



Waste Management Plan

SMWSTCTP-AFJ-1NL-WM-PLN-000001 Revision 01

Sydney Metro West – Central Tunnelling Package



DOCUMENT APPROVAL

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GLOSSARY / ABBREVIATIONS

Term / Acronym	Definition
AFJV	Acciona Ferrovia Joint Venture (the Contractor)
Amendment Report	Sydney Metro West Westmead to The Bays and Sydney CBD Amendment Report Concept and Stage 1 (2020)
CEMP	Construction Environmental Management Plan
CoA	Minister's Conditions of Approval (as relevant to Sydney Metro West Concept and Stage 1)
CTP	Central Tunnelling Package
DPIE	NSW Department of Planning, Infrastructure and Environment
EIS	Sydney Metro West Concept and Stage 1 Environmental Impact Statement (April 2020)
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
Minister, the	NSW Minister for Planning and Public Spaces
Planning Secretary	The Planning Secretary of the Department of Planning, Industry and Environment
Project	Sydney Metro West Concept and Stage 1
REMM	Revised Environmental Mitigation Measure
Submissions Report	Sydney Metro West Westmead to The Bays and Sydney CBD Submissions Report Concept and Stage 1 (2020)
WARR Act	NSW <i>Waste Avoidance and Resource Recovery Act 2001</i>
WRAPP	NSW Government's Waste Reduction and Purchasing Policy

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1 INTRODUCTION

Sydney Metro is Australia's biggest public transport program. Services on the North West Metro Line between Rouse Hill and Chatswood started in May 2019. The Sydney Metro network also includes Sydney Metro City & Southwest, Sydney Metro West and Sydney Metro Western Sydney Airport.

Sydney Metro West is a new 24 kilometre metro line between Westmead and the Sydney CBD (the Project). This infrastructure investment will double the rail capacity of the Greater Parramatta to Sydney CBD corridor with a travel time target between the two centres of about 20 minutes.

The planning approvals and environmental impact assessment for Sydney Metro West has been split into a number of stages recognising the size of the project. This includes:

- Stage 1 – Concept and all major civil construction works including station excavation and tunnelling between Westmead and The Bays. Planning approval for this stage was granted in March 2021.
- Stage 2 – All major civil construction works including station excavation and tunnelling from The Bays to Sydney CBD
- Stage 3 – Tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of the Sydney Metro West line

Due to the Project's importance, the Project was declared to be Critical State Significant Infrastructure by the Minister for Planning and Public Spaces. An Environmental Impact Statement (EIS) (Jacobs/Arcadis, 2020) for the Concept and Stage 1 (herein referred to as the Project) was placed on public exhibition from 30 April 2020 to 26 June 2020. Submissions were received from government, agencies, organisations and the public in response to the project. A Submissions Report was prepared by Sydney Metro in response to submissions received during the exhibition period and an Amendment Report was prepared by Sydney Metro in 2020 as a result of continued design development and refinement. The Project was approved on 11 March 2021 (SSI 10038). An administrative modification (Modification 1) was approved on 28 July 2021.

1.1 PURPOSE AND SCOPE

This Waste Management Plan (WMP or Plan) forms part of the civils Construction Environmental Management Plan (CEMP) for the design and construction of the Central Tunnelling Package (CTP). This Plan outlines how AFJV will comply with and implement the applicable requirements for the CTP and identify how waste generation, disposal and recycling will be managed during civils construction phase B1 (in accordance with the Sydney Metro Phasing Report).

This Plan outlines how AFJV will comply with and implement the applicable elements from the following documents, collectively referred to herein as the 'Project requirements':

- NSW Minister for Planning, Industry and Environment Conditions of Approval (CoA)
- Revised Environmental Mitigation Measures (REMMs), and the
- Sydney Metro Construction Environmental Management Framework (CEMF).

2 OBJECTIVES AND TARGETS

The key objective of this Plan is to ensure that waste is minimised and appropriately managed in compliance with the Project requirements. The CEMF provides waste management objectives that will apply to construction:

- Minimise waste through the project life-cycle; and
- 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.

Reduction targets to address the CEMF objectives have been established and identified in the Sustainability Management Plan, and provided in Table 2-1. The management of spoil and spoil reuse opportunities are identified in the Spoil Management Plan which forms part of the CEMP.

TABLE 2-1: OBJECTIVES AND TARGETS

Objective	Target	Measurement Tool
100% re-use or recycling of re-usable spoil	Spoil would be classified in accordance with Waste Classification Guidelines (NSW Environment Protection Authority, 2014). Spoil that is classified as virgin excavated natural material, excavated natural material, subject to a resource recovery order/resource recovery exemption under the Protection of the Environment Operations (Waste) Regulation 2014 or is otherwise reusable would be reused (consistent with the 100 per cent beneficial reuse performance outcome).	Sustainability Management Plan Spoil Management Plan Waste Tracking Register Inspection Records and Audit Reports
Minimum of 95% recycling target is achieved for construction and demolition waste	Stage 1 would adopt a construction waste recycling target of 95 per cent. Waste streams would be segregated to avoid cross-contamination of materials and maximise recycling opportunities.	WARR Reporting (Sustainability Management Plan)
Products made from recycled content are prioritised	The AFJV Environment and Sustainability Policy includes a commitment to sustainable procurement. The management of procurement and the retention of records associated with procurement is detailed in the Procurement Procedure.	Procurement Procedure Sustainability Management Plan

Objective	Target	Measurement Tool
	The AFJV procurement procedures are aligned with the Australian Standard AS ISO 20400:2018 Sustainable Procurement Guidance.	
The use of potable water for -potable purposes is avoided if non-potable water is available	AFJV would minimise water use and use non-potable water where feasible consistent with adopted sustainability initiatives and targets.	WARR Reporting Sustainability Management Plan Water Reuse Strategy

The EIS (Chapter 27) identified specific construction performance outcomes for the Project performance outcome relating to spoil are covered in the Spoil Management Plan those relevant to the management of waste are outlined in Table 2-2.

