



Low Impact Development  
Consulting

# Demolition & Construction Waste Management Plan

Multiunit Apartment Development

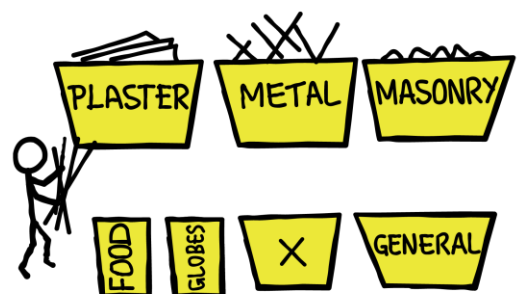
1-5 Rainbow Road, Mittagong

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1.0	27/09/2023	For issue	PM	CH
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## Disclaimer


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The content of this document represents the entirety of work output or recommendations offered by LID Consulting for this particular project. This content supersedes all other verbal discussions undertaken by LID Consulting representatives in relation to this project.

Commercial waste calculations are based on rates provided by government organisations and adopted and used as an industry standard. Bin numbers and spatial requirements have been calculated in accordance with these guidelines. The end user requirements may vary from this depending on the business use, type and operational practice.

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 LID acknowledges and pays respect to the Australian Aboriginal and Torres Strait Islander people, to their ancestors and elders, past, present and emerging, as the traditional custodians of the lands upon which we work and live. We recognise Aboriginal and Torres Strait Islander people's deep cultural and spiritual relationships to the water, land and sea, and their rich contribution to society.

# 1 Recycling & Waste Management Plan

Low Impact Development (LID) Consulting was engaged by TBG Constructions to assess the proposed development at 1-5 Rainbow Road, Mittagong to provide a Waste Management Plan (as required by Wingecarribee Shire Council's Statutory Planning).

A waste management analysis has been undertaken based on the following documents:

- Wingecarribee Shire Council's DCP part A9.12 Waste management and disposal;
- Wingecarribee Shire Council's Request for Further Information dated 23 August 2023, item 8.
- AS 2601 - 2001 Demolition of Structures, published by Standards Australia
- Code for the Control & Regulation of Noise on Building Sites NSW
- Environment Protection Authority Guidelines for Removal of Lead Paint & Asbestos
- Waste Avoidance and Resource Recovery Act 2001
- Contaminated Land Management Act 1997
- Refrigerant Handling Code of Practice 2007 (AIRAH/IRHACE)
- NSW Waste Avoidance and Resource Recovery Strategy 2014 – 2021

This report is based on the drawing sets:

- DA-03P to DA-12P, dated 15/12/2023, prepared by Coble Stephens Architects

## 1.1 Development Outline

<b>Site Address:</b>	1-5 Rainbow Road, Mittagong
<b>Type:</b>	Multi-unit apartment development
<b>Dwellings:</b>	50 Apartments
<b>Break up of units:</b>	10 x 1 bed apartments 35 x 2 bed apartments 5 x 3 bed apartments
<b>Planning Application No:</b>	23/1070

### 1.1.1 Existing buildings and other structures:

- The subject site contains 3 x residential single-story units. Unit 1 is brick veneer on bearers and joists with tile roofs and timber windows. Unit 2 is same as unit 1 with concrete slab extension. Unit 3 is fibro clad on timber frame structure with PVC cladding on few locations. All units have sheds on slab and some landscape furniture. See below demolition markup.

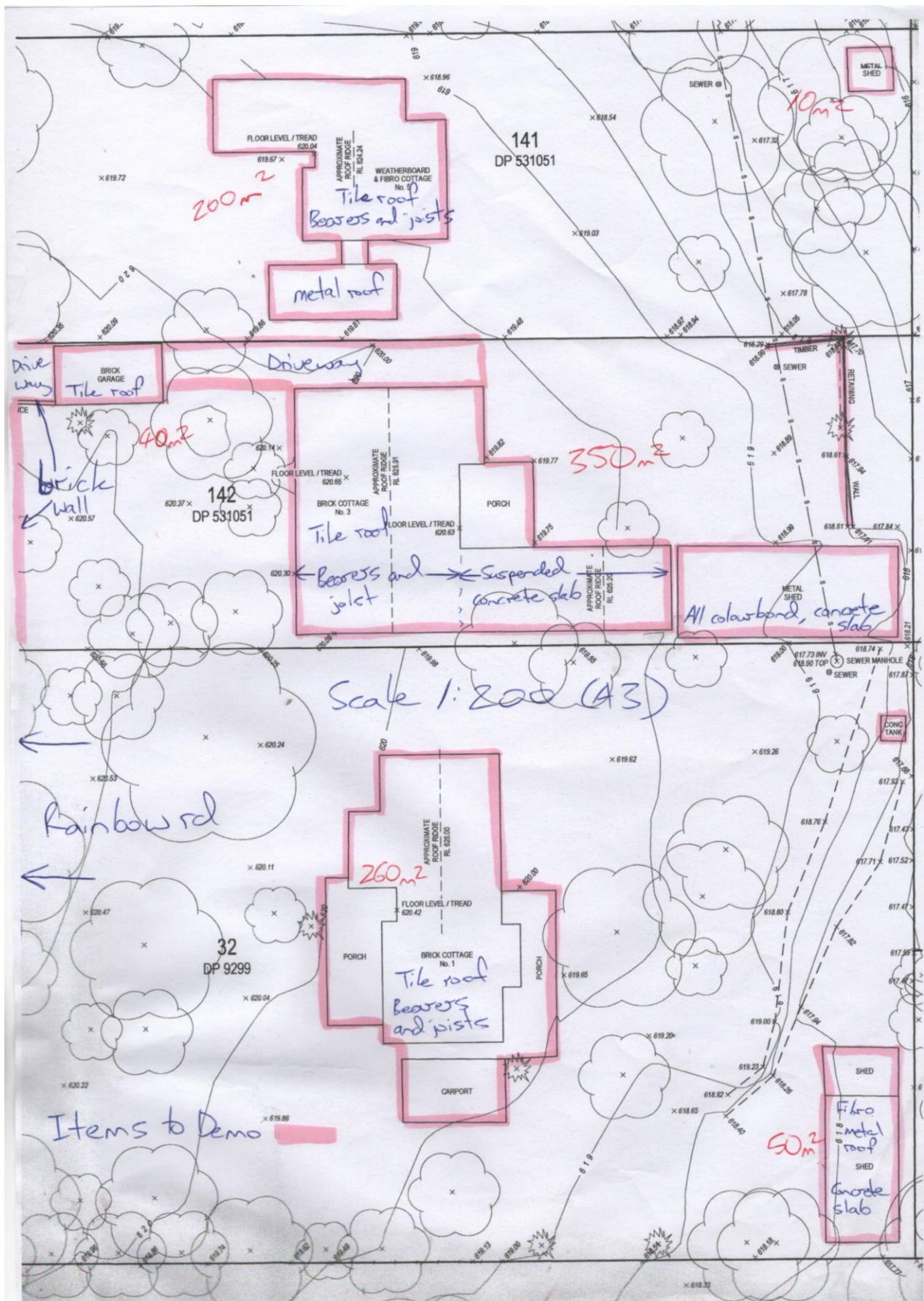


Figure 1: Demolition plan



### 1.1.2 Brief description of proposal:

The proposed 3-storey development comprises of 50 apartments over a shared basement carpark. Both pedestrian and main vehicular access are from Rainbow Road.

The details provided in this report are the recommendations for better practice management of demolition and construction waste. Generally, hand/manual demolition is proposed to effect better recycling and re-use rates. Separation of waste streams is also preferred for improved recycling of excess construction materials and is considered practical given the size of the site and project.

