VICTORIA CROSS STATION INTEGRATED STATION DEVELOPMENT
WASTE MANAGEMENT SUB PLAN

26/04/2022 | Project Revision No: 3

SMCSWSVI-LLC-SVC-EM-PLN-001581

Document Issue Status				
Date	Document Issue (in numbers)	Purpose and Summary of Amendments	Reviewed by	Approved by
11/11/2018	2.4	Update of waste targets	Tracey Wallbridge	Ross Trethewy
22/07/2020	2.5	Review and update to improve waste management planning and implementation on site	Tracey Wallbridge	Ross Trethewy
03/09/2020	3.0	Review of currency and update to improvement waste management planning and implementation on site	Tracey Wallbridge	Ross Trethewy
26/02/2021	3.1	Update to include relevant waste transport and disposal verification and heavy vehicle transport requirements	Tracey Wallbridge	Ross Trethewy
26/05/2021	3.2	Update to Heavy Vehicle GVM requirements	Brooke Brittain	Ross Trethewy

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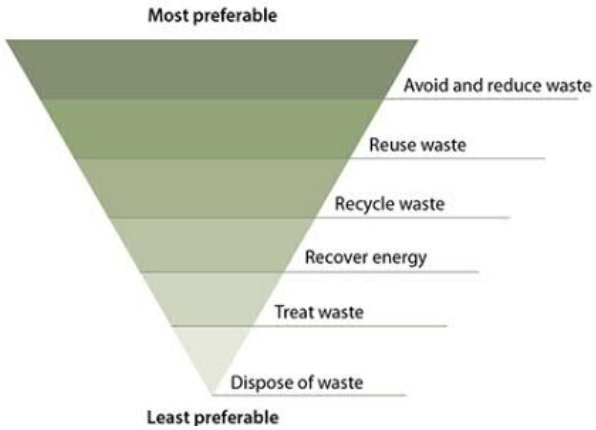
Project Revision Status				
Date	Project Revision (in numbers)	Purpose and Summary of Amendments	Reviewed by	Approved by
24/07/2020	1.0	New plan extracted from Sustainability Management Plan rev D	Jason Ambler	Sefton Campbell
12/11/2020	1.1	Project Implementation	Niall O'Brien	Brooke Brittain
26/05/2021	2	Update to include relevant waste transport and disposal verification and heavy vehicle transport requirements	Tracey Walbridge	Ross Trethewy
26/04/2022	3	Update to Document Issue 3.2, include SSD requirements, update legislation, remove completed works	Niall O'Brien	Ian Sheils

1. SCOPE OF PROJECT AND SUB PLAN

Project Details	
Scope of the Sub Plan	This Waste Management Sub Plan provides strategies and measures to minimise, manage and track solid and liquid waste generation. It outlines appropriate measures to ensure that solid and liquid wastes are managed appropriately during site establishment, demolition, construction and commissioning of the project. This may include solid construction wastes (soil, concrete, masonry, steel, timber, packaging and various plastics) and liquid wastes (washout waste water) produced during construction of the project. It describes measures to be implemented during relevant construction activities, which enables minimisation and reduction of construction wastes. Refer to Section 1.1 and 3.1 of the Project EHS Management Plan for clarification on how the EHS Sub Plans form part of the Lendlease Building (LLB) EHS management system.
Objectives of the Sub Plan	• To facilitate consideration of waste reduction and handling during all stages of the project from design to hand-over. • To maximise the beneficial re-use of excavated materials and construction wastes to reduce disposal to landfill. • To recover through reuse and recycling a minimum of: o 95% of all waste generated on site for the Station. o 90% (by weight) of all waste (excluding soil) generated on site for the Over Station Development (OSD), with a fixed benchmark target of 5kg of construction and demolition waste going to landfill per square metre of gross floor area (GFA). • To ensure reduction, reuse, recycling and disposal data is captured, reported and tracked to ensure compliance with relevant legislation • To prevent environmental pollution and potential for non-compliance associated with waste handling, transport and disposal. • To ensure proper disposal of waste to a licenced facility, and traceability of waste disposal.
Scope of Works	As all excavation, spoil and stockpiling works have been completed, this Plan has been revised to address the following remaining works: • Structures, fitout and services works for the Victoria Cross Metro Station (VCISD), • Structures, fitout and services works for the South Tower (OSD), • Public Domain works

