pitt&sherry

Waste Management Plan

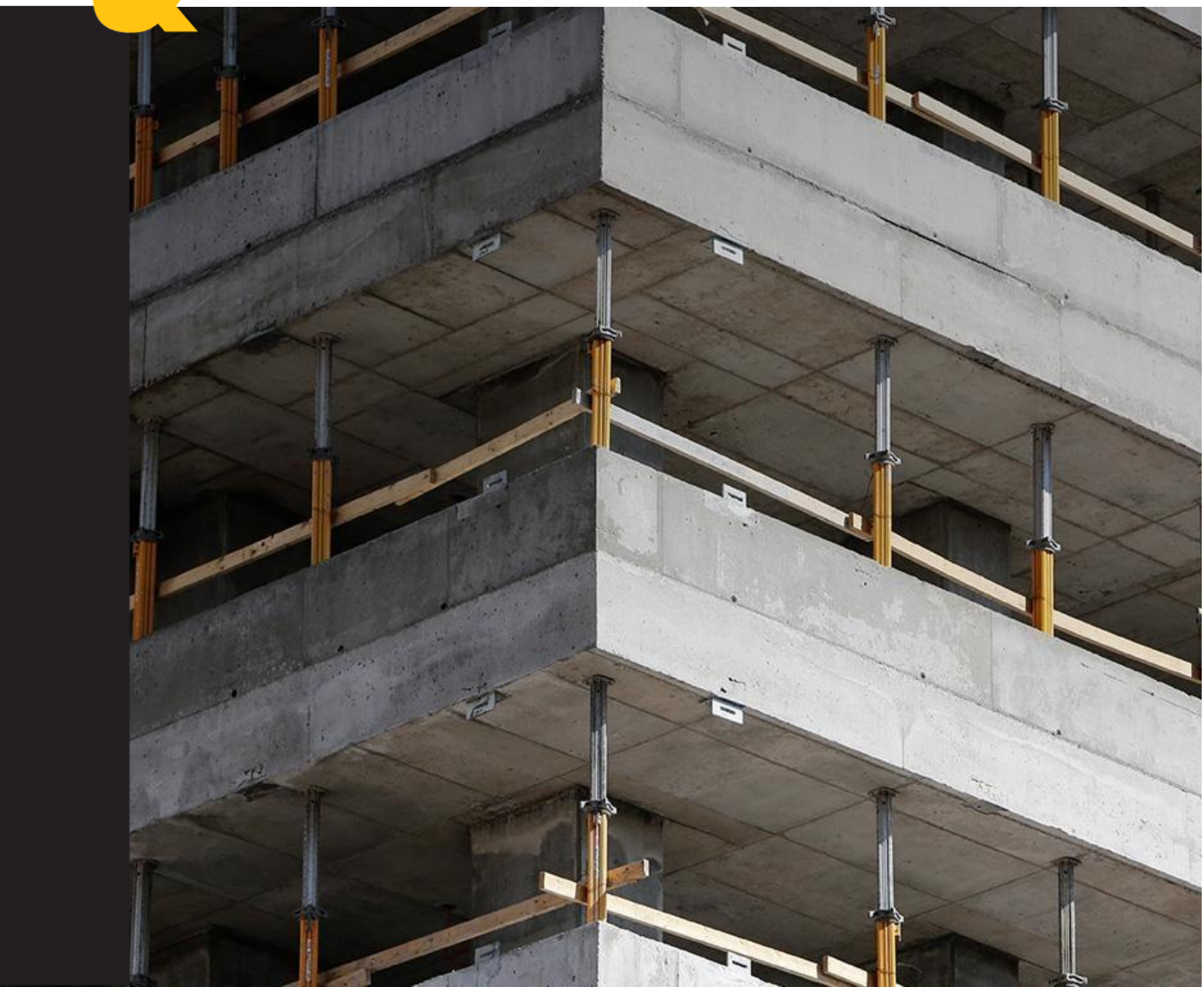
Light Horse Interchange Business Hub
[SSD9667]

Prepared for
Western Sydney Parklands Trust

Client representative
Luke Wilson

Date
22 March 2019

Rev00



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Glossary and Abbreviations

ACD	Asbestos Contaminated Dust or Debris
ACM	Asbestos Containing Material
BCC	Blacktown City Council
CoS	City of Sydney
DCP	Development Control Plan
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
GFA	Ground Floor Area
GST	Goods and Services Tax
HRV	Heavy Rigid Vehicle
LEP	Local Environmental Plan
LIBH	Light Horse Interchange Business Hub
MGB	Mobile Garbage Bins
NSW	New South Wales
OEH	Office of Environment and Heritage
POEO	Protection of the Environment Operations Act 1997
SEARs	Secretary's Environmental Assessment Requirements
WHS	Work, Health and Safety
WMP	Waste Management Plan

Executive Summary

pitt&sherry has been engaged by Western Sydney Parklands Trust to prepare a Waste Management Plan (WMP) to accompany the Development Application for the proposed Light Horse Interchange Business Hub ("the Site"). The Site is in the Blacktown City Council (BCC) Local Government Area (LGA) to the east of the M7 and south of the M4 on part of 165 Wallgrove Road and 475 Ferrers Road (Lot 10 in DP 1061237 and Lot 5 in DP 804051), Eastern Creek, New South Wales (NSW).

This WMP has been prepared based on the following:

- Secretary's Environmental Assessment Requirements (SEARs) from the Department of Planning and Environment (DPE)
- Blacktown City Council (BCC) Development Control Plan (DCP)
- Consultation with the Waste Officer at BCC
- Sydney DCP 2012
- City of Sydney Policy for Waste Minimisation in New Developments 2005
- NSW Waste Avoidance and Resource Recovery Strategy 2014-2021
- The NSW Environment Protection Authority (EPA) Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012, and
- Design documentation for the development.

This WMP details the waste management and minimisation activities to be carried out during demolition, construction and operation of the premises including:

- Specification of wastes and recyclables by expected type and volume, and nominated reuse and recycling potential
- Nominated siting of waste storage, waste infrastructure and recycling facilities for demolition, construction and final use
- Specification of how and where residual wastes will be disposed of (including collection schedules that will need to be implemented during the operational phase of the redevelopment)
- Confirmation of ongoing operational waste management, including:
    - Management of amenity
    - Effective separation of recyclables
    - The handling of special wastes in a clean, safe and efficient manner.

During operation of the Site it is anticipated that private contractors will be used for collection of waste and recyclables. This WMP can be used in the preparation of the waste management guidelines for the Site and to manage the ongoing operations of the development once completed.

1. Introduction

1.1 Outline of Proposal

pitt&sherry has been engaged by Western Sydney Parklands Trust (WSPT) to prepare a Waste Management Plan (WMP) to accompany the Development Application (DA) for the proposed State Significant Development 9667 Light Horse Interchange Business Hub (LIBH) in accordance with the Secretary's Environment Assessment Requirements (SEAR's). In response to the SEAR's, this Waste Management Plan addresses:

- Details of the quantities and classification of all waste streams to be generated on site during the development
- Details of waste storage, handling and disposal during the development and
- Details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.

The site is in the Blacktown City Council (BCC) Local Government Area (LGA) to the east of the M7 and south of the M4 on part of 165 Wallgrove Road and 475 Ferrers Road (part of Lot 10 in DP 1061237 and part of Lot 5 in DP 804051), Eastern Creek, New South Wales (NSW) (the "Site"). The proposal includes a staged redevelopment of the site as an industrial business hub with 157,600m^2 of industrial and light industrial warehouse floorspace and 7,900m^2 office floorspace. The first stage of the proposal will include demolition works, bulk earthworks, installation of infrastructure and subdivision of the site.

The Environmental Impact Statement (EIS) includes a concept proposal outlining the staged development of the site as an industrial business hub and a detailed proposal to facilitate delivery of the first stage of development, including demolition, bulk earthworks, infrastructure and subdivision. Development consent is being sought for excavation of the site and the construction and operation of a business hub. Section 1.2 provides the breakdown of Gross Floor Area (GFA) for each building proposed within the hub.

