



cap your footprint

LID Consulting Waste Management Plan Report

Proposed demolition, construction and operational waste at 63-67 The Corso, Manly NSW 2095.
Prepared for Invergowrie Properties.

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Waste Management Outline

Introduction

This report has been prepared on behalf of Invergowie Properties for proposed demolition and construction works at 63-67 The Corso, Manly.

This Demolition and Construction waste management analysis of the project has been undertaken to meet the requirements of the Manly Development Control Plan (DCP) 2013. The goal of this document and other related better practice waste management guidelines is:

- To maximise the reuse and recycling of demolition and construction waste materials; and
- Minimise the volume of material disposed to landfill.

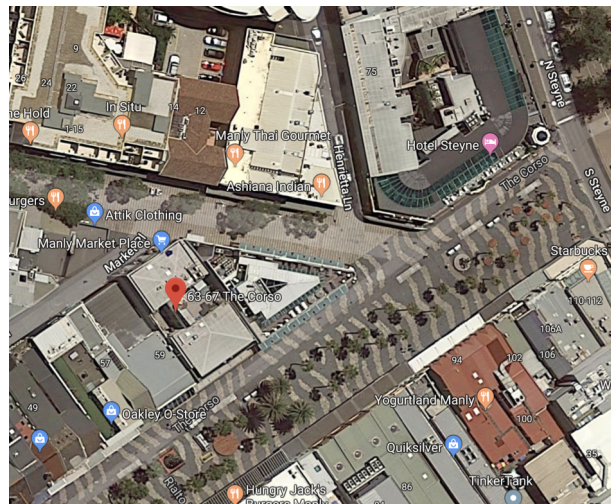
Note this document is not a full Construction Management Plan.

The Operational Waste Management Plan was prepared by the client/architect and incorporated into this report to combine all of the Waste Management plans into one document.

Outline of Proposal

Applicant Name: Invergowie Properties

Site address: 63-67 The Corso, Manly NSW.



(Google Image of Site and surrounding streets)

Existing Buildings and other structures:

- The existing subject site accommodates four storey building covering the entire site being used as backpackers accommodation.
- The building is of brick construction with a metal roof.
- The subject site is flat with no vegetation

Brief description of proposal:

- The proposed changes are internal.
- The proposed development involves converting the current backpacker accommodation into twelve units of shop-top housing and the addition of a new retail facility on the ground floor.

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.

Key legislation and references

Demolition and waste practices undertaken on site are to be carried out in accordance with the following key regulatory and reference documents:

- AS 2601 - 2001 Demolition of Structures, published by Standards Australia
- Northern Beaches Council – Manly DCP 2013 – see below.
- 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

Northern Beaches Council – Manly DCP, Section 3.8.2 Demolition and Construction Waste management

3.8.2 Demolition and Construction Waste Management

Requirements for the management of wastes, particularly in relation to the demolition of buildings are as follows:

Manly Development Control Plan 2013 Amendment 11 - last amended 28 August 2017

1. a) Footpaths, public reserves, street gutters are not used as places to store demolition waste or materials of any kind without Council approval;
2. b) Any material moved off-site is to be transported in accordance with the requirements of the Protection of the Environment Operations Act 1998;
3. c) Demolition and construction waste dockets demonstrating lawful disposal of waste must be retained onsite and kept readily accessible for inspection by regulatory authorities such as Council, the Environmental Planning Authority or Work Cover NSW;
4. d) Waste is only to be disposed of at an appropriately licensed facility;
5. e) Production, storage and disposal of hazardous waste are only conducted in accordance with any applicable Environmental Planning Authority guidelines.

Risk Assessments

Per industry practice detailed, specific risk assessments should be prepared by the individual contractors responsible for demolition, 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.
- Safe handling of hazardous and toxic waste materials if they are identified on the site, such as asbestos.

General Recommendations

Waste reduction hierarchy

The waste reduction hierarchy promotes preferable behaviour in the following order

1. Reduce
2. Re-use
3. Recycle
4. Energy recovery (waste as a fuel)
5. Disposal

Actions for good waste minimisation

The following measures help to ensure reduced waste to landfill:

1. Selection of demolition and head construction contractor. Contractors waste minimisation strategies should be detailed and specific.
2. Selection of demolition contractor who undertakes significant hand demolition rather than demolition by excavator.
3. Inclusion of a discussion of the intent to recycle and minimise waste in all site inductions.
4. Inclusion in contract conditions that plasterers supply their own plasterboard recycling bins if plasterboard is to be used.
5. Change of contractor behaviour by the inclusion in contract conditions that 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.
6. Commitment to keeping a waste register as required by Manly DCP 2013
7. Supervision of waste bins and enforcement of separation of waste types
8. During construction ensuring the labourer stockpiles materials suitable for re-use in work locations daily.
9. Separate bins with lids on for workers food waste and wrappers. Reduces contamination of other recycling loads.

Waste register

Council requires a register 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

Council permit applications

Waste bins or waste trucks 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.

