

LIVERPOOL HEALTH & ACADEMIC PRECINCT WASTE MANAGEMENT SUB PLAN

25/05/2021 | Rev No: 3.2



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
25/05/2021	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
31/05/2021	DRAFT	New template. LHAP site specific information added	Daisy Badel	Michael Niedzwiecki
07/07/2021	Rev 1	Draft approved. Review Only	Lilly Cauchi	Michael Niedzwiecki
05/08/2021	Rev 2	Plan reviewed as per John Staff comments	Lilly Cauchi	Daniel Puljic
27/10/2021	Rev 3	Updated waste volume estimates	Mathew Hill	Daniel Puljic
17/11/2021	Rev 4	Review only no changes	Ian Sheils	Daniel Puljic
09/12/2021	Rev 5	Update to SSDA requirements and updated EMD	Ian Sheils	Daniel Puljic
02/03/2022	Rev 6	Updated key waste streams and SSDA B14 made reference to table. Added waste facility register	Ian Sheils	Daniel Puljic

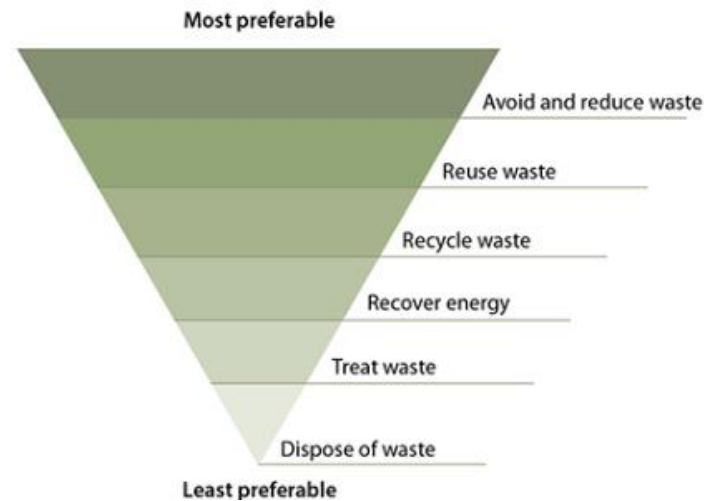
02-06-2022	Rev 7	Review only no changes	Dylan Stewart	Daniel Puljic
02-09-2022	Rev 8	Review only no changes	Dylan Stewart	Daniel Puljic
02/12/2022	Rev 9	Review only no changes	Dylan Stewart	Daniel Puljic
05/05/2023	Rev 10	General review & references to LLB removed & LLC inserted, updated EMD	Nigel Rose	Daniel Puljic
07/11/2023	Rev 11	General review & updated EMD	Nigel Rose	Daniel Puljic

SCOPE OF PROJECT AND SUB PLAN

Project Details	
Scope of the Sub Plan	<p>This Waste Environmental Management Sub Plan addresses the handling and management of waste materials generated by construction activities. The Plan identifies measures for designing out waste and minimising waste generation through pro-active planning, increased waste recovery and compliance with relevant statutory and project requirements.</p> <p>Refer to Section 1.1 and 3.1 of the Project EHS Management Plan for clarification on how the EHS Management Sub Plans form part of the Lendlease Construction (LLC) EHS Management System.</p>
Objectives of the Sub Plan	<ul style="list-style-type: none"> ● To facilitate detailed consideration of waste elimination, waste generation and waste recovery options for each stage of construction from design to decommissioning. ● To recover, through reuse and recycling, a minimum of 90% (by weight) of all waste (excluding soil) generated on site. ● To maximise resource recovery and beneficial re-use or re-processing of construction waste and excavated materials to reduce waste to landfill. ● 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	<p>This Management Sub Plan has been prepared and based on consideration of the following scope of works: Site establishment including vegetation removal, topsoil stripping, office, work zone, amenities, and compound setup.</p> <ul style="list-style-type: none"> ● Demolition of Thomas & Rachel Moore education centre, Alex Grimson, Oncology and Pathology buildings. ● Excavation of approximately 10,000m³ of material and backfilling of approximately 4,00m³ of clean fill. ● Installation of 325 Continuous Flight Auguring (CFA) type piles ● Construction of new Integrated Services Buildings over 2 stages, including basements to each, ● Refurbishment of numerous areas within the existing Caroline Chisholm and Clinical Services Building of the Hospital ● Construction of Campbell St shared Zone ● On Grade Car Park Works, ● External 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.