TABLE 2-2 DESIRED PERFORMANCE OUTCOMES AND PROJECT OUTCOMES FROM SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENT

Desired performance outcome	Sydney Metro West Performance Outcomes	How stage 1 addressed performance outcomes
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	<p>A minimum 95 per cent recycling target is achieved for construction and demolition waste</p> <p>Products made from recycled content are prioritised</p> <p>The use of potable water for -potable purposes avoided if non-potable water is available</p> <p>The reuse of water is maximised, either on site or off site</p>	<p>Stage 1 would adopt a construction waste recycling target of 95 per cent.</p> <p>Waste streams would be segregated to avoid cross-contamination of materials and maximise recycling opportunities.</p> <p>Stage 1 would minimise water use and use non-potable water where feasible consistent with adopted sustainability initiatives and targets – refer to Section 8.20 (Sustainability and climate change – Concept).</p>

3 ENVIRONMENTAL REQUIREMENTS

3.1 LEGISLATION AND GUIDELINES

The relevant legislation to this Plan is the:

- *Protection of the Environment Operations Act 1997 (POEO Act)*
- *Protection of the Environment Operations (Waste) Regulation 2014 (POEO Waste Regulation)*
- *Waste Avoidance and Resource Recovery Act 2001 (WARR Act)*

Refer to the CEMP for details of the relevant legislation.

Additional guidelines and standard relevant to the management of waste and recycling 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)

3.2 PROJECT REQUIREMENTS

The Project requirements relevant to the preparation of this Plan are listed in Table 3-1.

TABLE 3-1: COMPLIANCE MATRIX – REQUIREMENTS FOR THE PREPARATION OF THIS PLAN

Project Planning Approval (SSI 10038) 11 March 2021		
C1	Construction Environmental Management Plans (CEMPs) and CEMP Sub-plans must be prepared in accordance with the Construction Environmental Management Framework (CEMF) included in the documents listed in Condition A1 of this schedule to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 of this schedule will be implemented and achieved during construction.	This Plan
Construction Environmental Management Framework		
Ref	Requirement	Where addressed
14.2a	The Principal Contractor will develop and implement a Waste Management Plan which will include as a minimum:	This WMP
i.	The waste management mitigation measures as detailed in the environmental approval documentation	This Table and Appendix A
ii.	The responsibilities of key project personnel with respect to the implementation of this plan	Section 6
iii.	Waste management monitoring requirements	Section □
iv.	A procedure for assessment, classification, management and disposal of waste in accordance with Waste Classification Guidelines, and	Section 5.2 and the Soil and Water Management Plan
v.	Compliance record generation and management.	Section 7.4

Other Project requirements relevant to this Plan are included in **Appendix A**

3.3 REVISED ENVIRONMENTAL MITIGATION MEASURES

The relevant REMMs to this Plan are included in **Appendix A**.

3.4 LICENCES AND PERMITS

An EPL will apply for the CTP. The importation of waste to the CTP and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the conditions of the EPL (once granted). The following licensing or permits or regulatory processes will also apply to the CTP:

- Optimisation of waste reuse offsite will be managed through the Waste Recover Orders / Exemptions under the POEO Waste Regulation. Further information is provided in Section 5.5
- AFJV will only dispose of waste at appropriately licensed facilities or other facilities that have appropriate approvals to receive re-useable wastes including waste meeting a resource recovery order. Further information is provided in Section 5.3.3.
- The transportation of asbestos waste, asbestos soils or waste tyres will be undertaken by waste removal contractors registered under the EPA's WasteLocate system. Further information is provided in Section 5.3.3.

4 ENVIRONMENTAL ASPECTS AND IMPACTS

4.1 CONSTRUCTION

4.1.1 WASTE STREAMS

The EIS (Chapter 24) identified the following waste streams would be generated during construction of the Project which are detailed in Table 4-1 Quantities of waste generated during construction will be tracked as detailed in Section 5.3.3.

TABLE 4-1: INDICATIVE WASTE STREAMS GENERATED DURING CONSTRUCTION

Activity	Waste Stream	Likely Waste Classification	Document where waste stream is addressed
Demolition of buildings and other structures	General demolition waste	General solid waste (GSW) (non-putrescible)	This Plan
	Hazardous waste including asbestos	Hazardous waste Special waste	Hazardous and Special waste (including asbestos) is addressed in the Project Safety Management documentation.
Clearing and grubbing of vegetation, landscaped and/or turfed areas	Vegetation waste	GSW (non-putrescible)	This Plan
Tunnelling, excavation and general earthworks	Spoil	GSW (non-putrescible) Special waste Restricted solid waste (RSW) Hazardous waste	Spoil from station excavations and general earthworks is addressed in the Spoil Management Plan. Contaminated soil including PASS and ASS is addressed in the Soil and Water Management Plan.
		Tunnel boring machine wastes	GSW (non-putrescible)
	Wastewater	Recycled/treated or clean water (for discharge)	Wastewater to be discharged is addressed in the Groundwater Management Plan and Soil and Water Management Plan.

Activity	Waste Stream	Likely Waste Classification	Document where waste stream is addressed
		Liquid waste	Wastewater to be disposed – This Plan
Dust suppression, wash down of plant and equipment, and staff amenities at construction sites	Wastewater	Recycled/treated or clean water (for discharge)	Wastewater to be discharged is addressed in the Groundwater Management Plan and Soil and Water Management Plan.
		Liquid waste	Wastewater to be disposed – This Plan
General construction and resource use	General construction wastes	GSW (non-putrescible)	This Plan
		Spoil	Spoil management is addressed in the Spoil Management Plan.
Maintenance of plant, vehicles and equipment	Mechanical wastes	Hazardous waste and/or special waste	Hazardous and Special waste (including asbestos) is addressed in the Project Safety Management documentation.
		Liquid waste	This Plan
Site offices and cribs rooms	General waste	GSW (non-putrescible)	This Plan
		GSW (putrescible)	

4.1.2 RESOURCE USE

The EIS (Chapter 24) identified the resource requirements during construction of the Project (which includes indicative quantities for the CTP and the Western Tunnelling Package). Indicative quantities of resources including electricity, fuel, concrete, shotcrete, steel and water relevant to the CTP Works are detailed in the Sustainability Management Plan.

