental complaints will be recorded and managed in accordance with the process detailed in Section 3.7 of the CEMP.

8. Review and improvement

8.1. Continual improvement

The continual improvement process will be undertaken in accordance with Section 3.15 of the CEMP. The intent of the process is to:

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

8.2. Sub-plan review

The processes described in Section 3.6 of the CEMP may result in the need to update or revise this Sub-plan. This will occur as needed, in accordance with Section 3.14.2 of the CEMP.

A copy of the updated Sub-plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure.

A current copy of this Sub-plan and associated records will be kept at the premises for the duration of the licence and provided to an EPA officer upon request.

Part B: Implementation Systems and Tools

Part B of this Sub-plan explains how the waste impacts of the Project will be minimised. All relevant mitigation measures from the Infrastructure Approval, REMMs, CEMF and EPL are addressed in this Section. Compliance with these requirements is required at all times to minimise the risk of unauthorised environmental harm.

Part B contains the following:

- **Expectations and Requirements:** These describe what is required of the Project to implement the objectives of the Environment and Sustainability Policy and achieve the intended environmental performance outcomes.
- **JCG Response:** These are the specific actions that will be performed to demonstrate compliance with the Elements and Requirements.
- **Responsibility:** These are the people responsible for achieving compliance with the Expectations and Requirements. The key contributor is identified in bold font.
- **Deliverables:** These are the tangible outcomes that will be produced to demonstrate compliance with the Expectations and Requirements.

Element 1: Training

Table 13: Element 1: Training

ID	Expectations/Requirements	JCG Response	Responsibility	Deliverables
1.1	All personnel have completed an induction containing relevant environmental information before they are authorised to work on the Project	All personnel working on the Project will undertake a site induction, which will provide initial training on various environmental aspects, including waste management. It will cover: ▪ Waste minimisation and resource efficiency initiatives ▪ Classification of waste ▪ Reuse of waste on-site ▪ Appropriate disposal requirements.	**People and Culture Director** Environment, Approvals and Sustainability Director	Induction presentation Training records
1.2	Toolbox talks are used to reinforce key management requirements and lessons learnt	Toolbox talks on waste management requirements will be held regularly and will reinforce and reiterate information from inductions.	**Environmental Advisors** Site Supervisor	Training records

Element 2: Monitoring and reporting

Table 14: Element 2: Monitoring and reporting

ID	Expectations/Requirements	JCG Response	Responsibility	Deliverables
2.1	Worksites are regularly inspected to ensure the adequacy of controls	Site Supervisor to undertake daily inspections of worksite to assess the adequacy and effectiveness of waste management controls. Weekly inspection of waste management controls will be undertaken as part of joint JCG / Sydney Metro / ER / AA inspections.	**Environmental Advisors** Site Supervisor	Site Diary entries Environmental Inspection reports
2.2	Waste reporting	Monthly Sustainability Reports will be prepared to detail waste generation, reuse and disposal volumes (onsite and offsite) as well as disposal locations. This reporting will be undertaken using the agreed Sustainability Reporting template and within an agreed timeframe. Note: Reporting will be undertaken with a one-month lag, to ensure the accuracy of data.	**Sustainability Manager**	Monthly Sustainability Reports
2.3	Monitoring records are maintained	JCG will retain the following records (at minimum) of waste generated, received or removed from the premises: ▪ Waste classification reports ▪ Details of all waste transporters and the addresses and facility/business names of destination location(s) for all waste generated and transported off the premises for any purpose (including recycling, reuse, processing, treatment and disposal) ▪ Documented evidence (such as a licence) from each place of disposal that they can lawfully receive and manage (store, process, reuse, dispose) the types of waste proposed to be transported there ▪ Details of all waste received on the premises or transported off the premises that is subject to a Resource Recovery Order and/or Exemption under the *Protection of the Environment Operations (Waste) Regulation 2014*, and demonstration that the waste meets the requirements of the Order and/or Exemption ▪ Keep legible copies of all documents/records evidencing that all waste transported from the premises was taken to and received at a facility/premises that lawfully accept and process the waste as intended ▪ Keep legible copies of any waste tracking documentation required for the offsite transport of the waste to demonstrate the waste was tracked in accordance with NSW legislation	**Environment Manager** Environmental Advisors/Coordinator	Waste disposal and diversion register Section 143 Certificates Spoil Receival Site Approval Checklists Register of Receival Sites Waste Classification Reports GPS Records Material tracking forms Spoil daily dockets