Key risks associated with the management of waste on the project have been identified as:

- Poor site planning resulting in inadequate facilities for waste storage, management, and recovery/collection.
- Inappropriate handling and storage of solid waste, liquids, and contaminated or hazardous materials resulting in waste or pollution.
- Inappropriate transport and disposal of waste to non-licensed or non-approved facilities or sites; Limited communication with waste service providers resulting in an inefficient service and increased project waste costs.
- Over supply or inaccurate estimation of material requirements resulting in waste.
- Identification of contaminated soil or hazardous materials requiring testing, classification, treatment, specialist disposal and validation.
- 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, planning 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 or verification of waste volumes removed from site and transported to waste recovery depots.
- Inappropriate re-use or disposal without approval and required traceability documentation.

	Compliance with the Project EHS Management Plan and this Waste Management Sub Plan is intended to mitigate the risks and potential impacts of construction activities and waste generation on the environment.
Legislation and Guidelines	<p>Federal/National:</p> <p>Environmental Protection and Biodiversity Act</p> <p>Waste Classification Guidelines (Relevant State Government)</p> <p>National Packaging Covenant</p> <p>State:</p> <p>Environmental Protection Act 1997</p> <p>Waste Management and Resource Recovery Act 2016</p> <p>Waste Management and Resource Recovery Regulation 2017</p> <p>Local:</p> <p>Liverpool LEP 2008</p> <p>Project Specific Green Star Requirements</p> <p>Lendlease Requirements:</p> <ul style="list-style-type: none"> • GMR: 4.13 Degradation or Pollution of the Environment • GMR: 4.15 Uncontrolled Release of Stored Energy (non-electrical) • Lendlease Construction Workplace Delivery Code (WDC) • Site Sustainability Standards (Greenbook) • Sustainability objectives and target: insert details (e.g., Greenstar credit requirements) • Scope of Works for Waste Services (Source) • Lendlease Group Procurement Package for Waste <p>EHS Alerts:</p> <ul style="list-style-type: none"> • EHS Alert 49: Dewatering of Construction Sites (July 2019); EHS Alert 50: Fuel Spills + Leakages to the Environment (July 2019); EHS Alert 51 - Recycled Granular Material (July 2019); EHS Alert 52 - Waste + Excavated Material Disposal (August 2019)

	<p>SSDA – 10389</p> <p>B14. The Construction Waste Management Sub-Plan (CWMS) must address, but not be limited to, the following:</p> <p>(a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling, and disposal locations; Refer to Appendix 1 page 16 and Appendix 2 Page 17.</p> <p>(b) removal of hazardous materials, particularly the method of containment and control of emission of fibres to the air, and disposal at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards, and guidelines, prior to the commencement of construction.</p> <p>Waste Storage and Processing</p> <p>C34. All waste generated during construction must be always secured and maintained within designated waste storage areas and must not leave the site onto neighbouring public or private properties.</p> <p>C35. All waste generated during construction must be assessed, classified, and managed in accordance with the Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014).</p> <p>C36. The Applicant must ensure that concrete waste and rinse water are not disposed of on the site and are prevented from entering any natural or artificial watercourse.</p> <p>C37. The Applicant must record the quantities of each waste type generated during construction and the proposed reuse, recycling, and disposal locations for the duration of construction.</p> <p>C38. The Applicant must ensure that the removal of hazardous materials, particularly the method of containment and control of emission of fibres to the air, and disposal at an approved waste disposal facility is in accordance with the requirements of the relevant legislation, codes, standards, and guidelines.</p>
<p>Summary of Site Controls</p>	<p>Works will be planned, implemented, and monitored in accordance with the Lendlease GMRs, the Project EHS Management Plan, this Management Sub Plan, the Lendlease Construction 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.</p> <p>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.</p> <p>The objectives of this Management Sub Plan and details of the LLC 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.</p> <p>Site specific waste management controls, monitoring, reporting and performance measures have been identified in this Sub Plan. These include but are not limited to:</p>

- The establishment and maintenance of suitably designed waste handling areas that facilitate on-site waste separation, where available space allows for separation.
- The 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; and
- Weekly/monthly inspections of waste management areas and skip use.
- Verifying the Contractor appointed for waste removal (including bulk excavation, remediation, and demolition) has an accurate way of demonstrating that the loaded Heavy Vehicle is 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 LLC 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 overweight load issue and verified in Enablon as closed 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.