Quantities of resources and materials required during construction will be tracked as detailed in Section 5.3.

4.2 IMPACTS

4.2.1 UN-USEABLE SPOIL

The EIS identified the potential residual impacts would include generation of un-useable spoil during tunnelling due to contamination or acid sulfate soils. All un-useable spoil 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*. More detail is provided in the AFJV Spoil Management Plan.

4.2.2 RESOURCE USE

The EIS identified that the construction of the Project would require a variety of resources to including electricity, fuel, concrete, shotcrete, steel and water. Refer to the Sustainability Management Plan for detail relating to the CTP resource requirements.

In addition to detailing strategies to minimise resource consumption and maximising reuse of materials, the Sustainability Management Plan includes a commitment to incorporate materials with lower environmental footprint, and associated project targets.

5 WASTE MANAGEMENT AND RECYCLING

5.1 WASTE HIERARCHY

Waste management for the CTP will be managed in accordance with the principles of the WARR Act. The hierarchy is as follows:

- Avoidance of unnecessary resource consumption (refer to Section 5.3)
- Resource recovery including reuse, reprocessing, recycling and energy recovery (refer to Section 5.5)
- Disposal.

AFJV is committed to the management of waste in accordance with the objectives of the WARR Act (refer to Section 5.3). CTP works will be managed in accordance with the hierarchy and the legislation and guidelines applicable to waste management as identified in Section 3.1.

5.2 WASTE CLASSIFICATION

Waste generated from excavations and demolition will be assessed and classified in accordance with Figure 1 of the Sydney Metro Waste Classification Procedure (V3.0). A copy is provided in **Appendix B**.

This classification is consistent with the EPA's Waste Classification Guidelines. The NSW EPA's Waste Classification Guidelines- Part 1: Classifying Waste (2014) require waste to be classified into the following classes as defined in clause 49 of Schedule 1 of the *Protection of the Environment Operations Act* (POEO Act): special, liquid, hazardous, restricted, GSW putrescible and GSW non-putrescible).

In situ classification of spoil material will be undertaken in accordance with the Soil and Water Management Plan. In the event the material has not been subject of in-situ classification, the Environmental Manager would provide clarification regarding waste disposal options.

5.3 WASTE AVOIDANCE AND MINIMISATION

AFJV would implement the following waste avoidance and minimisation measures:

- Ensure necessary planning is undertaken to enable efficient management of the delivery and storage of materials to avoid spoilage
- Planning and coordination across different CTP work sites to effectively utilise all materials and avoid wastage
- When ordering goods and materials, purchase the correct volumes and where possible establish a take back arrangement of unused stock
- Procurement – use suppliers that can demonstrate sustainable practices

5.3.1 REUSE AND RECYCLE

When the avoidance or minimisation of waste is not possible, waste will be reused on site or offsite, including recovery through recycling and/or reprocessing (ie. process the waste product into a similar non waste product) through the following pathways:

- Resource recovery exemptions
- Approved recycling facility
- Approved notice under Section 143 of the POEO Act
- Adaptive reuse of salvaged heritage items (refer to Heritage Management Plan)

Specific recycling and reuse strategies for each anticipated waste stream is detailed in Table 5-1.

AFJV will continue to investigate opportunities for recycling and reuse of other non-putrescible waste throughout the delivery of the CTP (refer to Sustainability Management Plan).

TABLE 5-1: REUSE AND RECYCLING MEASURES

Waste Stream	Waste Stream
General demolition waste	<p>Demolition waste will be reused and recycled to the greatest extent practicable. Site facilities and assets will be shared and reused across CTP worksites.</p> <p>AFJV will engage subcontractors that align with AFJV's waste management strategy. Refer also to Sustainability Management Plan.</p>
Vegetation waste	<p>Due to the nature and scale of vegetation removal required for the CTP there is limited scope for reuse and recycling of native vegetation.</p> <p>Non-native vegetation, weeds and noxious weeds will be managed and disposed in accordance with the Flora and Fauna Management Plan.</p>
Spoil	<p>100% reuse of useable spoil generated from CTP works. Spoil reuse opportunities guided by the soil management hierarchy detailed in the EIS in Chapter 24 of the EIS are addressed in the Spoil Management Plan.</p>
Wastewater	<p>Construction water will either be reused on site, taken offsite as liquid waste or discharged in accordance with the EPL. Refer to the Soil and Water Management Plan.</p> <p>Water reuse options will be evaluated in the Water Reuse Strategy (CoA D79).</p>
General construction waste	<p>Mixed construction waste will be reused onsite, or separated on site and collected to be sent offsite to a licenced recycling facility. Paper and cardboard recycling will be contained separately from other waste materials.</p>
General waste (office / crib rooms)	<p>Office waste receptacles will be provided to maximise recycling opportunities.</p>

5.3.2 WASTE HANDLING AND STORAGE

AFJV will implement the following storage and waste handling measures:

- General waste and recyclables will be stored in bins/containers and collected regularly.
- Spoil, topsoil, mulch/green waste and weeds will be stored onsite and where necessary, dust suppression measures will apply (refer to the Air Quality Management Plan)
- PASS/ASS will be managed in accordance with the Acid Sulfate Soils Management Procedure in the Soil and Water Management Plan
- Contaminated spoil will be handled and temporarily stored in accordance with the Soil and Water Management Plan and the Spoil Management Plan and disposed offsite will be by a licenced contractor. Refer to those documents for detail on spoil management.
- Liquid waste will be stored in sealed tanks (or similar) in an appropriately bunded area prior to removal by a licenced contractor.
- Waste fuels, oils and other hazardous materials will be stored in a ventilated, bunded area prior to removal by a licenced contractor.

- Management of unexpected finds of asbestos will be in accordance with the Contamination and Asbestos Unexpected Finds Procedure included in the Soil and Water Management Plan. Asbestos removal will be managed by an appropriately licenced asbestos removalist.
- Special waste or hazardous waste will be segregated, contained and stored separately in an appropriately bunded area. The stockpiles will be covered and the cover will be anchored to avoid leakage. If the waste has the potential to result in leachate, the material will be stored with an appropriate leachate collection system. Further details relating to the management of special waste or hazardous waste are contained within the specific contamination assessments and Safety Management documentation (where applicable).