Contaminated Land

If the scope changes and excavation is to occur any contaminated soil identified after demolition and excavation has commenced 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.

Contaminated & 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.

Refrigerant removal

Air-conditioners on site are likely to have CFC (ChloroFluouroCarbons), HCFC (HydroChloroFluouroCarbons) or HFC (HydroFluouroCarbons) as the refrigerant. These refrigerants are either very harmful to the ozone layer or very significantly greenhouse gas contributors. 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-faqs>

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.

Construction & 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.

Waste charges by volume and 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.

Site training in WMP

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.

Vehicle management

Demolition, carting and construction vehicles including waste removal trucks will be able to access the site via Market Place and Central Avenue. Existing crossovers will be retained during the works to facilitate access.

Trees

There are no trees on the site.

Services

All services running to and from the site need to be identified and confirmed as terminated offsite as appropriate in the approved manner to ensure worker safety and to avoid damages to external services.

Runoff, spills, siltation and 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.

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

Vehicular 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.

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.

Site waste 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 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)
- Installation of tarps/coverings on site waste bins during non-work hours to prevent blown material leaving the site.

Drain Filtering / Sediment trap



Demolition Phase

Contractor(s)

The choice of demolition 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 disposed of.

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

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

Sequence

The general sequence to be followed for completing the demolition stage is as follows:

- Asbestos and hazardous materials removal if present.
- Services - to be disconnected and terminated by licensed contractors

- Windows and glass panels to be removed separately
- Fixtures & fittings (doors, cabinets, sanitary-ware, skirting, architraves etc.) to be dismantled and removed
- Applicable internal walls removed
- Any metal Roof sheeting to be removed and recycled

Contaminated Land

Any contaminated soil identified after demolition has commenced 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.

Hazardous Materials

Asbestos may be present in the building. Details of removal procedures and risk management will be detailed in a Hazardous Building Materials Assessment Report. Additional sampling may be required to areas that were not accessible at the time the report was undertaken.

If asbestos is found, an approved licensed removal contractor will be engaged to remove the product with air monitoring undertaken throughout the process.

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.

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)

Windows audit

An audit should be taken of all windows to be removed for demolition. 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 should be undertaken one month before demolition is scheduled to commence and the items be placed on a marketplace website (such as Gumtree, Freecycle, Zilch etc) for sale or take away for free. This audit may need to be undertaken by the project design team.

Materials to be recycled

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

Table 1 Demolition phase waste analysis – Demolition

Materials on Site			Destination		Contractor#
Type of Material	Location / examples	Estimated Qty – TBA by contractor	Reuse and recycling	Disposal	Operating in the local area
Bricks/Masonry	Internal walls	40m ³	<p>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.</p> <p>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.</p> <p>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.</p>		Benedict Recycling Kimbriki Resource Recovery Centre (KRRC)
Timber	Architraves, skirtings, stud walls, timber bulkheads, cabinetry, timber decking, floorboards	25m ³	<ul style="list-style-type: none"> • Re-used on site as formwork, bridging, blocking & propping • Reclaimed for second hand timber suppliers • Mulching by Waste contractors. 		Benedict Recycling www.Gumtree.com www.Ziilch.com
Mixed Metals	copper and brass pipes,	8m ³	Copper and older iron piping in good condition to scrap metal merchant. Brass, stainless and chrome tapware		Kimbriki (KRRC) Wards Metals Onesteel
Porcelain, Ceramics, Vitreous china	Toilets/Shower/vanities, bathrooms	8m ³	Can be used crushed with masonry for road base.		Benedict Recycling Kimbriki (KRRC)

Flooring - Linoleum	Kitchens, common areas	5m ³	If in reasonable condition advertise on trading websites for larger runs, make available to community groups. Can possibly also be used as weedmat.	Otherwise landfill.	Benedict Recycling www.Gumtree.com www.Ziilch.com
Cabling	Electrical, IT	0.5m ³	Non-ferrous metals are recyclable		Kimbriki (KRRC)
Doors	Glazed office Front doors, internal timber doors	2m ³	Limited potential with second hand building suppliers Timber doors mulched up for use – eg BioGrow type use or painted MDF acceptable		Kimbriki (KRRC)
Rigid PVC	Downpipes, conduit.	0.1m ³	Clean rigid PVC pipe and conduit can be recycled.	Landfill	Greenwood Landfill
Plasterboard	Internal walls	25m ³	Plasterboard recycling service, possibly can be crushed & used agriculturally.		Greenwood Landfill

Construction Phase

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 disposed of.

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.

Prefabrication to reduce waste

With some items to be pre-fabricated off-site in controlled yards or factories and delivered complete to site, on site waste is reduced. Pre-fabricated products include:

- Windows
- Stair case
- Lift
- Joinery

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

Construction system and take-offs

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.

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.