IMPLEMENTATION OF THE SUB PLAN

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 AND each new stage of construction	<p>Review project bid/tender commitments and opportunities to reduce waste through elimination or design out.</p> <p>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/design out.</p> <p>Identify options for reducing material waste e.g. standard size materials, reusable formwork system, soil, masonry, rock.</p>	CM SPE CA	Record of opportunities identified and changes made. FOOTPRINT metrics.	<p>Increased reuse in materials generated on site.</p> <p>Reduction in waste generated identified and recorded.</p> <p>Design change resulting in reduced waste generation recorded and quantified.</p>
Planning					
Identify expected major waste streams for each stage of construction and develop a detailed proposal for waste management service procurement and on site waste management.	Prior to commencing	<p>With reference to the construction program, identify major waste streams for each stage of works.</p> <p>For each stage of works, develop an understanding of expected waste quantities.</p> <p>Use this information to document waste service requirements (skip numbers, types, and sizes) with the aim of</p>	CM SM Engineer EHS	Completed Waste Stream Matrix (Appendix 2) Project specific waste management sub plan reviewed quarterly.	Achieve minimum 90% recovery by weight (excluding soils).

Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
		maximising on-site separation of key wastes including concrete, steel, plasterboard, cardboard, timber, soft and hard plastics. (Complete Appendix 1)			
Raise awareness of waste minimisation and site management practice requirements.	Prior to and during works.	Include project specific waste management information in the site induction. Display posters and signage and deliver toolbox talks addressing the conservation of resources and waste minimisation.	SM EHS	Induction delivered.	Active participation in waste management programs.
Site Establishment (waste management area/s)					
Implement the waste management requirements of the Site Sustainability Standard.	Prior to commencing works	Implement sustainability initiatives to achieve identified outcomes. (Refer to the Sustainability Greenbook on Source)	CM SM Sust Mgr.	Six monthly audits.	[Insert agreed level to be achieved] Agreed level achieved and maintained during construction.
Prepare a detailed site plan showing: <ul style="list-style-type: none"> Waste handling areas Material storage areas Concrete waste collection/washout areas Trade waste/wastewater facility locations. Stockpile locations. 	Prior to site establishment	Appropriately located and adequately sized areas must be identified for each activity. Waste management areas should accommodate multiple bins/skips to allow for on-site separation of different waste streams at various stages of construction. Waste management areas must be separate to material storage areas.	CM SM SPE EHS	Weekly/monthly EHS inspections. Monthly waste data capture (Footprint) Environmental Management Diagram (EMD) prepared (Appendix 1).	EMD reviewed quarterly. No pollution incidents associated with these activities.

Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
Procuring Waste Services					
<p>Identify suitable water service contractor that can verify compliance with heavy vehicle transport laws.</p> <p>Obtain any relevant approvals and permits for transport, reuse and/or disposal of waste prior to removal from site.</p>	Prior to engaging contractor	<p>Identify suitable waste transport contractors</p> <p>Check landfill/disposal facility licence details to confirm their suitability to accept the waste.</p>	CM Engineer	<p>Copies of any licences and approvals reviewed.</p> <p>Disposal/weighbridge documents retained and waste details captured in FOOTPRINT</p>	<p>No waste leaving site without approval.</p> <p>Copies of any permits/approvals kept on site.</p> <p>All loads transported off site accounted for at destination facility and quantity verified against quantity leaving site.</p> <p>System to accurately verify heavy vehicle loads are the correct mass leaving site.</p>
<p>Based on the identification of key construction wastes, identify skip requirements for on-site separation, collection (at ground level and within floor areas), off-site recycling and disposal for each stage of construction.</p>	Prior to works commencing	<p>Refer to Group procurement arrangements for waste services. (i.e. minor works contract and Scope of Works (SoW) for waste service providers).</p> <p>Discuss project requirements and targets for waste management with selected waste contractors.</p> <p>Identify opportunities for customising waste services for each stage of the project to maximise recovery and reduce costs.</p>	CM SM	<p>Monthly waste report from contractor (meeting requirements of Footprint).</p> <p>Monthly waste reporting by subcontractors (i.e. demo and excavation waste).</p> <p>SoW attached to contract information. (Refer to Source: EHS documents)</p>	Waste recovery targets met.
<p>Procure separate waste services for office and kitchen/crib hut waste (i.e. organic and putrescible waste).</p>	Prior to works commencing	<p>Discuss project requirements with relevant waste contractors.</p> <p>As a minimum, consider separate bins for the collection of putrescible waste, organic waste, co-mingled recyclables</p>	SM Engineer	<p>Monthly waste report from contractor (meeting requirements of Footprint).</p>	No unacceptable waste in construction skip bins.

