

**SSD**

# 43-61 Turner Road Data Centre

## Waste Management Plan

Reference: Appendix R

Final | 8 October 2024

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 299816-00

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# Executive Summary

This Waste Management Plan (WMP) has been prepared for the proposed data centre in accordance with the requirements of the Camden Development Control Plan (2019) (DCP). This WMP includes consideration of both the operational and construction phases of the development. The WMP also addresses the Secretary's Environmental Assessment Requirements (SEARs) for the Proposal.

A summary of the potential construction waste streams likely to be generated during construction of the Proposal and construction waste management is summarised in Section 3.2 and Section 3.4. Operational waste generation and management, including estimated operational waste quantities and collection requirements, are summarised in Section 3.3 and Section 3.4.

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# 1. Introduction

## 1.1 Purpose of this report

Arup has been engaged to prepare a Waste Management Plan (WMP) which addresses the Secretary's Environmental Assessment Requirements (SEARs) for the data centre (the Proposal) at 43-61 Turner Road, Gregory Hills NSW (the Site).

The Proposal will generate waste from construction activities and operational site use arising from maintenance and staff amenity spaces. This report summarises the type and classification of waste that are likely to be generated, handled, stored, and disposed of from the Site. This WMP also describes the waste management approaches to be undertaken during construction and operation of the Proposal. During the operational phase, source separation systems will be arranged for relevant waste and recycling streams generated by onsite activities.

At this stage, detailed design has not been undertaken. High-level estimates of waste generation rates have been calculated for the main waste streams during operation, which supports the identification of potential impacts and mitigation measures. More refined waste estimation and management provisions will be detailed in the Construction Waste Management Plan (CWMP) and Operational Waste Management Plan (OWMP) as the design progresses.

## 1.2 Proposal components and key terms

### 1.2.1 Proposal overview

The Proposal involves the construction of a data centre comprising of data halls, mechanical and electrical equipment rooms, offices, substation, security gatehouse, other ancillary support spaces, and external/rooftop, mechanical and electrical equipment.

Historically, the Site has been used for rural residential development. Based on historic mapping the Site has been progressively developed since the 1940s. However, the Site is currently unoccupied following its acquisition by the applicant in 2023. Currently, the Site is vacant, with farm dams and a former residential building remaining present within the extent of the Site. The area surrounding the Site is predominantly commercial/industrial land. Immediately to the east is comprised of a riparian corridor, and farther east comprises of vacant land and residential properties. The Site is zoned IN1 General Industrial under State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (WPC SEPP).

The Site generally slopes downward from the northwest corner to the southeast corner. Ground elevations vary with the Site at its highest in the northwest corner at about 104 metres Australian Height Datum (mAHD). The Site is at its lowest in the southwest corner at about 91 mAHD.

A summary of the proposal's key features includes:

- Construction of a two storey data centre comprising:
  - 2 data halls including fitout of IT Racks and equipment, associated cabling and supporting services
  - 27 backup generators
  - With an IT capacity of about 53 megawatts (MW).
- Construction of a guard house
- Infrastructure comprising civil, stormwater and drainage works and utilities servicing and connections.
- Diesel storage capacity of about 900 kilo litres (kL)

- High voltage substation incorporating 132/22 kilovolt (kV) transformers and associated switching and control buildings.
- 68 standard car parking spaces (of which five would have EV charging), 2 car parking spaces compliant with the *Disability Discrimination Act 1992*, 10 shared bicycle parking spaces.
- Hours of operation being on a 24 hours per day, 7 days per week basis.

A separate development application will be lodged with Camden Council for the site preparation and early works including construction of a new eastern access road, turning head at White Cliffs Avenue and connection of Central Hills Drive through the northwestern portion of the site (refer to Figure 2).

It is expected to take approximately 18 months to build the data centre with construction of the building commencing in Q1 2026 and be completed in Q2 2027 (subject to planning approval and weather conditions). It would take an additional twelve months post-construction to fully fit out the data centre. The Proposal is expected to be fully operational in Q2 2028.