Key Issues and Risks	The management of waste must be based on the hierarchy shown below where 'avoid and reduce waste' is the preferred option, and the 'disposal of waste' to landfill, is the least preferred option. The works described above will result in the generation of waste materials that may include: • Vegetation, soils and timber • Metal • Concrete • Cardboard and paper • Paint and chemicals • Plasterboard • Waste water including washout water • Co-mingled materials.  Key risks associated with the management of waste on the project have been identified as: • Over-ordering or inaccurate estimation of material requirements resulting in waste; • Identification of contaminated soil or hazardous materials requiring testing, treatment, specialist disposal and validation; • Inappropriate handling and storage of solid waste, liquids, contaminated or hazardous materials resulting in loss or pollution; • Inappropriate transport and disposal of waste to non-licenced or approved facilities; • Uncontrolled discharge of paint waste, concrete slurry, wet trade washout or litter into the stormwater system or off-site resulting in pollution; • Loss of resources and materials of value due to weather events, physical damage or vandalism; • Disposal of materials due to lack of awareness and behavioural factors; • Lack of accurate measurement of heavy vehicle gross vehicle mass to verify compliance with heavy vehicle transport laws. • Missing or inaccurate tracking and verification of waste removed from site and transported to waste recovery depots. • Inappropriate re-use or disposal without approval and required traceability documentation. • Rubbish causing unsightly, unhealthy or unsafe work conditions or environmental pollution resulting in damage to receptors or complaints from public/neighbours and/or action from authorities etc.
Legislation and Guidelines	**State:** • Waste Avoidance and Resource Recovery Act 2001 • SSI 15_7400 condition E106; and related EIS REMMs WM1-WM4. • SSD 10294 condition B49. • Protection of the Environment Operations Act 1997. • POEO (Waste) Regulation 2014 • NSW Waste Classification Guidelines, 2014 (EPA) • NSW Government Resource Efficiency Policy 2014 **Lendlease Requirements:** • GMR: 4.13 Degradation or Pollution of the Environment

	• Lendlease Building Workplace Delivery Code (WDC) • Site Sustainability Standards (Greenbook) • Sustainability objectives and targets • Scope of Works for Waste Services (Source), Lendlease Group Procurement Package for Waste • EHS Alert 52 - Waste + Excavated Material Disposal (August 2019)
Summary of Site Controls	Works must be planned, implemented and monitored in accordance with the Lendlease GMRs, the Project EHS Management Plan, this Management Sub Plan, the Lendlease Building Workplace Delivery Code and Sustainability Standards. These documents detail the Lendlease approach and commitment to pro-active and responsible waste management on the construction project. A waste management contractor is engaged to provide skip bins for waste storage and on-site segregation, and to undertake waste collection for off-site separation, recycling and disposal. The objectives of this Sub Plan and details of the LLB waste recovery targets and FOOTPRINT reporting requirements will be communicated to the contractor who will be required to prepare a detailed, monthly waste breakdown for the project. Suitable waste management contractor(s) must be engaged to collect and manage office, kitchen and site waste under a minor works contract. The service will be delivered in accordance with the *Scope of Works Waste Service Provider Engagement* available on Source and be customised to the project, each stage of the works and any additional Client or sustainability requirements. The objectives of this Management Sub Plan, details of the LLB waste recovery targets and Footprint reporting requirements will be communicated to the waste management contractor and subcontractors who will be required to provide detailed reporting on monthly waste breakdowns to the project. Site specific waste management controls, monitoring, reporting and performance measures have been identified in this Sub Plan, including: • Suitably designed waste handling areas that facilitate on-site waste separation, where available space allows for separation. • Correct storage and handling of waste materials including liquids. • Customisation of waste management services (considering type, expected quantity staging) in consultation with waste service providers. • Identifying external opportunities for reuse and re-processing of waste to achieve mutually beneficial outcomes. • Accurately validating that waste quantities removed from site match those quantities disposed of at the approved licenced facility(s) with documented evidence retained by the project for audit purposes. • Monthly reporting of waste and recycling data. • Weekly/monthly inspections of waste management areas and skip use. • Verifying that waste removal contractors have an accurate way of demonstrating that the loaded heavy vehicles are within the legal permissible Gross Vehicle Mass, contained appropriately and within dimension limits as required by heavy vehicle (and COR) legislation. As a primary measure this should involve determining the heavy vehicle mass at the point of loading or pending departure from site using: in vehicle telematics including heavy vehicle on-board mass measurement scales; OR the provision and use of a weighbridge; OR the use of portable axle load scales at random intervals, OR the use of scales on loading equipment such as excavators. As a secondary measure confirmation through a waste facility weighbridge unloading/delivery destination (i.e. dockets) is required to verify the mass of each heavy vehicle that has departed a project or other LLB workplace. Where an overweight load is identified through dockets or scales the event must be recorded as an incident in Enablon and an action plan assigned to the subcontractor to address the issue and verified in Enablon by Lendlease (refer Chain of Responsibility Management Sub Plan).