Sequence

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

- Frame up upper floor – stronger columns and timber or steel studs between.
- Install additional windows

- Services – electrical, plumbing
- Complete fit-out internally
 - Fire protection
 - Plastering
 - Bathroom finishes and fitout
 - Kitchen fitout and finishes.
 - Floor finishes
 - Lighting

1. Upper structure construction

- Internal walls - Damaged or off-cut metal stud framing to be recycled in metals bin on site. If used, 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. Roof

- The roof is remaining.
- 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.



3. Services installation

- 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.
- If installed, leftover steel pipe offcuts from the fire system can be recycled.
- 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. PVC drainage pipe may be processed at a mixed waste treatment facility, where it may be recovered for granulation and reuse or disposed to landfill.
- Waste solvents from PVC drainage gluing are to be tracked in the contaminated waste register and disposed to a suitable landfill for solvent container disposal.

4. Fitout and cladding

Application of internal and external linings: including façade glazing and features, awnings, plasterboard linings, lighting and insulation.

- Where the plastering contract 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 for an indicative list of contractors). The gypsum from plasterboard is readily usable in agriculture.
- Lighting, cabinetry, aluminium windows and fittings will generate plastic and cardboard packaging waste. Separate cardboard and plastics bins or enclosures should be provided to capture this waste.
- Waterproofing 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.
- 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.

5. Finishes

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

- 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.

6. Restoration

Re-establishment of kerbing, vehicle crossings and footpaths. If required, 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, for example a plastering contractor, 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.

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

Materials On Site and Collection Bin			Destination		
			Reuse and Recycling		Disposal
Type of Material	Bin / Container	Estimated Qty – TBA by contractor	On-site (Re-use / onsite recycling)	Off-site (Contractor and outlet) See waste contractors list below	(Contractor and landfill site)
Concrete/Bricks Waste cement render (if any)	Concrete / Masonry bin	<1m ³	The small volumes of waste concrete and blockwork expected may be reused onsite as ground stabilisation or binned for offsite recycling.	A concrete recycler can receive waste concrete and blockwork hauled off site. Separating masonry / concrete / bitumen attracts reduced charges from offsite recyclers compared with mixed materials.	Kimbriki (KRRC)
Metals - roof sheet offcuts, steel framing	Metals - ferrous	1m ³		Recycled building products contractor or scrap metal merchant	Deagan & Toohey Scrap Metal Kimbriki (KRRC)
Plasterboard clean wall and ceiling lining trimmings / damaged sheet	PB	1m ³		Plasterboard recycling service	Regyp
Timber	Architraves, skirtings, stud walls, timber bulkheads	2m ³	<ul style="list-style-type: none"> Re-used on site as formwork, bridging, blocking & propping Reclaimed for second hand timber suppliers Mulching by Waste contractors 		Kimbriki (KRRC)

Materials On Site and Collection Bin			Destination		
			Reuse and Recycling		Disposal
Type of Material	Bin / Container	Estimated Qty – TBA by contractor	On-site (Re-use / onsite recycling)	Off-site (Contractor and outlet) See waste contractors list below	(Contractor and landfill site)
Electrical cabling/wiring offcuts	Mixed metals or separate wiring bin	1m ³		A copper wire recycling facility.	Deagan & Toohey Scrap Metal Kimbriki (KRRC)
Finishes	Carpet, carpet squares, underlay, tiles,	10m ³	Carpet can be laid underneath mulch as a weedmat.	Generally cut to size on the job, waste is minimal.	Kimbriki (KRRC)
Packaging - Plastic and cardboard packaging	Plastic / cardboard recycling	5m ³		To general recycling waste as handled by council's recycling trade waste service	
Paint / Solvent / Adhesive waste tins	Solvents	<10L			Disposal to paint and solvent tin facility
Plastic (PVC drainage pipe offcuts, plastic wiring cable reels)	Plastic / Mixed recycling	2m ³		Can be processed by a mixed waste recycling contractor.	Advantage Recycling Pty Ltd

Recycling, Reuse Possibilities

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.

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.

Glass

Some contractors will crush glass with concrete and/or bricks for road base. Poor prices and an abundance of recycled glass generally results in window glass predominantly going to landfill.

Green waste

Green waste is very recyclable and easy to do so. Depending on the composition of the green waste – Mulch or compost , or even the local zoo!

MDF

Currently not known to be recyclable

Waste Contractors

Recycling, reuse and recovery guiding principles

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 require extensive sorting can incur a very significant premium price compared to a site pre-sorted load.

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 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>

Selection of Demolition contractors

When selecting demolition contractors, details of their experience and proposed recycling methods must be requested. Contractors with greater recycling experience and demonstrated application of recycling methods should be selected to quote.

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

Recycling, reuse and recovery services

The following is an indicative only list of Sydney based contractors that provide various services for handling the recycling, reuse and disposal of demolition and construction waste from the proposed project. This list has been assembled not in recommendation of any particular contractor but to demonstrate the general availability of recycling services around Sydney.