Figure 1 Proposal Location







### 1.3 SEARs relevant to this report

Table 1 identifies the SEARs which are relevant to this technical assessment.

**Table 1 SEARs requirements for Waste Management**

SEARs relevant to this technical report	Where addressed in this technical report
Identify, quantify and classify the likely waste streams to be generated during construction and operation.	Sections 3.2, 3.3 and 3.4 of this report
Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.	Section 3.4 of this report.
Identify appropriate servicing arrangements for the Site.	Section 3.4 of this report
If buildings are proposed to be demolished or altered, provide a hazardous materials survey.*	Not Applicable

\*The existing buildings on the Site will be demolished as part of early works, prior to approval of this SSDA.

## 2. Waste Policy, Guidelines and Plans

This Chapter presents relevant regulation, legislation and policy governing management of waste as it relates to the Proposal.

This report has been prepared in accordance with the following policy, standards, guidelines, and plans:

- The National Waste Policy: Less Waste More Resources 2018
- NSW Protection of the Environment Operations Act (POEO Act) 1997
- NSW Waste Avoidance and Resource Recovery Act (WARR Act) 2001
- NSW Protection of the Environment Operations (Waste) Regulations 2014
- NSW Waste and Sustainable Materials Strategy 2041
- NSW EPA Waste Classification Guidelines 2014
- NSW EPA Resource Recovery Orders and Resource Recovery Exemptions
- Camden Development Control Plan 2019 (DCP) Section 2.14 – Waste Management
- Camden Development Control Plan 2019 (DCP) Section 5.5.7 – Liquid & Solid Waste
- Camden Council's Waste Management Guideline 2019

## 3. Assessment

This Chapter outlines the methodology used to define the baseline and undertake the environmental assessment of potential impacts of the Proposal on waste management, including definition of the study area used as the basis of the assessment.

### 3.1 Study area

The study area for the Waste Management Plan is limited to the Site boundary identified in Figure 2.

### 3.2 Construction waste generation and management

#### 3.2.1 Overview

Construction waste will be generated at the Site during Site clearance, excavation, and the construction phase of the Proposal. Construction waste will be managed in line with standard industry practice, to prevent environmental damage and, where possible, recover materials for reuse and recycling. A CWMP will be produced in later design phases and will meet the requirements outlined in the Camden Council's Waste Management Guidelines 2019 for Construction Waste Management Requirements.

Construction waste management for the Proposal is routine and adequately managed through standard industry practice and will be documented in the CWMP before starting on-site works. The CWMP will outline:

- Types and volumes of waste likely to be generated
- The procedure for assessing, classifying, and storing waste in line with the NSW EPA Waste Classification Guidelines<sup>1</sup>
- Storage, sorting areas and treatment of waste on the Site, including stockpiles. Stockpiles of excavated material should be constructed and managed in accordance with the Department of Environment & Climate Change NSW: Managing Urban Stormwater; Soils and Construction 2008
- Methods of transport and disposal of wastes, including waste that possesses hazardous characteristics, so that any waste leaving the Site is transported and disposed of lawfully and does not pose a risk to human health or the environment
- Reuse/recycling opportunities to manage excess construction materials generated during the construction phase and steps taken to reduce waste brought to the Site
- Requirements for compliance with the *Waste Avoidance and Resource Recovery Act 2001*
- The Resource Recovery Orders and Exemptions requirements applicable to the waste on-site.

Construction waste has the potential to pollute land or waterways including groundwater through accidental escape of waste or runoff, and through disposal of waste to an inappropriate site.

#### 3.2.2 Contaminated Hazardous Waste

The NSW Environment Protection Authority (EPA) regulates the management of hazardous waste. If unexpected contaminated / hazardous waste materials are identified, the NSW EPA and Council may need to be notified. All contaminated/hazardous waste must be transported by a NSW EPA licensed contractor and treated or disposed of at an appropriate licensed facility.

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<sup>1</sup> <https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines>

If a material is suspected of being contaminated or hazardous, work should be halted, with all potentially contaminated or hazardous waste handled in accordance with appropriate legislation and regulations including the Work Health and Safety Regulation 2011.

