35-43 BELGRAVE STREET, MANLY

Waste Management Plan

Prepared for:

Time & Place
Level 38, Suite 3803
Australia Square
264 George Street
Sydney BSW 2000

SLR Ref: 610.31188-R01
Version No: -v1.0
June 2023

PREPARED BY

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
Tenancy 202 Submarine School, Sub Base Platypus, 120 High Street
North Sydney NSW 2060 Australia
T: +61 2 9427 8100
E: sydney@slrconsulting.com www.slrconsulting.com

BASIS OF REPORT

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DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
610.31188-R01-v1.0	21 June 2023	Andrew Quinn	Damian Balas	Andrew Quinn

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Appendix A – NBC Waste Management Plan Form

1 Introduction

This waste management plan (WMP) supports approval of a mixed-use development proposed to be constructed at 35 to 43 Belgrave Street, Manly (the Development). The property is on the corner of Belgrave Street, Whistler Street and Sydney Road. Raglan Street

The location of the Development is shown in Figure 1 below.

Figure 1 Development location

2 Project Description

The Development covers five lots from 35 to 43 Belgrave Street, Manly, and will require the demolition of buildings on these lots. The Development consists of:

- Two level basement car park
- 441 m^2 of retail on the ground floor with frontages on Belgrave Street, Whistler Street and Sydney Road
- 24 residential apartments on the upper levels.

Figure 2 and below shows the ground floor design and a typical upper level design.