- **1300RUBBISH**
www.1300rubbish.com.au, ph. 1300 78 22 47
Bin only company - collects plasterboard for delivery to recycling centre.
- **Advantage Recycling** - Balgowlah
www.advantagerecycling.com.au ph. 0434 915 816
A multi stream recycling service – plastics, cabling, untreated timber, scrap metal.
- **Australian Native Landscapes** – Seven Hills, Terrey Hills, North Ryde,
www.anlscape.com.au, ph. 131458
Green waste off-site composting.
- **Benedict Industries** - Belrose, Banksmeadow, Chipping Norton
www.benedict.com.au ph. 02 9986 3500. Contact Matthew Rooke 0431 737 444
matthew.rooke@benedict.com.au or Gay Willis 0427 087 897 for more details.
Primarily a rubble recycling company but will manage a wider waste stream per below. Benedict will separate loads by hand or machine, screen some loads and crush masonry products. Non-recyclable elements will go to landfill.
 - Bitumen / Asphalt
 - Clean concrete, blockwork, brick, mortar (masonry), porcelain at Chipping Norton
 - Rubble+ soil – concrete/masonry and dirt mix
 - Mixed load – concrete rubble and mixed in non-recyclables (incl mixed demolition waste, vegetation, timber, plastics)
 - Steel loads – not mixed with other materials that requires sorting. (A One Steel bin is supplied in their yard and collected periodically by One Steel)
 - Electrical cable – not mixed with other materials that requires sorting. (A One Steel bin is supplied in their yard and collected periodically by One Steel)
 - Cardboard – not mixed with other materials that requires sorting. (A Remondis bin is supplied in their yard and collected periodically by Remondis)

- Clean timber – pine or hardwood. Can contain nails or nail plates (no engineered timber such as laminated products, or MDR; no treated timber; no stumps). Timber is mulched at the Benedict Menangle plant.
- Green waste – bushes, branches, ground covers, some soil ok - (vegetation but no manmade material or tree stumps) is mulched at the Benedict Menangle plant.
- Clean and laminated MDF, laminated timbers, stumps and plastics will generally go to landfill.
- Do not accept paints, liquids or food waste. Food waste on site should go into separate bins with lids. Delivery of any of these or other non-recyclable materials will ensure a load is considered a mixed load of potentially rejected.

Detailed information about the acceptable and non-acceptable materials can be found at http://benedict.com.au/wp-content/uploads/Benedict-Recycling_Acceptable_Waste_Streams.pdf

Benedict Industries do not provide a bin collection service. Materials need to be delivered to Benedict Industries. Benedict are regularly serviced by good (smaller) bin suppliers and transporters as recommended by them depending on the location of the job.

- **Bingo Industries** – Banksmeadow Depot
www.bingoindustries.com.au 02 9737 0351 Daniel Spiteri 0409 900 743 (Recycling Sales Manager), Natasha 0406 182 626, Jean Yi 0450 081 600
Concrete, blockwork, Bricks, Porcelain, Bitumen / Asphalt. Primarily a rubble recycling service similar to Benedict however they also provide their own bins.
- **Bower Reuse & Repair Centre** – Parramatta
<https://bower.org.au> ph (02) 9568 6280
The facility accepts materials, from small customers upwards. Leftover renovation and building materials are on-sold. Bin collection service is not provided. Collection fees are applicable in this case as Brookvale is just outside their pickup area.
- **CMA Eco Cycle**
<https://www.cmaecocycle.net> 1300 32 62 92
A full lighting recycling service – all lights and all volumes.
- **Concrete Recyclers** – Camellia
www.concreterecyclers.com.au
ph. 02 8832 7400
Concrete, brick, asphalt
- **Deagan & Toohey Scrap Metal** – Curl Curl
ph. 02 9905 1625
Metals, pickup service.
- **Ecocycle** – St Mary's
www.ecocycle.com.au
Lighting, e Waste and Battery collection service.

- **Greenwood Landfill** – St Ives
ph.02 9450 2288
Is a licensed waste facility that accepts building and demolition materials. Recycling as much as possible prior to committing not recyclables to the soil. It accepts the following materials: Mixed waste, brick, concrete, raw timber, tiles, Asphalt, Bitumen, steel, trees and logs.
- **Gyprock** – Wetherill Park
www.gyprock.com.au/Pages/About-us/Recycling.aspx, ph. 131744
Only new, clean Gyprock product plasterboard waste is accepted. They do not provide bins.
- **Heritage Building Centre**
www.heritagebuilding.com.au/products/recycled-timber/
02 9567 1322 Rear 432b, West Botany Street, Rockdale 2216
Recycled Building materials
- **IPlex Pipelines** - <http://www.iplex.com.au/>. Simon Laffan on 07 3881 9246
IPex requirements:
 - clean rigid PVC pipe and conduit is accepted.
 - Large volumes can be recycled
 - Arrange an inspection of pipe prior to sending to IPex – contact Simon
 - Below ground PVC must be clean for recycling
 - Pipes manufactured pre 2005-06 may contain lead. Excessive lead will cause problems with recycling.
 - PVC sheathing around electrical or data cabling not accepted.
- **Kimbriki Resource Recovery Centre** – Terrey Hills
<http://www.kimbriki.com.au> ph. (02) 9486 3512
The facility accepts materials, from small customers to large civil construction industries. Bin collection service is not provided. Tipping fees are applicable.
- **KLF Holdings** – Camellia and Asquith
<http://www.klfholdings.com.au/> –
Porcelain, concrete and bricks
- **Lamp Recyclers** - Statewide
<https://www.lamprecyclers.com.au> 1300 789 917