This WMP is based on the following:

- Secretary's Environmental Assessment Requirements (SEARs) from the Department of Planning and Environment (DPE) for the development
- Blacktown City Council DCP
- Consultation with the Waste Officer at Blacktown City Council
- Sydney DCP 2012
- City of Sydney Policy for Waste Minimisation in New Developments 2005
- NSW Waste Avoidance and Resource Recovery Strategy 2014-2021
- The NSW EPA Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012 and
- Design documentation for the development.

The following information has been reviewed in developing this WMP:

- Proposed Light Horse Business Hub Hazardous Material Survey and Register, Environmental Monitoring Services EMS18 5619, 1 03 2018
- Targeted Contamination Assessment Report for proposed Light Horse Interchange Business Bub, 13 November 2018 (rev 3), Environmental Earth Sciences, 13 November 2018
- Proposed Light Horse Business Park – Contamination Assessment at Ferrers Road, Eastern Creek, Environmental Earth Sciences, 13 November 2018 (Note: known collectively with the Targeted Contamination Assessment Report within this WMP as 'Contamination Reports').

1.2 Site Details

Table 1 Indicative Retail and Residential Gross Floor Area (GFA)

Address of Development	Immediately south-east of the Light Horse Interchange at the intersection of the M4 Western Motorway with the Westlink M7 Motorway; on part of 165 Wallgrove Road and 475 Ferrers Road (part of Lot 10 in DP 1061237 and part of Lot 5 in DP 804051), Eastern Creek (Figure 1 below).
Existing Buildings and Other Current Structures On-Site	The development is approximately 29.5Ha in area (study area is wider). Existing buildings and structures associated with the former Wallgrove Army Base are located within the central part of the site and include: a Warehouse Building, Storage Sheds, Accommodation Building and a Sewage Treatment Plant containing disused infrastructure (Figure 2). The site has been used for cattle grazing for at least the last ten years and is currently covered with vegetation (predominantly grassland) and scattered trees, with more concentrated vegetation within the south-western corner of the site Existing vehicle access is available via Wallgrove Road and an underpass below the M7 Motorway.
Description of Proposed Development	The concept proposal includes a staged redevelopment of the site as an industrial business hub with approximately 157,600m^2 of industrial and light industrial floorspace for activities which could include advanced manufacturing, freight, logistics and warehousing/distribution facilities. Additionally, 7,900m^2 office floorspace comprising offices to support the industrial and light industrial uses, within a landscaped setting is proposed. New primary vehicle access to the development is proposed from Ferrers Road. Emergency access only will be permitted by a secondary light vehicle access road via the existing Wallgrove Road driveway. The first stage of the proposal will include demolition works, bulk earthworks, installation of infrastructure and subdivision of the site, enabling the issue of a Construction Certificate. Further detailed approvals will be sought for the development and construction of individual buildings, ancillary facilities and associated site works.

This development achieves the waste objectives set out in the DCP. The details on this form are the provisions and intentions for minimising waste relating to this project. All records demonstrating lawful disposal of waste will be retained and kept readily accessible for inspection by regulatory authorities such as council, NSW EPA or WorkCover NSW.

Contact Name	Luke Wilson - Project Manager Parramatta Park & Western Sydney Parklands Trusts A: Level 7, 10 Valentine Avenue, Parramatta, NSW 2150 M: 0400 506 926 | P: 02 9895 7500 | F: 02 9895 7580

Figure 1 Proposed Development Site Location

1.3 WMP Objectives

The principal objective of this WMP is to identify all potential wastes likely to be generated during the demolition, construction and operational stages of the development. This includes a description of how waste can be reduced, reused, recycled or disposed of, in accordance with local and regional legislation.

The specific objectives of this WMP are as follows:

- To minimise resource requirements and construction waste through reuse and recycling and the efficient selection and use of resources
- To minimise demolition waste by promoting adaptability in building design and focusing upon end of life deconstruction
- To maximise reuse or recycling of construction and demolition waste either on site or elsewhere
- To encourage building designs, construction and demolition techniques in general which minimise waste generation
- To assist applicants to develop systems for waste management that ensure waste is transported and disposed of in a lawful manner
- To provide guidance in regard to space, storage, amenity and management of waste management facilities
- To ensure waste management systems are compatible with collection services
- To minimise risks associated with waste management at all stages of development.

1.4 Secretary's Environmental Assessment Requirements

This WMP has been prepared by **pitt&sherry** in accordance with the SEAR's, regarding waste management, outlined as follows:

- Details of the quantities and classification of all waste streams to be generated on site during the development
- Details of waste storage, handling and disposal during the development and
- Details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.

2. Waste Management Considerations

2.1 Relevant Legislation

Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) is administered by the NSW Environmental Protection Authority and provides for a system of environmental protection licences for scheduled development work and activities, as well as the ability to issue environmental protection notices for pollution and waste management. Environmental offences are also described under the POEO Act.

The proponent must ensure that all stages of the Proposal are managed to prevent pollution, including pollution of waters. The proponent is obliged to notify the relevant authorities (e.g. Environment Protection Authority) when a 'pollution incident' occurs that causes or threatens 'material harm' to the environment.

The POEO Act and POEO (Waste) Regulations 2014 specify the legal requirements for the management of waste. There are serious offences under the POEO Act for the unlawful transportation and deposition of waste (Section 143). Ensuring resource management is considered against the waste hierarchy should be undertaken in accordance with the *Waste Avoidance and Resource Recovery Act 2001* (WARR Act).

Waste Avoidance and Resource Recovery Act 2001

The *Waste Avoidance and Resource Recovery Act 2001* (WARR) provides the legislative framework to manage resource recovery in NSW and under which the Waste Avoidance and Resource Recovery Strategy can be implemented.

Legal requirements for the management of waste are also established under the *POEO Act 1997* and the *POEO (Waste) Regulation 2005*. Unlawful transportation and deposition of waste is an offence under Section 143 of the POEO Act.

2.2 Waste Hierarchy

The Waste Avoidance and Resource Recovery Act 2001 establishes the waste hierarchy[1] (Figure 2) which details the preferential order for the efficient use of resources from avoidance, to resource recovery and then disposal. Management of construction waste generated by the development has been considered against the Waste Hierarchy.

The highest priority within the waste hierarchy is avoiding and reducing waste generation. Throughout construction the following actions will be taken to avoid and reduce waste generation where practicable:

- Items selected with the least unnecessary packaging or suppliers of resources for the development will be requested to minimise packaging where practicable
- Sustainable procurement that prioritises use of products that are recycled, repairable, refillable, reusable or biodegradable, where possible
- Plan to enable efficient management of delivery and storage of materials so as to avoid spoilage or damage of materials
- Ensuring stored supplies are protected from the weather or potential vandalism
- Employing trained and qualified construction staff to avoid damage to materials and avoid wastage
- Establishing supplier/retailer/manufacturer 'take back' arrangements for the packaging/pallets
- Ensuring correct types and quantities of materials are ordered; any excess or surplus materials will be identified and utilised where fit for purpose or considered for buyback programs.

[1] NSW EPA, The Waste Hierarchy, 2017, accessed 1/6/2018 from https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/warr-strategy/the-waste-hierarchy

The second priority is the recovery of resources which prioritises reuse, recycling, reprocessing and energy recovery. Reuse and recycling ensures resources are kept in the circular economy, decreasing the need for virgin materials. If reuse and recycling are not viable options, energy recovery is considered in order to return energy to the community. The following actions will be undertaken throughout construction to facilitate reuse, recycling and/or reprocessing:

- Onsite sorting and segregation of all waste materials into dedicated enclosed bins
- Waste within the four demountable site huts and toilet facilities.

Waste items that cannot be avoided or recycled/reprocessed will require disposal. Hazardous chemicals, potential site contamination and asbestos require disposal in accordance with the Protection of the Environment Operations (Waste) Regulation 2014 (Appendix A).