Element 3: Auditing, review and improvement

Table 15: Element 3: Auditing, review and improvement

ID	Expectations/Requirements	JCG Response	Responsibility	Deliverables
3.1	Review this Sub-plan to ensure compliance with the EPL	This Sub-plan has been updated in accordance with the process outlined in Section 3.14.2 of the CEMP to include relevant conditions of the EPL.	**Environment, Approvals and Sustainability Director**	Updates to this Sub-plan if required during delivery
3.2	Audits are undertaken to ensure compliance with the requirements of this Sub-plan	Audits will be performed in line with Section 3.12 of the CEMP, and this Sub-plan will be updated if required.	**Environment, Approvals and Sustainability Director**	Audit Reports
3.3	All non-compliances are reported and actioned	A waste non-compliance can generally be defined as a failure to comply with the conditions of the SSI 19238057 Infrastructure Approval or the EPL. Where a non-compliance is also an environmental incident, JCG will implement the relevant notification procedures for both non-compliances and incidents (refer to Sections 3.10 and 3.12.2 of the CEMP). Where a non-compliance is raised as part of an audit or an incident or complaint investigation, the audit, incident or complaint report may be used to close out the non-compliance; it is not necessary to raise a separate non-compliance report. Procedures for corrective actions are addressed in Section 3.12.2 of the CEMP.	**Environment, Approvals and Sustainability Director** Environmental Advisors	Corrective Action Reports Complaint Reports Incident Reports Audit Reports

Element 4: Project specific requirements

Infrastructure Approval (SSI 19238057)

Table 16: Infrastructure Approval (SSI 19238057)

ID	Requirements (Conditions)	JCG Response	Responsibility	Deliverables	Timing
A49	The locations of all heavy vehicles used for spoil haulage must be monitored in real time and the records of monitoring be made available to the Planning Secretary and the EPA upon request for a period of no less than one year following the completion of construction.	Refer to Section 6.4.2	**Site Supervisors** Spoil Manager	Environmental Inspection Checklist	During construction
D90	Waste generated during construction and operation must be dealt with in accordance with the following priorities: (a) waste generation must be avoided and where avoidance is not reasonably practicable, waste generation must be reduced; (b) where avoiding or reducing waste is not possible, waste must be re-used, recycled, or recovered; and (c) where re-using, recycling or recovering waste is not possible, waste must be treated or disposed of.	Refer to Section 6.1	**Environmental Advisors** Spoil Manager Site Supervisors	Section 143 Certificates Spoil Receival Site Approval Checklists Register of Receival Sites Waste Classification Reports GPS Records Material tracking forms Spoil daily dockets	During construction
D91	The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the conditions of the current EPL for the CSSI, or be done in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, as the case may be.	Refer to Section 6.5	**Environmental Advisors** Spoil Manager Site Supervisors	Section 143 Certificates Spoil Receival Site Approval Checklists Waste Classification Reports	During construction
D92	Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	Refer to Section 6.4.2	**Environmental Advisors** Spoil Manager Site Supervisors	Section 143 Certificates Spoil Receival Site Approval Checklists Register of Receival Sites Waste Classification Reports GPS Records Material tracking forms	During construction

ID	Requirements (Conditions)	JCG Response	Responsibility	Deliverables	Timing
				Spoil daily dockets	
D93	All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes.	Refer to Section 6.2	**Environmental Advisors** Spoil Manager	Waste Classification Reports	During construction