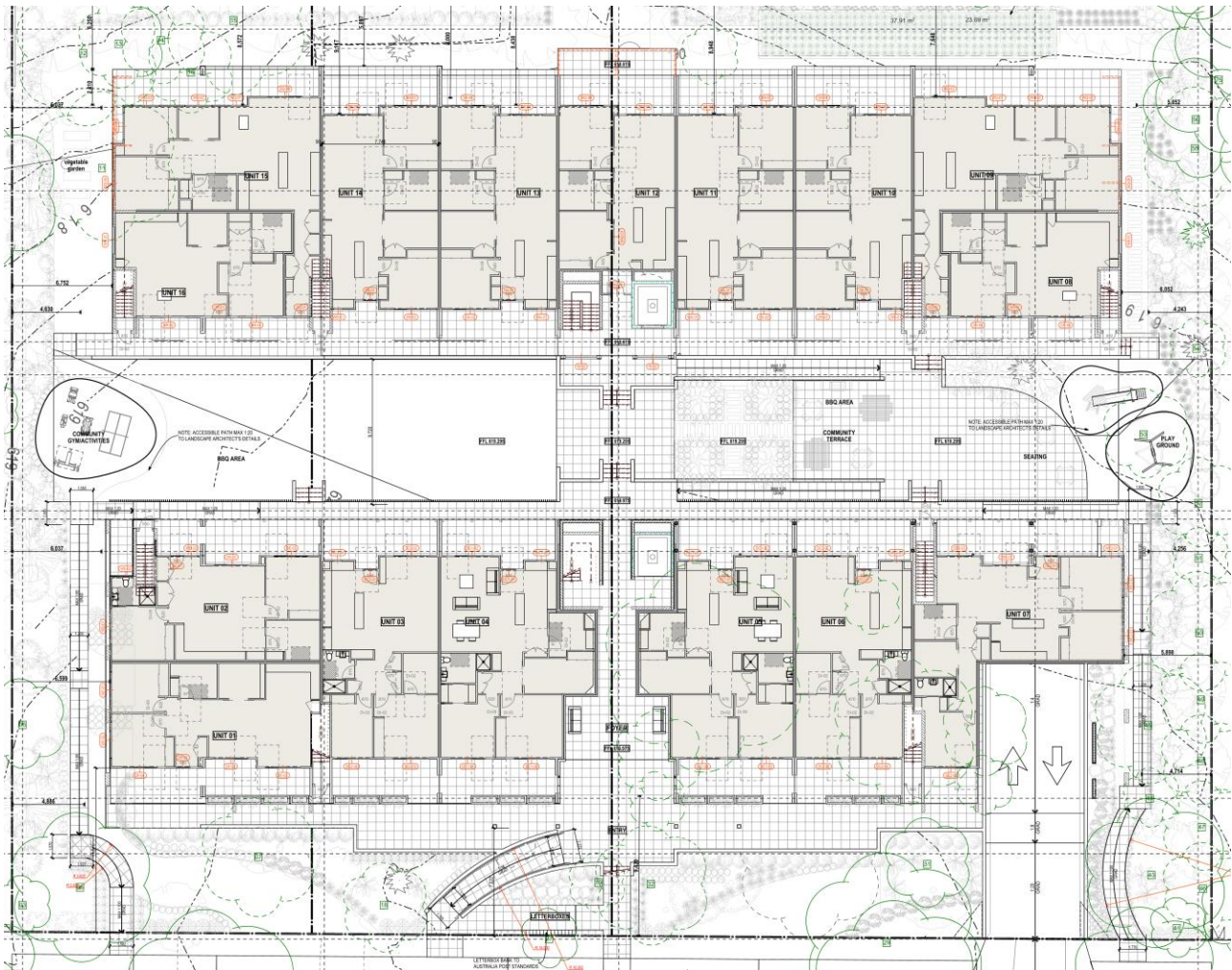


Figure 2: Proposed site plan

## 1.2 Waste context

Australia generated 75.8 million tonnes of solid waste in 2018-19, which was a 10% increase over the previous two years (2016-17).

Sectors generating the most waste were:

- Manufacturing: 12.8 million tonnes (16.9%)
- Construction: 12.7 million tonnes (16.8%)
- Households: 12.4 million tonnes (16.3%)

- Electricity, gas and water services: 10.9 million tonnes (14.4%)

#### Construction

- 16.8% of total waste
- Largest supply of masonry materials (8 million tonnes), 35% of all masonry material waste
- \$2 billion spent on waste services
- Construction waste increased by 22% since 2016-17<sup>1</sup>

The intent of demolition and construction waste management plans is to assist in reducing this.

### 1.3 Actions for Good Waste Minimisation

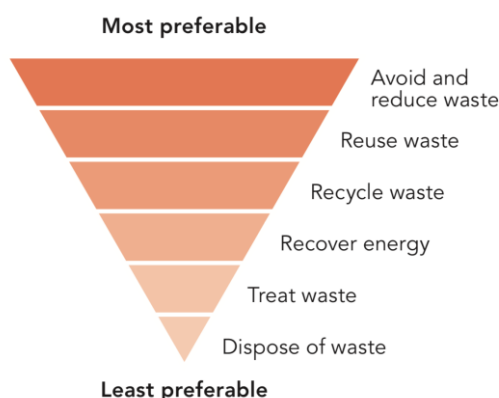
Principles for good waste minimisation have generally followed the waste hierarchy framework shown as the inverted triangle below (from the Environmental Protection Act 2017).

In recent years the concept of waste reduction has also been presented through a circular economy discussion. Both concepts are current, but a circular economy process aims to shift thinking from the predominantly linear model of "take, make and waste" that we have seen in the last few decades and that leads to resource and environmental depletion, to a system where products and services are designed to be reused or ideally be regenerative i.e. to repair the environment.

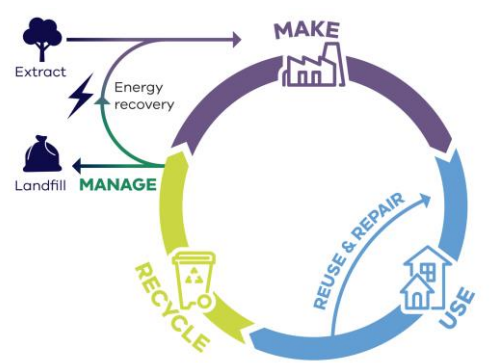
Further, a circular economy allows waste to be avoided in the first instance to reduce environmental impacts of production & consumption. There is now an increasing focus on this across Australia and around the world.

More information can be found at the Australian Circular Economy Hub <https://acehub.org.au>

#### Waste hierarchy



#### Circular Economy



#### Design for retaining and reusing materials

<sup>1</sup> <https://www.abs.gov.au/statistics/environment/environmental-management/waste-account-australia-experimental-estimates/latest-release>

An important component of the circular economy is designing out waste and pollution. Increasing reuse and recovery activities minimises the number of resources used and avoids the generation of waste.

This project design presents many positive resource reuse and retainment opportunities.

Opportunities can include:

- Designing to minimise excavation
- Retaining a large portion of the structure and/or fit-out saves energy and material use and avoids waste as part of the highest component in the waste hierarchy.
- Designing to standard material sizes
- Specifying the use of second-hand recycled materials
- Designing for deconstruction – use mechanical fixings that allow easy disassembly rather than glues

### **Waste minimisation on site**

The following measures help to ensure reduced site waste to landfill:

1. **Selection of head contractor** - demolition, excavation and/or construction.
  - a. At tender time contractors should be asked to demonstrate in detail, in writing how they:
    - i. minimised waste on previous jobs – must be specific with job details and initiatives
    - ii. propose to minimise waste on this job
    - iii. stream (separate) specific waste items for recycling or use a waste contractor that will maximise recycling
  - b. Favour demolition contractors who undertake significant demolition by hand rather than excavator.
  - c. A Greenstar experienced contractor and GreenStar accredited waste processing facility are preferred. Both should hold a Green Star Compliance Verification Summary issued by a suitable qualified auditor, confirming compliance with the Green Star Construction and Demolition Waste Operational and Reporting Criteria.
2. Carry out a **pre-demolition** audit (or waste management audit) before any renovation or demolition project and for any materials to be re-used or recycled, as well as for hazardous waste. Similarly carefully **consider all construction materials** to be used prior to construction.
3. **Waste minimisation addressed in all site inductions** – site inductions must include a discussion of the intent to recycle and minimise waste and the implications of poor waste minimisation practices.
4. **Setting targets for maximum number of mixed waste bins** to leave the site. Note items taken directly to a recycling station or a recycling contractor collection will reduce total bin numbers.
5. **Inclusion in contract conditions** for trades to minimise waste. Set cost penalties where the target number of bins is exceeded. Measures that change of contractor behaviour include:
  - a. plasterers supply their own plasterboard recycling bins.



- b. other trades such as studwork framers and electrical supply their own bins and clean up their own work at the end of the day, placing waste into their own bins – specifically timber or metal stud off cuts or cabling for recycling.
  - c. ensuring contract conditions confirm contractors nominated waste minimisation strategies. These should be detailed and specific.
  - d. contractors being required to provide records of waste bins sent offsite.
6. **Keeping a waste register** that records waste types and volumes as they leave the site as required by Councils DCP (Development Control Plan).
  7. **Supervision and monitoring of waste bins** and enforcement of separation of waste types
  8. **Active waste separation of waste streams** - During construction ensuring the labourer stockpiles materials suitable for re-use in work locations daily.
  9. **Bins with lids** on for workers food waste and wrappers or other waste that may blow out of bins and around on site. Reduces contamination of other recycling loads.