Construction waste may cause health risks arising from handling or contact with contaminated soil and hazardous waste materials.

A CWMP will be developed before construction commences for the appropriate management of hazardous waste on the Site. All waste for disposal will be classified, transported from the Site and disposed of in line with the Waste Classification Guidelines.

### **3.2.3 Preliminary earthworks**

The construction works will aim to minimise disposal of waste soil by:

- Reusing clean excavated material on-site
- Reuse clean excavated material off-site provided the materials are classified as either virgin excavated natural material (VENM) or excavated natural material (ENM)
- Minimising excavation of contaminated material and considering on-site capping and immobilisation where appropriate.
- Treating contaminated soil or material if possible
- Send to a licenced soil treatment facility if practicable

### **3.2.4 Weed Management**

Construction waste may cause the spread of weeds, pests or pathogens within recovered waste materials.

The CWMP may specify appropriate control and disposal measures to minimise impacts associated with the spread of weeds and plant pathogens if required.

### **3.2.5 Recycling Rate targets**

The proposed development should support waste avoidance and minimisation initiatives, in line with the waste hierarchy detailed in the NSW Waste Avoidance and Resource Recovery Act 2001.

Waste reporting and audits can be used to determine the actual percentage of wastes that are being, or have been, recycled during the Site preparation and construction stages of the development and reduce the impact of potential waste of recyclable resources through unnecessary disposal to landfill.

### **3.2.6 Potential waste streams and estimated quantities**

Construction waste streams along with their waste classification and proposed management pathways are documented in Table 2 with the expected streams including:

- Site excavation waste
- Construction waste
- Packaging waste
- Construction work compound waste from on-site employees.

Site excavation material during the SSD phase is estimated to be:

- Cut: 4,350m<sup>3</sup>
- Fill: 9,763m<sup>3</sup>

It is expected that the site excavation material will be temporarily stockpiled for on-site reuse and any surplus material is required to be taken off-site and disposed of appropriately. It should be noted that further

site investigations have confirmed the presence of residual asbestos material on site, and that this will need to be disposed of in line with WorkSafe NSW and NSW EPA requirement.

The types of preliminary construction waste materials generated is expected to mainly consist of bricks, concrete, timber, and metal. A high proportion of these materials is expected to be recyclable.

Waste and recyclable materials will be removed from the Site by appropriately licensed contractors and reused, recycled, or disposed of at appropriately licensed facilities, in line with the NSW Waste Classification Guidelines.

### 3.3 Operational waste generation and management

#### 3.3.1 Overview

Operational waste that will be generated in the data halls and corridor areas includes electronic waste (e-waste) and packaging waste. The site will generate small amounts of operational waste from the Site office areas. These operational waste streams are documented in Table 2 and are expected to include:

- General solid waste
- Mixed recycling
- Paper / cardboard
- E-waste from end-of-life office equipment and maintenance of the data centre
- Infrequent hazardous waste materials for disposal (e.g., batteries, spill clean-up, paints)
- Bulky waste items, such as furniture and packaging.

An OWMP will be produced in later design phases and will meet the requirements outlined in the Camden Council's Waste Management Guidelines 2019 for Operational Waste Management Requirements for industrial developments. The requirements for the OWMP are outlined in Section 4.

Operational waste has the following potential impacts associated with:

- Loss of amenity for workers, or neighbours due to odour and vermin
- Escape of litter causing:
  - Pollution of land and waterways
  - Harm to wildlife
  - Loss of amenity to neighbouring properties
- Pollution of land or waterways through disposal of waste to an inappropriate site.

#### 3.3.2 Estimated Operational Waste quantities

It is estimated the data centre layout consists of approximately 2,746m<sup>2</sup> to be used as office or office-like space, which will generate operational waste similar to a commercial office. Preliminary waste generation has been estimated by applying the typical waste generation rates for commercial offices, published in the Camden Council Waste Management Guidelines 2019 and City of Sydney Guidelines for Waste Management 2018.