Lamp Recyclers is both a Collector and a Recycler of globes, lamps and fluorescent tubes. The method of disposal is dependant on the volume to be recycled. In this case, the volume is relatively small, so a Corflute Ezy-Return™ reply-paid lamp recycling pack should be requested and disposed of as per the instructions.
- **Liverpool Scrap Metal** – Moorebank
<http://www.liverpoolscrapmetal.com.au> ph. 02 9602 4330

Mixed metals recycling,

- **Liverpool City Council Community Recycling Centre**

99 Rose Street, Liverpool. Ph: 1300 362 170

The centre accepts materials such as:

- Cardboard
- Polystyrene
- Paints
- Fluorescent globes and tubes
- Green Waste
- has an authorized collection point scheme to recycle architectural and decorative paint named 'Paintback'. The following is 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

Further information can be found at www.paintback.com.au

- **Metropolitan Demolitions Group** – St Peter's

www.metrodemo.com.au.

Concrete, blockwork, Bricks, Porcelain, Bitumen / Asphalt. Accept waste similar to Benedict Industries, but they have their own recycling facility. Glass is crushed in with brick and concrete. For larger projects Metro send bulk rubble for recycling overseas.

- **Onesteel Recycling** – Chipping North, Wetherill Park

www.onesteel.com

Mixed metals recycling, full site clean-up and bin services

- **ReGyp – Kurnell**

www.regyp.com.au, ph.1300 473 497

Regyp provide and collect their own bins for new and old plasterboard per below:

- Plasterboard and cornice off-cuts
- Plasterboard with paint or wallpaper
- Non-laminated plasterboard tiles
- Gypsum blocks, gypsum prefab wall panels eg RFC rapid wall
- Chemical precipitate gypsum (eg FGD)
- Suitable industrial gypsum waste
- Detailed acceptable and non-acceptable waste information can be found at <http://www.regyp.com.au/waste/>