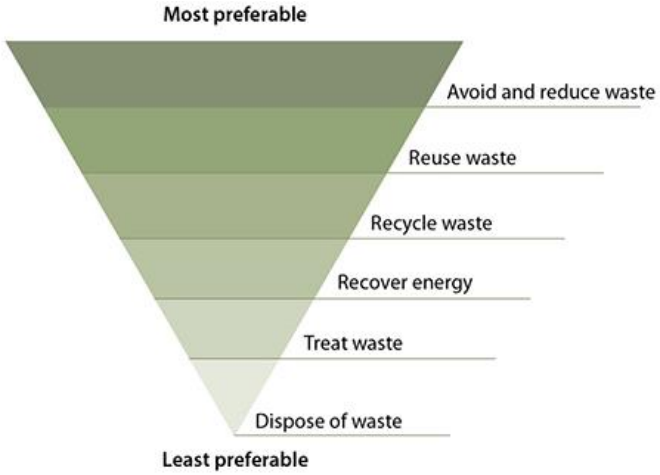


Figure 2 Waste Hierarchy

2.3 Procedure for Assessing, Classifying and Storing Waste

Waste generated through the demolition and construction phase will be assessed and classified in accordance with the *NSW EPA Waste Classification Guidelines*[2]. Where waste cannot be avoided, reduced, reused or recycled it will be classified allowing for appropriate and responsible disposal.

2.4 Waste Handling and Storage

As per the *POEO Act*, a person who stores waste on premises (whether or not the waste was generated on the premises) must ensure that it is stored in an environmentally safe manner.

When waste is to be handled and/or stored onsite prior to onsite reuse or offsite recycling/disposal it must be stored in accordance with Waste Storage (Clause 42) within Schedule 1 of the *POEO Act*, as summarised below:

- Spoil, topsoil and mulch are to be stockpiled onsite in allocated areas where appropriate, and mitigation measures for dust control and surface water management will be implemented as per the Environmental Management Plan. Stockpiles will be clearly signposted and separated
- Liquid wastes (Note: not expected during construction at the site) will be stored in appropriate containers in bunded areas until transported off-site. Bunded areas will have the capacity to hold 110 per cent of the liquid waste volume for bulk storage
- Hazardous waste will be managed by appropriately qualified and licensed contractors, in accordance with the requirements of the *Environmentally Hazardous Chemicals Act 1985* and the EPA waste disposal guidelines

[2] NSW EPA, Waste Classification Guidelines Part 1: Classifying Waste, 2014, accessed 1/6/2018 from https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/wasteregulation/140796-classify-waste.pdf?la=en&hash=604056398F558C9DB6818E7B1CAC777E17E78233

- All other recyclables or non-recyclables wastes will be stored in appropriate receptacles (e.g. bins or skips) in appropriate locations onsite, accessible to commissioned contractors who regularly remove/empty the bins to approved disposal or recycling facilities.

Waste generated on the site and stored on the site will be stored in a manner that prevents unauthorised access and uncontrolled release. Waste generated outside the site will not be received at the site for storage, treatment, processing or disposal.

See Section 3.2.5 for additional detail relevant to the storage of waste at the site during demolition and construction.

2.5 Methods of Transport and Disposal of Wastes

The transport and disposal of wastes (including wastes that possess hazardous characteristics) will occur in a manner that mandates all waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment. Suitably qualified Collection Contractors will be engaged to collect and transport waste to licensed facilities.

Waste disposal is to be in accordance with the *POEO Act* and the *Waste Avoidance and Resource Recovery Act 2001.* The locations of local waste management, recycling and disposal facilities are included in Sections 3.1. Waste generated outside of the site will not be received at the site for storage, treatment, processing, reprocessing or disposal. Importation of fill material will be managed responsibly with necessary controls in place.

3. Demolition / Excavation Stage

The DA seeks approval for the demolition of existing structures, excavation and construction of a mixed-use business hub at the property located immediately south-east of the Light Horse Interchange at the intersection of the M4 Western Motorway with the Westlink M7 Motorway; on part of 165 Wallgrove Road and 475 Ferrers Road (Lot 10 in DP 1061237 and Lot 5 in DP 804051), Eastern Creek. This includes demolition of the existing warehouse (21,040m^2) and excavation of approximately 800,000 tonnes of mixed fill, subject to detailed design.

The Hazardous Materials Report (Environmental Monitoring Services Pty Ltd 2018) and the Baseline and Targeted Contamination Assessments (Environmental Earth Sciences, 2018) found that seven main stockpiles of potentially contaminated soil were present on the Site including a larger area containing waste soil and demolition rubble (potentially from previous site works) and an area of stockpiles on the western road shoulder of Ferrers Road. Asbestos-containing materials (ACM) were identified in two of the seven soil mound stockpiles (Mounds 5 and 7) as well as identified or assumed in the below buildings (Figure 3):

- Warehouse Building
- Storage Sheds
- Accommodation Building
- Sewage Treatment Plant.

Figure 3 Existing Structures within the Site (not to scale)

Lead-containing paint and Polychlorinated Bi-Phenyl (PCB) containing light fixtures were identified in all the existing buildings within the site. Synthetic Mineral Fibre (SMF) insulation was identified in many areas within the Warehouse and Accommodation Buildings.

These sites/materials will be managed as per recommendations provided in the Hazardous Material Survey Report, the Contamination Reports and following best practice guidelines by properly licensed contractors. Materials will be further tested to confirm presence of the respective hazardous materials as per relevant Australian Standards by a NATA accredited laboratory.

Tables 1-3 provides the proposed management methods for this demolition waste. The principal aim of managing this activity is to maximise resource recovery and minimise residual waste from demolition activities while ensuring safe and appropriate materials management.

3.1 Demolition Waste Recyclers and Disposal Points

The NSW EPA Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities (2012) states that, it is a stakeholder's responsibility to 'minimise construction and demolition wastes and maximise resource recovery of materials'. In accordance with this, Table 2 provides the contact details for the waste and recycling disposal facilities proposed during the demolition and construction phase. The waste streams accepted at these facilities are outlined within Appendix F.

Table 2 Material reuse, recycling and disposal facilities which can be used to dispose of waste and recyclables during the demolition stage

Name of Company	Address	Opening Hours	Contact Details	Distance from Site
SITA Wetherill Park Resource Recovery Facility	20 Davis Rod, Wetherill Park NSW 2164	Mon – Fri 5am – 4:30pm Sat – Sun 8:30am – 3pm	1300 651 116	9km
Genesis Eastern Creek (Bingo)	Honeycomb Drive, Eastern Creek NSW 2766	Mon – Thurs 6am - 6pm Saturday 7am - 1pm	02 9832 3333	8km
Genesis Alexandria (Bingo)	76 Burrows Rd Alexandria, NSW 2015		02 9519 9999	37km
Bingo Recycling Centre	25 Dunheved Circuit, St Marys NSW 2760	Mon – Fri 6.30am – 4.30pm Saturday: 6:30am – 1:30pm	1300 424 646	16km
Sydney Transwaste Industries	160 Arthur Street Homebush West NSW 2140	Mon – Sun 6am - 7pm	02 9746 8333	25km
Macleans Waste Management Pty Ltd	33-37 Plasser Cr, North St Marys NSW 2760	Mon – Fri 6am - 6pm	02 4735 6700	12km
SIMS Metal	76 Christie Street, St Marys NSW 2760	Mon-Fri 8:00 am -4pm	02 9623 0391	15km
Concrete Recyclers (Group)	14 Thackeray Street	Mon – Fri	02 9684 6811	20km