The expected waste generation for major waste streams is:

- General waste: 1,922 L/week
- Mixed recyclables: 72 L/week
- Paper & Card: 1,850 L/week

- Food and Garden Organics: 959 L/week

Waste and recyclable materials will be removed from the Site by appropriately licensed contractors and reused, recycled, or disposed of at appropriately licensed facilities, in line with the NSW Waste Classification Guidelines 2019.

The Proposal is likely to generate e-waste in the form of server racks and associated data storage equipment reaching the end of their service life. For this reason, a waste collection and recycling contract should be established to collect all e-waste for refurbishment, reuse or recycling and ensure it is not disposed of to landfill.

The waste generation estimates, and waste management requirements are based on the following key assumptions:

- Drawings provided by Greenbox Architecture Pty Ltd.
- Site office areas include front of house and administration areas. These areas however were not explicitly indicated in the architectural drawings dated 11/09/24 by Greenbox Architecture Pty Ltd. An estimate of the approximate site office area (m<sup>2</sup>) was applied based on previous data centres.
- Waste generation volumes for e-waste, confidential paper and other ad hoc waste were not able to be determined due to the limited data available.
- The following areas were not included as site office areas to calculate operational waste generation estimates:
  - Data halls
  - Circulation areas
  - Electrical and plant rooms
  - Loading dock
- Bulky waste will be stored and collected on an ad hoc basis. Management and collection arrangements will be proposed in the OWMP.
- Sanitary waste will be collected directly from the point of generation by a specialist waste collection contractor.
- E-waste and other ad hoc waste streams will be stored in Mobile Garbage Bins (MGBs) located within designated areas as required. Any hazardous or liquid waste will be stored in appropriate specialised containers and collected by specialised services.

### **3.3.3 Waste targets and reporting**

Waste reporting and audits can be used to determine the actual percentage of wastes that are being, or have been, recycled during the operations of the development and reduce the impact of waste of recyclable resources through unnecessary disposal to landfill. Building management should encourage users by demonstrating a commitment towards waste avoidance and minimisation initiatives. The waste hierarchy as detailed in the NSW Waste Avoidance and Resource Recovery Act 2001 and should be observed in order of preference.

### **3.3.4 Waste Storage**

There is a need for the provision of a waste enclosure area which is sufficient for the storage of a maximum of a weeks' worth of operational general waste from the development, based on preliminary calculations in Section 3.3.2.

Storage of cardboard and paper must be in a dry, vermin proof area and must not be stored for more than two weeks in order to prevent the breeding of pests.



The waste streams to be stored in the enclosure are:

- General waste - Collected every week, or more often if required.
- Paper/card – Collected every week, or more often if required.
- Comingled recycling - Collected every week, or more often if required.
- Bulky waste - Collected as needed / on call.

It is assumed that on-site bin washing will be conducted by an external contractor on an ad-hoc basis.

### **3.4 Cumulative Impacts**

It is unlikely that there will be any cumulative impacts after the implementation of a CWMP, OWMP and the management pathways identified in Table 2.

### **3.5 Summary of waste generation and management**

Table 2 below outlines the expected waste materials, classification, and management pathways for construction and operational waste.