## 1.4 Risk Review

Per industry practice detailed, specific risk assessments should be prepared by the individual contractors responsible for demolition, excavation, the construction of the structure, services, fitout and finishes phases. The risk assessments should take into account but not be limited to waste related activities such as below:

- Worker, pedestrian and traffic hazards created by movement of waste to waste bins and movement of waste bins and vehicles on and off site.
- Excavation risks
- Safe handling of hazardous and toxic waste materials if they are identified on the site, such as asbestos.

## 2 Demolition & Construction Waste Details

This section details Council's requirements in relation to demolition and construction waste management plans. Also provided are additional details which may be of assistance in minimising and managing demolition and construction waste.

### 2.1 Wingecarribee Shire DCP 2012 Waste Management requirements

This waste Management Plan meets the requirements of the Wingecarribee Shire Council DCP Guideline part A9.12 Waste Management and Disposal,

In accordance with the DCP Guideline Section, the following demolition & construction waste management plan is to address:

### 2.2 General items to address

The following demolition & construction waste management plan is to address:

- (a) details regarding how waste is to be minimised within a development;
- (b) estimations of quantities and types of materials to be re-used or left over for removal from the site;
- (c) details regarding the types of waste and likely quantities of waste to be produced;
- (d) a site plan showing storage areas away from public access for reusable materials and recyclables during demolition and construction and the vehicle access to these areas;
- (e) targets for recycling and reuse;
- (f) nomination of the role/person responsible for ensuring targets are met and the person responsible for retaining waste dockets from facilities appropriately licensed to receive the development's construction and demolition waste;
- (g) confirmation that all waste going to landfill is not recyclable or hazardous; and
- (h) measures to optimise the level reuse and recycling of demolition and construction waste, either on site or diverted for reuse and recycling with receipts sufficient to demonstrate the target will be achieved.

### 2.3 Accurate Estimation

The design involves common construction methods and can be readily estimated with accuracy by experienced contractors for material take-offs.

Careful estimation, ordering and prefabrication offsite prior to site construction will ensure that minimal excess material is wasted and that variations on site that result in waste are minimised.

### 2.4 Site Induction Training in Waste Management

All contractors on site should be trained in the contents of this waste management plan as part of site induction procedures, to maximise the use of recycling storage provided on site and the diversion of demolition and construction waste from general landfill.

## 2.5 Waste Register

Council requires a register is to be kept for recording types and quantity of waste taken off site, waste contractor used and destination for the treatment or disposal of the waste.

Monthly waste and recycling contract reports provided by the waste processing facilities, indicating the amount of waste received, and a breakdown of materials recycled or sent to landfill will form the basis of the waste register.

The register should also include tracking of contaminated wastes generated on site that include but may not be limited to:

- Contaminated soils
- Materials containing asbestos or older electrical equipment including lighting controls containing PCBs (possible within garage building on site)
- Waste oils, oil and fuel filters from machinery used on site, oily water
- Solvents, paints and adhesives and their containers

## 2.6 Waste Charges by Volume & Weight

Most demolition and construction waste is charged by volume (set price for the bin or per standard size truck), and also by weight. This means that even some lightweight voluminous products are expensive to be disposed of – which may improve the incentive to recycle more. For example **PVC pipe** can take up a large volume and fill bins quickly. Utilising recycling of good volumes of clean PVC pipe is a smart move to save on the number of waste bins or trucks.

## 2.7 Additional Council Bin Permits

Waste bins are proposed to be fully within the fenced off-site boundary. Should additional waste skips be required outside of the property on the roadway or nature strip a permit would be required from council.

## 2.8 Pollution Control Measures

Pollution control measures should be identified and documented, prior to work commencing. This should identify where pollution control measures will be installed, and how erosion and loose waste will be managed. Examples of measures to be applied during works follow:

- Capping / properly sealing off all pipe ends to underground stormwater and sewer connections either at ground level, as the pipes leave the site or at the mains.
- Drain filters/sediment traps in front of side entry pits or over grated pits (see image below)
- Silt fences on the down slope side of the site where the site has a slope steeper than 1:20 (see image below)
- Silt bunds in swales to retain site erosion materials but allow water flow through
- Erosion control blankets over mounded earth
- Installation of tarps/coverings on site waste bins during non-work hours to prevent blown material leaving the site.



Example – Silt Fencing



Example – Drain Filtering / Sediment trap

## 2.9 Runoff, Spills, Siltation & other Pollutants

Suitable measures are to be taken to ensure the possibility of pollutant runoff from the site is contained and managed. Containment fencing and silt management measures at the boundaries are recommended.

Once excavation is below street level run-off externally from the site should not occur. Ground infiltration could still occur but should be minimised if onsite water is minimised.

The following are some indicative measures that can be implemented for runoff management and spill containment.

### 2.9.1 Vehicle Spills

Spill and sediment tracking off the site from vehicles leaving the site should be managed to minimise pollutant and sediment loads that could otherwise enter street stormwater catchment.

### 2.9.2 Truck / Bin Clean-up

For the majority of the work, demolition will be carried out on a concrete pavement. Trucks will need to be inspected to ensure broken glass, shards of metal and brick rubble is not transported off-site on to the roadways. During the excavation works trucks will potentially collect soil on wheels. The use of crushed rock on internal roadways will reduce this, as will the use of rumble grids. Washing down trucks and storage bins prior to leaving site is another method that may be required to prevent silt and pollutants leaving the site, All measures reduce the need to clean down roadways.

## 2.10 Demolition & Excavation Stage

The following outlines the general sequence and waste streams identified for the demolition and excavation phase and recommends appropriate methods for recovery and disposal.

### 2.10.1 Streaming waste (waste separation)

Separation on site is the simplest way to reduce recycling costs as it simplifies sorting of waste at the processing yard. In most cases mixed loads of recyclable and non-recyclable products that requires extensive sorting can incur a very significant premium price compared to a site pre-sorted load.

Jobs are to be scheduled and planned to maximise recycling.

During demolition separate bins or stockpiles for recycling should be established as follows:

- All clay roof tiles, brickwork, concrete and rock for removal and recycling as road base or similar
- All timber framing for recycling or for mulching
- All metal
- PVC pipes for recycling where quantities warrant
- Electrical cabling
- Carpet tiles if present are to be stockpiled and kept dry
- Other materials as relevant

## 2.10.2 Contractors

In NSW there is currently a requirement that waste operators and transporters that receipt more than 5,000 tonnes per year be EPA NSW licensed and therefore under greater EPA scrutiny. Accordingly larger waste transporters and operators are more likely to be living up to their commitments. (The Waste Management Association of Australia – WMAA is looking to also have this threshold reduced to 1000 tonnes).

The choice of demolition and excavation contractors and attitude to waste has a significant impact on the waste performance of a project site. Tendering contractors should identify their planned waste minimisation strategies. Waste minimisation strategies should identify which products are to be recycled and where they are to be taken to, and which are not to be recycled and where they will be sent.

The demolition and excavation contractors are to confirm or improve on re-use or recycling options in this plan, or document an explanation if otherwise.

The following larger waste transporters and operators are recommended:

- **Metro Demolitions** - <http://www.metrodemo.com.au/demolition/>
- **Benedict** - <http://www.benedict.com.au/locations/>
- **Bingo Industries** - <https://www.bingoindustries.com.au/recycling-centres/nsw/>
- **Suez** - <http://www.recyclingnearyou.com.au/large-dropoff/FairfieldNSW>
- **Fairfield City Council** - <http://www.recyclingnearyou.com.au/large-dropoff/FairfieldNSW>
- **Dial a Dump** - <http://www.dadi.com.au/recycling-landfill/genesis-eastern-creek>
- **Brandown** - <http://www.brandown.com.au/>
- **Hi Quality** - <http://www.hiquality.com.au/resource-recovery/company-overview>
- **Regroup** - <http://www.municipalenvironmental.com/regroup/service/recycling>
- **Concrete Recyclers** - <http://www.concreterecyclers.com.au/location.html>

For larger projects Green Star accredited and experienced demolition contractors would be expected to provide better recycling outcomes. This rating verifies that the Contractor has met the standards of the Green Building Council of Australia (GBCA). The GBCA's objective is to minimise Construction and Demolition Waste that is disposed of to landfill. The following Demolition Contractors have Green Star project experience:



### Green Star Demolition Contractors

- **Liberty Industrial** – <http://libertyindustrial.com.au/> Stephen Hartnett 0447 013 432 – Significant warehouse demolition experience. Recently demolished a 500,000m2 of warehouse spaces in Moorebank. Unrestricted demolition and asbestos removal licences.
- **Metropolitan Demolitions** - <http://www.metrodemo.com.au/> Shane Morris 0450 788 845 Green. Unrestricted demolition and asbestos removal licences.
- **Matt Dalley Demolition** - <http://www.dalleydemo.com.au/> Alan O'Neil 0497 849 183. Unrestricted demolition and friable asbestos removal licences.
- **Perfect Contracting** - <https://perfectcontracting.com.au/> Luke Hamblyn 0452 249 271

### 2.10.3 Sequence

The general sequence to be followed for completing the demolition and excavation stages is as follows:

1. Installation of hoardings & fencing and boundaries to protect the public and significant vegetation.  
Checking to ensure existing fences are sufficient and complete to prevent unauthorised public access.
2. Installation / identification of access roads, washdown and other site safety protection measures
3. Asbestos and hazardous materials removal. If hazardous materials are detected a these will be removed by accredited contractors.
4. Demolition methods
  - By hand or machine – vegetation – minimal.
  - By hand - Services - to be disconnected and terminated by licensed contractors
  - By hand - Windows and glass panels to be removed separately
  - By hand - Fixtures & fittings (doors, cabinets, sanitary-ware, skirting, architraves etc.) to be dismantled and removed
  - By hand or machine - Roof sheeting / tiling to be removed
  - By hand or machine - Plasterboard removed
  - By hand or machine - Roof timbers, floor & wall framing removed
  - By machine - Bricks and concrete dismantled and removed
5. Demolition of existing buildings
  - All demolished materials are to be moved to the waste bin storage area with subsequent separation and loading of material into separated bins for recycling as appropriate – See Table 1.
  - Demolition would most likely occur building by building starting with 80 Cope Street. The bin storage area will need to initially be placed in the driveway of 80 Cope St, as this building is demolished more space can be created to facilitate further bin storage and/or materials sorting onsite. Much of the demolition would occur mechanically as would separating demolished materials for loading into trucks and removal to recycling yards as appropriate – See Table 1.
6. Excavation
  - Top soil can be stockpiled on site in the south west corner.
  - Assume 150mm topsoil removal for the building area plus 20% for adjacent levelling. Cut volume is increased further by 40% for a loose earth bulking factor) based on finished levels shown but excluding over-excavation and ramps etc.

- Excavated material unable to be re-used on site should be inspected with the hope that it can be sent to a clean fill site for re-use.

#### 2.10.4 Contaminated Land<sup>2</sup>

No contamination report has been undertaken, as the site is a greenfield site / suburban residential site. Should any contamination be found, it would be expected to be within the boundary of planned excavation, if additional contamination is identified after demolition and excavation has commenced it is to be remediated and disposed of to an approved contaminated/remediated soil facility per the Contaminated Land Management Act as required by NSW EPA.

#### 2.10.5 Contamination & Hazardous Materials

Any contaminated and hazardous materials found on site during demolition should be removed and disposed of in the authorised manner. Refer to the Demolition Phase/ Hazardous Materials section for procedures and indicative locations of asbestos.

Potential contamination sources include:

- Imported fill materials
- Hazardous building materials (including lead paints) within the structure(s)
- From pesticides applied around the building
- Leaks from vehicles in garage areas
- Infiltration from offsite sources

Asbestos is commonly contained in older buildings built prior to 1985 and may occur in the following locations:

- Cement sheet walls
- Backing to floor tiles
- Lagging insulation for hot water pipes
- Backing to old switchboards
- External cladding (Fibro)
- Corrugated cement sheet roofing

Any previously unidentified suspected asbestos material identified during the demolition should halt works until such time the material can be inspected and classified by an experienced consultant and removed by an approved licensed removal contractor with air monitoring undertaken throughout the process.

Details of removal procedures and risk management will be detailed in a Hazardous Building Materials Assessment Report.

#### 2.10.6 Refrigerant Removal

Air-conditioners on site are likely to have CFC (Chlorofluorocarbons), HCFC (HydroChloroFluouroCarbons) or HFC (HydroFluouroCarbons) as the refrigerant. These refrigerants are either very harmful to the ozone layer or are greenhouse gases with a very significant global warming potential (GWP). For example the common air-conditioning refrigerant R410A has a GWP figure of 2,088<sup>2</sup> ie 2,088 times the same global warming potential of the same unit volume of carbon dioxide.

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<sup>2</sup> <https://www.dcceew.gov.au/environment/protection/ozone/rac/global-warming-potential-values-hfc-refrigerants>

If units are not disposed of properly, refrigerant may escape into the atmosphere, contributing significantly to global warming. CFC and HCFCs have been banned for a while now. The alternative, HFCs are being gradually phased out. The federal government has started to cap the amount of refrigerant using HFCs that enters Australia as a start to outlawing such refrigerants including the common R-410A.

<http://www.environment.gov.au/protection/ozone/hfc-phase-down/hfc-phase-down-fags>

Before disposing of air conditioners, all units are to have the refrigerant 'recovered' by a licensed Australian Refrigeration Council (ARC) member technician <https://www.arctick.org/>. ARC members must hold a Full Refrigerant and Air-conditioning (Full RAC) licence or Restricted Refrigerant Recoverer licence (RRRL).

The recovered refrigerant is generally returned to a refrigerant gas retailer or wholesaler who will recycle the gas if possible. Where maintenance regimes have not used the manufacturers recommended gases or have used different gases over time, the refrigerant is less likely to be recyclable. If recycling is not possible, when enough gas is collected the retailer/wholesaler will forward the gas to the refrigerant gas product stewardship organisation Refrigerant Reclaim Australia (RRA) <https://refrigerantreclaim.com.au/>. RRA has a facility in Melbourne (the sole approved facility in Australia) for destroying refrigerant gases in an environmentally friendly manner. Gas is sent to this facility from all over Australia.

This scheme operates under the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989, and regulates the handling, trade and disposal of refrigerants which are ozone depleting and synthetic greenhouse gasses.

Without an appropriate licence, operators are operating illegally.

### 2.10.7 Window Audit

An audit must be taken of all windows to be removed for demolition, to enable the sale of windows not required. This should include:

- the outside dimensions of each window,
- confirmation of the frame type (aluminium, timber, PVC, or composite, domestic, semi commercial or commercial, fixed glazed, awning, sliding, bifold),
- glazing type (single or double glazed, clear, tinted or low e), and
- a picture for each window.



This audit must be undertaken two months before demolition is scheduled to commence and the items be placed on a marketplace website (such as Gumtree, Freecycle, Zilch, Oz Recycle etc) for sale or take away for free. This audit may need to be undertaken by the project design team.

### 2.10.8 Materials to be Recycled

All materials suitable for recycling must be forwarded to an appropriate registered business to the satisfaction of the Principal Certifying Authority.

### 2.10.9 Existing site pictures

The following pictures are of the three dwellings on site to be demolished

Existing developments to be demolished		Photos showing building materials from existing developments	
1 Rainbow Road			
1. Existing house outside view			
2. Existing shed outside view			



3. Existing house  
inside view of  
kitchen



4. Existing house  
inside view of  
bathroom





### 3 Rainbow Road

1. Existing house outside view



2. Existing shed outside view



3. Existing house  
inside view



4. Existing house  
bathroom  
view





## 5 Rainbow Raod

1. Existing house outside view



2. Existing house outside view from the back



3. Existing house inside view



5. Existing house  
bathroom  
view





2.10.10 Table 1 Demolition phase waste analysis – Site Establishment, Demolition, and Excavation

Materials on Site			Destination		Volume of material diverted from landfill
Type of Material	Location / examples	Estimated Qty – TBC by contractor	Reuse and recycling options and recyclers	Disposal and landfill sites	
Vegetation	Trees/shrubs	6m <sup>3</sup>	<ul style="list-style-type: none"> <li>Mulching by green waste contractors</li> </ul>		6m <sup>3</sup>
Concrete	Ground slabs, driveways, paving	24m <sup>3</sup>	<ul style="list-style-type: none"> <li>Removal and delivery to concrete/masonry recycler for filling, levelling material, road base</li> <li>Bowral waste centre (preferably separated bin)</li> </ul>		24m <sup>3</sup>
Bricks / masonry	Brick walls and blockwork.	24m <sup>3</sup>	<ul style="list-style-type: none"> <li>In the event that the mortar is able to be separated from the bricks then there is opportunity for reuse of the bricks in external construction.</li> <li>Alternatively, in the event that the demolished brick cladding will not be in a feasible condition for re-use; there is opportunity to recycle crushed brick into other building materials.</li> <li>Demolished brick walls will need to be broken down into suitable sized pieces (as accepted by recycling contractor) and transported to a concrete recycling facility.</li> <li>Bowral waste centre (preferably separated bin)</li> </ul>		24m <sup>3</sup>
Cement/fibro sheet	External cladding	12m <sup>3</sup>		<ul style="list-style-type: none"> <li>Painted cement sheet is for disposal</li> <li>Metro Demolitions, Bingo, Benedict Industries</li> </ul>	0m <sup>3</sup>