Name of Company	Address	Opening Hours	Contact Details	Distance from Site
Kurnell Landfill	Camellia NSW 2142 330 Captain Cook Drive Kurnell NSW 2231	7am - 4pm Saturday 7am - 2pm Mon – Fri 6:15am - 4pm Saturday 6:15am - 1:30pm	02 9668 8539	60km
Remondis Australia (Taren Point)	2 Bay Road Taren point NSW 2229	Not available on website	02 9526 2642	54km
Reverse Garbage	8/142 Addison Road Addison Road Community Centre Marrickville NSW 2204	Mon – Sat 9am - 5pm Sunday 9am - 4pm	02 9569 3132	33km
Randwick Recycling Centre	72 Perry Street Matraville NSW 2036	Mon – Fri 6am – 3pm Saturday 8am - 11am	1300 722 542	49km
Wetherill Park Resource Recovery Facility	20 Davis Rod, Wetherill Park NSW 2164	Mon – Fri 5am – 4:30pm Sat – Sun 8:30am – 3pm	1300 651 116	9km
SUEZ Belrose Waste & Recycling Centre	Crozier Road, Belrose NSW 2085	Mon – Fri 6am – 5pm Sat – Sun 8am – 5pm	1300 651 116	49km
Liberty OneSteel Recycling	79-81 Stephen Road, Botany NSW 2019	7am - 3pm	02 8335 8470 / 13 63 82	54km
Toxfree	40 Christie Street, St Marys NSW 2760	Mon – Fri 9 am – 5 pm	9851 4200	14km

Waste disposal will be in accordance with the Protection of the Environment Operations (POEO) Act and the Waste Avoidance and Resource Recovery Act 2001. Wastes that are unable to be reused or recycled will be disposed off-site at an EPA approved waste management facility, following correct classification.

Environmental Management recommendations made within the Contamination Reports will be incorporated in to the Site Environmental Management Plan. The waste management treatment for soil and groundwater prescribed in the Contamination Report should be adhered to during demolition and construction.

Table 3 provides the contact details of contractors that can collect and remove waste and recyclables during the demolition and construction phase. The project manager is responsible for retaining waste dockets from appropriately licensed facilities that receive construction and demolition waste from the development.

Table 3 Material reuse, recycling and collection companies which can be used to collect and remove waste and recyclables during the demolition phase

Name of Company	Head Office Address	Website	Contact
SUEZ	12 Gibbens Road West Gosford NSW 2250	www.sita.com.au	4324 6133
Economy Waste Group	3 Bowen Crescent, West Gosford NSW 2250	www.skipbinhirecentralcoast.com.au	4325 1800
Remondis Australia	75 Pile Road Somersby NSW 2250	www.remondis.com.au	4336 3100
Bins Skips Waste and Recycling (Central Coast)	3/62 Lakedge Ave, Berkeley Vale NSW 2261	www.binsskipswasteandrecycling.com.au	4306 0014
Thuroona Asbestos Removals P/L	Unit 2/2 Henry Street Parramatta NSW 2150	Not specified	0432 210 030
Liberty OneSteel Recycling	79-81 Stephen Road, Botany NSW 2019	www.libertyonesteel.com	13 63 82 / 1800 178 335
SIMS Metal	72 Burrows Road, Alexandria NSW 2015	www.simsmm.com	9509 7002
D&R Henderson	106-108 Ham Street, South Windsor NSW 2756	www.drhenderson.com.au	1300 733 266

The details listed in Tables 2 and 3 are correct and operating under approved Licences at the time of completion of this Waste Management Plan. The owner of the waste generated at the development and engaged contractors will be required to actively manage their responsibilities for waste management to ensure any material moved offsite is transported in accordance with the requirements of *the Protection of the Environment Operations Act (1997)*.

3.2 Demolition Material

Demolition material estimates are based on the current design documentation and the current size and material types of the existing onsite structures, as per C&D generation rates (McGregor Environmental Service, 2000). Table 4 summarises the major demolition waste streams that will be generated by the project. Nominated siting of waste storage, waste infrastructure and recycling facilities for demolition and construction are detailed in Section 2.2.4.

In accordance with the relevant DCP, all records demonstrating lawful disposal of waste must be retained and kept readily accessible for inspection by regulatory authorities such as Council, OEH or WorkCover NSW.

Table 4 Expected Overall Demolition and Excavation Waste Generation Estimates and Method of Management

Type of Waste Generated	Reuse	Recycling	Disposal	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
	Estimated Volume (m^3)			
Stage 2 – Demolition of Existing Warehouse Building and Excavation				
Excavation material – bitumen	400	2,000		Reuse portion as required as on-site fill. Stockpile soil and reuse for landscaping if deemed suitable. Send to recycling or reprocessing as road base/aggregate. Facility at Genesis Eastern Creek, Bingo or Concrete Recyclers (Group).
Excavation material - soil	23,000	20,000		
Timber		500		Separated on site. Treated timber sent to landfill at Genesis. Untreated timber to be mulched for landscaping or sent to second hand timber suppliers. Recyclable timber sent to D&R Henderson.
Concrete		6,300		Sent to concrete recycling or reprocessing as other materials such as road base aggregate. Sent to facility at Genesis Eastern Creek, Bingo or Concrete Recyclers Group.
Bricks		2,040		Sent to concrete recycling Facility for reprocessing as road base / aggregate (Genesis, Sydney Transwaste Industries).
Tiles		150		Crushed and used for drainage, landscaping and driveways, for reuse on-site or off- site. Sent to Genesis or Sydney Transwaste Industries for processing.
Metal (incl. structural steel)		500		Sent to SITA Wetherill Park or SIMS Metal for metal recycling.
Glass		500		Glass can be disposed by Sydney Transwaste Industries or sent for reprocessing into various appropriate products.
Fixtures, fittings and plasterboard		500		Disposal to a building material recycling / reprocessing facility such as Wetherill Park or Sydney Transwaste Industries.
Floor coverings			500	Depending on the type of floor covering either disposal to Genesis or Kurnell landfills.
Packaging (used pallets, pallet wrap)		1,200		Sent to Wetherill Park, Macleans Waste Management or Bingo.
Garden organics		3,000		Sent to Wetherill Park for green waste processing.
Residual waste			400	Disposal via Wetherill Park or to Genesis landfill.
Asbestos			196,500	Waste type managed as per the Contamination Reports and recommendations from any further testing. Estimated volume (which includes 'suspected asbestos' may reduce

Type of Waste Generated	Reuse	Recycling	Disposal	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
	Estimated Volume (m^3)			
Stage 2 – Demolition of Existing Warehouse Building and Excavation				
				with further testing. Sent to landfill.
Hazardous Waste (liquids, contaminated soils, chemicals etc)			200	Waste type managed as per the Contamination Reports and recommendations from any further testing. Sent to Toxfree for further processing.

The Australian Reusable Resource Network, the Sydney Waste Exchange and Planet Ark's Business Recycling network will be used where possible for any excess materials that are reusable. These organisations allow individuals and organisations to list recyclable and reusable items they either wish to dispose of or obtain and provide locations of local recycling options for a wide number of Demolition and Construction materials. The following websites can be used as resources: http://www.arrnetwork.com.au, http://businessrecycling.com.au/ and http://www.sydneywaste.com.au.

3.2.1 Assessing, Classifying and Storing Waste

Waste types and volumes identified within Section 2.2 are based on estimates. During demolition, contractors are recommended to consult the NSW Environment Protection Authority's (EPA) Waste Classification Guidelines. A summary of the guidelines is available in Appendix B.

3.2.2 Asbestos/Fibro Cement Material

Findings from the Hazardous Materials Report details the locations of the identified Asbestos existing buildings and stockpiles on the Site. In the event of an unexpected find at a location not specified within the Hazardous Materials Report, all work will cease immediately.

The only waste management option available for the management of building asbestos is secure collection and disposal at a suitable landfill facility licensed to accept hazardous materials. The material will need to be wrapped and sealed in heavy-duty plastic before being removed from site by an appropriately licensed contractor. The Wetherill Park Resource Recovery facility, as per their website information, will accept asbestos materials.