Control Measure	Timing	Methodology	Responsibility	Monitoring and Reporting	Performance Measurement
		(bottles/cans), paper/cardboard, printer cartridges, batteries, and globes. (These wastes must not be placed in mixed construction waste skip bins).			

Subcontractors and Supplier Waste Management

Identify major suppliers and identify opportunities to minimise or eliminate packaging and procure recycled content products.	Prior to and during construction	Identify major suppliers with the largest potential waste generation impact. Proactively consider and review supply agreements, materials, and packaging with the view of eliminating or minimising waste through 'take back' or 'reduction of packaging material' initiatives. Request input from subcontractors and suppliers to nominate recycled products or products that include a recycled component. Check compliance with specifications and ensure the material is fit for purpose.	CM SM	Specifications met. Tabled in design and pre-contract meetings. Sign off on product selection. Take back and package reduction programs implemented.	Proven examples of packaging reduction. Use of recycled materials and recycled content products. Material received with clearance certificates (i.e. no contamination) and fit for purpose.
Major subcontractors to submit details of waste generated, waste minimisation, take back, reuse and recycling opportunities.	During Construction	Identify major subcontractors with the largest potential waste generation impact. Identify predicted waste types that will be generated and quantities.	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. Bulk handling and reusable/returnable transport containers encouraged.

		<p>Identify practical measures associated with the subcontractor's scope of work or product supply to reduce waste entering the site (e.g. reduced or alternative packaging, take back, use of recycled materials, hire arrangements etc).</p> <p>Document waste management commitments in contract documentation and site plans.</p>		<p>waste management activities.</p> <p>Monthly waste reports.</p>	<p>Waste and recovery targets tracked.</p>
<p>Waste provider (including bulk excavation, remediation, and demolition) heavy vehicle mass compliance</p>	<p>Prior to commencement</p>	<p>Verifying the Contractor appointed for waste removal (including bulk excavation, remediation, and demolition) has an accurate way of demonstrating that the loaded Heavy Vehicle is within the legal permissible Gross Vehicle Mass, contained appropriately and within dimension limits as required by Heavy Vehicle (and COR) legislation.</p>	<p>CM</p>	<p>Scope of Work</p> <p>Verification of system during subcontractor works to proceed and audits</p>	<p>Compliance to NHVL (heavy vehicle mass requirements)</p> <p>Heavy vehicles provided by waste contractor inclusive of an accurate way of measuring mass.</p>
Site Waste Handling and Management					
<p>Dispose of waste using licensed contractors at appropriately licensed/ approved facilities.</p>	<p>At all times</p>	<p>Consider reuse and recycling options before disposal.</p> <p>Request copies/check EPL/approval for facilities receiving waste and recyclables before the waste leaves site.</p>	<p>SM</p>	<p>Inspection of waste transport licenses and vehicles.</p> <p>Monthly waste report.</p> <p>Disposal dockets.</p>	<p>No waste disposed to unlicensed facilities.</p> <p>Copies of disposal documentation maintained and tracked in Footprint.</p> <p>No illegal placement of waste on land or in water.</p> <p>Waste, reuse, recycling, and recovery data tracked in Footprint.</p>