Materials on Site			Destination		
Type of Material	Location / examples	Estimated Qty – TBC by contractor	Reuse and recycling options and recyclers	Disposal and landfill sites	Volume of material diverted from landfill
Earthenware/concrete roof tiles	Roof tiles	6m <sup>3</sup>	<ul style="list-style-type: none"> <li>Removal and delivery to concrete/masonry recycler for filling, levelling material, road base</li> <li>Bowral waste centre recycles pure concrete (preferably separated bin)</li> </ul>		6m <sup>3</sup>
Unpainted hardwood timbers	Studs, framing, hardwood floorboards	12m <sup>3</sup>	<ul style="list-style-type: none"> <li>Re-used on site as formwork, bridging, blocking &amp; propping &amp;/OR reclaimed by second hand timber suppliers</li> <li>Reused on site as flooring, fencing, furniture. &amp;/or reclaimed for second hand timber suppliers</li> <li>The hardwood floorboards are a high value item and where in good condition should be separated and sold.</li> <li>Chipping for mulch</li> <li>Bowral waste centre (preferably separated bin)</li> </ul>		12m <sup>3</sup>
Sheet plywood	Flooring, wall bracing	6m <sup>3</sup>	<ul style="list-style-type: none"> <li>Reuse eg for bracing or concrete formwork</li> </ul>		6m <sup>3</sup>
Sheet chipboard	Flooring	0m <sup>3</sup>		<ul style="list-style-type: none"> <li>Limited potential re-use if it has been wet and damaged. To Landfill</li> </ul>	0m <sup>3</sup>
Painted timbers	architraves, skirting,	12m <sup>3</sup>		<ul style="list-style-type: none"> <li>Limited potential re-use. To Landfill</li> </ul>	0m <sup>3</sup>
Other composite wood products	Joinery	12m <sup>3</sup>	<ul style="list-style-type: none"> <li>Some standalone joinery cabinet carcasses may be reused in sheds. Garages etc</li> <li>Benedict Industries</li> </ul>	<ul style="list-style-type: none"> <li>Limited potential re-use. Predominantly to Landfill</li> <li>Benedict Industries</li> </ul>	3m <sup>3</sup>

Materials on Site			Destination		
Type of Material	Location / examples	Estimated Qty – TBC by contractor	Reuse and recycling options and recyclers	Disposal and landfill sites	Volume of material diverted from landfill
Metals	metal roofs, fences, sinks, baths, copper and brass pipes, chrome fixtures, shop fittings,	12m <sup>3</sup>	<ul style="list-style-type: none"> <li>Any metal from structures on the existing site and delivered to metal recyclers</li> <li>Shop Fittings can be sold on second hand websites such as Gum Tree and Greys Online.</li> <li>Copper and older iron piping in good condition to scrap metal merchant. Brass, stainless and chrome tap ware accepted by some merchants.</li> <li><a href="http://www.Gumtree.com">www.Gumtree.com</a></li> <li><a href="http://www.Zilch.com">www.Zilch.com</a></li> <li><a href="http://www.Greys.com">www.Greys.com</a></li> <li>Bowral waste centre (preferably separated bin)</li> </ul>		12m <sup>3</sup>
Other Metals	a/c ducting, sinks, baths, chrome fixtures, light fittings, Metal Ceiling grid, metal ceiling grid hangers, metal studs, A/C units, Rigid A/C Ducting, Cool Rooms, refrigerators, metal door frames, garage roller doors,	6m <sup>3</sup>	<ul style="list-style-type: none"> <li>Any metal from structures on the existing site and delivered to metal recyclers</li> <li>Brass, stainless and chrome tapware accepted by some merchants.</li> <li>Heating units can be recycled.</li> <li>Non-ferrous metals is recyclable.</li> <li>Corroded / poor condition piping, ductwork and other metals may need to be sent to either a mixed recycling waste facility or landfill as appropriate.</li> <li>Bowral waste centre (preferably separated bin)</li> </ul>	Disposal of Refrigerant from AC needs to meet EPA standards (small volume less than 0.5m <sup>2</sup> ).	6m <sup>3</sup>
Windows	Timber and aluminium windows, shopfront windows	6m <sup>3</sup>	<ul style="list-style-type: none"> <li>Limited potential with second hand building suppliers.</li> <li>Will be advertised on second hand market websites prior to demolition.</li> <li>Potential re-use as glazing OR crushed for aggregate in concrete production.</li> </ul>	<ul style="list-style-type: none"> <li>Separation of glass and framing is generally not economic so not commonly undertaken.</li> <li>Metropolitan Demolitions</li> </ul>	0m <sup>3</sup>

Materials on Site			Destination		
Type of Material	Location / examples	Estimated Qty – TBC by contractor	Reuse and recycling options and recyclers	Disposal and landfill sites	Volume of material diverted from landfill
			<ul style="list-style-type: none"> <li>Some windows are double glazed, the older windows are single glazed.</li> <li>Bowral waste centre recycles timber (preferably separated bin)</li> </ul>		
Timber Doors	Internal doors	6m <sup>3</sup>	<ul style="list-style-type: none"> <li>Limited potential with second hand building suppliers.</li> <li>Muched up for use – eg BioGrow type use or painted MDF acceptable</li> <li>Bowral waste centre recycles timber (preferably separated bin)</li> </ul>		6m <sup>3</sup>
Lights	Fluorescent, Downlights, Oyster	80 No 6m <sup>3</sup>	<ul style="list-style-type: none"> <li>Lightweight Steel sheet in fixtures</li> <li>Copper Cabling</li> <li>PCB's and Fluorescent tubes. Disposal of Fluorescent tubes needs to meet EPA requirements,</li> <li>Non-ferrous metals</li> <li>Steel sheet and castings recycled</li> <li>Copper Cabling recycled</li> <li>Mercury collected for medical industry.</li> <li>Ecocycle,</li> <li>Lamp Recyclers.</li> </ul>	<ul style="list-style-type: none"> <li>Landfill where lights are complex and individual components are not separable</li> </ul>	40 No 3m <sup>2</sup>
Vitreous china	Toilets, shower bases, vanities	4m <sup>3</sup>	<ul style="list-style-type: none"> <li>Crushed up and mixed with masonry products</li> </ul>		4m <sup>3</sup>
Plasterboard	Internal Walls and ceilings	12m <sup>3</sup>	<ul style="list-style-type: none"> <li>Plasterboard recycling service</li> <li>Bowral waste centre (preferably separated bin)</li> </ul>		12m <sup>3</sup>
Rigid PVC	Downpipes, conduit.	4m <sup>3</sup>	<ul style="list-style-type: none"> <li>Clean rigid PVC pipe and conduit can go be recycled.</li> </ul>	<ul style="list-style-type: none"> <li>Landfill where pipes / conduits are dirty</li> </ul>	0m <sup>3</sup>

