



189 RIVERVIEW RD AVALON BEACH

Waste & Construction Management Plan

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1. Introduction

This waste management plan has been prepared by Clearview Property Services Pty Ltd. The plan details the way in which the proposed development at 189 Riverview Rd – Avalon Beach will manage the waste and recycling generated during the demolition and construction phases of the development in accordance with the DA Conditions as set by Council

2. Overview of Development

The proposed development at 189 Riverview Rd – Avalon Beach consists of a new five storey home with a detached 2 car garage.

These following tables provide details on the waste estimates and collection protocols for the proposed development during demolition and construction phases.

3. Waste Generation Estimate

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

- To maximize the reuse and recycling of demolition and construction materials
- To reduce the volume of materials going to landfill
- To maximise waste material avoidance and reuse onsite
- To ensure that where practicable, an efficient recycling procedure is applied to waste materials
- To ensure efficient storage and collection of waste

3.1 Demolition

Based on the quantity survey provided to Clearview Property Services Pty Ltd, it is estimated that approximately 104m³ of waste will be generated during the demolition/excavation phase of the development. The following table details the estimated composition by area or volume of demolition waste to be generated.

Table 1 - Composition of demolition waste by volume

Material	M ³
Green/Vegetation	20m ³
Bricks/stone	20m ³
Residual general (incl. fittings, fixtures etc)	20m ³
Concrete	10m ³
Parquetry Flooring	6m ³
Tiles	6m ³
Timber	18m ³
Asbestos	2m ³
Glazing	2m ³
Total	104m ³

3.2 Construction

The quantity of waste materials to be generated onsite are estimates based on the information provided to Clearview Property Services Pty Ltd and therefore the systems that will be put in place need to incorporate flexibility to allow for variation in the total quantities generated. Active site management during the construction phase will ensure all waste/recyclable materials are disposed of appropriately and that all waste receptacles are of sufficient capacity to manage onsite activities.

Table 2 below details the estimated composition by area or volume of construction waste to be generated. Table 2 -

Composition of construction waste by volume

Material	M ³
Fill	2000m ³
Paint	73L (0.073m ³)
Residual recycling	52m ³
Residual General waste	60m ³
Concrete	18m ³
Plasterboard	9m ³
Carpet	3m ³
Tiles	5m ³
Blockwork	5m ³
Total	152m ³

4. Waste Management Strategy

The following waste hierarchy will be used as a guiding principle:



Avoid and Reduce

Minimise the production of waste materials in the construction process by

- Assessing and taking into consideration the resultant waste from different design and construction options
- Purchasing materials that will result in less waste, which have minimal packaging, are pre-cut or fabricated.
- Not over ordering products and materials

Reuse

Ensure that where ever possible, materials are reused either on site or offsite

- Identify all waste products that can be reused
- Put systems in place to separate and store reusable items
- Identify the potential applications for reuse both onsite and offsite and facilitate reuse

Recycling

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.

Disposal

Waste products which cannot be reused or recycled will be removed and disposed of. The following will need to be considered:

- Ensure the chosen waste disposal contractor complies with OEH requirements
- Implement regular collection of bins

5. Waste Management Systems

5.1 Onsite and Offsite Systems

Table 3 – Waste management systems (demolition)

Material	Estimated volume (m ³)	Onsite (re-use or recycle)	Offsite (recycling contractor)	Disposal (contractor and landfill site)
Green/ Vegetation	20m ³			Disposed of at suitable waste facilities
Bricks	20m ³	Reuse cleaned bricks where possible		Disposed of at suitable waste and recycling facilities
Residual general waste (incl. fittings, fixtures etc)	20m ³			Disposed of at suitable waste and recycling facilities
Concrete	10m ³			Disposed of at suitable waste and recycling facilities
Tiles / Flooring	6m ³			Disposed of at suitable waste and recycling facilities
Flooring	6m ³			Unsuitable material will be taken to landfill for disposal

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Timber	18m ³	Re use where possible as formwork or framing		Disposed of at suitable waste and recycling facilities
Asbestos	2m ³			<i>A licensed asbestos contractor will be engaged to dismantle and dispose of asbestos as per legislative requirements</i>
Glazing	2m ³			Disposed of at suitable waste and recycling facilities

Table 4 details the expected waste materials and management systems for the construction phase of the project.

Table 4 – Waste management systems (construction)

Material	Estimated volume (m ² or m ³ where indicated)	Onsite (re-use or recycle)	Offsite (recycling contractor)	Disposal (contractor and landfill site)
Fill	2000m ³	Suitable soil to be reused where appropriate for onsite landscaping	Unusable soil/fill to be taken offsite and disposed at appropriate facility – usually accepted at landfills for re-use accept fill for specific projects.	
Paint/waterproofing	73L (0.073m ³)		Clean tins recycled by metal recycler where possible	Residue/wash-off hardened and disposed appropriately
Residual general recyclables	52m ³		Collected by contractor and disposed at appropriate recycling facility	
Residual general waste	60m ³			Collected by contractor and disposed at appropriate landfill
Concrete	10m ³		Separated where possible and taken to concrete recycling facility – deposited onsite directly into skips or trucks to be Removed from site.	