<p>Separate/sort waste materials on site to divert waste from landfill and maximise recovery.</p>	<p>At all times</p>	<p>In consultation with the waste service provider identify costs and options for the separation of materials on site.</p> <p>Maintain waste storage areas in a tidy condition.</p> <p>Provide separate bins (as identified during the planning stage) and clear signage to prevent cross-contamination of wastes in segregated skips.</p> <p>Identify options for the use of balers for plastic and cardboard.</p> <p>(NOTE: WHS considerations MUST be made and approval of supply and use of a baler received from RBU EHS Manager prior to use).</p> <p>Maintain a materials reuse area to divert materials of value from recycling and disposal skips.</p>	<p>SM</p>	<p>Weekly/monthly inspection</p> <p>Monthly waste reports.</p>	<p>Clean and tidy waste management area.</p> <p>Nil to minimal cross contamination of waste types.</p> <p>On site separation of wastes maximised during various stages of construction.</p>
<p>Maintain waste handling and waste storage areas (solid and liquid wastes) in good condition to prevent pollution.</p>	<p>At all times</p>	<p>Store liquid wastes in secure, well ventilated, covered, bunded areas (110% capacity of stored goods. Covered where possible).</p> <p>Store materials in original containers (label and seal intact). Do not stack unless secured.</p> <p>Provide a spill control kit and clean up spills immediately.</p>	<p>SM EHS</p>	<p>Weekly inspection of waste areas to assess condition of storage and waste collection areas and identify maintenance requirements.</p>	<p>Nil to minimal cross contamination of wastes.</p> <p>No spillage or loss of wastes from collection containers in storage areas.</p> <p>No 'orphaned' drums identified on site during inspections (i.e. drums/containers left outside of a bunded area)</p>
<p>Encourage good site 'housekeeping' in material handling and storage areas to prevent damage and the loss of</p>	<p>At all times</p>	<p>Communicate material handling and storage requirements to subcontractors.</p>	<p>SM</p>	<p>Weekly inspection to identify inappropriate storage or the waste of materials and resources.</p>	<p>No loss due to poor storage.</p>

materials due to physical impact and weather events.		Address in subcontractor WMS.			
Where spoil cannot be reused on-site, dispose of excavated materials off-site to a lawful/ licensed facility.	At all times	<p>Use a licensed waste contractor to transport spoil to an appropriately licensed or approved facility that is able to receive material as classified.</p> <p>Complete required checks and forms and check approvals for disposal to a non-licensed property.</p> <p>Track the disposal of chemical and hazardous wastes in accordance with authority requirements.</p>	CM SM	<p>Tracking of materials transported off-site (i.e. through docketing etc).</p> <p>Waste classification reports.</p> <p>Waste facility license check and verification.</p> <p>Subcontractor energy and waste reporting form (submitted monthly with progress claim)</p> <p>Random inspection of waste transport licenses and vehicles.</p>	<p>Reconciliation of tracking registers and docketing.</p> <p>Soil quantities tracked in Footprint.</p> <p>No spillages/loss of waste during transport.</p>
Heavy vehicles for waste removal have an accurate way of demonstrating compliance to heavy vehicles legal permissible Gross Vehicle Mass	At all times	Confirmation that all heavy vehicles used for waste removal have an accurate way of demonstrating that the loaded Heavy Vehicle is within the legal permissible Gross Vehicle Mass, contained appropriately and within dimension limits as required by Heavy Vehicle (and COR) legislation this can be	CM SM	Verified through 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.	No heavy vehicles leaving site in excess of a heavy vehicles legal permissible Gross Vehicle Mass

Waste Data Capture

Capture waste data and analyse to assess waste management outcomes.	Whole of Project	Capture office/kitchen waste and construction site waste data in FOOTPRINT. Analyse waste data to identify new opportunities and/or issues.	CM	Quarterly FOOTPRINT data review.	Outlined in the Project Review and discussed
Review of heavy vehicle mass requirements.	Following removal of waste	Review of transported waste mass requirements for heavy vehicles for GVM compliance with 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 LLC workplace.	CM	Review of waste dockets	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 overweight load issue and verified in Enablon as closed by Lendlease.
Project Completion					
Co-ordinate the sharing and reuse of raw materials, excess products, and building materials including plywood, hoarding, fencing, concrete and formwork where possible.	During construction	Establish a dedicated material recovery area for the collection of materials suitable for reuse.	CM SM	Discussed in project and subcontractor meetings. Reinforced through toolbox talks. Weekly/monthly inspection Recycling facility dockets.	Documentation of actual examples as a case study. Quantified in project reviews.