5.3.3 WASTE DISPOSAL

Material that is unable to be reused or recycled on site will be disposed of offsite following waste classification. The disposal of any waste is to be in accordance with the POEO Act and the WARR Act. There will be two types of waste disposal, being:

- disposal to an EPA licensed facility, or
- disposal to a receiving site under Section 143(3A) of the POEO Act.

Where disposal is proposed to an EPA licensed facility, the AFJV Environment Manager will review and confirm the allowed waste streams prior to commencing disposal use of that facility.

Prior to transporting wastes to a receiving site where an EPA licence is not required (such as an beneficial reuse site), an AFJV Waste Disposal Application will be submitted to the Environment Manager, which would need to include a completed and signed notice under section 143(3A) of the POEO Act ("s.143 Notice") along with accompanying documentation confirming that the proposed disposal site holds appropriate licences / approvals to receive the waste. Disposal of the material will not occur until the Environment Manager has approved the AFJV Waste Disposal Application.

Approved waste sites, both EPL licensed or beneficial reuse sites under the POEO Act will be included on the waste disposal register and material taken to this location will be tracked as described below.

5.3.4 WASTE TRANSPORTATION

5.3.4.1 AFJV WASTE TRACKING

Waste removed from CTP will be tracked using a Waste Tracking Register track waste movements from cradle to grave, including but not limited to movement of waste within the boundaries of the site. The register will consolidate GPS tracking, landfill receipt receipts, section 143 notices and resource recovery order/exemption details. Specifically, the following details will be recorded:

- Waste facility details
- Date transported
- Source and Quantity
- Waste classification
- Haulage company
- Truck registrationWaste receipt location
- Landfill docket numbers.

5.3.4.2 TRACKABLE WASTE

Under the Protection of the Environment Operations (Waste) Regulation 2014 (Waste Regulation), the transport and disposal of certain high-risk or hazardous waste must be tracked when it is transported into, within or out of NSW.

Consistent with the Protection of the Environment Operations (Waste) Regulation 2014 the following wastes potentially encountered/generated are required to be tracked within NSW:

- Hazardous Wastes as defined by Table 3 in the NSW EPA 'Waste that must be tracked' guideline,
- Liquid Waste (Category 1 trackable waste),
- Waste oil/water, hydrocarbon/water mixtures emulsions, and
- Wastes listed in Table 1 of the NSW EPA 'Waste that must be tracked' Guideline¹.

Trackable Waste must be tracked using the EPA's online waste tracking (OWT) system².

A waste Transport Certificate is the document used to record the transport of a load of trackable waste from the consignor to the receiving facility. The Transport Certificate is created from a Consignment Authorisation by the consignor, transporter or receiving facility nominated on the Consignment Authorisation.

The creation of the Consignment Authorisation is done by the receiving facility, while the transport certificates that must accompany each load can be created by any of the relevant parties (consignor, transporter or receiver) – where they have the required access to the OWT system.

Details of waste types, volumes and destinations will also be recorded for all relevant waste movements off site as noted in Section 5.3.4.1.

5.4 WASTELOCATE

AFJV acknowledges the requirement for transporters and receivers of certain types of material to be registered with the EPA's WasteLocate system. WasteLocate tracks each load from pick up to disposal using GPS, and generates a unique consignment number just like a parcel in the post. Waste required to be tracked by WasteLocate include:

- Tyre consignors, transporters and facilities transporting or receiving waste tyres in NSW weighing more than 200 kilograms or consisting of 20 or more tyres in one load.
- Asbestos transporters and facilities receiving asbestos waste in NSW, weighing more than 100 kilograms or consisting of more than 10 square metres of asbestos sheeting in one load.
- People transporting asbestos contaminated soil in NSW, weighing more than 100 kilograms.

Obligation to be registered with WasteLocate will be a mandatory requirement for applicable waste transporter or disposal facilities by the AFJV.

5.5 WASTE EXEMPTION

Clause 91 POEO Waste Regulation enables the EPA to grant exemptions to the licensing and payment of levies for the land application or use of waste.

The EPA has issued general exemptions for a range of commonly recovered, high volume and well characterised waste materials that allow their use as fill or fertiliser at unlicensed, off-site facilities. Under the Protection of the Environment Operations (Waste) Regulation 2014, there are a number of resource recovery orders and exemptions currently in force.

Relevant Resource Recovery Exemptions and Orders which may be applicable to this Project are defined in Table 5-2 below. These are general gazette exemptions that do not require additional approval.

Note that additional existing Resource Recovery Exemptions may be used, or new Project specific exemptions may be granted where an application is made to the EPA. It is likely that the CTP team

¹ Refer to the following website for more information: <https://www.epa.nsw.gov.au/your-environment/waste/tracking-transporting-hazardous-waste/waste-must-tracked>

² Refer to the following website for more information: <https://www.epa.nsw.gov.au/your-environment/waste/tracking-transporting-hazardous-waste/online-waste-tracking>

will seek additional exemptions during delivery. For example, a Resource Recover Exemption to reuse material that may include material with small quantum of shotcrete which may be cut out during the excavation process, as consistent with other large excavation projects.