**Table 2 Waste generation and management summary**

Waste stream	Source	Phase	Estimated quantities	Expected waste classification under NSW Waste Classification Guidelines	Expected management pathway
<b>Excavated Soil</b> Soil, sand, and rubble fines	Excavation of Site works	Construction	4,350m <sup>3</sup>	General solid waste (non-putrescible) – pre-classified.	Temporarily stockpiled for on-site reuse.
<b>Contaminated excavated soil</b> Asbestos impacted soils, topsoil or fill material contaminated with asbestos contaminated material (ACM), hydrocarbons, or other chemicals (for example, lead)	Excavation of contaminated fill or soils with surface contamination from previous land use.	Construction	Not quantified, however the site represents a medium risk with regards to potential contamination.	<p>Further site investigations have confirmed the presence of residual asbestos material on site. A Remediation Action Plan (RAP) is being prepared for early works, which will describe the approach to managing contamination onsite to reduce the risk of health and environmental impacts.</p> <p>If any further contamination is identified during main construction works, the RAP would be followed.</p> <p>A potential management pathway might include:</p> <ul style="list-style-type: none"> <li>• Soil contaminated with ACM would initially be classified as special waste and need remediation in line with a remediation action plan. Soil contaminated with hydrocarbons, lead paint or other chemicals could be classified as restricted or hazardous waste, depending on contaminant concentration and leachability, potentially requiring off-site remediation and/or disposal. Testing of building footprints will need to be carried out prior to the early works DA submission and any subsequent remediation will be undertake as part of early works approval.</li> </ul>	<p>Existing buildings and potentially contaminated soil within building footprints will be assessed and remediated prior to the commencement of any works.</p> <p>If contamination is found, it is likely that the Proposal will need to develop a remediation action plan that will define the preferred approach to any contaminated excavated soil. Potential management pathways might include:</p> <ul style="list-style-type: none"> <li>• Send for off-site treatment for recycling or reuse</li> <li>• Send to appropriately licenced facility and/or landfill</li> </ul> <p>Asbestos containing material, hazardous and/or intractable wastes will be disposed of in line with WorkSafe NSW and Environment Protection Authority requirements.</p>
<b>Green waste</b> Trees, shrubs and weeds	Vegetation removed from cleared land	Construction	Not quantified	General solid waste (non-putrescible) – pre-classified.	Temporary stockpiling on-site and removal for composting or disposal at licensed facilities. The CWMP may outline appropriate control and disposal

Waste stream	Source	Phase	Estimated quantities	Expected waste classification under NSW Waste Classification Guidelines	Expected management pathway
					options of any high threat weeds identified on the Site if required.
<b>General construction waste</b>  Concrete, timber, plastic wrapping and strapping, packaging, cardboard & paper, landfill, bricks & tiles, Plasterboard	Offcuts, excess material, packaging	Construction	Not quantified	General solid waste (non-putrescible) – pre-classified.	Stored in on-site skip bins and transported off-site for disposal or recycling.  Any wooden pallets to be stored for reuse or returned to the supplier for reuse where possible.
<b>Septic waste</b>	Toilets for site workers	Construction	Not quantified	Liquid waste.	Portable toilets provided and serviced by an appropriately licensed contractor. All liquid waste managed off-site at an appropriately licensed facility.
<b>Scrap metals</b>	Offcuts, damaged items	Construction	Not quantified	General solid waste (non-putrescible) – pre-classified.	Stored in dedicated recycling bins for off-site transport to metal recycling facilities.
<b>General residual waste</b>	Site offices and administration areas and amenities	Operation	1,922 L/week	General solid waste (non-putrescible) – pre-classified.	Stored in dedicated general waste bins. Regular scheduled collection for off-site disposal.
<b>Food and garden organics</b>	Site office, workers lunch area	Operation	959 L/week	General solid waste (non-putrescible) – pre-classified.	Construction: Stored in residual waste bins and transported offsite for disposal.  Operations: Stored in dedicated organics bins and transported offsite for composting. Regular scheduled collection.
<b>Mixed recycling</b>	Site offices and administration	Operation	72 L /week	General solid waste (non-putrescible) – pre-classified.	Stored in dedicated mixed recycling bins and transported