- Waste reduction, storage, separation (for reuse and recycling) and disposal requirements will be included in relevant specifications, contractual agreements, supply agreements, quality assurance documents, subcontractor work method statements and waste management plans.
- Criteria for the selection and use of recycled and recycled content products will also be specified.
- Site inspections, monitoring and reporting will be undertaken by Lendlease and subcontractors as detailed in the Project EHS Management Plan, Subcontractor Waste Management Plans/SWMS, and the following implementation table.

Waste reduction, storage, separation (for reuse and recycling) and disposal requirements must be included in relevant specifications, contractual agreements, supply agreements, quality assurance documents, and subcontractor work method statements. Criteria for the selection and use of recycled and recycled content products must also be specified.

Key waste streams have been identified in Appendix 2.

OSD SSD approval requirements

The requirements of Condition B49, and where it is addressed, are below:

Requirement	**Addressed**
B49. Prior to the issue of the relevant Construction Certificate, the Applicant shall: (a) amend, or prepare an addendum to, the Construction Waste Management Sub-Plan (CWMP) applicable to the CSSI station works (CSSI 7400) to apply to the development. The amended CWMP must be submitted to the Planning Secretary and Certifying Authority, or	Whole plan
(b) prepare a Construction Waste Management Sub-Plan (CWMP) for the development, independent of the CWMP approved with the CSSI station works. A copy of the CWMP must be submitted to the Planning Secretary and Certifying Authority. The Sub-Plan must include, as a minimum, the following elements: (i) require that all waste generated during the project is assessed, classified and managed in accordance with the EPA's "Waste Classification Guidelines Part 1: Classifying Waste"; (ii) demonstrate that an appropriate area will be provided for the storage of bins and recycling containers and all waste and recyclable material generated by the works; (iii) procedures for minimising the movement of waste material around the site and double handling; (iv) waste (including litter, debris or other matter) is not caused or permitted to enter the waters of Sydney Harbour; (v) any vehicle used to transport waste or excavation spoil from the site is covered before leaving the premises; (vi) the wheels of any vehicle, trailer or mobilised plant leaving the site and cleaned of debris prior to leaving the premises; (vii) details in relation to the transport of waste material around the site (on-site) and from the site, including (at a minimum): • a traffic plan showing transport routes within the site; • a commitment to retain waste transport details for the life of the project to demonstrate compliance with the Protection of the Environment Operations Act 1997; and • the name and address of each licensed facility that will receive waste from the site (if appropriate).	Not used