TABLE 5-2 WASTE RECOVERY EXEMPTIONS AND ORDERS, AND ASSOCIATED CONDITIONS RELEVANT TO THE PROJECT (EPA CURRENT ORDERS AND EXEMPTIONS, 2018)-

Exemption/Order	General Conditions
<p>The excavated natural material exemption 2014</p> <p>The excavated natural material order 2014</p>	<p>The chemical concentration or other attributes of the excavated natural material listed in the Excavated Natural Material Exemption must not be exceeded.</p> <p>The excavated natural material can only be applied to land as engineering fill or used in earthworks.</p> <p>ENM handling, processing and testing requirements are outlined in detail in the exemption.</p>
<p>The excavated public road material exemption 2014</p> <p>The excavated public road material order 2014</p>	<p>The excavated public road material can only be stored within the road corridor at the site where it is to be applied to land.</p> <p>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. This exemption does not apply to the land application of excavated public road material on any land outside the road corridor.</p> <p>The excavated public road material cannot be applied on private land.</p> <p>The consumer must apply the relevant waste within a reasonable period of time.</p>
<p>The reclaimed asphalt pavement exemption 2014</p> <p>The reclaimed asphalt pavement order 2014</p>	<p>The reclaimed asphalt can only be:</p> <p>Applied to land for road related activities including road construction or road maintenance activities, being:</p> <ul style="list-style-type: none"> ○ A use as a road base and sub base, ○ Applied as a surface layer on road shoulders and unsealed roads, and ○ Use as engineering fill material. <p>Used as an alternative raw material in the manufacture of asphalt.</p>
<p>The recovered aggregate exemption 2014</p> <p>The recovered aggregate order 2014</p>	<p>The chemical concentration or other attribute of the recovered aggregate listed in the recovered aggregate exemption must be met.</p> <p>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:</p> <p>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, and Construction of roads on private land unless:</p> <ul style="list-style-type: none"> • 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.

Exemption/Order	General Conditions
<p>The stormwater exemption 2014</p> <p>The stormwater order 2014</p>	<p>Stormwater can be applied to land by:</p> <ul style="list-style-type: none"> • Spraying, spreading or depositing on the land, • Ploughing, injecting or mixing into the land, and • Filling, raising, reclaiming or contouring the land.
<p>The mulch order 2016</p> <p>The mulch exemption 2016</p>	<p>The 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.</p> <p>Mulch does not include plant material from kerbside waste collections.</p>
<p>The recovered plasterboard order 2014</p> <p>The recovered plasterboard exemption 2014</p>	<p>The chemical concentration or other attributes of the recovered plasterboard material listed in the order must not be exceeded.</p> <p>Recovered plasterboard can only be applied to land as a soil amendment. Prior to application to land the soil to which the material will be applied must be characterised to determine appropriate application rates. The recovered plasterboard must be incorporated into the topsoil.</p> <p>Handling, processing, sampling and testing requirements are outlined in detail in the order. Protection of the Environment Operations (Waste) Regulation 2014 applies to this order.</p>

6 MANAGEMENT AND MITIGATION

Mitigation measures to address CoAs, CEMF requirements and REMMs are outlined in Table 6-1. Refer to Sustainability Management Plan for measures related to resource consumption including power and emissions.

TABLE 6-1: MITIGATION MEASURES

Ref	Requirement	Timing	Responsibility	Source
WM1	<p>Waste generated during the construction of the CTP will be managed in accordance with the following waste management hierarchy:</p> <ul style="list-style-type: none"> ▪ Avoidance of unnecessary consumption ▪ Resource recovery including reuse, reprocessing, recycling and energy recovery, and ▪ Disposal. 	Construction	Environmental Manager Site Supervisor	CEMF CoA D111
WM2	All staff and Subcontractors will participate in a Site induction that will describe waste minimisation and reuse management measures, including the requirements of the waste management hierarchy.	Prior to construction	Environmental Manager	AFJV best practice
WM3	Excavation planning will be undertaken following in situ waste classification. This planning will allow targeted removal of contamination based on location and exposure risk, e.g., removal of hotspots to reduce risk of cross contamination.	Construction	Environmental Manager Site Supervisor	Best Practice
WM4	Waste generated onsite, that requires storage prior to disposal, will be segregated by waste type.	Construction	Environmental Manager Site Supervisor	REMM WR4
WM5	Procurement processes will include opportunities for waste minimisation, including embedding waste specific requirements in subcontracts where appropriate.	Prior to construction	Sustainability Manager Commercial Manager	REMM WR3
WM6	Construction waste will be minimised by accurately calculating materials to be brought to site, limiting excess materials and limiting packaging by purchasing in larger orders.	Prior to construction	Project Engineers Site Supervisor	REMM WR3
WM7	Hazardous materials surveys will be completed on all buildings prior to demolition. Hazardous materials will be selectively removed by suitably licensed	Prior to construction	Project Manager Safety Manager	REMM WR2

Ref	Requirement	Timing	Responsibility	Source
	contractors prior to the full demolition of buildings in accordance with an approved demolition plan. Disposal will be at suitably licensed facilities.			
WM8	100% of usable spoil will be re-used or recycled (both onsite and offsite). Where necessary the off-site re-use of spoil will be in accordance with specific resource recovery exemptions/orders.	Construction	Environmental Manager	Sustainability Management Plan
WM9	The re-use and recycling of materials generated on CTP, where suitable, will be prioritised over disposal at landfill facilities.	Construction	Environmental Manager Sustainability Manager	CoA D111 Sustainability Management Plan
WM10	Waste will be tracked using Waste Tracking Registers.	Construction	Environmental Manager	CEMF REMM WR5
WM11	Prior to transporting wastes to a receiving site where an EPA licence is not required (such as a beneficial reuse site), an AFJV Waste Disposal Application will be submitted for review to the Environment Manager, confirming that the proposed disposal site holds appropriate licences / approvals to receive the waste.	Construction	Environmental Manager	REMM WR5
WM12	Any disposal of weeds and exotic vegetation as identified during pre-clearing inspections resulting from clearing and grubbing operations will be managed in accordance with Biosecurity Act 2015 and the Flora and Fauna Management Plan.	Construction	Environmental Manager	Flora and Fauna Management Plan
WM13	Suitably licensed waste contractors will be used for the collection and transport of wastes for either off site processing and/or disposal to an appropriately licensed facility.	Construction	Environmental Manager	Best practice
WM14	Receipts for waste transfer and disposal will be checked to ensure all details are correct and retained for audit purposes.	Construction	Site Supervisor	REMM WR5
WM15	The discovery and excavation of previously unexpected contaminated land or asbestos will be managed and disposed of in accordance with an Unexpected Contaminated Lands and Asbestos Management Procedure in the SWMP. Any contaminated waste will be handled, separated, contained, managed and	Construction	Environmental Manager Safety Manager Site Supervisor	REMM WR4