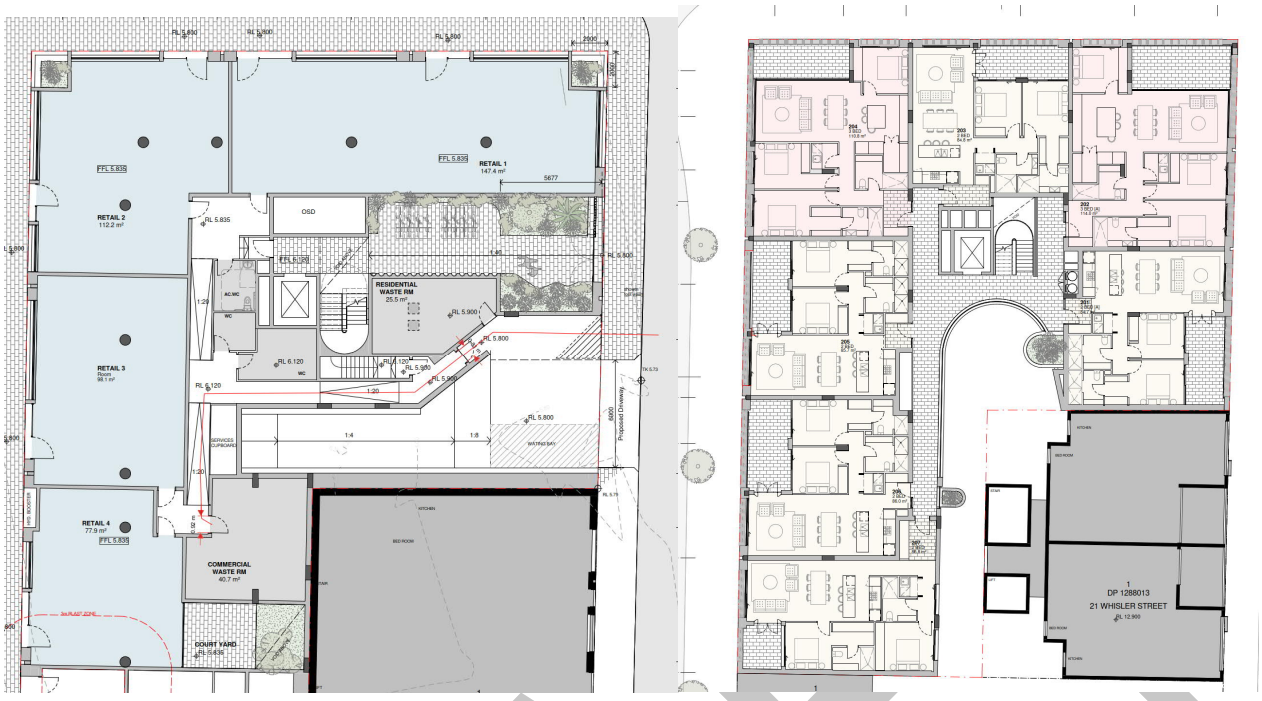

Figure 2 Ground Floor and Typical Upper Level

3 Objective

The objective of this waste management plan (WMP) is to identify all potential wastes likely to be generated at the development site during the operational phases of the development, including a description of how waste would be handled, processed and disposed of, or re-used or recycled, in accordance with Council's requirements expressed in the Northern Beaches Council Waste Management Guidelines (NBC Guidelines).

4 Review of WMP

This WMP requires review and updating to ensure ongoing suitability for the proposed on-going operations at the site.

This WMP will be reviewed and updated:

- To remain consistent with waste and landfill regulations and guidelines
- If changes are made to site waste and recycling management, or
- To take advantage of new technologies, innovations and methodologies for waste or recycling management.

Copies of the original WMP and its future versions should be retained by the building manager. Changes made to the WMP, as well as the reasons for the changes made, should be documented by the building manager as part of the review process.

5 Better Practice Waste Management and Recycling

5.1 Waste Management Hierarchy

This WMP has been prepared in line with the waste management hierarchy shown in Figure 3, which summarises the objectives of the Waste Avoidance and Resource Recovery Act 2001.

The waste management hierarchy comprises the following principles, from most to least preferable:

- Waste avoidance, prevention or reduction of waste generation. Achievable through better design and purchasing choices.
- Waste reuse, reuse without substantially changing the form of the waste.
- Waste recycling, treatment of waste that is no longer usable in its current form to produce new products.
- Energy recovery, processing of residual waste materials to recover energy.
- Waste treatment, reduce potential environmental, health and safety risks.
- Waste disposal, in a manner that causes the least harm to the natural environment.

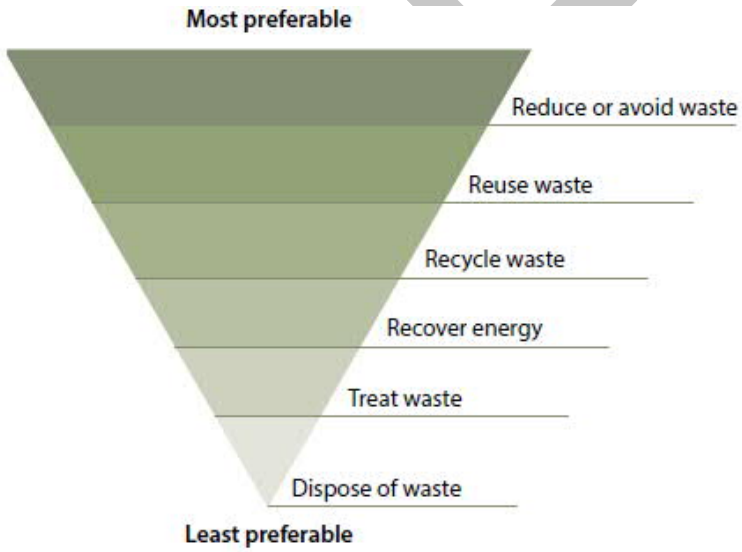

Image from NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21.

Figure 3 Waste management hierarchy

5.2 Benefits of Adopting Better Practice

Adopting better practice principles in waste minimisation offers significant benefits for organisations, stakeholders and the wider community. Benefits from better practice waste minimisation include:

- Improved reputation of an organisation due to social and environmental responsibility.
- Lowered consumption of non-renewable resources.
- Reduced environmental impact, for example, pollution, from materials manufacturing and waste treatment.
- Reduced expenses from lower waste disposal.
- Providing opportunities for additional revenue streams through beneficial reuse.