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2. IMPLEMENTATION

Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
Design and Work Methodology					
Identify opportunities to 'design out' or eliminate waste.	At design stage & each new stage of construction	Work with project designers, suppliers and subcontractors to identify opportunities to minimise waste generation, incorporate recycled content materials/products, and/or revise construction methodologies to eliminate waste. Identify options for reducing material waste e.g. standard size materials, reusable formwork system.	CM SPE CA	Record of opportunities identified and changes made. FOOTPRINT metrics.	Increased reuse in materials generated on site. Reduction in waste generated identified and recorded. Design change resulting in reduced waste generation recorded and quantified.
Planning and Site Establishment					
Key waste streams and recovery are captured, monitored (i.e. landfill and recovered) and reviewed.	Whole of Project	Key waste streams are analysed using FOOTPRINT	CM	Monthly waste reports from waste contractor.	Achieve 95% diversion from landfill as per Sydney Metro targets and the Green Star target for Station works. Achieve minimum 90% diversion from landfill for OSD works, targeting a fixed benchmark of 5kg of construction and demolition waste going to landfill per square metre of gross floor area (GFA). These are as per Green Star targets.
Where possible, undertake in-situ sampling and testing of spoil from foundation or services works to determine waste classification.	Prior to works commencing	Waste classification as per NSW EPA guidelines.	PM / CM	Report on material classifications.	Waste classifications and quantities (m^3) confirmed with various options available to project team. 100% of reusable spoil must be made available for reuse.
Request major subcontractors and suppliers submit waste minimisation, take back and recycling details.	At tender and contract finalisation	Identify major subcontractors and suppliers with the largest potential waste impact. Identify practical measures associated with their scope of work or product supply to reduce waste entering the	SM	Inspection of incoming materials and packaging to identify new opportunities. Periodic checks of waste skips and subcontractor	Reduced waste generation and costs. Alternative products identified and used.

Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
		site (eg reduced or alternative packaging, take back, use of recycled materials, hire arrangements etc)		waste management activities. Monthly waste reports.	Bulk handling and reusable/returnable transport containers encouraged. Waste and recovery targets tracked.
Based on the identification of key waste types, identify skip requirements for on-site separation, collection, off-site recycling and disposal.	Prior to works commencing	Discuss requirements and targets for waste management with waste contractors. Provide source (ie on-site) separation options/facilities. Provide colour coded bins/signage for recyclable and non-recyclable wastes (eg lunch, office areas). Provide skips for the collection of mixed construction wastes for off-site separation. Classify waste that cannot be reused or recycled for disposal at approved facilities.	CM/SM	Weekly inspection checklist (to identify cross contamination, condition of handling areas, bin capacity) Monthly waste report from contractor Monthly waste reporting by subcontractors (ie demo and excavation waste).	Adequate number and type of litter bins available. Contractors made accountable for placing waste in the correct bins. Cross-contamination traced to responsible subcontractor to rectify. Waste recovery targets met.
Include information in the Site Induction about waste minimisation and management and the conservation of resources including paper, electricity and water.	Prior to works commencing	Revise Lendlease induction package to include site specific risks and information. Deliver induction material.	CM/SM	Register of inducted personnel	Site induction delivered to all workers on site.
Establish suitably located and designed stockpile, waste and material storage and handling areas.	Prior to works commencing	Mark details of waste handling and new material storage areas on the Environmental Management Diagram (Appendix 1). Protect stored materials from damage (eg weather).	CM/SM	Weekly/monthly inspection checklist.	Reuse and on-site separation of waste maximised. Loss of materials and resources of value due to damage, prevented.
Identify wet trade washout requirements and establish appropriately designed and located facilities.	Prior to works commencing	Identify an area of the site away from drains and waterways. Establish suitable facilities. Identify a licenced liquid waste transporter. Incorporate water recycling. Document a procedure for the wash out and disposal of acrylic and solvent	CM/SM	Weekly/monthly inspection checklist. Daily monitoring of waste area operation. Waste/recycling reports.	Facilities should be stand-alone, not connected to stormwater or sewer. No uncontrolled discharge of washout. Facilities maintained in good condition with capacity.