Ref	Requirement	Timing	Responsibility	Source
	disposed of to prevent migration and further contamination.			
WM16	Waste will be segregated between recyclable and nonrecyclable waste, as well as between categories of recyclable wastes. Wherever possible, packaging will be avoided or minimised.	Construction	Environmental Manager	REMM WR4
WM17	Ensure that each CTP works site has an appropriate person authorised to sign off any waste Transport Certificates when Trackable Waste is picked up from site.	Construction	Environmental Manager Site Supervisor	Best practice
WM18	Waste generated outside the project must not be received at the site, except as expressly permitted by a Waste Resource Recovery Exemption if such a license is required for that waste.	Construction	Site Supervisor	CoA D112
WM19	Stockpiles will be managed to avoid any contamination of land and adjacent waterways.	Construction	Environmental Manager Site Supervisor	REMM WR4

6.1 MANAGEMENT OF WASTE STREAMS

The management of the waste streams outlined in Section 4.1.1 is summarised in Table 6-2.

6.2 RESOURCE MANAGEMENT

The EIS identified that the construction of the Project would require a variety of resources to including electricity, fuel concrete, shotcrete, steel and water. Refer to the Sustainability Management Plan for detail relating to the CTP resource requirements.

TABLE 6-2: MANAGEMENT OF WASTE STREAMS

Activity	Waste stream	Likely waste classification	Proposed waste management method	Proposed storage	Sampling / testing	Target Calculations	Comments
Demolition of buildings and other structures	General demolition waste – concrete, bricks and gravel etc	General solid waste (GSW) (non-putrescible)	Reuse on site Reuse / recycle offsite (resource recovery exemption)	Stockpile or skip bin	n/a	Included in 95% construction waste target	Any opportunities for reuse of salvaged heritage items will be identified in the Heritage Interpretation Plan prepared by Sydney Metro
	General demolition waste – scrap metals	GSW (non-putrescible)	Recycle where possible	Skip bin for scrap metal	n/a	Included in 95% construction waste target	
	Materials with paint containing lead	See Lead Paint Flowchart - Appendix C	See Lead Paint Flowchart - Appendix C	Determined based on classification	Waste Classification		Lead Paint Flowchart in Appendix C
	Hazardous waste including asbestos	Hazardous waste Special waste	Hazardous waste would be managed through specific SWMS prepared by demolition contractor	Bunded and contained	Waste Classification	n/a	Refer to Soil and Water Management Plan

Activity	Waste stream	Likely waste classification	Proposed waste management method	Proposed storage	Sampling / testing	Target Calculations	Comments
Clearing and grubbing of vegetation, landscaped and/or turfed areas	Vegetation waste	GSW (putrescible)	Reuse on site where possible Weeds will be disposed of in accordance with the <i>Biosecurity Act 2015</i>			Included in 95% construction waste target	
Excavation and general earthworks	Spoil	VENM / ENM	Reuse on site where possible Offsite reuse (Resource recovery exemption) Offsite reuse (Section 143) Offsite disposal to a licenced facility	Stockpiles	Waste Classification	100% useable spoil	Refer to Spoil Management Plan
	Spoil – potentially contaminated or contaminated soil	Special waste Restricted solid waste (RSW) Hazardous waste	Onsite remediation Offsite disposal at a licenced facility	Stockpiles – banded and contained if required	Waste Classification	n/a	Refer to Soil and Water Management Plan and/ or Remedial Action Plan/s For ASS – refer to Soil and Water Management Plan

Activity	Waste stream	Likely waste classification	Proposed waste management method	Proposed storage	Sampling / testing	Target Calculations	Comments
	Wastewater	Liquid waste	Treated and reused onsite where appropriate Discharged in accordance with EPL Disposed as liquid waste	Water Treatment Plant/s Water re-use tanks	EPL / Soil and Water Management Plan Waste Classification	n/a	Refer to Soil and Water Management Plan and Groundwater Management Plan
General construction and resource use	General construction waste – steel	GSW (non-putrescible)	Recycled offsite	Skip bin for scrap metal	n/a	Included in 95% construction waste	
	General construction waste – conduits and pipe	GSW (non-putrescible)	Recycled offsite	Skip	n/a	Included in 95% construction waste	
	General construction waste – conduits and pipe (containing asbestos)	Special waste	Offsite disposal	Bunded and contained	Waste Classification	n/a	Refer to Project safety documentation
	General construction waste – timber	GSW (non-putrescible)	Reuse onsite / offsite	Skip or timber waste bin	n/a	Included in 95% construction waste	

Activity	Waste stream	Likely waste classification	Proposed waste management method	Proposed storage	Sampling / testing	Target Calculations	Comments
	General construction waste – packaging, cardboard, plastics etc	GSW (non-putrescible)	Return to supplier (where possible) Offsite disposal at licenced facility	Segregated receptable	n/a	Included in 95% construction waste	
	Construction waste – empty drums (oil etc)	GSW (non-putrescible)	Return to supplier (where possible) Offsite disposal at licenced facility	Segregated receptable	n/a	Included in 95% construction waste	
	Construction waste – pesticides, spill clean ups, paints / other chemicals	Hazardous waste / liquid waste	Return unused portions to supplier where possible Offsite disposal at licenced facility	Bunded and contained	Waste Classification	n/a	
	Construction waste - Metals	GSW (non-putrescible)	Recycle offsite	Skip bin for scrap metal	n/a	n/a	
	Construction Waste - Aerosols	GSW (non-putrescible)	Recycle offsite	Segregated receptable	n/a	n/a	
	Sediment basins discharge and sediments	Liquid waste / GSW (non-putrescible)	Reuse onsite	Sediment basin/s	EPL / Soil and Water Management Plan	n/a	
	Tyres	Special waste	Offsite disposal at licensed facility	Stockpile	n/a	n/a	