- **Sell and Parker** – Banksmeadow, Kings Park, Ingleburn

www.sellparker.com.au

Metal

- **Suez** - <http://www.recyclingnearyou.com.au/large-dropoff/FairfieldNSW>

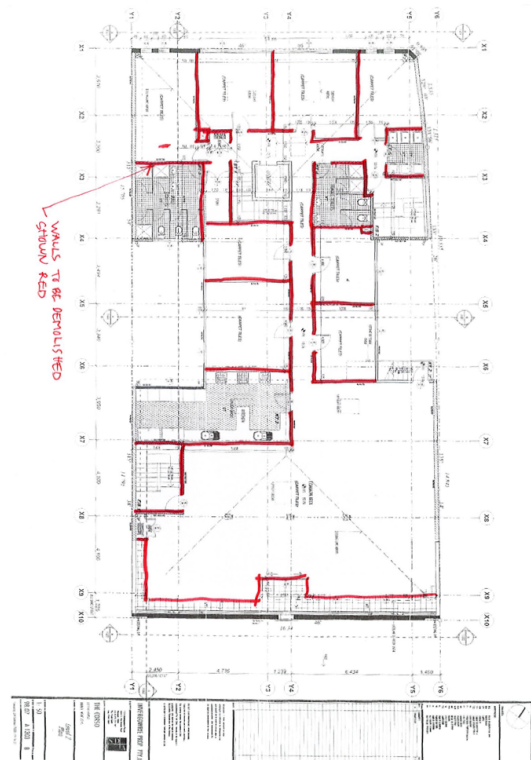
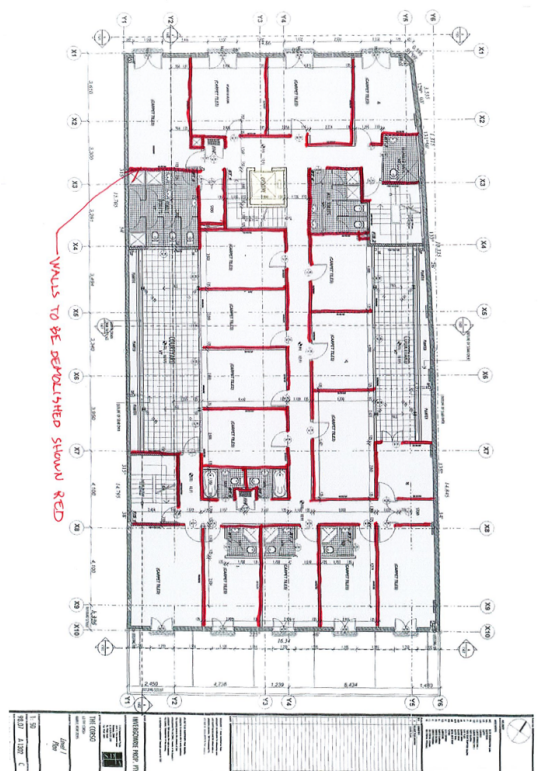
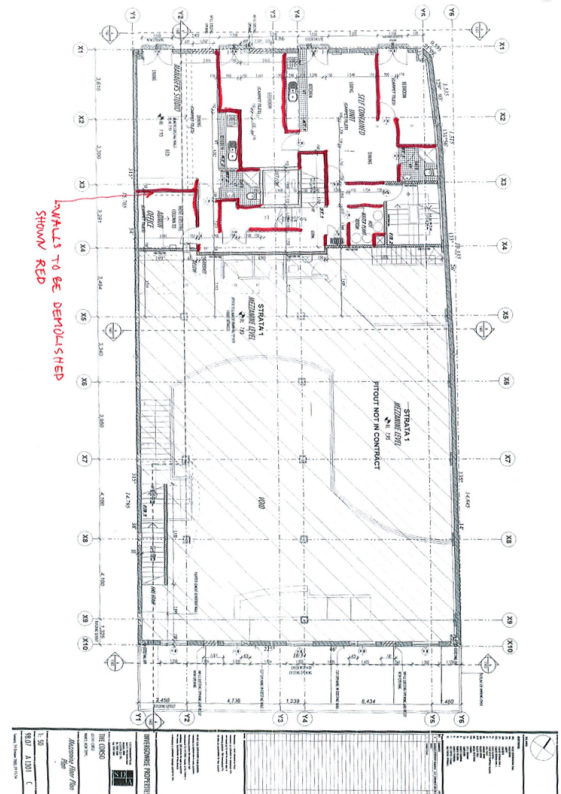
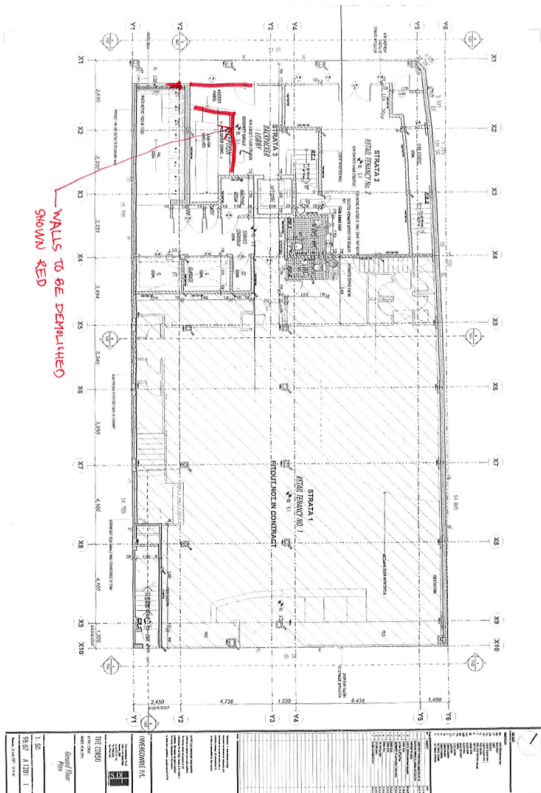
Soft plastics from packaging

- **Sustainable Resource Centre** – Fairfield City Council
http://www.fairfieldcity.nsw.gov.au/directory_record/129/src
ph. 02 9725 0750
The facility accepts materials, from small customers to large civil construction industries.