Plasterboard	9m ³		Stockpiled onsite and collected by plasterboard supplier/recycler or taken to appropriate recycling facility	
Carpet	3m ³		Stockpiled and collected as required by carpet supplier for recycling contractor	Unsuitable material will be taken to landfill for disposal
Tiles	5m ³		Stockpiled and collected as required by specialty metal recycling contractor for recycling/resale	
Blockwork	5m ³		Stockpiled and collected as required by specialty glass recycler or taken to appropriate C&D facility for separation and recycling	

Note: The quantities of construction and demolition waste materials have been estimated using industry guides for predicting waste quantities¹. The figures in Table 3 and 4 above are estimates and are used as a guide for designing the waste management systems on site.

It should be noted that there are multiple offsite recycling/disposal facilities available for the appropriate processing of the materials detailed above and the facility choice will depend largely on the waste contractor/supplier engaged.

5.2 Contracts and Purchasing

Each subcontractor working on the site will be required to adhere to this Waste & Construction Management Plan. The Head Contractor will ensure each subcontractor:

- Takes practical measures to prevent waste being generated from their work
- Implements procedures to ensure waste resulting from their work will be actively managed and where possible recycled, as part of the overall site recycling strategy or separately as appropriate
- Ensures that the right quantities of materials are ordered, minimally packaged and where practical pre-fabricated. 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 offsite.
- Ensuring all skips/bins/stockpiles are clearly labeled identifying which material is suitable for each receptacle
- Engaging appropriate waste and recycling contractors to remove waste and recycling materials from the site
- Co-coordinating between subcontractors, to maximize on site reuse of materials
- Monitoring of bins on a regular basis by site supervisors to detect any contamination or leakage
- Ensuring the site has clear signs directing staff to the appropriate location for recycling and stockpiling station/s. And that each bin/skip/stockpile is clearly sign posted
- Providing training to all site employees and subcontractors in regards to the WMP as detailed in section 5.3 below.
- Should a subcontractor cause a bin to be significantly contaminated, the Site Manager will be advised by a non-conformance report procedure. 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 Contractors' Quality Management Systems
- Retaining demolition and construction waste dockets to confirm and verify which facility received the material for recycling or disposal.

5.3 Training and Education

All site employees and sub-contractors will be required to attend a site-specific 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. They are also to be made aware of waste reduction efforts in regards to packaging.

5.4 Construction Management Plan

- The construction management plan addresses the requirements for safe working practices to protect the safety and welfare of residents, pedestrians and workers on and near the project during the construction of the proposed development site. The proposed development consists of the demolition of the existing premises, excavation and the construction of a multi-level residential building.
- Due to the location of the project in an urban environment, street traffic (automotive and pedestrian) is expected around the project.
- The project is situated at 189 Riverview Rd – Avalon Beach which is minor road for throughfare traffic but very important to local traffic flow including the local bus routes.
- Due to this locality, we envisage light pedestrian and vehicular traffic, therefore adequate provisions shall be made during construction to minimise any associated impact to pedestrian and vehicle circulation via a registered traffic control plan.
- Vehicular access to the project shall be strictly left into the site and left out of the site from Riverview Rd. Temporary footpath crossing shall be provided across the road for pedestrians, Signs & or Flagmen shall be used to control pedestrians and ensure safe access across the footway near temporary crossings.
- Caution signs shall be placed on the footpath either side of the crossing to warn pedestrians of possible truck movements, and caution signs placed on Riverview Rd warning pedestrians and vehicles to take care.
- All deliveries, concrete pumps, crane set up, concrete supply shall be outside the site boundaries, with all traffic movements being controlled in accordance with OH & S requirements and AS 1472.3 & in accordance with council conditions & suitable applications / approvals.
- Impact to traffic circulation shall be minimal during the construction process.
- No parking shall be permitted on site. On street parking in neighborhood areas shall be discouraged with an emphasis placed on utilising the existing public transport system. All deliveries shall be within the site compounds where practicable.
- The impact to local traffic shall be minimal during the construction process.
- Due to the restrictions of the site and the footprint of the development, on-site concrete pumping and some crane activities cannot occur. All concrete pumping and crane set ups shall take place on Riverview Rd after obtaining the appropriate approvals.
- All traffic movements being controlled in accordance with OH & S requirements and AS 1472.3. The use of the public way (footway and roadway) for the storage of building material will not be permitted.
- An onsite tower crane will be erected & all lifting will take place from the construction zone as required after obtaining the appropriate approvals.