Activity	Waste stream	Likely waste classification	Proposed waste management method	Proposed storage	Sampling / testing	Target Calculations	Comments
	Domestic waste – AFJV personnel including food	GSW (putrescible)	Offsite disposal at licensed facility	Skip	n/a	n/a	
	By-product of operation of Water Treatment Plant/s	GSW (non-putrescible)	Offsite disposal at licensed facility	Skip	n/a	n/a	
Maintenance of plant, vehicles and equipment	Mechanical wastes – oil, grease and other fluids	Liquid waste	Offsite disposal at licensed facility	Bunded and contained	n/a	n/a	
	Mechanical wastes – hydraulic fluid etc	Hazardous waste	Offsite disposal at licensed facility	Bunded and contained	n/a	n/a	
	Oil filters / oily rags etc	GSW (non-putrescible)	Offsite disposal at licensed facility	Skip	n/a	n/a	
	Batteries	Hazardous waste	Offsite disposal at licensed facility	Bunded and contained	n/a	n/a	
Site offices and cribs rooms	General waste – paper / cardboard	GSW (non-putrescible)	Recycle offsite	Segregated receptacle	n/a	100%	
	Glass and cans	GSW (putrescible)	Recycle offsite	Segregated receptacle	n/a	60	

Activity	Waste stream	Likely waste classification	Proposed waste management method	Proposed storage	Sampling / testing	Target Calculations	Comments
	Ink cartridges	GSW (non-putrescible)	Recycle offsite	Segregated receptacle	n/a	100%	
	Effluent / sewage	Liquid	Offsite disposal at licensed facility	Tank	n/a	n/a	
	Sanitary waste	Special waste (clinical)	Offsite disposal at licensed facility	Sanitary bins	n/a	n/a	
	Batteries	Hazardous waste	Offsite disposal at licensed facility	Segregated receptacle	n/a	n/a	
	Mobile Phones	Hazardous waste	Offsite disposal at licensed facility	Segregated receptacle	n/a	n/a	

7 COMPLIANCE MANAGEMENT

7.1 ROLES AND RESPONSIBILITIES

The environmental roles and responsibilities of key project personnel are outlined in Section 3.5 of the CEMP and Section 8.1 of the Spoil Management Plan.

The Environment Manager, Construction Manager and Project Managers are accountable for the implementation of this management plan.

Responsibilities specific to the implementation of this Plan are identified in Table 6-1.

7.2 TRAINING

Refer to CEMP for full details on the delivery of waste management including:

- Environmental induction for CTP specific waste management including the requirements of this Plan
- Toolbox talks and awareness for site specific waste management

In addition to the above, specific training will be undertaken for delegated officer authorised to sign off any waste Transport Certificates when waste is picked up from site (refer to WMM 17).

7.3 MONITORING, INSPECTIONS AND AUDITS

Review and confirmation of the implementation of waste reduction and management measures described in this Plan will be undertaken as part of the auditing and inspection regimes described in the CEMP. Site environmental inspections will include the ongoing effectiveness and suitability of the waste management controls, including onsite waste storage facilities and the waste tracking process (described in Section 5.3.3). Refer to the CEMP for more information on monitoring, inspections and audits.

7.4 REPORTING AND RECORDS

Refer to Section 3.10 of the CEMP for all recording and reporting requirements. The AFJV will retain records specific to waste management including:

- Environmental inspections relating to waste storage areas and waste management processes (such as waste tracking register and waste docket)
- WARR Reporting requirements
- WRAPP Reporting requirements
- Purchasing and procurement records (refer to Sustainability Management Plan).

8 REVIEW AND IMPROVEMENT

8.1 CONTINUOUS IMPROVEMENT

The Waste Management Plan forms part of the CEMP. Refer to the CEMP for the process on continuous improvement and sub plan update and amendment.

APPENDIX A COA AND REMMS RELEVANT TO THIS PLAN

Minister's Conditions of Approval (SSI 10038) (11 th March 2021)		
Ref	Requirement	Where addressed
A47	All Heavy Vehicles used for spoil haulage must be clearly marked on the sides and rear with the project name and application number to enable immediate identification by a person viewing the Heavy Vehicle standing 20 metres away.	Section 5.3.3
D83	The locations of all Heavy Vehicles used for spoil haulage must be monitored in real time and the records of monitoring be made available electronically to the Planning Secretary and the EPA upon request for a period of no less than one (1) year following the completion of construction.	Spoil Management Plan
D77	An Unexpected Contaminated Land and Asbestos Finds Procedure must be prepared before the commencement of construction and must be followed should unexpected contaminated land or asbestos (or suspected contaminated land or asbestos) be excavated or otherwise discovered during construction.	Section 6.1
D111	<p>Waste generated during construction and operation must be dealt with in accordance with the following priorities:</p> <ul style="list-style-type: none"> 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. 	<p>Section 5.3</p> <p>AFJV is responsible to the extent this condition applies to construction.</p>
D112	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 Stage 1 of the CSSI, or be done in accordance with a Resource Recovery Exemption or Order issued under the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> , as the case may be.	Section 2, Section 5.5 and Section 6.1
D113	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 <i>Protection of the Environment Operations (Waste) Regulation 2014</i> , or to any other place that can lawfully accept such waste.	Section 2, Section 5.5 and Section 6.1
D114	All waste must be classified in accordance with the EPA's <i>Waste Classification Guidelines</i> , with appropriate records and disposal dockets retained for audit purposes.	Section 5.2 and Section 7.4

Minister’s Conditions of Approval (SSI 10038) (11th March 2021)