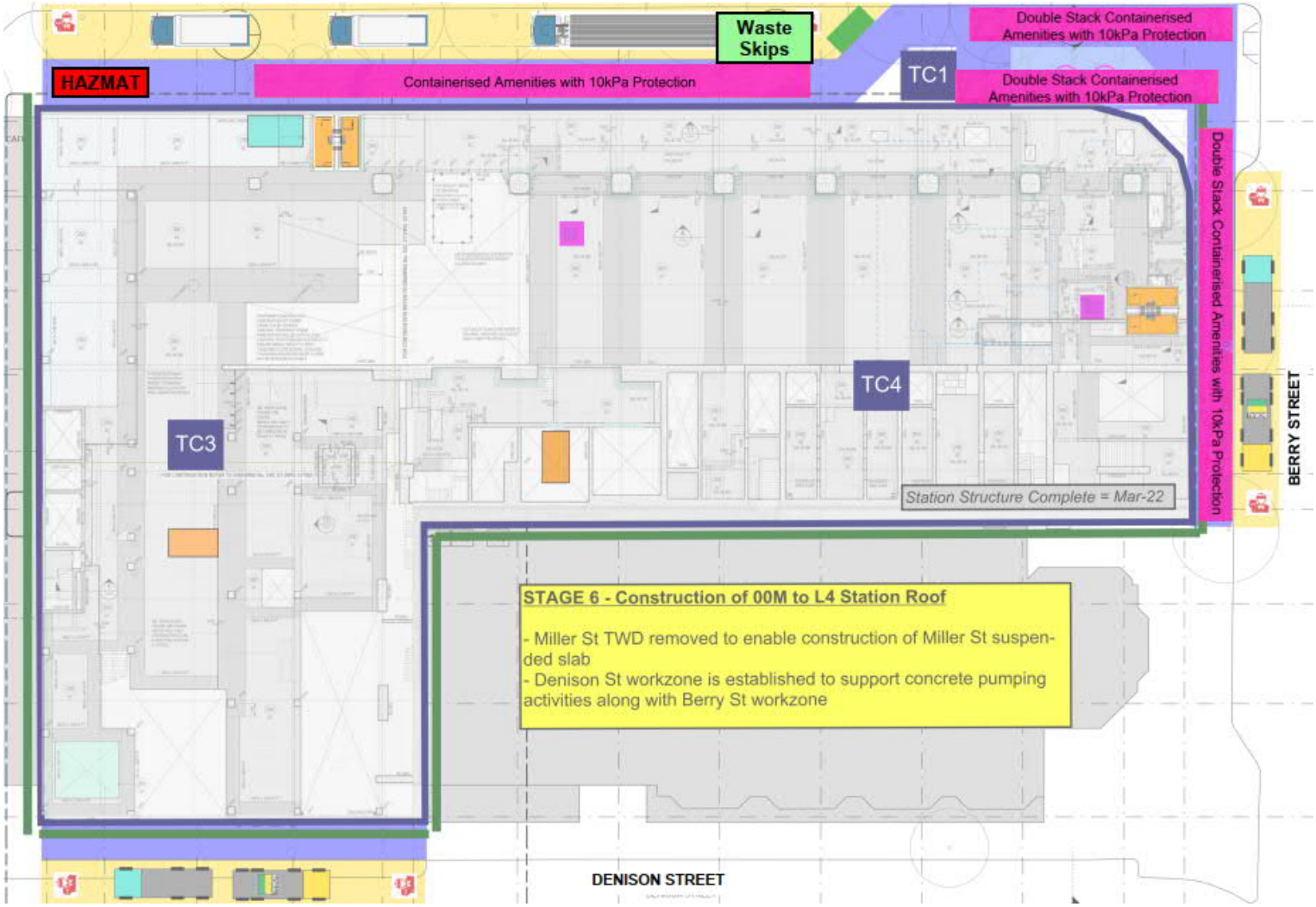
Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
		based paints. (Third party proprietary system preferred)			
Establish suitably designed and located concrete waste washout facilities.	Prior to works commencing	Trucks generally should be washed out at concrete yard, not on site. Where washout must occur on site, industry best practices for waste management should be employed e.g. CCAA Best Practice Guidelines for Concrete By-Product Re-Use. Identify an area of the site away from drains. Maintain the facility so that dried concrete/slurry can be removed for recycling.	SM	Weekly/monthly inspection checklist. Daily monitoring of waste area operation. Waste/recycling reports.	No excess concrete left on site. No hardened spills/ pours left on site.
Implement the requirements of the Sustainable Site Setup checklist.	Prior to commencing works	Implement energy, water and waste sustainability initiatives to achieve agreed levels.	CM/SM	Six monthly audits.	Agreed level achieved and maintained during construction.
Planning for Waste Minimisation					
Identify major suppliers and material requirements and identify opportunities to minimise packaging.	Prior to and during construction	Review supply agreements, contractor materials and packaging proposals. Subcontractor WMS to address waste minimisation.	CM/SM	Inspect material deliveries. Specifications met.	Proven examples of packaging reduction. Use of recycled materials and recycled content products.
Encourage the identification and procurement of recycled materials and recycled content products (eg timber, concrete, road base, asphalt etc)	Prior to works commencing	Request input from subcontractors and suppliers to nominate products that include a recycled component. Subcontractor WMS to address. Check compliance with specifications and ensure material is fit for purpose. Obtain clearance certificates for all imported fill/products.	PM/CM	Tabled in design and pre-contract meetings. Sign off on product selection.	Material received with clearance certificates (ie no contamination) and fit for purpose.
Planning for Waste Reuse and Recycling					
Segregate waste building materials (eg concrete, timber, steel, etc) on site and store in separate bins.	At all times	Discuss project requirements with the waste contractor.	SM	Weekly/monthly inspection checklist. Monthly waste reports.	Clean and tidy waste management area.

Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
		Maintain waste storage areas and provide bins and clear signage. Maintain a materials reuse area to divert materials of value from recycling and disposal skips.			Nil to minimal cross contamination of waste types.
Ensure imported fill and recycled road products and landscape materials are accompanied by a clearance certificate.	At all times	Verify the type and content of all materials delivered to site.	CM/SM	Inspection of deliveries. Clearance Certificate	Certificate provided prior to materials being placed on site. No ex-situ site contamination.
Storage of Waste					
Maintain waste handling and storage areas for solid and liquid wastes in good condition.	At all times	Store liquids/liquid waste in secure, well ventilated, covered, bunded areas. Store materials in original containers (label intact). Seal containers securely and do not stack unless secured. Provide a spill control kit and clean up spills immediately. Maintain washout facilities.	SM	Weekly inspection of waste areas to assess condition of storage and waste collection areas and identify maintenance requirements.	No spillage or loss of wastes from collection containers in storage areas. No 'orphaned' drums identified on site during inspections (ie drums/containers left outside of a bunded area) No loss due to poor storage.
Chemical wastes protocols developed to ensure these wastes are stored correctly (in sealed drums) in designated, bunded areas.	All times	Dedicated bunded area with 110% capacity of stored goods. Area should be covered if possible.	SM / Foreman/ supervisor	Weekly inspection of Waste Collection Areas.	Correct covers and containers for waste. No spillages/loss of waste during storage.
Disposal of Waste					
Waste provider (including bulk excavation, remediation and demolition) heavy vehicle mass compliance.	Prior to commencement	Verify bulk waste contractors have an accurate way of demonstrating that loaded heavy vehicles are within the legal permissible Gross Vehicle Mass, contained appropriately and within dimension limits.	CM	Scope of Work. Verification of system during subcontractor works to proceed and audits. Review of waste dockets.	Compliance to NHVL (heavy vehicle mass requirements). Heavy vehicles provided by waste contractor inclusive of an accurate way of measuring mass.
Dispose of waste using licensed contractors to appropriately licensed or approved facilities.	At all times	Consider reuse and recycling options before disposal. Develop WMS for the transportation of waste. Check EPL/approval for facilities receiving waste and recyclables.	SM	Inspection of waste transport licenses and vehicles. Monthly waste report. Disposal dockets.	No waste disposed to unlicensed facilities. Copies of disposal documentation maintained and tracked in Metrics Spreadsheet and Enablon.