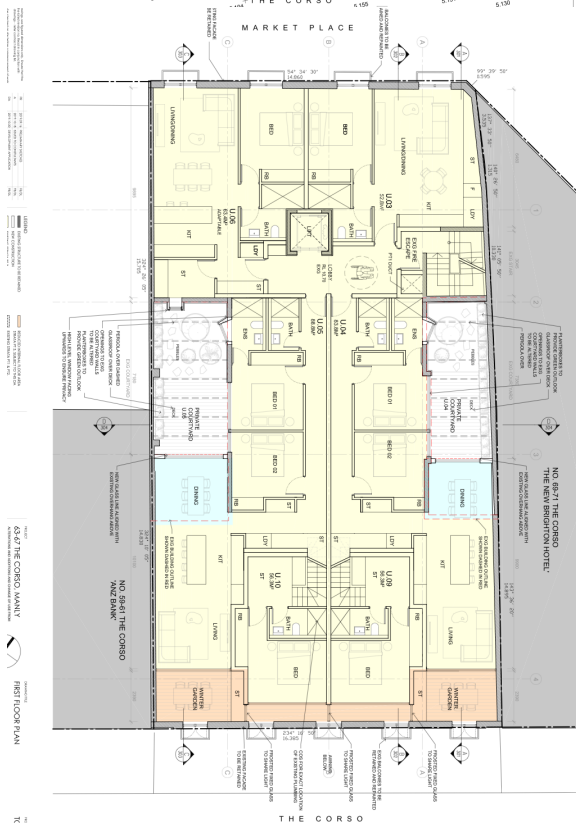
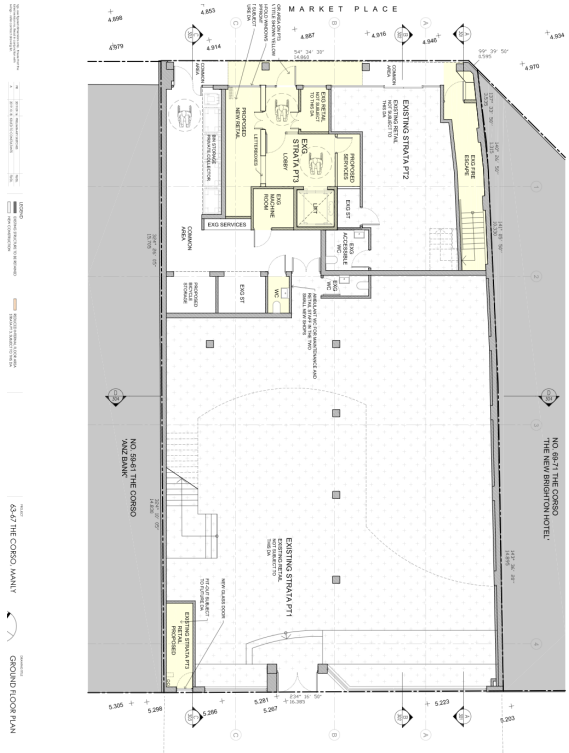
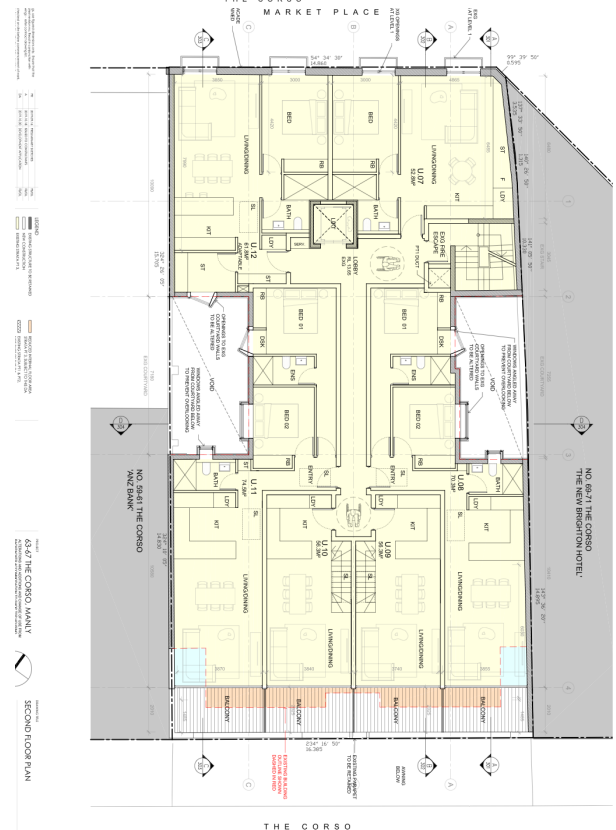
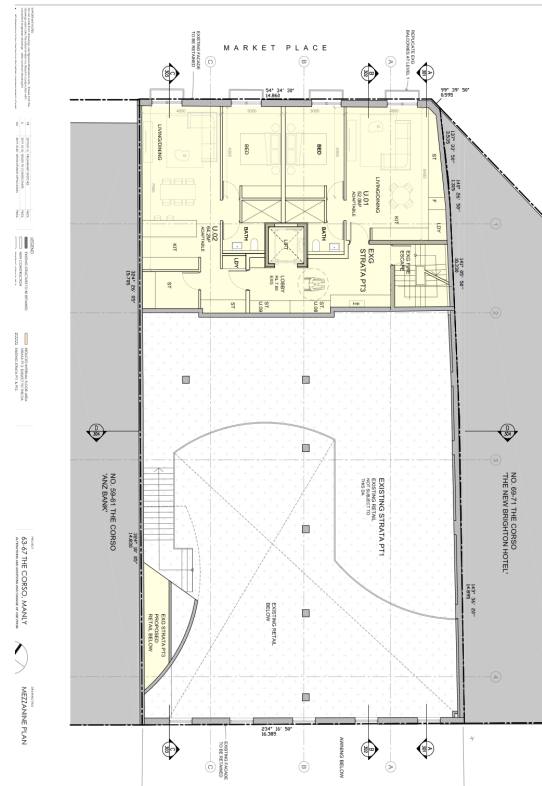
Materials recycled (nothing else):
 - Terracotta roof tiles, Clay bricks
 - Clean concrete (with or without steel), and
 - Asphalt - ripped and profiled
- **Sydney rubbish services** Surrey Hills
<http://sydneyrubbishservices.com.au/plasterboard-gyprock-waste-removal/>
02 9785 5526
Bin only company - collects plasterboard for delivery to recycling centre
- **Veolia**
<http://www.veolia.com.au>, ph. 132 955
All waste metal in large volumes