APPENDIX 1: ENVIRONMENTAL MANAGEMENT DIAGRAM (EMD)

ENVIRONMENTAL MANAGEMENT DIAGRAM – LIVERPOOL HEALTH & ACADEMIC PRECINCT PROJECT



EXTENT MAP



KEY ENVIRONMENTAL ISSUES

- Unexpected finds
- Noise to general public / Hospital
- Water run off
- Sediment run off

SENSITIVE RECEPTORS

- Local Residents in Goulburn & Campbell Streets
- Alex Grimson Building
- Caroline Chisholm Building
- Existing Clinical Services Building
- Liverpool TAFE – College Street Campus
- Ingham Institute

KEY CONTROL MEASURES

- Blue metal to cap exposed soil
- Geofabric under pit grates to stormwater inlets to filter water
- Radiation monitoring of cancer bunker
- Shaker grid located inside of gates 2 & 3
- High pressure washer to clean tyres in inclement weather

LEGEND

Icon	Descriptions
	Site Accommodation
	A-Class Hoarding
	Shaker Grid
	Spill Kit
	HS / DG Storage
	Tree Protection Zone
	Stormwater Inlet
	Radiation Monitor
	Noise Monitor
	Ground Vibration Monitor
	Rubbish Skip

KEY CONTACTS

Senior Construction Manager Daniel Puljic 0477 393 259	Senior Site Manager Damien Smith 0437 559 361	General Foreman James Hall 0429 801 618	Senior EHS Coordinator Nigel Rose 0428 741 878	Emergency Services 000
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APPENDIX 2: Key Waste Streams, Estimated Quantities and Service Requirements

(Note: this table can be reproduced in EXCEL and modified as required, for workability and to suit the project and its staging requirements).

Project Name: Liverpool Hospital & Academic Precinct (LHAP) Table

Start Date:		Finish Date:			Duration:			
Stage and Timing	Expected waste types *	Estimate of expected waste quantity **	Estimate of service requirements (Type, number, and size - weekly) ***				Comments	# Weeks
	-EXAMPLES ONLY- ADD SITE DETAILS Refer to Appendix 3 for guidance		SKIPS	BINS	BALERS/ COMPACTORS	OTHER (e.g. kerbside)		
Office	Shredded paper		nil	1 x 240L bin	nil	nil		Once every month
	Comingled recyclables	2 bins	nil	1 x 240L Bin	nil	nil		Once per fortnight
	Ink cartridges	4 cartridges	nil	n/a	nil	nil		Once every month
	Food waste & General Waste	2 bins	nil	1 x 240L Bin	nil	nil		Once per week
Site Accommodation	Comingled recyclables	6 bins	nil	1 x 240L bin	nil	nil		Once every month
	Food waste & General Waste	6 bins	nil	1 x 240L Bin	nil	nil		Once per week
Demolition	Concrete	7,000m3	40	nil	nil	nil		weekly
	Bricks/ Blocks	500m3	20	nil	nil	nil	Starting next week	weekly
	Metal/ Steel	20m3	9	nil	nil	nil		daily
	Excavated Material	100m3	10	nil	nil	nil		

	Timber	nil	2 x 10m3	nil	nil	nil		nil
	General Demolition Waste (Contaminated Waste) Asbestos	20m3 nil	2 nil					weekly
Piling	Concrete	100m3						
	Steel	20t						
Earthworks	Spoil	12,000m3						
Structure	Concrete	100t						
	Steel		10 x 13m3					
Facade	Timber pallets Soft plastic		4 x 13m3					
Fit out	Cardboard boxes Pallets Timber packers Soft plastic Strapping Styrofoam		10 x 13m3 30 x 17m3	12 x 1.5m3				
External works including landscaping	General Waste		2 x 10m3					
Final clean up	Mixed Recyclable		8 x 13m3					