Revised Environmental Mitigation Measures

Table 17: Revised Environmental Mitigation Measures

ID	Requirements (REMM)	JCG Response	Responsibility	Deliverables	Timing
WR1	All waste would be assessed, classified, managed, transported and disposed of in accordance with the Waste Classification Guidelines and the Protection of the Environment Operations (Waste) Regulation 2014.	Refer to Section 6.2	**Environmental Advisors** Spoil Manager	Waste Classification Reports	During construction
WR2	A hazardous material survey would be completed for those buildings and structures suspected of containing hazardous or special waste materials (particularly asbestos) prior to their demolition. If hazardous waste or special waste (e.g. asbestos) is encountered, it would be handled and managed in accordance with relevant legislation, codes of practice and Australian standards.	Refer to Section 6.3.4	**Project Manager**	Hazardous Material Survey Reports	During construction
WR3	Construction waste would be minimised by accurately calculating materials brought to the site and limiting materials packaging.	Refer to Section 0	**Project Engineers**	Contract documents	During construction
WR4	Waste streams would be segregated to avoid cross-contamination of materials and maximise reuse and recycling opportunities.	Refer to Section 6.4.1	**Spoil Manager** Site Supervisors	Environmental Inspection Checklists	During construction
WR5	A materials tracking system would be implemented for material transferred between Sydney Metro West sites and to offsite locations such as licensed waste management facilities.	Refer to Section 6.6	**Spoil Manager** Site Supervisors	Materials Tracking Documentation	During construction

Environmental Performance Outcomes

Table 18: Environmental Performance Outcomes

Key Issue	Desired Performance Outcome	Sydney Metro West Performance Outcome	Sub-plan Reference
Spoil, Waste Management and Resource Use	▪ Spoil generated during the construction is effectively stored, handled, treated (if necessary), reused, and/or disposed of lawfully and in a manner that protects environmental values.	▪ 100 per cent of useable spoil is reused in accordance with the spoil reuse hierarchy ▪ A minimum 95 per cent recycling target is achieved for construction and demolition waste ▪ Products made from recycled content are prioritised ▪ The use of potable water for non-potable purposes is avoided if non-potable water is available. The reuse of water is maximised, either on site or off site	Refer to Section 1.2 and the Water Reuse Strategy

Construction Environmental Management Framework

Table 19: Construction Environmental Management Framework

ID	Requirements (CEMF)	Sub-plan Reference
3.5 (a)	Subject to Section 3.4(b) the Principal Contractors will prepare issue-specific environmental sub plans to the CEMP which address each of the relevant environmental impacts at a particular site or stage of the project. Issue specific sub plans will include as a minimum: i. Spoil management; ii. Groundwater management; iii. Noise and vibration management; iv. Heritage management; v. Flora and fauna management; vi. Visual amenity management; vii. Soil and water management; viii. Air quality management; and ix. Waste management.	This Sub-Plan
3.6 (a)	The Principal Contractor will prepare and implement activity specific environmental procedures. These procedures should supplement environmental management sub plans, but may substitute for sub plans in agreement with Sydney Metro if a reasonable risk based justification can be made and the sub plan is not a requirement of any approval.	Appendix A
3.6 (b)	The procedures will include: i. A breakdown of the work tasks relevant to the specific activity and indicate responsibility for each task; ii. Potential impacts associated with each task; iii. A risk rating for each of the identified potential impacts; iv. Mitigation measures relevant to each of the work tasks; and v. Responsibility to ensure the implementation of the mitigation measures.	Appendix A Activity Method Statements Task Risk Assessments
14.1 (a)	The following waste objectives will apply to construction: i. Minimise waste throughout the project life-cycle; and ii. Waste management strategies will be implemented in accordance with the Waste Avoidance and Resource Recovery Act 2001 management hierarchy as follows: ▪ Avoidance of unnecessary resource consumption; ▪ Resource recovery (including reuse, reprocessing, recycling and energy recovery); and ▪ Disposal.	Section 1.2