Appendix 1 - Proposed Works

Demolition

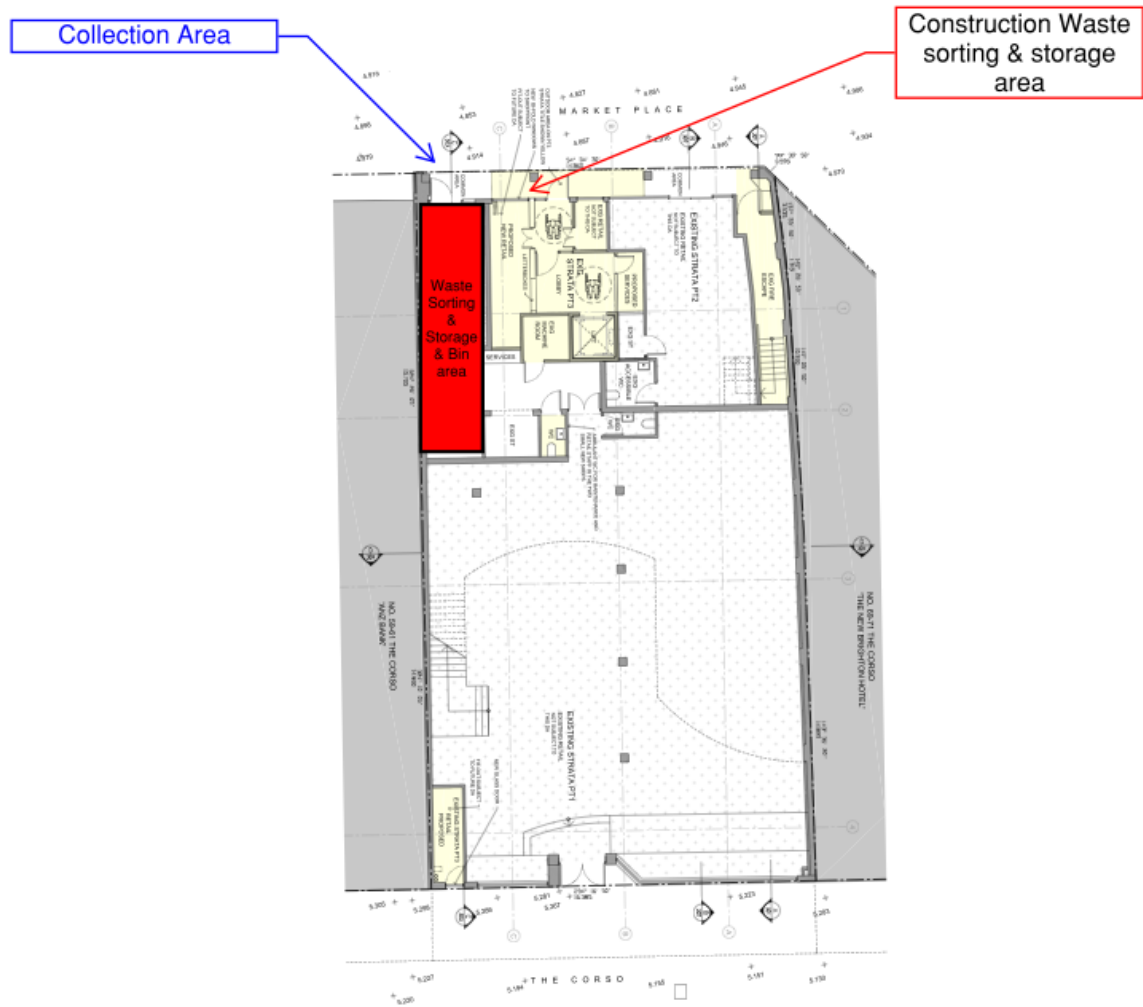


Construction



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Construction



Client/architect prepared details:

Operational Phase

OPERATIONAL WASTE

1.1 General

Due to restricted vehicular access to the site, Council cannot be responsible for the collection of waste from the residents of the proposed apartments. Instead, the operational waste will be collected by a private waste management company, as is currently the case.

1.2 Description of waste storage areas

The Bin room for residents of the proposal is located in the common service area on the ground floor, where the existing garbage room is also located. The designated garbage area will be accessible to all residents and clearly signposted and lit.

The waste storage area is to contain a tap and hose and the floor is to be graded and drained to the sewer. Ventilation is to be provided through mechanical ducting or naturally ventilated through grilles in the doors. The residents and the building management will be supplied with a key to the garbage rooms.

1.3 Waste management strategy

The residents in the apartments will utilize the garbage room for all general garbage including the recyclable components of this waste.