



Construction Waste Management Plan Wee Hur Student Village Redfern November 2018

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1 Introduction

This Construction Waste Management Plan has been prepared by Waste Audit & Consultancy Services (Aust) Pty Ltd for Allen Jack + Cottier for the Wee Hur Student Village project located at 13-23 Gibbons Street, Redfern NSW to provide guidance regarding the management of waste during the construction phase of the development.

The aim of this Plan is to ensure that all waste resulting from construction activities is managed in an effective and environmentally aware manner, specifically:

- To minimise the generation of waste to landfill
- To maximise waste avoidance and reuse of materials on site
- To ensure that an efficient recycling procedure is applied to waste materials
- To make employees and subcontractors aware of their waste management responsibilities

Preparation of this Construction Waste Management Plan has been undertaken with reference to the relevant City of Sydney requirements, as well as industry best practices.

In particular, compliance with The National Occupational Health and Safety Commission *National Standard for Construction Work [NOHSC: 1016:2005]* and other relevant national standards pertaining to the construction process is required under the Environmental Planning and Assessment Regulation 2000.

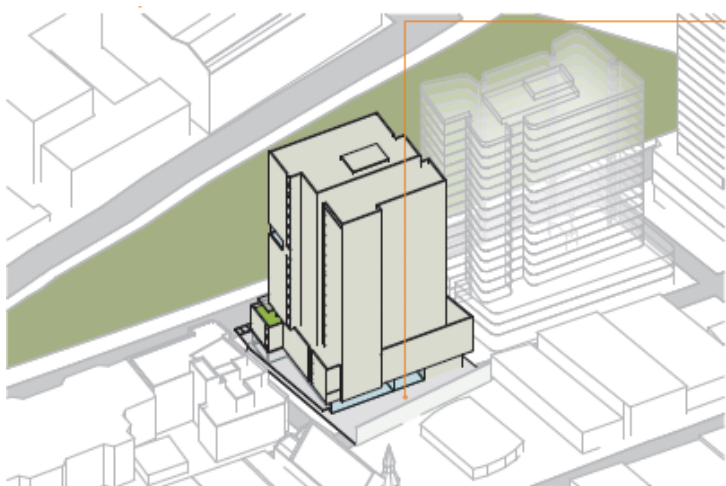
Section 143 of the *Protection of the Environment Operations Act 1997* requires waste to be transported to a place that can lawfully accept it. It will be the responsibility of the site's developer to ensure that all contractors:

- Provide details of their operating licence to transport waste
- Clearly specify where all wastes are to be transported
- Confirm the capacity of the nominated facilities to receive/manage the waste;
- Retain construction waste/recycling dockets on site to confirm which authorised waste/recycling facilities received the material for recycling and disposal; and
- Provide reports on management aspects (types, quantities and disposal pathways).

Note: The testing and classification of any excavated material is not covered in this report. Where necessary, the development's managers will arrange for separate specialist testing to be conducted. If acid sulphate soils are present on site, a separate management plan will need to be prepared for the handling and disposal of such soil.

2. The Site

The current site plan (elevation) is shown below:



3. Waste Management Strategy

3.1 Waste Management Principles

The following waste hierarchy has been used to guide this construction waste management plan:



Avoid

Adopt sound work practices during the construction process that avoid the creation of waste products in the first place

Reduce

Reduce the use of materials during the construction process that require treatment or disposal

Reuse

Ensure that wherever possible, materials are reused either on site or offsite:

- Identify and put systems in place to separate and store materials that can be reused onsite
- Identify the potential applications for reuse offsite and facilitate this process

Recycle/Recover

Identify all recyclable waste products to be produced on site:

- Provide systems for separating and stockpiling of recyclables
- Provide clear signage to ensure recyclable materials are separated
- Process the material for recycling either onsite or offsite

Note: In some cases it may be more economical to send the unsorted waste to specialised waste contractors who will separate and recycle materials at an offsite location.

Treat/Dispose

Waste products which cannot be reused or recycled will be removed and treated/disposed of at appropriately licensed facilities, ensuring the following:

- Chosen waste disposal contractor complies with OEH requirements
- Bins to be monitored for fullness and collected on an efficient schedule minimising transport

3.2 Record Keeping

Records will be required to be kept of all wastes and recyclables generated and either re-used on site or transported off-site. It will be a condition of appointment that all contractors provide these records and that they also contain details of the facilities that the materials are transported to.

These records will be made available to the relevant authorities on request.