ID	Requirements (CEMF)	Sub-plan Reference
14.1 (b)	Targets for the recovery, recycling or reuse of construction waste, and beneficial reuse of spoil will be provided by the Principal Contractor.	Section 1.2
14.2 (a) i	Principal Contractors will develop and implement a Waste Management Plan which will include as a minimum: i. The waste management mitigation measures as detailed in the environmental approval documentation;	Section 6
14.2 (a) ii	The responsibilities of key project personnel with respect to the implementation of the plan	Section 4.1
14.2 (a) iii	Waste management monitoring requirements	Section 6.6 Element 2: Monitoring and Reporting
14.2 (a) iv	A procedure for the assessment, classification, management and disposal of waste in accordance with Waste Classification Guidelines	Section 6.2 Section 6.6 Appendix A
14.2 (a) v	Compliance record generation and management.	Section 6.6
14.2 (b)	Principal Contractors will undertake the following waste monitoring as a minimum: i. Weekly inspections will include checking on the waste storage facilities on site; and ii. All waste removed from the site will be appropriately tracked from ‘cradle to grave’ using waste tracking dockets.	Section 6.6 Element 2: Monitoring and Reporting
14.2 (c)	Principal Contractors will report all necessary waste and purchasing information to Sydney Metro as required for Sydney Metro to fulfil their WRAPP reporting requirements.	Element 2: Monitoring and Reporting
14.2 (d)	Compliance records will be retained by the Principal Contractors in relation to waste management including records of inspections and waste dockets for all waste removed from the site.	Element 2: Monitoring and Reporting

Environment Protection Licence

Table 20: Environment Protection Licence

ID	Requirements (EPL)	Sub-plan reference
O1.1	Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	Section 6
O5.1	Waste Management Plans must be prepared and implemented for all demolition/ construction/ excavation works undertaken on the premises that generate waste that will be disposed offsite (not including office paper or cardboard). The plan must be completed prior to waste being transported off the premises. The plans must include the following: a) Estimations of the different waste types to be generated from the proposed works; and b) Estimations of how much of each waste type will be generated from the proposed works; and c) List of all places (full street address) where waste will be transported to; and d) Written confirmation from each place of disposal (listed in point c) that they can lawfully receive the types of waste proposed to be transported there. e) Where the place of disposal changes after the plan has been made, an amendment to the plan can be made as a register that includes an update to points a) to d) above. The Waste management plan must be submitted to the EPA prior to the commencement of scheduled activities. Any subsequent amendments must be provided to the EPA upon request.	Section 5.1 Appendix B Table 14: Element 2: Monitoring and reportingTable 14 Section 6.4.2
O5.2	The licensee must keep detailed records of waste generated, received or removed from the premises that includes (at a minimum): a) the addresses and facility/business names of destination location(s) for all waste generated and transported off the premises for any purpose (including recycling, reuse, processing, treatment and disposal); b) details of all waste received on the premises or transported off the premises that is subject to a Resource Recovery Order and/or Exemption under the Protection of the Environment Operations (Waste) Regulation 2014, and demonstration that the waste meets the requirements of the Order and/or Exemption; c) legible copies of all documents/records evidencing that all waste transported from the premises was taken to a facility/premises that can lawfully accept that waste type; and d) records of all compliance checks conducted under condition O5.3. Note: A copy of an up-to-date Construction Waste Management Plant (CWMP) and records must be kept on the	Table 14: Element 2: Monitoring and reportingTable 14 Section 8.2

ID	Requirements (EPL)	Sub-plan reference
	premises for the duration of the licence and provided to an EPA officer upon request.	
O5.3	The licensee must develop a compliance program to ensure that all waste is being managed, transported, reused, recycled or disposed in a lawful manner. The compliance program must include, but not limited to: a) Desktop investigations; b) Site Inspections of reuse, recycling or disposal locations; c) any other suitable method to check compliance with the CWMP. The records for the compliance program must be available to the EPA upon request.	Section 6.7
O5.4	Excavated material suitable for re-use within the premises, may be transported from one part of the premises to another part of the premises by road.	Section 6.5
O5.5	The licensee must not cause, permit or allow any waste generated outside the licensed premises to be received at the licensed premises, except virgin excavated natural material or as expressly permitted by a condition of this licence or a resource recovery order and/or resource recovery exemption under the Protection of the Environment Operations (Waste) Regulation 2014.	Section 6.5