APPENDIX 3: KEY WASTE TYPES, MINIMUM SITE REQUIREMENTS AND OPPORTUNITES FOR DIVERSION

Waste Type	Site Requirements (minimum)	Opportunities for optimising reuse or recycling Discuss with Team, subcontractor, and Waste Service Provider/specialist
Aluminium	Separate for recycling.	
Asphalt	Separate. Stockpile or place in skip. No runoff of contaminants.	Reused in temporary works, site levelling or to establish walkways, driveways, or stabilised areas. Off-site recycling.
Biodegradable bags	Purchase	Landfill
Cables and parts	Metal components separated and placed in metal bin. Remaining material placed in mixed skip.	
Cardboard	Bins (240L), skips or cages Baler	Off-site recycling
Carpet and carpet underlay	Separated	Recycled. Donated. Cleaned and reused by others.
Crib hut/kitchen waste	Bins and collection arranged (240L) Putrescible wastes must not be placed in mixed construction skips.	Separate bins for food waste, cans, plastic bottles for off-site recycling.
Concrete (liquid slurry from washout and solid).	Appropriately designed and located washout facility Waste concrete (wet) and slurry placed in collection trays. Separate stockpile or skip for dried concrete for off-site recycling. Separate dried concrete from plastic tray lining. Place plastic in mixed skip.	On-site reuse of excess concrete (i.e. hardstand areas, footpaths) On site recycling of wastewater. Check whether plastic liner affects the ability of the waste service provider to recycle the concrete.
Drums and containers	Store in banded areas for collection. Must not be stored with incompatible substances.	Removal off-site by a licensed contractor for rinsing, recycling, or disposal at a licensed landfill.
Excavated spoil (clean soil, rock etc)	Reuse on site. Stockpile separately. Removed from site by trucks.	Reuse off-site under a resource recovery exemption, development approval or licence (beneficial reuse). Disposal off-site (if contaminated)
Excavated spoil contaminated	Stockpile separately.	Approved treatment and reuse on site if possible.

	Removed from site by trucks. Disposal off-site to an appropriately licenced facility. Controls installed to prevent pollution.	Reuse of treated material off-site (where permissible).
Food packaging/cans/bottles	Bins or cages. Signage to identify the purpose of each bin/cage.	Recyclables sorted for collection and off-site recycling. Landfill if not recyclable.
Facade frames/supports	Separated and protected from damage.	Returned for reuse. Disassembled for recycling.
Glass/plastic/cans	Bins (240L), skips or cages Baler	Separated for collection. Off-site recycling
Green waste (vegetation)	Mulch or chip on site. Trucked off site. Separated into a skip.	Chipped on site. Transported to off-site centre for recycling
Ink cartridges (office based use)	Collection bin or drop off points identified.	Return for refill or recycling.
Liquid from wet trades (e.g. paint, dry walls, renderers, tilers etc)	Dedicated washout facility/treatment system.	Off-site recycling of solids (slurry) On-site recycling of water.
Oily rags and filters	Bins. Separated from other wastes.	Off-site recycling by licensed waste oil recycler
Organic food scraps	Bins. Separated from waste that can be recovered or recycling.	On-site worm farm or maggot farm Taken off-site to organic recycling facility Landfill
Paper waste (e.g. office based use)	Secured and unsecured Bins (240L)	Off-site recycling
Plastic (soft and hard)	Separate bin/skip. Baler or cage.	Off-site recycling or re-processing.
Scrap metal/steel	Separate skip.	Off-site recycling
Sediment control materials	Store on site for reuse.	Reuse at other local sites. Recycle clean fabrics and plastics.
Spill control materials (e.g. absorbent pads/booms)	Containers, bins and/or tanks that have been suitably banded	Taken off-site to landfill. Collection by specialist waste contractor if containing hydrocarbons, chemicals.
Timber and timber pallets	Separated. Skip bin.	Reused on site. Recycled off-site. Returned Disposed to landfill.
Waste oil, grease, lubricants	Sealed and stored in original container in banded areas for collection.	Off-site recycling by licensed contractor.
Plastic wrapping/containers	Separated. Baler or skip	Off-site recycling for clean, dry, soft plastics

Must remain uncontaminated by other wastes (e.g. slurry)

or landfill as appropriate.

WASTE FACILITY REGISTER

SUBCONTRACTOR	WASTE COMPANY	LICENSE NUMBER
Demolition		
Formsite	Bingo	
Polyseal	“	
Buildup	“	
Foxville	“	
Favetti	“	
Grid	“	
Axis	“	