3.3 Materials Storage

All waste and recycling materials will be stored in bins provided by the appointed contractor(s). These bins will be appropriately coloured and signed to indicate what materials are to be deposited into them and located so as to maximise the recovery of reusable/recyclable materials.

3.4 Liquid Waste

- Ensure water is used in moderation and no taps are left continuously running
- Use any grey water produced on site for irrigation or for dust suppression
- Only discharge clean water into storm water
- Manage all wastewater and runoff in accordance with Sydney Water requirements

3.5 Asbestos

The process for managing any materials that have initially been suspected of being, or containing, asbestos waste is as follows¹:

- i. Treat the material as asbestos unless proven otherwise
- ii. Do not disturb the material (i.e., shift or place into a container)
- iii. Seek advice from a suitably qualified laboratory to test the material(s) to determine if it is or is not asbestos
- iv. If determined not to be asbestos, then it can be managed as an inert waste
- v. If determined to be asbestos then it must be managed by a licenced contractor for packaging, removal and disposal
- vi. If the material has accidentally been uncovered, then the area should be cleared, barriers erected to prevent access, NSW WorkCover and EPA notified, and if the material is broken, it should be covered with a fine spray/mist of water.

For what has been conclusively identified as asbestos-containing materials (including soils), a specialist/licensed asbestos contractor will be used. As required, only workers trained in asbestos removal techniques will be allowed to manage the removal of asbestos-contaminated soil and any material contained in the buildings.

In regard to disposal of asbestos containing materials, there are regulatory requirements under clause 42 of the Protection of the Environment Operations (Waste) Regulation 2005 that apply to the management of asbestos waste, including:

- Waste must be stored on the premises in an environmentally safe manner.
- Non-friable asbestos material must be securely packaged at all times.
- Friable asbestos material must be kept in a sealed container.
- Asbestos-contaminated soil must be wetted down.
- All asbestos waste must be transported in a covered, leak-proof vehicle.
- Asbestos waste must be disposed of at a landfill site that can lawfully receive this waste. Always contact the landfill beforehand to find out whether asbestos is accepted and any requirements for delivering asbestos to the landfill.
- It is illegal to dispose of asbestos waste in domestic garbage bins.
- It is also illegal to re-use, recycle or dump asbestos waste.

¹ Alternatively, any material suspected of being asbestos can simply be classified as such, and then managed accordingly.

4. Materials Streams

The table below shows materials streams expected to be generated during the construction process. Specific disposal/recycling facilities have not been shown, as a waste contractor has not yet been appointed for the project.

All waste contractors and sub-contractors, once appointed, will be required to detail all intended and actual disposal facilities used, in order to ensure the guiding principles of the waste hierarchy are upheld and maximum diversion from landfill is achieved.

The following table details the estimated composition by m³ of construction waste to be generated, and the recommended management strategy for each type of material.

Materials on Site		Destination		
Type of Material	Estimated Volume (m ³)	On-Site (Reuse or Recycle)	Off-Site (Reuse or Recycle)	Disposal (Landfill)
Concrete (Excess)	80 m³	Separated on site and crushed for use in temporary access road construction	Collected by contractor and taken to concrete recycling facility	No disposal to landfill
Floor Coverings	40 m³	No on-site reuse	Disposed of into a designated bin and collected for recycling if of the required quality, or disposal to landfill if not	Material that cannot be recycled will be disposed of at landfill facility
Metal Offcuts, Roof Sheeting, Wiring, etc.	30 m³	No on-site reuse	Collected by specialist metal subcontractor for separation into different metal types for recycling	No disposal to landfill
Used Pallets	30 m³	Reused on site for storage where possible	Collected by contractor and disposed of at recycling facility	No disposal to landfill
Timber Offcuts	30 m³	Reuse for formwork where possible	Untreated recyclable timber will be collected and recycled at appropriate timber yard. Unrecyclable (treated) timber will be disposed of at landfill	Material that cannot be recycled will be disposed of at landfill facility
Plasterboard Offcuts	30 m³	No on-site reuse	Material to be separated and stockpiled onsite and collected by the waste contractor for recycling for possible use as soil improver with gypsum etc. removed by recycler	Material that cannot be recycled will be disposed of at landfill facility
Paper/Cardboard Recycling	20 m³	Reuse cardboard boxes for storage where possible	Separated onsite into dedicated receptacles and collected by the waste contractor for recycling	No disposal to landfill
Glass (Excess)	15 m³	No on-site reuse	Recyclers consulted as to potential for recycling	No disposal to landfill
Mixed Recyclables	15 m³	No on-site reuse or recycling	Separated onsite into dedicated receptacles and collected by the waste contractor for recycling	No disposal to landfill
General Waste (All Other Materials)	80 m³	No on-site reuse or recycling	Separated onsite into dedicated receptacles and collected by the waste contractor for disposal	Disposal to landfill

In total, the development's construction phase will produce around **370 cubic metres** of waste materials, of which the vast majority should be able to be reused (either on-site or off-site) or recycled off-site at a specialised facility.