Materials on Site			Destination		
Type of Material	Location / examples	Estimated Qty – TBC by contractor	Reuse and recycling options and recyclers	Disposal and landfill sites	Volume of material diverted from landfill
			<ul style="list-style-type: none"> <li>PVC sheathing around electrical or data cabling not accepted</li> </ul>		
Foil Insulation	Roof Insulation	4m <sup>3</sup>	<ul style="list-style-type: none"> <li>If insulation is over 40 years old it is unlikely to be recyclable.</li> </ul>	<ul style="list-style-type: none"> <li>Landfill</li> </ul>	0m <sup>3</sup>
Cabling	Electrical, IT	6m <sup>3</sup>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Landfill</li> </ul>	6m <sup>3</sup>
Floor, wall & window finishes	Carpet, tiles, lino floor tiles,.	18m <sup>3</sup>	<ul style="list-style-type: none"> <li>If in reasonable condition advertise on Gumtree for larger runs, make available to community groups</li> <li>Curtains can be recycled as painter's rags and painter's furniture protection.</li> <li><a href="http://www.Gumtree.com">www.Gumtree.com</a></li> <li><a href="http://www.Ziilch.com">www.Ziilch.com</a></li> </ul>	<ul style="list-style-type: none"> <li>Landfill</li> </ul>	0m <sup>3</sup>
<b>Total waste (excluding excavation) and percentage diverted</b>		<b>198m<sup>3</sup></b>	<ul style="list-style-type: none"> <li></li> </ul>		<b>130m<sup>2</sup> 65%</b>
Excavated fill	Basement Carpark	11,200 m <sup>3</sup>	<ul style="list-style-type: none"> <li>Excavated fill is often able to be re-used so long as the fill is clean and uncontaminated.</li> <li>Excavated fill can often be used on construction projects by the main contractor or external contractor, depending on the project subsequently occurring at the time.</li> </ul>	If no avenues for re-use, or if the fill is unclean or an insufficient soil type, it may be disposed of in a commercial landfill site.	11,200 m <sup>3</sup>

# For further information regarding each contractor refer to the Waste Contractors section of this report.



## 2.11 Construction Stage

*For Bin Placement and Vehicle Collection Path see: Appendix A Demolition and Construction Waste Bin Collection Location Plan.*

### 2.11.1 Streaming waste (waste separation)

Separation on site is the simplest way to reduce recycling costs as it simplifies sorting of waste at the processing yard. In most cases mixed loads of recyclable and non-recyclable products that requires extensive sorting can incur a very significant premium price compared to a site pre-sorted load.

Jobs are to be scheduled and planned to maximise recycling.

During construction separate bins or stockpiles for re-use or recycling should be established as follows:

- All clay roof tiles, brickwork, concrete and rock for removal and recycling as road base or similar
- All timber framing for re-use on site, recycling or for mulching
- All metal
- Paints – for the Paintback program
- A separate bin is to be provided for recyclable plastic packaging film
- A separate bin is to be provided for recyclable paper and cardboard

### 2.11.2 Contractors

The choice of head contractor and attitude to waste has a significant impact on the waste performance of a building site. Tendering contractors should identify their planned waste minimisation strategies. Waste minimisation strategies should identify which products are to be recycled and where they are to be taken to, and which are not to be recycled and where they will be sent to.

The construction contractor is to confirm or improve on re-use or recycling options in this plan, or document an explanation if otherwise.

Table 2 below outlines the waste streams identified for the construction stages and recommends appropriate methods for recovery and disposal to be followed, particularly where individual trades contractors are to be appointed.

### 2.11.3 Construction System & Take-offs

Items to be pre-fabricated off-site in controlled yards or factories and delivered complete to site will reduce on-site waste significantly. Pre-fabricated products include:

- Precast panels
- Roofing sheets cut to length
- Windows
- Lifts
- Joinery
- Screens

Further; waste is generally reduced at off-site fabricators for economic benefits.

Contractors can further reduce waste by the selected building system. Pre-cast panels generate less waste than blockwork structures. Prefabricated walls reduce waste in comparison to site built framed walls.

In-addition careful and accurate ordering of materials, along with clean-up and retention of re-useable materials will assist to reduce on-site waste.

#### 2.11.4 Waste Recovery on site

Timber stud offcuts will be re-used where possible (a good labourer stockpiling materials in work locations can help re-use of materials) or stockpiled for the public use or recycled as timber mulch.

#### 2.11.5 Waste Container Guidelines

All waste containers / skip bins are to be clearly visible, accessible and labelled in a well-lit area to ensure use.

No hazardous, flammable or explosive materials are to be disposed of within skip bins. Storage of skip bins is not to cause disturbance to normal stormwater flow.

#### 2.11.6 Contamination of soil during construction

Contamination of soil or surrounding spaces, which then needs to be removed off site, often occurs and can be addressed in the following ways in *italics*

- small items such as discarded fasteners, food scraps packaging and straws – *locate small easy to find bins with lids around the site*
- broken polystyrene – *cut and sweep up immediately then place in bins with lids*
- rubble mixed into soil that might otherwise become a garden bed – ensure crushed rock for ground stabilisation is placed in locations that will be covered by paths and not garden beds.

#### 2.11.7 Sequence

The general sequence to be followed for completing the construction stages is as follows:

##### 1. Foundations and basement construction

Expected to include in-situ poured concrete footings, columns and carpark slab

- Slab and in situ Dintel column concrete - Experienced concreters order loads accurately, ordering on a load by load basis near the end of the pour. Waste concrete would be a fraction of one load per pouring day i.e. approx. 1-2m<sup>3</sup> at most on the last delivery of the pour. Waste is to be crushed and used for ground stabilisation, behind retaining walls as broken up aggregate, or removed and crushed for re-use in road base or similar.
- Dintel / Rediwall retaining walls around the perimeter of the basement. No onsite waste anticipated from the use of precast wall panels.

##### 2. Upper structure construction and windows

Expected to include Dintel / Rediwall, blockwork/brickwork, fire rated plasterboard party walls, Dintel / Rediwall in-situ concrete or blockwork lift core(s), steel columns and/or beams, poured concrete suspended slabs, metal non-party walls and aluminium windows.

- Permanent metal formwork such as Kingfloor for suspended slab removes the need for timber formwork. Any metal formwork offcuts can be recycled.

- Suspended slabs are poured on site. Excess or trimmed reinforcing steel is to be sent off site to mixed metal recycler.
- Maximum waste anticipated from poured concrete slabs would be no more than 1m<sup>3</sup> per pour, to be spread and crushed for re-use on site as base for pedestrian paving, road base or similar.
- Dincel / Rediwall concrete filled walls involve minimal waste. Some plastic Dincel / Rediwall formwork waste will occur where these units are trimmed down.
- Blockwork/brickwork and mortar waste will be minimal and can be reused in other locations on site, or recycled off site.
- Steel portal frames to support upper level floor slabs. Portal frames are fabricated off-site generating no waste on site.
- Steel studs will be ordered to length to minimise offcuts. Damaged or off-cut metal stud framing to be recycled in metals bin on site.
- Windows come to site prefabricated so only generate waste from plastic, cardboard and timber protective packaging. Separate cardboard and plastics bins or enclosures should be provided to capture this waste.

### 3. Roof

Metal roofing is usually ordered cut to size to reduce off-cuts on site and improve the finishes of edges.

- Metal sheet, guttering offcuts, damaged downpipes can easily be recycled.
- Installation of the ground level downpipes should be delayed until the end of the job to reduce the chance of damage. Temporary plastic downpipes reduce wastage of metal downpipes, and can be re-used.



### 4. Services installation

- **Electrical** - Installation of electrical systems. Wire waste should not end up in general waste bins on site but should be removed, stored and sent for recycling of the copper.
- **Fire services** - If installed, leftover steel pipe offcuts from the fire system can be recycled.
- **Lifts** will be prefabricated offsite and installed with minimal waste.
- **Plumbing** and drainage would include water, sewer piping, and PVC drainage pipe installation. Accurate ordering of quantities will ensure minimal pipe waste. If clean-up is thorough, some pipework can be recovered for use on other jobs. Significant volumes of clean PVC and HDPE drainage pipe can be separated for collection and may be recovered for granulation and reuse. Otherwise it may be disposed to landfill.
- Waste solvents from pipe gluing are to be tracked in the contaminated waste register and disposed to a suitable landfill for solvent container disposal.

### 5. Cladding and fitout

Application of external and internal linings: including external cladding and features, awnings, plasterboard linings, insulation.

- Off-form concrete walls – Some will be precast concrete and some will be completed on-site. For on-site off-form concrete, after stripping, formwork is cleaned in most cases and where possible, reused again. It is in concreters financial interests

to re-use formwork. Residual formwork offcuts will be placed in general waste to landfill.