The laws of handling and disposing of asbestos at work are provided in WorkCover NSW publication '*How to Manage and Control Asbestos in the Workplace: Code of Practice (Dec 2011)*' as an approved code of practice under section 274 of the *Work Health and Safety Act 2011* (the WHS Act). On site containment of any impacted soil will be considered and managed accordingly.

3.2.3 Cut and Fill

The proposed development requires a degree of cut and fill for levelling pre-construction. The estimated cut and fill to be required is 60,640 m^3 and the fill will mainly be sourced from onsite excavation. Cut and fill operations will refer to the Concept Cut and Fill Plan.

3.2.4 Enabling Reuse/Recycling

It is proposed that the following bins will be made available during the demolition and construction phase to facilitate the separation of materials that will be reused on-site or sent for recycling. All bins will be stored and filled within the site perimeter and removed as required by a private contractor. Proposed bins for reuse/recycling are as follows:

- A (skip) bin or tipper truck for all brick materials - clearly marked with a 'Brick Materials Only' sign. Note that this will only be available during the demolition phase of the development
- A (skip) bin for all ceramic materials – clearly marked with a 'Tile/Ceramic Materials Only' sign
- A (skip) bin or tipper truck for all concrete materials – clearly marked with a 'Concrete Materials Only' sign

- A (skip) bin for other recyclable materials – to capture other potentially recyclable materials such as untreated timber, metals etc
- A designated area or (skip) bin for all excavation material – clearly marked with an 'Excavation Material Only' sign:
    - Construction staff will be directed to reuse the material in this bin if the quality of the material is suitable for filling purposes
    - If a designated area is needed instead of a skip bin, then the area will be appropriately bunded and covered with a tarp
- A (skip) bin for all residual waste – clearly marked with a 'Garbage Only' sign.

Where limited room is available for segregation of construction materials, consultation with recycling facilities will be undertaken to determine which materials can be disposed of within the same skip and still be easily sorted post collection.

Standard dust suppression methodologies will be adopted for managing dust from the demolition material handling on site and will be in accordance with recommendations within the Hazardous Materials Survey Report and Register.

Further, planned work staging, careful on-site storage and source separation will enable increased resource recovery and reduced waste to landfill.

3.2.5 Demolition Waste Storage Areas

The proposed waste storage sites are depicted in Figure 4 and will be located within the confines of the development site. Alongside the waste storage area, there is adequate space for ancillary amenities such as toilets, staff parking and a site office. Waste skips are to be located in the area denoted in red in Figure 4.

This area (approximately 20m x 10m) has been nominated because it meets the requirements needed for a waste storage area, such as slope, drainage, location of waterways, storm water outlets, truck and operator access and vegetation. Further, there is no vegetation within the selected location, it is accessible and situated in an area where the majority of demolition will occur. The waste storage site is required to be no less than 200m^2 in order to have enough room for the required skip bins, enabling source separation and vehicular access for collection. The proposed waste disposal site will not be visible from the street and will be fenced off, secure and unable to be accessed by the public or nearby residents. It is recommended that the same area be earmarked for use during construction.

Figure 4 Current Site Plan and Demolition Phase Waste Management Location (in red, not to scale)

4. Construction Stage

4.1 Construction Material

pitt&sherry has estimated approximate waste generation volumes for major construction materials based on available C&D generation rates (Table 5) as per industry guidelines[3]. Quantities of specific waste generated during the construction phase of the commercial development is best estimated by site contractors due to their knowledge of the site and experience with similar development projects. Space for managing construction material on site will be allocated as per Figure 3, similar to the proposed space allocated for demolition waste management.

Table 5 Estimated Construction Waste Generation

Building Type	**Construction Waste Generation Rates (tonnes / 1000m^2)**						
	Timber	**Concrete**	**Bricks**	**Gyprock**	**Sand/soil**	**Metal**	**Other**
Warehouses including office space	5.1	18.8	8.5	8.6	8.8	2.75	5
Internal roads and other infrastructure		28	10		15		5

The Stage 2 construction footprint, as developable area is expected to be 29.5 ha as per available design information. The Office Block waste generation rates (Table 5) have been used to estimate waste generated in the major waste streams. It has been assumed the construction waste associated with warehousing is the same as an office block, allowing for elements of prefabrication and waste avoidance in materials ordering and delivery of materials on-site.

Table 6 summarises the major waste streams and approximate quantities that are expected to be generated by the development during the construction stage. Waste will be separated into heavies, lights and one or two other streams such as cardboard, gyproc and timber on-site for easy management, in consultation with specific waste management companies once engaged.

Table 6 Estimated Construction Waste Generation

Type of Waste Generated	**Reuse**	**Recycling**	**Disposal**	**Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used**
	Estimated Volume (m3)			
Excavation material	50,000	5,000	5,640	Reuse portion as required as on-site fill. Stockpile soil and reuse for landscaping if deemed suitable. Send to recycling or reprocessing as road base/aggregate. Bingo or Macleans Waste Management facilities. Disposal option considered in light of potential contamination.
Timber (off-cuts, studs etc)		120	65	Separated on site and provided to timber recyclers such as D&R Henderson. Non-recyclable treated timber sent to Genesis Landfill.

[3] McGregor Environmental Services (2000) Predicting C&D waste quantities in the Inner Sydney Waste Board

Type of Waste Generated	Reuse	Recycling	Disposal	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
	Estimated Volume (m3)			
Concrete		235		Sent to recycling or reprocessing as relevant. Genesis Eastern Creek / Bingo, Macleans Waste Management or Concrete Recyclers (Group).
Bricks		50		Sent to concrete recycling or reprocessing as other materials such as road base aggregate. Facility at Genesis Eastern Creek / Bingo, Macleans or Concrete Recyclers (Group).
Tiles		40		Sent to concrete recycling facility for reprocessing as road base / aggregate (Genesis, Sydney Transwaste Industries). Reverse Garbage may accept certain volumes.
Metal (incl. structural steel)		80		Crushed and used for drainage, landscaping and driveways, for reuse on-site or off- site. Sent to metal waste processing centres such as SITA Wetherill Park or SIMS metal.
Glass		25		Glass can be recycled by Sydney Transwaste Industries or sent for reprocessing into various appropriate products.
Plasterboard (offcuts)		30	10	Sent to Genesis or Sydney Transwaste Industries or disposal to Kurnell landfill.
Fixtures and fittings		5		Disposal to a building material recycling / reprocessing facility such as Sydney Transwaste Industries.
Floor coverings			40	Depending on the type of floor covering either disposal to Genesis Alexandria or Kurnell landfill.
Packaging (used pallets, pallet wrap)		20		Sent to Randwick Recycling Centre, Reverse Garbage (accepts pallets) or Remondis Taren Point.
Containers (cans, plastic, glass)		5		Sent to SITA Wetherill Park for recycling.
Paper/cardboard		20	5	Sent to Kurnell Landfill or Randwick Recycling Centre for recycling.
Residual waste			10	Disposal at Genesis Landfill.
Liquid waste (sewage)			5kL	Volume is reported in liquid measure. Managed by a private contractor and removed from the site according to a service agreement with the temporary amenity hire provider.

Waste disposal will be in accordance with the Protection of the Environment Operations (POEO) Act and the Waste

Avoidance and Resource Recovery Act 2001. Wastes that are unable to be reused or recycled will be disposed off-site at an EPA approved waste management facility, following correct classification.

Environmental Management recommendations made within the Contamination Reports will be incorporated in to the Site Environmental Management Plan. The waste management treatment for soil and groundwater prescribed in the Contamination Report should be adhered to during demolition and construction.

4.1.1 Assessing, Classifying and Storing Waste

Waste types and volumes identified within Section 4.1 are based on estimates. During construction, contractors are recommended to consult the NSW Environment Protection Authority's (EPA) Waste Classification Guidelines. A summary of the guidelines is available in Appendix B.