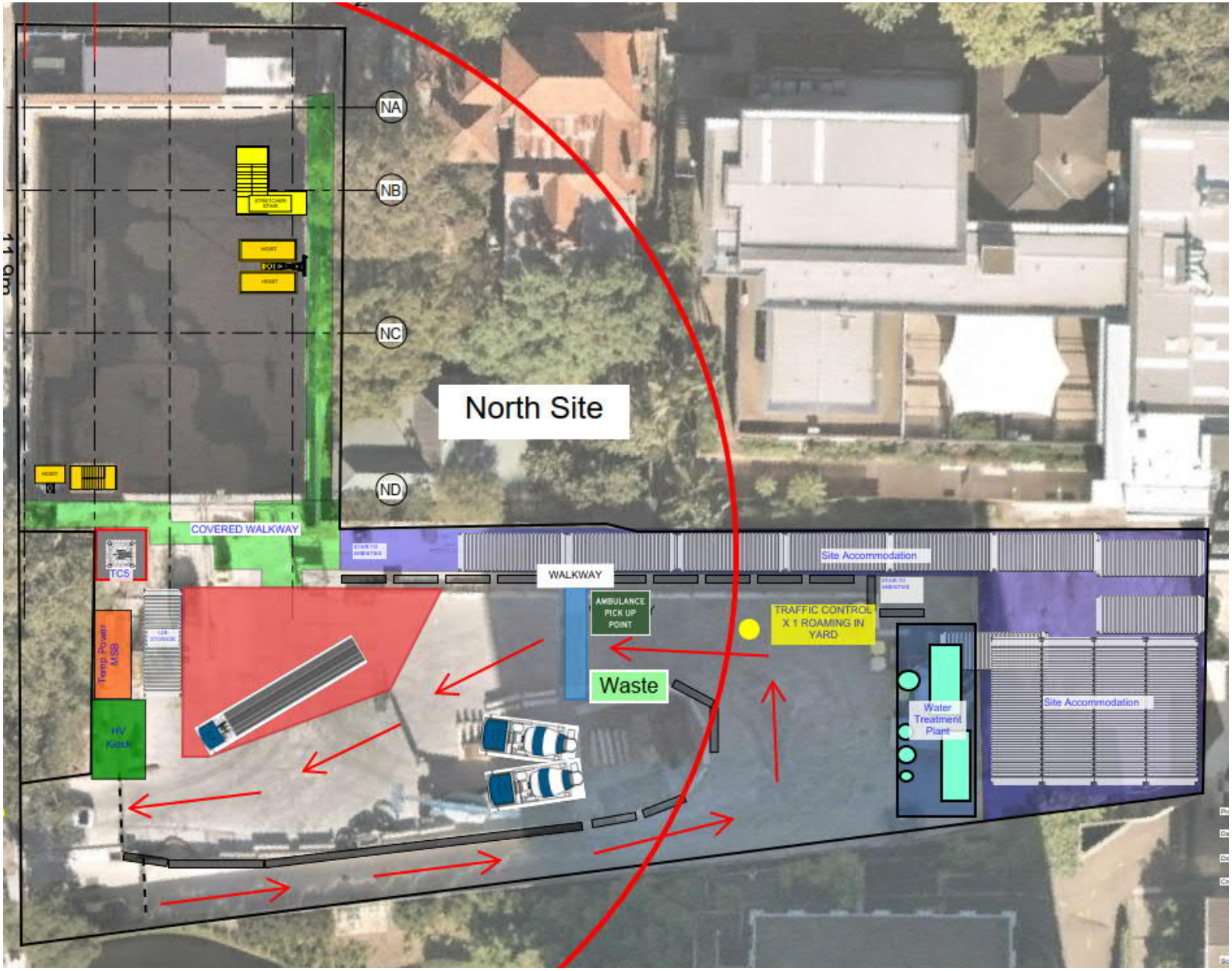
Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
					No illegal placement of waste on land or in water. Waste, reuse, recycling and recovery data tracked in metrics spreadsheet and Enablon.
Where spoil cannot be reused, dispose of excavated materials off-site.	At all times	Use a licensed waste contractor to transport spoil to an appropriately licensed or approved facility. Complete required checks and forms and seek approval for disposal off-site to a non-licenced property.	CM/SM	Tracking of materials transported off-site (ie through dockets etc). Waste classification reports. Subcontractor energy and waste reporting form (submitted monthly with progress claim).	Reconciliation of tracking registers and dockets. Soil quantities tracked in metrics spreadsheet and Enablon.
Remove any hazardous waste off site to a suitable treatment facility, prior to disposal. Track the disposal of asbestos and hazardous wastes in accordance with NSW EPA requirements.	At all times	Engage specialist consultant. Identify appropriate licensed contractor to remove and transport waste to licensed treatment facility.	CM/SM	Waste classification from consultant. Waste tracking documentation including a consignment authorisation. Clearance survey/report.	Reconciliation of tracking registers and dockets. Correct covers and containers for waste transfer. No spillages/loss of waste during transport.
Appropriate disposal of all wastewater from site operations (i.e. paint washing) or temporary facilities (i.e. toilets).	At all times	Collection and disposal of wastewater by approved licensed contractor	SM	As required	Waste disposal dockets correspond to waste types/ volumes.