Waste stream	Source	Phase	Estimated quantities	Expected waste classification under NSW Waste Classification Guidelines	Expected management pathway
	areas, workers lunch areas				off-site for disposal. Regular scheduled collection.
<b>Paper and cardboard</b>	Site offices and administration areas, packaging.	Operation	1,850 L/week	General solid waste (non-putrescible) – pre-classified.	Stored in paper / cardboard recycling containers and transported off-site for recycling. Regular scheduled collection.
<b>E-waste</b>	Site office and data halls	Operation	Not quantified, however the Proposal is likely to generate e-waste in the form of server racks and associated data storage equipment reaching the end of their service life. For this reason, a waste collection and recycling contract will be established to collect all e-waste for refurbishment, reuse or recycling and ensure it is not disposed of to landfill.	No classification within the NSW Waste Classification Guidelines as this waste should not be disposed to landfill.	Stored, separated, and collected for recycling. A waste collection and recycling contract will be established to collect all e-waste for refurbishment, reuse or recycling and ensure it is not disposed of to landfill.
<b>Hazardous waste</b> Paints, solvents, waste oils, chemicals, and related packaging.	Building fit-out and ongoing maintenance during operations	Construction and Operation	Not quantified, as generation will be linked to ad hoc site activities and maintenance rather than regular procedures.	Empty containers which held these liquid waste products: general solid waste (non-putrescible)– pre-classified. General solid waste (non-putrescible)– pre-classified.	Maintenance vendors to remove empty containers for disposal or recycling as part of their contract.
<b>Green waste</b>	Maintenance of the outdoor green spaces	Operation	Not quantified, as generation will be linked to the flora species chosen during detailed design.	General solid waste (non-putrescible) – pre-classified	Removal by maintenance personnel for composting or disposal at licensed facilities.

## 4. Waste Management Plan

The Camden DCP requirements state that a WMP is to be prepared in line with Camden Council's Waste Management Guideline 2019. As per this guideline, the WMP must address the relevant requirements as set out in Table 3.

**Table 3 DCP requirements to be addressed in WMP**

Camden Council's DCP Requirements	
<b>Objectives</b> <ol style="list-style-type: none"> <li>Ensure that an appropriate waste service is provided to all new development;</li> <li>Ensure waste collection vehicles have safe, reliable access to all collection points and can manoeuvre to all waste collection points during all stages of a development; and</li> <li>Ensure provision of adequately designed and constructed storage and collection areas for all developments that allows for responsible storage and collection of all waste types that are generated at the development.</li> </ol>	
<b>Industrial Development Submission Requirements</b> <p>As provided in Section 4.8 of the Camden Council Waste Management Guideline:</p> <ol style="list-style-type: none"> <li>Architectural plans showing: <ol style="list-style-type: none"> <li>Bin storage area. Each bin should be illustrated on the submitted plan. Typical bin dimensions are provided in APPENDIX 2 of the Camden Council Waste Management Guideline;</li> <li>Bin collection area. Each bin should be illustrated on the submitted plan. Typical bin dimensions are provided in APPENDIX 2 of the Camden Council Waste Management Guideline; and</li> <li>Path of travel for moving waste bins between storage area and collection area as applicable.</li> </ol> </li> <li>Swept path analysis prepared by a suitably qualified professional in accordance with AS2890.2 must be provided. Specifications for waste collection vehicles are provided in APPENDIX 4 of the Camden Council Waste Management Guideline. The swept path analysis will illustrate that a heavy rigid vehicle can; <ol style="list-style-type: none"> <li>Enter the site in a forward direction;</li> <li>Perform collections in a safe manner; and</li> <li>Exit the site in a forward direction.</li> </ol> </li> <li>An Ongoing Waste Management Plan (WMP) must be submitted with the Development Application and must include the following information: <ol style="list-style-type: none"> <li>An estimation of waste generation for garbage, recycling, and any other relevant waste type. Waste generation rates to be used for calculations and example calculations are provided in APPENDIX 2 of the Camden Council Waste Management Guideline. Estimates should be provided as a volume of waste per week (in litres);</li> <li>Number of each type of bin (garbage, recycling and any other relevant type) required by the development;</li> <li>Number of waste collections for each type of waste per week required by the development;</li> <li>Details of waste storage areas including dimensions, floor area (m<sup>2</sup>) and location;</li> <li>Details of any waste management equipment included in the development. Descriptions of some available waste management equipment options are provided in APPENDIX 3 of the Camden Council Waste Management Guideline;</li> <li>Details of dedicated waste collection point including dimensions, floor area (m<sup>2</sup>) and location;</li> <li>Proposed arrangements for the management, maintenance and cleaning of all waste/recycling management areas;</li> <li>Proposed management of litter within the property boundaries (the area of public footpath or public area adjacent to the premises is to be maintained in a clean and tidy condition); and</li> </ol> </li> <li>Evidence of compliance with any specific industrial waste laws/protocols provided by the licensing authority. For example, those related to production, storage and disposal of industrial and hazardous wastes as defined by the Protection of the Environment Operations Act 1997.</li> </ol>	



## 5. Environmental Management Measures

Table 4 describes the measures that would be applied to avoid, minimise, or mitigate the potential impacts associated with the waste generated because of the Proposal. More detailed provisions for waste management and resource recovery would be detailed as part of the CWMP and OWMP.