4.1.2 Reducing Waste During Construction

To mitigate the potential for excess construction material delivered to site, ordering of materials will be staged. The delivery of materials will arrive 'as needed' and supplied or made to order where possible; this will avoid waste and prevent over-ordering and the potential degradation of materials through weathering and moisture damage during storage on Site. For example, materials will be pre-cut to size where possible, therefore reducing waste onsite during construction.

Suppliers and sub-contractors when engaged will be required to implement industry best practice to limit material wastage and will advise on expected waste quantities, how they are minimising waste and what they will take-back/manage themselves.

4.1.3 Cleaning, Odour and Noise

All construction activities will be undertaken during standard daytime construction hours (7am to 6pm Monday to Friday and 7am to 4pm on Saturdays). Any construction outside of these normal working hours would only be undertaken with prior approval from relevant authorities.

Collection and removal of waste by contractors will occur during construction site operating hours. All waste will be removed within a timely manner by contractors to reduce risk of windblown litter, noise and odour.

Staff and contractors will be expected to routinely undertake inspections of the worksite and waste storage areas to ensure litter/debris is regularly cleaned up and that all waste streams continue to be separated for reuse and/or recycling. Inspections will ensure reusable and/or recyclable material is not disposed of as waste to landfill in order to increase resource recovery and diversion.

The end of each working day will require a sweep of the working area as well as waste storage areas to facilitate site cleanup. At the cessation of the construction phase, staff/contractors will perform a sweep of the entire site, removing any waste items not removed during routine inspections. Standard dust suppression methodologies will be adopted for managing dust from the demolition material handling on site.

4.2 Construction Waste Recyclers and Disposal Points

Table 2 (in Section 2.1) provides the contact details for the waste and recycling disposal facilities that will be used to remove waste and recyclables during the construction phase. Table 3 (in Section 2.1) provides the contact details of contractors that can collect waste and may also be used to remove waste and recyclables during the construction phase. However, in line with the Waste Avoidance and Resource Recovery Strategy 2014-2021, it is anticipated that ordering systems in place during construction will enable the avoidance waste by limiting excess materials during ordering and/or preferencing contractors and suppliers of construction materials that provide recycling or reuse solutions for unwanted or excess materials.

5. Ongoing Operation

Everyday normal operation of the business hub is anticipated to generate multiple waste streams (general waste, recycling, oil and green waste) that will need to be collected and managed separately, subject to detailed design and lessees who operate on the Site. Table 7 provides a summary of the expected volumes of waste and recyclables that will be generated during ongoing operations. Note, the actual number of bins required is decided as per expected waste generation, building design and interim waste storage room access and locations, upon finalisation of these details.

Table 7 Expected waste types and volumes generated during ongoing operations

Type of Waste to be Generated	Expected Volume per Week	Proposed On-site Storage	Destination
Residual Waste	317,450 Litres	Office waste stored in 80L bins at source before emptied into combined warehouse and office 1100L bins stored in designated waste storage area for commercial contractor collection	Disposal
Co-mingled Recycling	82,400 Litres	Office waste stored in 80L bins at source before emptied into combined warehouse and office 1100L bins stored in designated waste storage area for commercial contractor collection	Recycling
Oil	240 Litres	Monthly collection by specialist contractor from on-site storage at the generating retail business	Recycling into biofuel
Green Waste	N/A	Green waste will be removed by the designated landscape / grounds keeping contractor from the source and not stored onsite at anytime	Recycling/ reprocessing

This summary provides details of the proposed on-site storage and treatment facilities e.g. internal waste storage rooms and an external waste storage area, and bin infrastructure that will be used on-site. Specifications for the design and construction of internal and external waste storage areas have been included to demonstrate that these areas will be built in compliance with the BCC DCP.

5.1 Access

5.1.1 Waste Storage Areas

The waste store areas are recommended to be located on the ground floor level of the primary building within each Lot (Figure 5) as per the Indicative Concept Masterplan within the SEAR's.

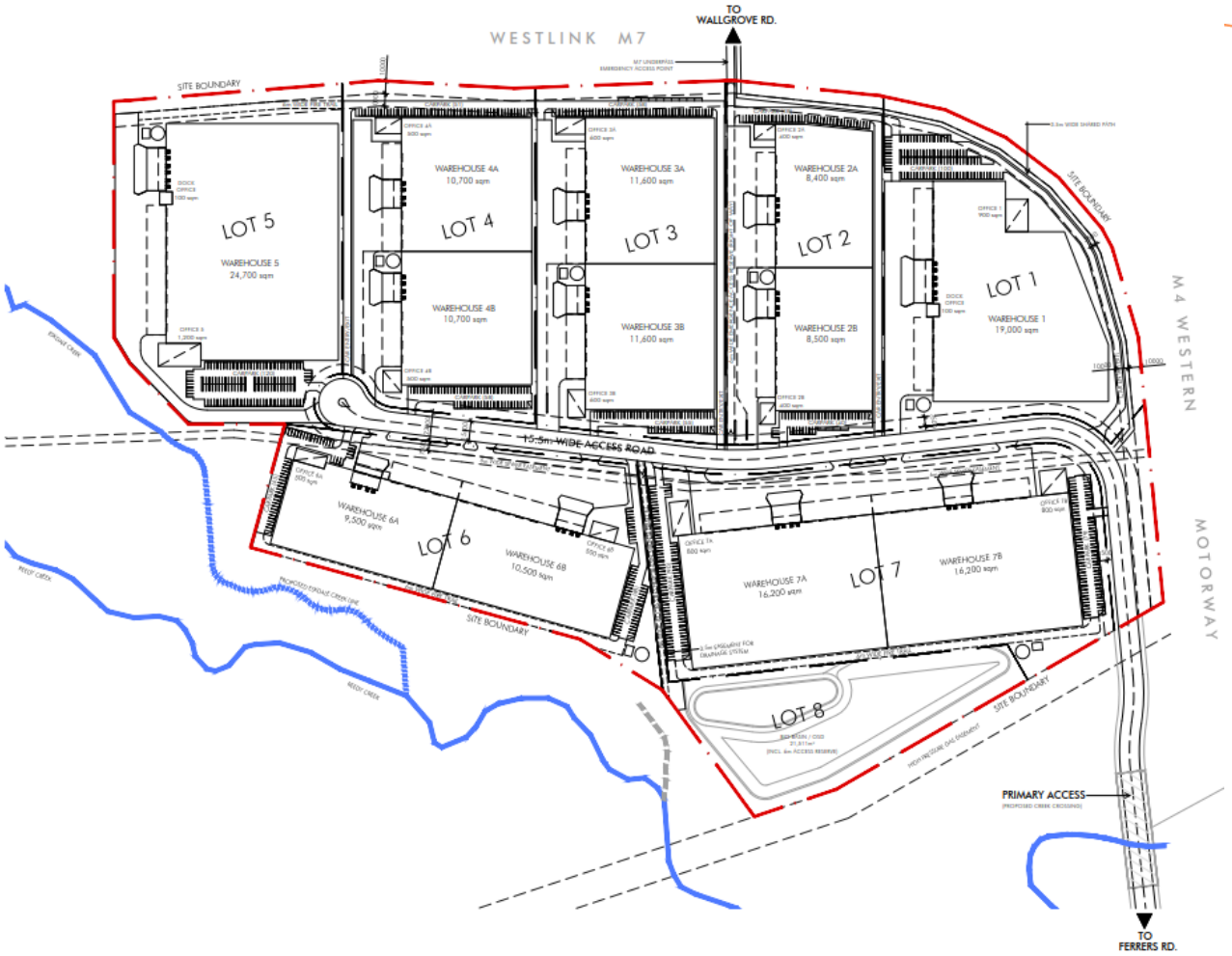


Figure 5 Indicative Concept Masterplan

Each building will have a waste storage room located adjacent to vehicular access to enable onsite waste collection. This will enable each tenant within each lot to engage their own waste management contractor if desired and will encourage ownership of waste when stored on each Lot. In addition to vehicular access, the storage areas will be easily located by staff and cleaners by foot and an appropriate distance from waste sources to reduce OH&S and amenity impacts. Waste storage areas will be locked and secured to prevent use by unauthorised persons and deter illegal dumping. Storage areas will be screened, reducing bin visibility from public areas ensuring public safety, improved amenity and avoidance of liability issues.