APPENDIX 1: ENVIRONMENTAL MANAGEMENT DIAGRAM

South Site



North Site


NA
NB
NC
ND
North Site
COVERED WALKWAY
TC5
Temp Power MSB
HV Kiosk
WALKWAY
AMBULANCE PICK UP POINT
Waste
TRAFFIC CONTROL X 1 ROAMING IN YARD
Site Accommodation
Water Treatment Plant
Site Accommodation

APPENDIX 2: KEY WASTE TYPES, MINIMUM SITE REQUIREMENTS AND OPPORTUNITES FOR DIVERSION

Waste Type	Common Handling Options and Bin Sizing	Methods Available for Management
Asphalt	10m^3 bins	Reused in temporary works or site levelling or to establish walkways, driveways or stabilised areas. Transported off site for recycling.
Cables and parts	10m^3 bins comingled with construction wastes	Any metal components are to be segregated and the remainder taken off-site to landfill
Concrete (liquid slurry) from washout.	Appropriately designed and located dedicated washout facility	Off-site recycling of solids (slurry). On site recycling of waste water if possible.
Concrete (solid)	10m^3 bins	Reused to establish walkways, driveways or stabilised areas. Reused in temporary works or site levelling. Transported off site for recycling.
Drums and containers (empty and containing no residue)	Stored in bunded areas for collection	Removal off-site by a licensed contractor for rinsing, recycling or disposal at a licensed landfill.
Excavated spoil (clean soil, rock etc)	Stockpiles Trucks	Reuse on site if possible. Reuse off-site under a resource recovery exemption or licence(beneficial reuse). Disposal off-site.
Excavated spoil contaminated	Stockpiles Trucks	Approved treatment and reuse on site if possible. Reuse of treated material off-site (where permissible). Disposal off-site to an appropriately licenced facility.
Food packaging/cans/bottles	240L bins	Recyclables sorted for collection and off-site recycling.
General domestic wastes	240L bins	Collected from site for disposal
Glass/plastic/cans/paper/cardboard	240L bins	Off-site recycling
Green waste	Trucks or large skip	Chipped on site. Transported to off-site centre for recycling
Liquid from wet trades (eg paint, dry walls, renderers, tilers etc)	Dedicated washout facility/treatment system.	Off-site recycling of solids (slurry) On-site recycling of water.

Waste Type	Common Handling Options and Bin Sizing	Methods Available for Management
Oily rags and filters	200L bins	Off-site recycling by licensed waste oil recycler
Organic food scraps	240L bins	Off-site to landfill with other non-recyclable municipal waste
Paper and office based wastes	240L bins	Off-site recycling
Plasterboard	10m^3 bins	Off-site recycling
Printer Cartridges	Special collection bin	Off-site recycling
Scrap metal/steel	10m^3 bins	Off-site recycling
Sediment controls	Stored on site	Reuse controls where possible on the site or at other local sites.
Sediment build up behind control structures	Stockpile Immediate reuse on site	Respread on site, unless obvious contamination is present (colour/smell)
Spill control materials (eg absorbent pads/booms containing hydrocarbons, chemicals	Containers, bins and/or tanks that have been suitably bunded	Taken off-site to landfill.
Timber	10m^3 bins	Segregated and recycled off-site or disposed
Pallets	10m^3 bins	Segregated and reused off-site
Waste oil, grease, lubricants	Sealed and stored in original container in bunded areas for collection.	Off-site recycling by licensed contractor.
Plastic wrapping/containers	240L bins	Off-site recycling or landfill as appropriate.