Construction Environmental Management Framework

1.3	<p>Sydney Metro has developed an Environment and Sustainability Policy (Appendix A) which applies to SydneyMetro projects. Principal Contractors are required to undertake their works in accordance with this policy. The policy reflects a commitment in the delivery of the project to:</p> <p>Develop effective and appropriate responses to the challenges of climate change, carbon management, resource and waste management, land use integration, customer and community expectation, and heritage and biodiversity conservation.</p>	CEMF Appendix A and CTP Construction Environmental Management Plan
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6.2b	<p>Spoil management measures will be included in regular inspections undertaken by the Contractor, and compliance records will be retained. These will include:</p> <p>ii. Waste docket for any spoil disposed of to landfill sites.</p>	Section 7.4
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14.1	<p>a. The following waste objectives will apply to construction:</p> <ul style="list-style-type: none"> i. Minimise waste throughout the project life-cycle; and ii. Waste management strategies will be implemented in accordance with the <i>Waste Avoidance and Resource Recovery Act 2001</i> management hierarchy as follows: <ul style="list-style-type: none"> • Avoidance of unnecessary resource consumption; • Resource recovery (including reuse, reprocessing, recycling and energy recovery); and • Disposal. <p>b. Targets for the recovery, recycling or reuse of construction waste, and beneficial reuse of spoil will be provided by the Principal Contractor.</p>	Section 2
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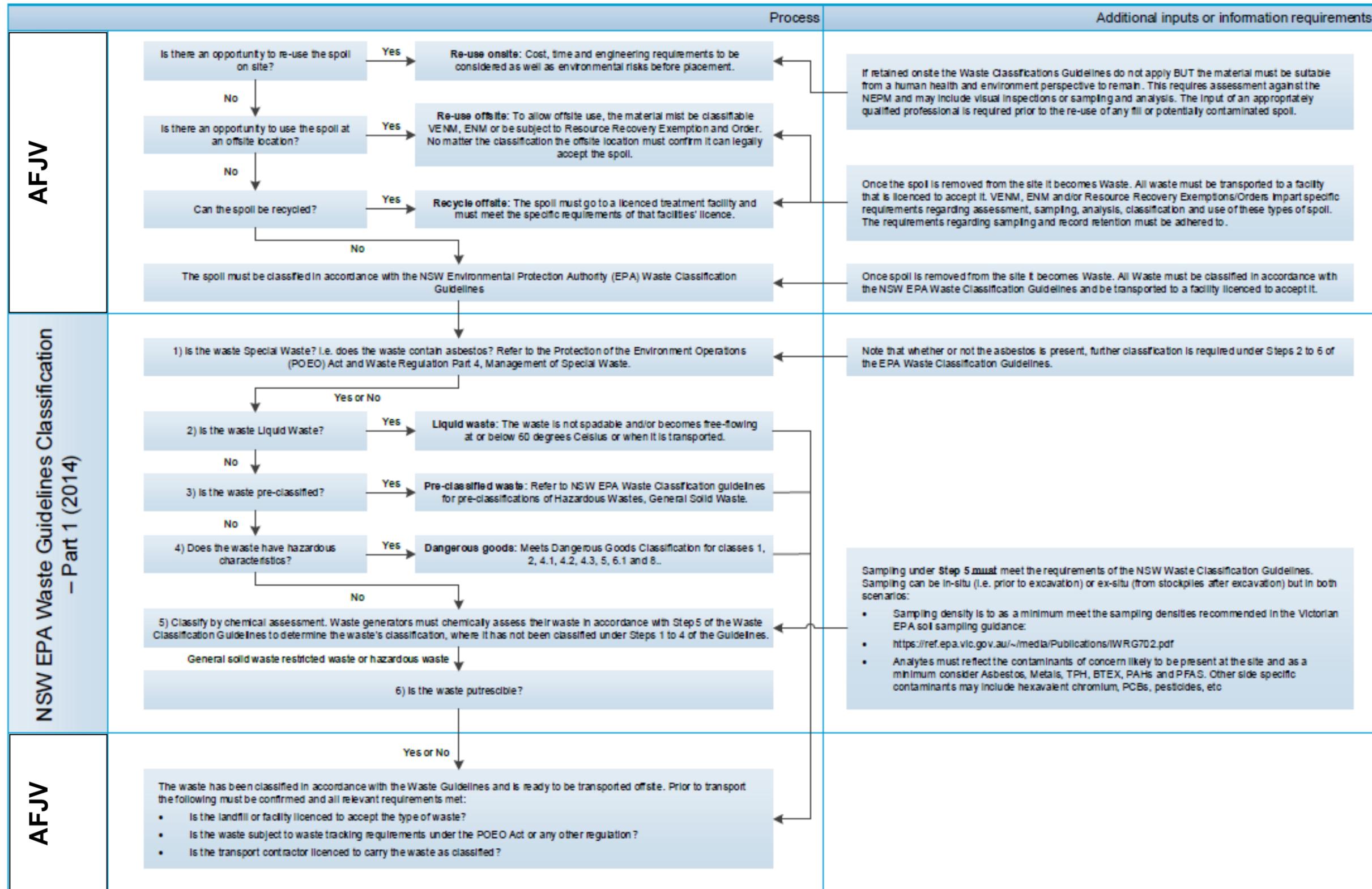
14.2c	<p>Principal Contractors will report all necessary waste and purchasing information to Sydney Metro as required for Sydney Metro to fulfil their WRAPP reporting requirements.</p>	Section 7.4
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Revised Environmental Mitigation Measures

C1	<p>For sites where potential contamination risk is moderate, high or very high, a further review of data would be performed.</p> <p>Where the additional data review provides sufficient information to confirm that contamination is likely to have a very low or low risk, the site would then be managed in accordance with the Soil and Water Management Plan. This would typically occur where there is minor, isolated contamination that can be readily remediated through standard construction practices such as excavation and off-site disposal.</p>	Section 6.1 Soil and Water Management Plan
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Minister's Conditions of Approval (SSI 10038) (11 March 2021)		
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.	Section 5.2 and Section 6.1
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.	Section 6 - WM7
WR3	Construction waste would be minimised by accurately calculating materials brought to the site and limiting materials packaging.	Section 5.3 Sustainability Management Plan
WR4	Waste streams would be segregated to avoid cross-contamination of materials and maximise reuse and recycling opportunities.	Section 6.1
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.	Section 5.3.3

APPENDIX B WASTE CLASSIFICATION PROCEDURE - FLOWCHART



APPENDIX C LEAD PAINT DECISION FLOWCHART

Scenario 4: Bulk demolition material or segregated material; containing paint containing lead (at any concentration); not containing asbestos; arising from residential, educational or child care institutions¹

1. This scenario also applies to residential portions of mixed-use structures