Part C Annexures

Appendix A Procedures

Appendix B Register of Waste Disposal Sites

Table 21: Register of Waste Disposal Sites

Facility Name	Address	Lawfully Received Waste Types (of relevant to the ETP Works)	EPL/DA
51 Huntingwood Dr - A W Edwards	51 Huntingwood Dr, Huntingwood	▪ RRO-RRE	SSD-41589232
Aerowest JV - Bringelly	Badgery's Creek Rd, Bringelly, NSW 2556	▪ RRO-RRE	BAN-22-SWZ-0025
Archbold Rd - Eastern Creek - AWJ Civil	Lot 102 and Lot 103 Archbold Road Eastern Creek	▪ RRO-RRE ▪ VENM	DA-15-01330
AWJ Civil	13 Endeavour Rd, Caringbah AWJ	▪ RRO/RRE	DA23/0721
Bingo Waste Management Centre	123-129 Patons Lane, Orchard Hills	▪ GSW	EPL20814
Boral Recycling	39a Widemere Rd, Wetherill Park	▪ RRO/RRE ▪ GSW ▪ ENM ▪ VENM ▪ Concrete	EPL11815
Botany Aquatic Centre	2 Myrtle St, Botany	▪ RRO/RRE	F25/147
Breen Resources	Captain Cook Drive, Kurnell, NSW, 2231	▪ RRO-RRE ▪ GSW	EPL-4608, EPL-20697 and DA 269-90
Bulk Recovered	Leppington, 1382-1402 Camden Valley Way,	▪ RRO-RRE ▪ VENM	DA--400/2018
Burton Contractors	771-781 Mamre Rd, Kemps Creek	▪ RRO-RRE	SSD17647189
Camellia	Corner of Devon Street and Colquhoun Street Rosehill	▪ RRO-RRE	DP1308385
Clean & Green Organics	769 The Northern Road, Bringelly NSW 2556	▪ RRO-RRE	EPL-11539 and DA 2000 1726 - 3
Cobbity - Sydney Hydro	84 Cut Hill Rd, Cobbitty	▪ RRO-RRE	DA 2019 844 1
Colebee Warehouse - Transport for NSW	695 Richmond Road, Colebee	▪ RRO-RRE	TfNSW Review of Environmental Factors
CPB - WSA	Pitt St Badgerys Creek	▪ RRO-RRE	WSA - Airport Plan