Office space located within each Lot are not expected to generate large volumes of general waste or commingled recyclables. These spaces will have their own bins for recycling and general waste (up to 80L in size) located within the office space. Each waste/recycling storage area will be of sufficient size to hold a minimum of two day's worth of waste and recyclables. These bins will be emptied into larger bins located in the designated waste storage area for collection by the nominated waste collection contractor. Sufficient space will be designated within each Lot for the storage of all source separated waste and recyclables between collections.

Storage areas will be free from hazards and loose items, enabling manoeuvrability of bins during and between servicing, as well as facilitating cleaning. Services and appliances will not be located within the bin storage areas as they may be damaged during servicing. Double doors will ensure flexibility for a range of bin sizes to suit various tenants of the development, once determined.

Bins which encourage source separation of recyclables will be utilised within all office and suitable warehouse areas for use by tenants and staff within the development. General waste and co-mingled recycling bins will be located adjacent to each other, to encourage source separation of recyclables from waste sent to landfill.

Bulky Waste Storage

A dedicated bulky waste storage area will be located on the ground floor in an enclosed room adjacent to the waste storage room. Given the nature of the development as predominantly warehouse buildings, a minimum of 20m^2 of space has been recommended per Lot. This space allocation will be based on the size of each warehouse on each Lot.

5.1.2 Waste Collection Contractors

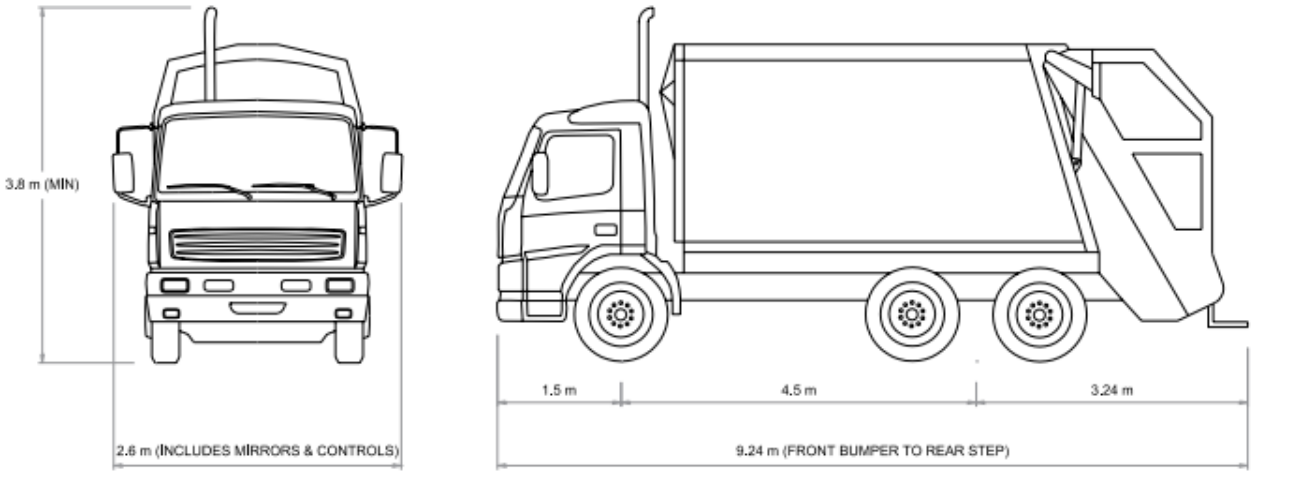
Private licensed waste and recycling contractors will be used for collections of general waste and recyclables. Individual waste collection contractors will be chosen through tender processes once the proposed development site has been constructed.

Planned internal roads will allow clearance for a waste collection vehicle vehicle (Medium Rigid Vehicle MRV at 8.8m length requiring 4.5m head room, a standard size used by private waste service providers), given their construction for B-Double vehicular access and turning. Further, the wide access road through the development enables onsite collection. Estate roads are designed to BCC standards.

To match these access requirements, a private waste collection contractor will be able to provide a rear loader collection vehicle which lift 1,100L bins. Vehicle specifications are provided in Table 8, provided by BCC and correlate with the Medium Rigid Vehicle standard specification. Figure 6 shows the type of vehicle that may be used for collections from the development.

Table 8 Rear-loader MRV collection vehicle specifications

Vehicle clearance (height)	4.5 metres
Vehicle clearance (length)	8.8 metres
Vehicle turning circle	22 metres



Source: City of Sydney Policy for Waste Minimisation

Figure 6 Rear-loader collection vehicle

5.2 Waste / Recycling Generation Calculations

The volume of waste generated from the building has been estimated based on City of Sydney Policy for Waste Minimisation in New Developments (Table 9).

Table 9 Waste Generation Rates

Area of Generation	Daily Waste Generation Rate (per 100m^2)	Daily Recycling Generation Rate (per 100m^2)
Warehouses	40L	10L
Offices	10L	10L

Source: *CoS Policy for Waste Minimisation in New Developments 2005*

The following bin sizes (Figure 7) will be used on site:

- 80 litre bins will be used for collection of general waste and recycling within the office space for each tenancy, scattered around desk and kitchen spaces before being moved to the waste collection bin rooms and emptied into larger MGBs (assisted by bin lift mechanism) by cleaners/caretaker
- 1100 litre MGBs will be used for collection of general waste and recycling, a rear-loader collection vehicle will be used for collection
- A 240L drum or unit will be used for the collection of any waste oil from each warehouse within each Lot
- Any green waste generated on site will be removed by an engaged landscaping contractor at the time of undertaking landscaping works.

Source: TPI Cleanaway Website – www.transpacific.com.au

Figure 7 Typical Range of Mobile Garbage Bins (MGBs)

5.2.1 Required Number of Bins

Indicative waste and recycling generation calculations for the new development are noted in Table 10. The type and required number of bins and collection frequency for each waste type are also provided. Bin size has been recommended to enable a greater choice of collection contractors. Larger bins could be selected dependent on tenants' desires, further enhancing the space flexibility within waste storage areas. The collection frequencies can be altered and adapted once the site is operational. A five-day operational week has been assumed in the calculation of waste generation for both office and warehousing space.

Table 10 Waste and recyclable generation calculations and collection frequency

Lot	Waste Type	Weekly Generation (Litres)	Type, number and frequency of collection
1	General Waste	49,600 – warehouse 700 - office	11 x 1100L MGBs collected daily
	Commingled Recycling	12,400 - warehouse 700 - office	4 x 1100L MGBs collected daily
	Oil	40 - warehouse	One 240 litre drum collected every 6 weeks
2	General Waste	46,400 – warehouse 550 - office	10 x 1100L MGBs collected daily
	Commingled Recycling	11,600 - warehouse 550 - office	4 x 1100L MGBs collected daily
	Oil	40 - warehouse	One 240 litre drum collected every 6 weeks
3	General Waste	64,000 – warehouse 800 - office	13 x 1100L MGBs collected daily
	Commingled Recycling	16,000 - warehouse 800 - office	4 x 1100L MGBs collected daily
	Oil	40 - warehouse	One 240 litre drum collected every 6 weeks
4	General Waste	47,000 – warehouse 600 - office	10 x 1100L MGBs collected daily
	Commingled Recycling	11,750 - warehouse 600 - office	4 x 1100L MGBs collected daily
	Oil	40 - warehouse	One 240 litre drum collected every 6 weeks
5	General Waste	38,400 – warehouse 500 - office	8 x 1100L MGBs collected daily
	Commingled Recycling	9,600 - warehouse 500 - office	3 x 1100L MGBs collected daily
	Oil	40 - warehouse	One 240 litre drum collected every 6 weeks
6	General Waste	68,000 – warehouse 900 - office	14 x 1100L MGBs collected daily
	Commingled Recycling	9,600 - warehouse 500 - office	5 x 1100L MGBs collected daily
	Oil	40 - warehouse	One 240 litre drum collected every 6 weeks

5.3 Design of Storage Areas

The waste storage areas will be constructed with adequate space to accommodate all waste and recyclables generated at the development. The waste storage areas will be designed and constructed with the following specifications as shown in Table 11.