- **Lightweight steel battens** for supporting cladding fixed to the outside of the frame will be recyclable.
- **Metal cladding** and feature metal screening will be pre-cut for size although some cutting and waste may be required on site.
- **Cement sheet or composite cladding** materials will go to landfill.
- **Aluminium timber look battens** will be fixed to the outside of the building. These will be recyclable.
- **Aluminium louvers** will be fixed to the outside of the building. These will be pre-cut offsite and generate minimum waste on site.
- **Insulation** - Experienced insulation installers should be able to estimate quantities accurately, with small cut-offs being reused elsewhere on site in small gaps. Leftover insulation can also be taken offsite by the contractor for reuse in other jobs. Small amounts of damaged insulation may be generated and should be disposed of to landfill.
- **Plaster** - The plastering contractor will generate an economically recyclable quantity of plasterboard waste from clean offcuts and damaged clean sheet, therefore a bin for recycling plasterboard offcuts should be provided on site. The bin should be clearly marked for clean plasterboard as it can be readily recycled (see 'Waste Contractors' section below).
- **Lighting, cabinetry, and fittings** will generate plastic and cardboard packaging waste. Separate cardboard and plastics bins or enclosures should be provided to capture this waste.
- **Ceramic tile** offcuts can be recycled with masonry waste. Carpet and carpet tile offcuts cannot readily be recycled. Vinyl flooring cannot currently readily be recycled.
- **Flooring** installed in units will result in small quantities of trimmed material. This should be sent to a mixed waste offsite processing centre where it can be disposed to landfill if not recoverable.

## 6. Finishes

Work includes painting and rendering, detailing of architectural façade features, floor sealing and finishes, cleaning.

- **Render** - Where specified, render waste generated by rendering contractors may be cement based or mixed with synthetic binder. As for mortar, cement render waste can be removed and crushed for re-use in road base or similar. Synthetic bound render waste will need to be disposed of to landfill.
- **Paint and floor sealing** contractors will produce waste containers that are contaminated solvent-based waste, requiring tracking and disposal to an approved landfill facility. A bin for paint, adhesive and solvent containers will be used to store this waste and movements should be recorded in the waste register for contaminated materials.

## 7. Restoration

Re-establishment of kerbing, vehicle crossings and footpaths. Involves concrete pouring, and paving.

### Contract conditions on trades and subcontractors

Trades on site that are likely to produce waste as a result of their activity, where recycling is possible, should be required to recycle waste that is recoverable, through contract conditions requiring the use of marked bins provided by the primary contractor for



recoverable material, and including the waste management plan content as part of the contractor site induction conditions.

2.11.8 Table 2 Construction phase waste analysis – Structure, Services, Fit-out and Finishes

Stage of Construction	Destination				
	Reuse and Recycling			Disposal	
	Type of Material	Estimated Qty – TBA by contractor	On-site (Re-use / onsite recycling)	Off-site (Offsite Recycling)	(Contractor and landfill site)
Under-slab plumbing pipework	Plastic pipes	12m3	-	-	Builders bins to landfill
Poured insitu Concrete footings, columns, slab on ground, driveway ramp	Concrete	Minimal waste expected <1m <sup>3</sup>	Can be used under driveways or paths as a base if any excess waste from the last pour of the day is left	-	NA
Shotcrete walls to basement	Concrete	Minimal waste expected <1m <sup>3</sup>	Can be used under driveways or paths as a base if any excess waste from the last pour of the day is left	-	NA
Blockwork walls to basement, lift shaft and building walls	Masonry	12m <sup>3</sup>	-	Recycled at Bowral waste centre facility (preferably separated). To be placed dedicated bin	<b>Not to be added to builders landfill bin</b>
Concrete slabs	Concrete	Minimal waste expected <1m <sup>3</sup>	Can be used under driveways as a base if any excess waste from the last pour of the day is left	-	-
Timber framework	Pine timber	24m3	.	- Recycled at Bowral waste centre facility (preferably separated). To be placed dedicated bin	<b>Not to be added to builders landfill bin</b>
Roofing	Metal sheets and gutters	6m3	.	Recycled at Maclean waste transfer facility when separated. Placed dedicated bin -	<b>Not to be added to builders landfill bin</b>

Stage of Construction	Destination				
	Reuse and Recycling			Disposal	
	Type of Material	Estimated Qty – TBA by contractor	On-site (Re-use / onsite recycling)	Off-site (Offsite Recycling)	(Contractor and landfill site)
Roof Insulation	Bulk insulation and sisalation	4m3	-	-	Builders bins to landfill
Building wrap/ sisalation	sisalation	2m2	-	Larger pieces to be re-used on other sites -	Builders bins to landfill
Windows	Cardboard	6m3	.	Cardboard and plastic recycled at Bowral waste centre facility when separated. Stored on site until sufficient waste quantities are generated	Not to be added to builders landfill bin
	Plastic	2m3	-		Not to be added to builders landfill bin
Masonry/brickwork	Bricks	12m <sup>3</sup>	-	Recycled at Bowral waste centre facility (preferably separated). To be placed dedicated bin	Not to be added to builders landfill bin
Lightweight Cladding and Eave soffits	FC sheets	12m3	-	-	Builders bins to landfill
Plumbing pipes in walls and conduit	Plastic pipework	4m3	-	-	Builders bins to landfill
Electrical and IT cable	Cabling	2m3	-	-	Builders bins to landfill
Insulation	Bulk insulation	2m3	-	-	Builders bins to landfill
Plasterboard	Gypsum Plasterboard	12m3	-	-	Builders bins to landfill
Skirtings/architraves/timber trimmings	Pine wood/ MDF	2m3	-	Wood is recycled if separated from MDF	MDF to builders bin and landfill
Wet area tiling	Tiles	3m3	-	Recycled at Bowral waste centre facility (preferably separated). Placed dedicated bin and at substantial quantities	Not to be added to builders landfill bin

Stage of Construction	Destination				
	Reuse and Recycling			Disposal	
	Type of Material	Estimated Qty – TBA by contractor	On-site (Re-use / onsite recycling)	Off-site (Offsite Recycling)	(Contractor and landfill site)
Painting	Paint	200L	-	Taken to Paintback facility at Grafton	<b>Not to be added to builders landfill bin</b>
Joinery/kitchen and bathroom cabinets	MDF	N/A (prefabricated offsite)	-	-	Builders bins to landfill
Floor finishes	Floorboards	2m3	If offcuts are standard sized, those can be re-used on site in other dwellings	-	Builders bins to landfill
Carpet (if proposed)	Carpets	6m3	Carpet can be laid underneath mulch as a weedmat	-	Builders bins to landfill

## 2.12 Recycling & Reuse of Materials

There are many ways that demolished building materials can be reused or recycled. Technology is developing constantly to increase and improve the options already available. Following are some of the ways that demolished building materials can be reused and recycled.

- **Concrete, blockwork, bricks, porcelain, bitumen / asphalt**  
Concrete slabs/panels and bitumen/asphalt paving can be readily recovered and recycled for reuse or reconstitution in other construction products. Bricks can be crushed for reuse as aggregate and other products.
- **Plasterboard / Gypsum**  
Clean plasterboard / paper lined gypsum board can be readily recovered and recycled for construction and agricultural use when crushed.
- **Metal**  
Metal recycling generally falls into ferrous and non-ferrous metal categories  
Numerous recyclers exist to handle both types in mixed and separated loads
- **Timber**  
Many re-use opportunities as well as recycling and at the very least chipping for gardening.
- **Rigid PVC pipework and conduit**  
Since PVC is a thermoplastic PVC pipe can simply be reground, pulverized and returned to the extrusion process to make new pipe. There are companies in NSW, Victoria, Queensland and Western Australia that take back and recycle construction industry PVC pipe or conduit. Conditions for take back are:  
Accepts:
  - mixed building, construction and demolition waste of PVC and P.E. pipe
  - pipe with glue and dirtWon't accept:
  - pipe lengths under 1.5m
  - mud clumps on pipe– mud will clog up the granulating machines
  - connectors pieces – elbows or angles.
  - Screws, rivets or metal brackets connected
  - rubber seals
  - painted pipe
  - stickers  
For details of companies that take back PVC see:
  - Vinyl Council of Australia <https://www.vinyl.org.au/find-a-recycler>
  - PIPA - Plastics Industry Pipe Association <https://pipa.com.au/recycling/>
- **Cardboard + Polystyrene**  
As with cardboard, polystyrene is completely recyclable and can be used to produce a number of plastic products.
- **Globes – Fluorescent and High Bay**



Various elements of a light globe can be re-used which requires a more specialised process for separation. The mercury can be used for medical purposes, Lightweight Steel sheet in fixtures, copper cabling, castings can all be separated and recycled.

- **Finishes**

Carpet can be used as a weed mat.

- **Paint tins**

Old paint tins can be recycled at one of over 160 locations around Australia. See more details at Paintback [www.paintback.com.au](http://www.paintback.com.au) where the following paints are accepted:

- Interior and exterior architectural paint
- Deck coatings and floor paints
- Primers, undercoats and sealers
- Stains and shellacs
- Varnishes and urethanes (single component)
- Wood coatings

- **Glass**

Some contractors will crush glass with concrete and/or bricks for road base. Due to poor prices for as well as an abundance of recycled glass, glass is generally currently not recycled separately. Window glass predominantly goes to landfill.