CPB - WSA	100 Anton Rd, Luddenham	▪ RRO-RRE	WSA - Airport Plan
CSR Badgerys Creek	235 Martin Road, Badgerys Creek, NSW 2555	▪ RRO-RRE	SSD-MP10_0014
Denmark Link Road - Burton Contractors	Denmark Link Rd	▪ RRO-RRE	A49344630 and Hold Point 70
ECCOR – Eco Cycle Materials	155 Newton Rd, Wetherill Park NSW, 2164	▪ GSW	EPL-10699
Elevation Greystanes - AWJ Civil	44 Clunies Ross Street, Greystanes	▪ RRO-RRE	SSD 10399
Enviro Pacific Services	Lot 122 DP1194515, Heathcote Road, Holsworthy NSW 2173.	▪ RRO-RRE	Crown Land
Elford - Elford Group	340-400 Badgerys Creek Rd (Council Side)	▪ RRO-RRE	DA-693/2009
Fulton Hogan	1669-1723 Elizabeth Dr, Badgerys Creek	▪ RRO-RRE ▪ VENM	DA-240775
Gledswood Hills, 190 Raby Road	J K Williams 190 Raby Road Gledswood Hills	▪ RRO-RRE	DA20231861
Glenfield Waste Services	2 Cambridge Ave, Glenfield. NSW. 2167	▪ RRO-RRE	4614
Great River NSW Pty Ltd	Castlereagh - 14-98 Old Castlereagh Rd,	▪ RRO-RRE ▪ VENM	DA2 MOD11
Hi-Quality Quarry	1503-1519 Elizabeth Dr, kemps Creek.	▪ RRO/RRE ▪ GSW-NP	EPL-20593
Horsley Park (Gazcorp)	813 – 913 Wallgrove Road, Horsley Park	▪ RRO-RRE	SSD-5248
Horsley Park (UCBC)	813 – 913 Wallgrove Road, Horsley Park	▪ RRO-RRE	SSD-36156297
John Holland - Penrith Stadium	143 Station St, Penrith	▪ RRO/RRE	SSD-6829271
Kemps Creek	884-928 Mamre Rd, Kemps Creek. Burton Contractors - Mustafa Ak	▪ RRO-RRE	SSD176471989
Lighthorse Business Park - AWJ Civil	165 Wallgrove Road, Eastern Creek	▪ RRO-RRE	SSD-9667
M7-M12 Project – John Holland	M7-M12 Integration Project, 112 Wallgrove Rd Cecil Park NSW 2178	▪ RRO-RRE	EPL-21829
M12 Central - Seymour Whyte Constructions	M12 Central - Motorway (Elizabeth drive, Penrith NSW 2740)	▪ RRO-RRE	EPL -21596

M12 West - CPB Georgiou	M12 Motorway West (1793 Elizabeth Drive, Badgerys creek)	▪ RRO-RRE	EPL -21595
M1R2T - John Holland Gamuda JV	M1 EXTENSION TO RAYMOND TERRACE - Black Hill to Tomago, 1877 Pacific Highway	▪ RRO-RRE ▪ VENM	EPL-21808 and SSI-7319
Mamre Road - Seymour Whyte	Mamre Road	▪ RRO-RRE	EPL-21817
MCL7 Project - Bluescope Steel Limited	55 Templar Rd, Erskine Park, NSW 2759	▪ RRO-RRE	EPL-12495
MET Recycling	134 Carnarvoin St, Newton Street North, Silverwater NSW 2128	▪ GSW ▪ Concrete	EPL-20948
Metropolitan Demolitions and Recycling	396 Princes Hwy, Sydney New South Wales 2044	▪ Concrete	EPL 11483
Microsoft Data Centre - Mainland Civil	707-769 Mamre Rd, Kemps Creek	▪ RRO-RRE	SSD-10101987
Milperra, ESR Development	270 Horsley Park	▪ RRO-RRE	DA-715/2022
Moorebank Intermodal - SIMTA and Qube Holdings	Moorebank Precinct West Moorebank Avenue, Moorebank,	▪ RRO-RRE	EPL-21054 and DA-SSD-10431
Moorebank Intermodal - SIMTA and Qube Holdings (Platinum Waste)	Moorebank Avenue, Moorebank	▪ RRO-RRE	EPL-21054, SSD-10431 and SSD-5066
MR512 Heathcote Rd Upgrade	Between Infantry Parade, Holsworthy and the Avenue, Voyager Point	▪ RRO-RRE	EPL-21505
Oran Park	600J & 650 The Northern Road, ORAN PARK,NSW	▪ RRO-RRE	DA No. 2021/1254/1
Orchard Hills, Luddenham Road	211-227 & 289-317 Luddenham Road Orchard Hills	▪ RRO-RRE	DA24/0294/10791
Penrith Lakes - Kingsfield Pty	McCarthy's Lane, Cranebrook	▪ RRO-RRE	DA2 and DA3
Randwick - Sydney Children's Hosp & Minderoo	Sydney Children's Hospital S1 & Minderoo CCC, 67 Botany St, Randwick	▪ RRO-RRE	SSD-10831778
Rockdale - Bayside Council, CONO Services	427-429 Princess Highway, Rockdale 2216	▪ RRO-RRE	DA-2022/46
Rousell Street, Eastern Creek - Vella Civil	5 Eighteenth Ave, Austral NSW 2179	▪ RRO-RRE	SSD 41807966