Table 11 Internal waste storage area design and construction specifications

Layout	• Entry of vermin will be prevented • Provide separate storage areas for waste and recycling bins to facilitate use and collection – separate by at least 1.2m and ensure bins will not be placed one in front of another, or in such a way as to restrict access to the bins for use or removal • Ensure bins are easily accessible both for use by staff and movement by collection contractors • The gradient of waste/recycling storage area floors and the gradient of any associated access ramps must be sufficiently level so that access for the purpose of emptying containers can occur in accordance with WorkCover NSW Occupational Health and Safety requirements.

Floors	• Floors are to be constructed of impervious material – steel trowel finished concrete (minimum 75mm thick) or other approved material graded and drained to a Sydney Water Corporation approved drainage fitting located in the rooms
	• Floors will be well drained and will be connected to the sewer
	• Floors and walls must be finished to a smooth even surface covered at the intersection with walls and plinths
	• The walls, floors and ceilings of the waste and recycling rooms and service compartments must be finished with a light colour
	• The floors of waste rooms and recycling rooms must be provided with an adequate supply of hot and cold water mixed through a centralised mixing valve with hose cock
	• Waste and recycling rooms must be ventilated by either:
	  ○ Permanent, unobstructed natural ventilation openings direct to the external air, not less than one-twentieth i.e. 5% of the floor area; or
	  ○ A mechanical exhaust ventilation system exhausting at a rate of 5L/s.m^2 floor area, with a minimum rate of 100L/s min
	• Waste and recycling rooms must be provided with artificial light controlled by switches located both outside and inside the room.

Walls	• Walls are to be constructed of impervious material and cement rendered • Intersection of floors and walls shall be covered with a minimum radius of 50mm • Waste and recycling receptacles will have adequate separation from walls • Storage and drainage racks will be made of a durable, impervious, non-corrosive material and will be separated from walls to allow easy access • A bump rail 50mm clear of walls or flat sheet iron installed flush with walls will be provided.
Ceiling	• The ceiling is to be constructed of an impervious material and cement rendered so that it has a durable and smooth finish • The ceiling will be of a suitable height for the type of service • The ceilings of waste and recycling rooms and service compartments must be finished with a rigid smooth faced non-absorbent material capable of being easily cleaned.

Doors	• Doors will be durable, lockable, close fitting, self-closing doors that can be opened from inside and outside • Doors will be a sufficient width for movement of waste and recycling receptacles • A close fitting and self-closing door able to be opened from within the room must be fitted to all waste and recycling rooms.
Collection	• Use defined borders to prevent the parking of vehicles on bin presentation areas • Provide access openings (minimum 1.2m wide) for collection. In the case of commercial collections, sufficient to accommodate the containers proposed in this waste plan • Access to the waste storage and recycling area shall be readily available on collection days. There shall be no conflict with the delivery or after service vehicles, loading docks and the like.
Other features	• Adequate natural and mechanical ventilation will be provided • Adequate lighting controllable from outside and inside the rooms will be provided • Adequate water supply, including hot water for commercial uses and cleaning will be provided • Clear signage will be displayed describing how to use the waste facilities correctly • Facilities will be clean and healthy – dust free, with litter managed appropriately and odour and noise issues addressed as described in Section 5.11.

5.4 On-site Cleaner/Caretaker

Privately engaged cleaners or an onsite caretaker/s will ensure that the ongoing management of waste and separation of recyclables is carried out in a clean, safe and efficient manner – achieving maximum diversion of recyclable materials.

Bins and waste storage/collection areas will be regularly cleaned and inspected by the on-site staff or cleaners/caretakers.

5.5 Seafood, Poultry and Meat Waste

It is not anticipated that large volumes (in excess of 50 litres a day) of seafood, poultry or meat waste will be produced from the proposed development. The small amounts of seafood, poultry and meat waste from office staff plate scrapings and leftover food will be disposed of with other general waste. General waste will be collected daily. Therefore, **pitt&sherry** does not expect that there will be any odour or vermin issues associated with this waste.

5.6 Grease Trap Waste

Any waste grease will be collected on-site through the use of a grease trap. This waste is to be collected by a private contractor every three to four months. Collection schedules can be adjusted in the future to accommodate any changes in waste grease generation.

5.7 Trade Waste

There is potential for trade waste needs during the operational stage of the development, dependent on the tenants. It will be the responsibility of each tenant to manage their approvals for and disposal of Trade Waste with the relevant authority.

5.8 Special Waste Management

There is potential for special waste management needs during the operational stage of the development, dependent on the tenants. For example, battery or gas forklifts may be used in operations, along with batteries, paint, cleaning products, fire washwater or chemicals. It will be the responsibility of each tenant to manage any special or one-off waste streams.

5.9 Waste Avoidance & Sustainable Purchasing

It is anticipated that a Purchasing Policy will be implemented by tenants for office operation, and will include strategies for waste minimisation, such as;

- Procurement of materials containing recycled content, such as paper, napkins and paper towels etc
- Purchasing in bulk to minimise single use packaging
- Investigation of third party packaging for options to incorporate recycled content and reduce packaging
- Discouraging the use of polystyrene foam and petroleum-based plastic takeaway packaging
- Provide ceramic cups, mugs, crockery and cutlery rather than disposable.

5.10 Signage

Signage, as shown in Figure 8 will be displayed at eye level in the internal garbage store. In addition to bin labels provided by the waste management contractor, bin stickers, such as those shown below, will be affixed to the lids and front faces of the MGBs.

In addition, clear and easy to read “NO STANDING” signs and “DANGER” warning signs must be fixed to the external face of each waste and recycling room where appropriate. The use of safety signs in waste storage areas should comply with *AS 1319 Safety signs* for the occupational environment, used to warn of hazards and control behaviour. The development will decide on the use of particular safety signs as relevant for its environment.

Source: *NSW Department of Environment & Climate Change Better Practice Guide for Waste Management in MUDs, 2008*

Figure 8 Bin and Storage Area Signage

5.11 Amenity Management

Amenity impact on the surrounding communities and environment will be managed according to the mitigation measures set out in Table 12.

Table 12 Amenity Management Methods

Impact	Mitigation/ management method
Noise	Due to the location of the development, noise from daily waste collections are not anticipated to impact on surrounding properties. Potential noise impacts are further ameliorated by onsite collections recommended for scheduling within working hours Monday-Friday.
Odour	General waste collections will occur on a daily basis. Therefore, given that any putrescible waste is stored on-site for a very short time period, it is not expected that there will be any odour or vermin issues associated with waste. Hot water taps for bin washing will be installed and the walls will be constructed of an impervious material for easy cleaning reducing the risk of odour. Cleaning will occur on a regular basis. Adequate ventilation will be provided to reduce odours. Storage areas will be designed to prevent the entry of vermin.
Visibility from street levels	Since waste and recyclable bins will be stored onsite and easily accessible from the internal wide access road, it is assumed that bins and other receptacles will not be visible from street level.

Asbestos Management Guidelines

Appendix A

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Procedure for Assessing and Classifying Waste

Appendix B

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Proposed Light Horse Business Park – Contamination Assessment at Ferrers Road, Eastern Creek NSW

Appendix C

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Targeted Contamination Assessment Report for Proposed Light Horse Interchange Business Hub

Appendix D

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Hazardous Materials Survey Report and Register

Appendix E

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Western Sydney Recycling Directory

Appendix F

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Waste Management Plan –

Light Horse Interchange Business Hub

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