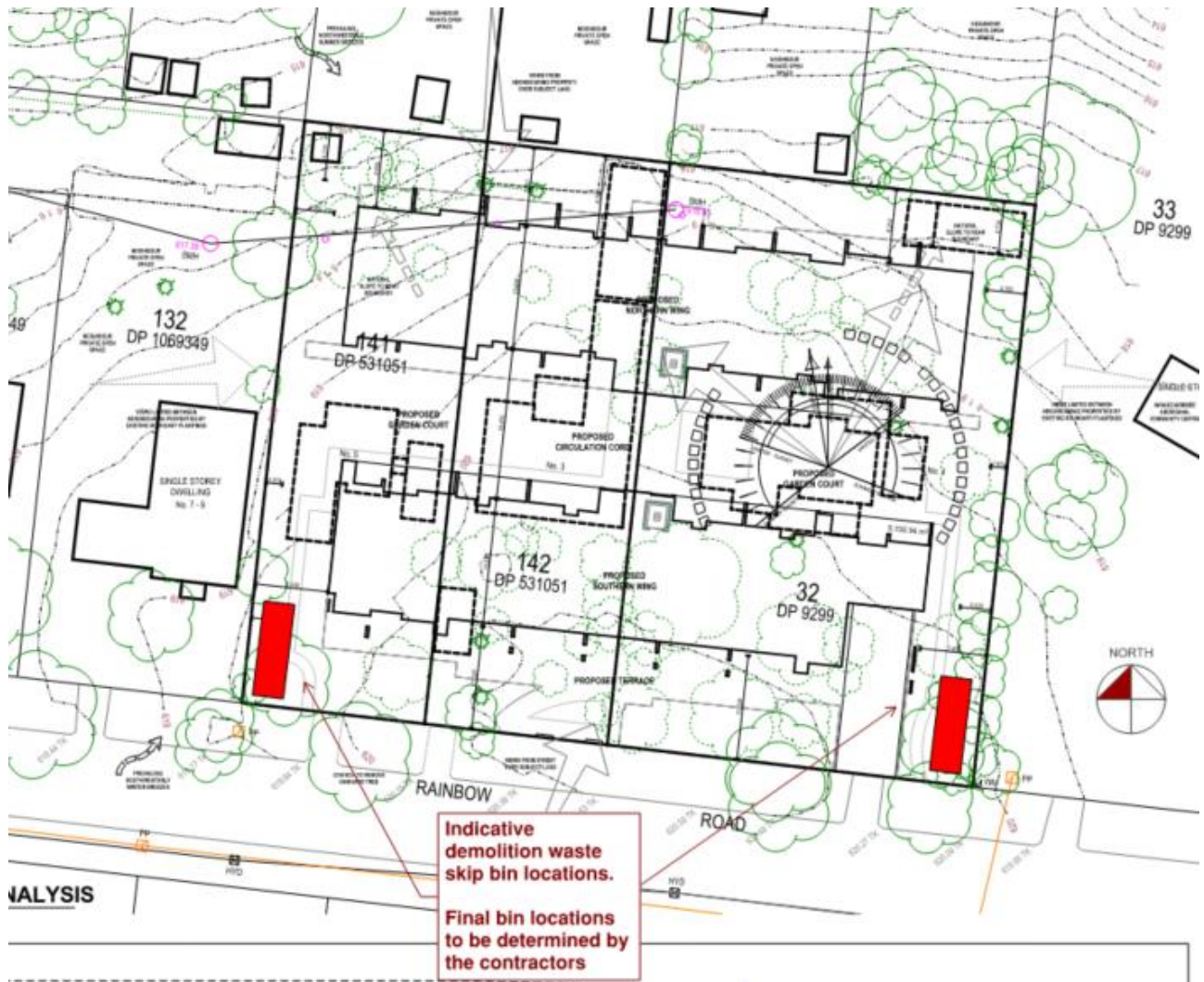
- **Green waste**

Green waste is very recyclable and easy to do so. Depending on the composition of the green waste – it can be used as Mulch or compost in many different formats. Depending on the waste it may even be sought after by the local zoo!

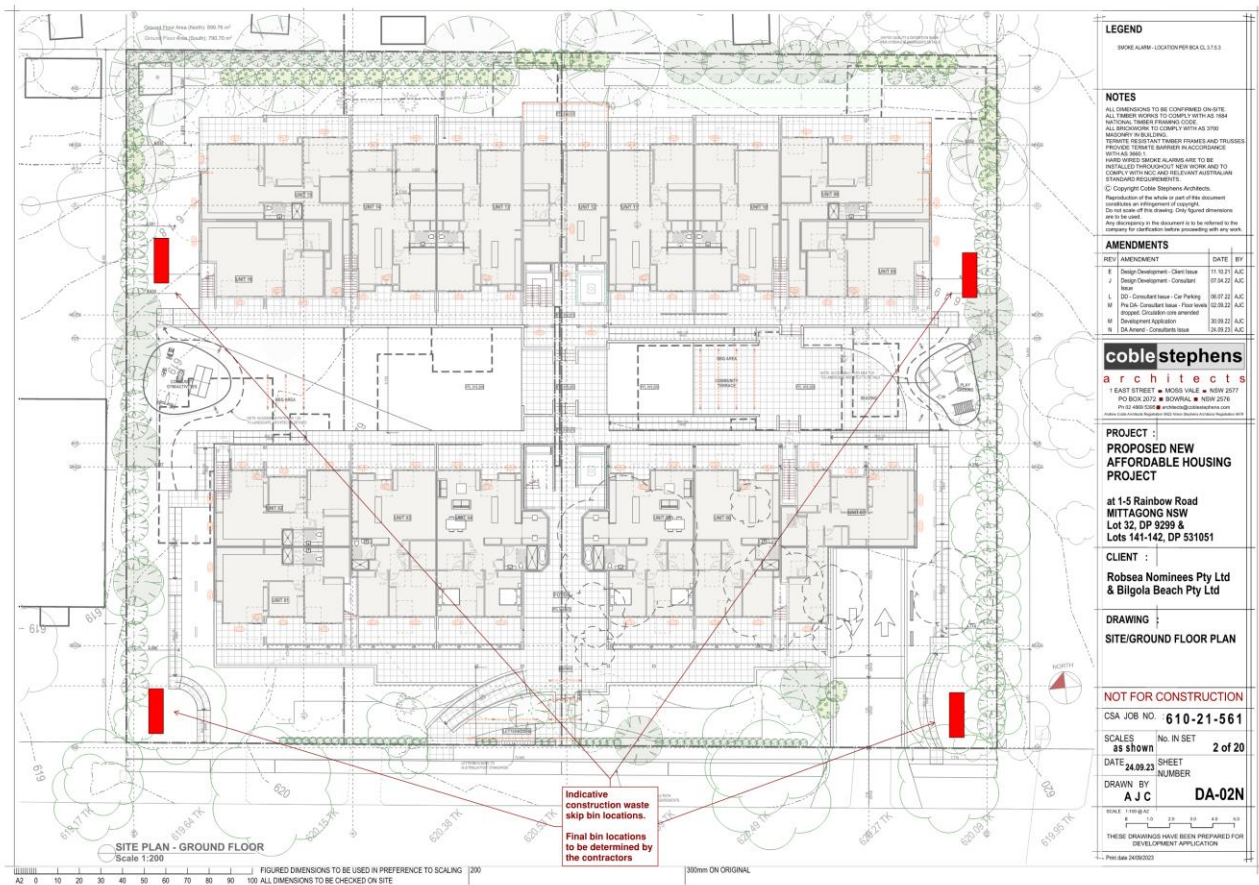
- **MDF**

Currently not known to be recyclable

## Appendix 1 - Demolition & Construction Bin Locations



Demolition Bin Store Location.



Construction Bin Store Location.

## Appendix 2 - Recycling, Reuse & Recovery Services Directory

Refer to The Wingecarribee Resource Recovery Centre Recycling Directory – Construction and Demolition Waste:

[https://www.wsc.nsw.gov.au/services/Waste-and-Recycling/A-to-Z-Waste-Guide?dlv\\_OC%20CL%20Public%20DocLib%20Relative](https://www.wsc.nsw.gov.au/services/Waste-and-Recycling/A-to-Z-Waste-Guide?dlv_OC%20CL%20Public%20DocLib%20Relative)

Refer to The Bowral Waste Centre webpage:

<https://www.bowralwastecentre.com.au/>