5. Work Plan

The following summarises the principles for the Work Plan to be provided for construction activities for the development; a comprehensive Work Plan will be developed and submitted to the relevant authorities after the construction contractor(s) have been appointed.

Following this appointment, more detail as to the construction process will be known, and will be evaluated to ensure that all applicable requirements are met. It will be a condition of appointment that the contractor(s) will develop a Work Plan and the requirement for submitting this following the appointment should be conditioned in the DA for lodgment with the reviewing authority.

A copy of the relevant Australian Standards will be kept on site, and during site induction all workers will be advised as to the requirements contained within these Standards.

It is recommended that the following requirements are included in the Work Plan:

Proposed Construction Methods

- The contractor will be required to detail all machinery that will be used on-site as well as for transporting materials off-site, including vehicles to be used by waste/recycling contractors
- All operators of machinery will be required to provide evidence of licences and insurances to operate machinery
- All machinery will have to be demonstrated to be in good working order
- Safe work method statements will be required for all aspects of the construction

Estimated Time for Work to be Completed

It is difficult to state with accuracy the actual time for the construction activities to occur (i.e., be completed), due to issues such as weather and other unforeseen issues. Once the contractor(s) have been appointed a timeframe for construction activities will be developed.

Hours of Operation

Hours of all construction activities will be restricted to what is required by the City of Sydney and any other relevant obligations.

There are a large number of residences in close proximity to the site, so all contractors will be required to ensure that hours of operation, noise, dust and other adverse impacts, do not cause nuisance to these other premises.

Sediment Control Measures

All drains located on or off-site that could have any sediment flow to them will be protected by bunding. The type of bunding (straw bales or purpose bought bunding) will depend on the location.

Contractors will be responsible for undertaking activities that minimise sediment generation and this will be required to be included in their Work Plan as to the methodologies to be used. All measures used for sediment control will be inspected daily.

Site Access

The site will be protected by fencing, and all gates locked when the site is not occupied. Access during working hours will be controlled by a gatekeeper, and there will be clearly signed and controlled entry and exit points. Site access will only be granted to those who have attended site induction and/or required to be on site due to their employing organisations' requirements (e.g., City of Sydney or WorkCover officers).

6. Contractor Management

Each subcontractor working on the site will be required to adhere to this Waste Management Plan.

The Head Contractor will ensure each subcontractor:

- Takes practical measures to prevent waste being generated from their work
- Implements procedures to ensure any waste that is created will be actively managed and where possible recycled, as part of the overall site recycling strategy or separately
- Ensures that the right quantities of materials are ordered, minimally packaged and where practical pre-fabricated, and any oversupplied materials are returned to the supplier
- Implements source separation of off-cuts to facilitate reuse, resale or recycling

The Site Manager will be responsible for:

- Ensuring there is a secure location for on-site storage of materials to be reused on site, and for separated materials for recycling off site
- Engaging qualified contractors to remove waste and recycling materials from the site
- Coordinating subcontractors to maximise on site reuse of materials
- Regular monitoring of bins by site supervisors to detect any contamination or leakage
- Ensuring the site has clear signs directing staff to the correct location for recycling and stockpiling, and that each bin/skip/stockpile is clearly signposted
- Providing training to all site employees and subcontractors in regard to the WMP as detailed in Section 7 below

Should a subcontractor cause a bin to be significantly contaminated, the Site Manager will be advised through a non-conformance report and the offending subcontractor will then be required to take corrective action, at their own cost. The non-conformance process would be managed by the Head Contractor's Quality Management System.

7. Training and Education

All site employees and sub-contractors will be required to attend an induction that will outline the components of the WMP and explain the site-specific practicalities of the waste reduction and recycling strategies outlined in the WMP.

All employees are to have a clear understanding of which products are being reused/recycled on site, and where they are stockpiled, and are also to be made aware of waste reduction efforts in regard to packaging.

This report has been prepared by:

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