**Table 4 Summary of potential impacts and proposed mitigations for construction and operational waste**

ID	Impacts	Mitigation	Responsibility	Timing
<b>W01</b>	Health risks arising from handling or contact with contaminated soil and hazardous waste materials	Existing buildings and potentially contaminated soil within building footprints will be assessed and remediated prior to the commencement of any works. Asbestos containing material, hazardous and/or intractable wastes will be disposed of in line with WorkSafe NSW and Environment Protection Authority requirements.	Construction contractor	Construction (Early works)
<b>W02</b>	Waste of recyclable resources during construction through unnecessary disposal to landfill.	Waste will be managed in line with the waste hierarchy. The CWMP will include provisions for segregation and separate collection of recoverable materials, including green waste, excavated natural materials and metals.	Construction contractor	Construction (Main works)
<b>W03</b>	Pollution of land or waterways including groundwater through accidental escape of waste or runoff.	The CWMP will include measures for containment of waste during storage and transport, such as covering, fencing and bunding.	Construction contractor	Construction (Main works)
<b>W04</b>	Spread of weeds, pests or pathogens within recovered waste materials.	The CWMP may outline appropriate control and disposal options of any high threat weeds identified on the Site if required.	Construction contractor	Construction (Main works)
<b>W05</b>	Pollution of land or waterways during construction through disposal of waste to an inappropriate site.	The CWMP will include a requirement that all waste be delivered to an appropriately licensed facility for recovery or disposal. Receipts for all disposed materials must be kept and made available for inspection by regulatory authorities.	Construction contractor	Construction (Main works)
<b>W06</b>	Waste of recyclable resources during operation through unnecessary disposal to landfill.	Waste will be managed in line with the waste hierarchy. An OWMP will be developed and will include provision for source separation systems for recyclable materials, including, paper and card, mixed recyclables, e-waste, and hazardous waste.	Proponent	Operation
<b>W07</b>	Loss of amenity for workers, or neighbours due to odour and vermin. Escape of litter causing: <ul style="list-style-type: none"> <li>• Pollution of land and waterways</li> <li>• Harm to wildlife</li> <li>• Loss of amenity to neighbouring properties.</li> </ul>	An OWMP will be developed during detailed design for the adequate provision for storage and collection of waste.	Proponent	Operation

ID	Impacts	Mitigation	Responsibility	Timing
W08	Pollution of land or waterways during operation through disposal of waste to an inappropriate site.	The OWMP will include a requirement that all waste be delivered to an appropriately licensed facility for recovery or disposal.	Proponent	Operation

## 6. Summary of Residual Impacts

It is not likely that there will be any residual impacts remaining if the above mitigation measures are implemented and waste is stored and managed appropriately.

## 7. References

Australian Government, 2018. *The National Waste Policy: Less Waste More Resources 2018*

Camden Council, 2019. *Camden Development Control Plan 2019*

Camden Council, 2019. *Waste Management Guideline*

NSW EPA, 2014. *NSW Waste Avoidance and Resource Recovery Strategy 2014–21*

NSW EPA, 2014. *Waste Classification Guidelines*

NSW EPA, 2015. *Waste Levy Guidelines*

NSW EPA, 2019. *Standards for Managing Construction Waste in NSW 2019*

NSW Government, 2020. *Protection of the Environment Operations (Waste) Regulation 2014*

NSW Government, 2020. *Waste Avoidance and Resource Recovery Act 2001*

NSW Government, 2021. *NSW Protection of the Environment Operations Act 1997*