SCAW Road Project - CPB Contractors	Luddenham, NSW 2745	▪ RRO-RRE	EPL-21695
Serlana - Seven Hills	1 Brumby St, Seven HIlls	▪ RRO-RRE	VBS24-9628
Spring Farm Upgrade	Near the intersection of M31 Hume Highway and Menangle Road	▪ RRO-RRE	EPL-21673
SSTOM - Airport Terminal - Parklife JV	560 Badgerys Creek Rd, Badgerys Creek	▪ RRO-RRE	EPL-217807
SSTOM - Parklife JV	Luddenham Road, Luddenham South	▪ RRO-RRE	EPL-217807
Sydney Football Stadium S2	44 Driver Avenue, Moore Park, 2004	▪ RRO-RRE	SSD - 9835
Sydney Gateway Project - John Holland	Sydney Gateway Project, Burrows Rd and Nigel Love Bridge Entrance	▪ RRO-RRE	EPL-21524
The Yards - AWJ Civil	757-769 Mamre Rd, Kemps Creek	▪ RRO-RRE	SSD-9522
Viking Civil	Lot 2 DP598602 & Lot 12 DP591857, known as 275-280 Eighth Avenue, Austral, Lot131 & 132 DP879822, known as 26-28 Kelly Street, Austral	▪ RRO-RRE ▪ VENM	DA-7092022
Warringah Freeway - CPB DTI JV	Warringah Freeway	▪ RRO-RRE	EPL-21619
WSA - CPB Acciona JV	The Northern Road, Bringelly, NSW 2556	▪ RRO-RRE	Western Sydney Airport Stage 1 Development (Federal Gov Approval)
Green Spot Resource Recovery Facility	24 Davis Road, Wetherill Park, NSW, 2164	▪ Liquid Waste	EPL-21092
Downer Sustainable Road Resource Centre	9 Devon Street, Rosehill, NSW, 2142	▪ Liquid Waste	EPL-21611
Demast	7 Long Street, Smithfield, NSW, 2164	▪ Liquid Waste	EPL-20875

Appendix C Environmental Representative Endorsement

HBI Healthy Buildings International Pty Ltd
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[redacted]

10 November 2025

A/Director Sustainability, Environment and Planning
Metro West
Sydney Metro
Transport for NSW
PO Box K659
HAYMARKET NSW 1240

REF: 201208 (G) WMP_Rev 5

Dear Ryan

RE: Sydney Metro West Stage 2 – Eastern Tunnelling Package: Waste Management Sub-Plan (Rev 5)

I refer to Sydney Metro's (SM) submission of the following document required by Condition C1 of the Sydney Metro West – The Bays to Sydney CBD Approval (SSI 19238057) which was approved by the Department of Planning and Environment (DPE) on 24 August 2022:

- Sydney Metro West, Eastern Tunnelling Package Waste Management Sub-Plan Rev 5 dated 31 October 2025 (SMWSTETP-JCG-SWD-SW000-EM-PLN-002022).

It is noted that:

- The Waste Management Plan (WMP Rev 0) was prepared by John Holland CPB Ghella JV (JCG) to address the requirements of Condition C1 of the Infrastructure Approval.
- Rev 2 of the document comprised an annual update of the plan largely related to EPL requirements.
- Revisions 3 and 4 were part of an annual review by JCG which included an update of the Register of Waste Disposal sites.
- Revision 5 also comprised an update of the Register of Waste Disposal sites.
- Sydney Metro has reviewed the document and has no comments.

Following the above reviews, the revised document is considered to comprise minor amendments. As the approved Environmental Representative for the Sydney Metro West and as required by Condition A32(j) and C1, on the basis of the above, the Waste Management Sub-Plan (Revision 5) is approved.

Yours sincerely

[redacted]

Environmental Representative – Sydney Metro West – Eastern Tunnelling Package

[redacted]