6 Waste Legislation and Guidance

6.1 Northern Beaches Council Requirements

The NBC Guidelines set out a number of specifications for waste management in new developments. The specifications relevant to this development are summarised below.

6.1.1 Introduction

iii. Application and use of the Waste Management Guidelines

To assist applicants to complete the mandatory Waste Management Plan (WMP) for all developments involving demolition and/or construction, Council has prepared a WMP template that can be used.

6.1.2 Chapter 1 – Demolition

Applicants must complete 'Section 1 – Demolition' of the Waste Management Plan in accordance with this Chapter.

This will be provided in the subsequent waste management plan prepared by SLR.

1.1. Requirements

Applicants must demonstrate project management that seeks to:

a) Incorporate the waste hierarchy principle of avoidance, resource recovery and disposal.

b) Minimise the waste sent for disposal.

c) Minimise the impact and disturbance on surrounding amenity, public safety, roadways and natural and built environment.

d) Adhere to any relevant legislation not limited to hazardous waste, storage and transportation regulations.

e) Send waste materials to a suitably licensed facility.

f) Identify suitable locations on the site for sorting and storing of materials for re-use, recycling and disposal. Factors to consider include slopes, drainage and personnel and vehicular access.

g) Maintain valid tipping dockets and receipts on site for inspection.

6.1.3 Chapter 2 – Construction

Applicants must complete 'Section 2 – Construction' of the Waste Management Plan in accordance with this Chapter.

Applicants must demonstrate project management that aims to:

a) Incorporate the waste hierarchy principle:

b) Minimise the waste sent for disposal

c) Minimise the impact and disturbance it has on surrounding amenity, public safety, roadways and natural and built environment

d) Comply with relevant legislation (refer to the Introduction xii)

e) Send waste materials to a suitably licensed facility

f) Identify suitable locations on the site for sorting and storing of materials for re-use, recycling and disposal. (Factors to consider include slopes, drainage and personnel and vehicular access)

g) Maintain valid tipping dockets and receipts on site for inspection.

6.1.4 Chapter 4 – On-going waste management for three or more dwellings

4.1. Outline of dwelling types

A development containing three or more dwellings can include:

- Residential flat buildings
- Mixed-use developments (three or more dwellings)

These dwelling types must include a Waste Storage Area within the property which complies with these guidelines. The Waste Storage Area will be provided with shared waste and recycling containers and a Wheel In Wheel Out service by Council. (refer to Introduction to Guidelines (vii) Glossary)

Development proposals between 3 and 80 dwellings must comply with 4.2., 4.3., 4.4., 4.5. and 4.6 below.

4.2. Waste Storage Area design requirements

All Waste Storage Areas will:

a) Be a designated area to accommodate Council's allocated number of waste and recycling containers.

b) Have a practical layout, be free of obstructions and have only 90 degree angle corners.

c) Have a floor area capable of storing the number of bins outlined in Appendix A.

d) Accommodate 1 x 240L vegetation bin for every 200m^2 of landscaped open space on the site.

e) Be graded and drained to a Sydney Water approved drainage system.

f) Be serviced by an easily accessible water tap. The tap must not obstruct aisles, access ways and placement of bins.

g) Be cement rendered and coved (smooth rounded corners) at the floor and wall intersections.

h) Be clear of any service and utilities infrastructure and related activities.

i) Be capable of being kept clean and tidy at all times.

j) Be in accordance with the BCA, relevant AS and legislation detailed in Chapter xii of the Waste Management Guidelines.

4.2.1. Additional requirements for chute systems and mechanical compaction

Where chute systems are proposed, they must meet the minimum requirements outlined in Appendix C.

4.3. Waste Storage Area location requirements

The Waste Storage Area must be:

a) At street level and permit easy, direct and convenient access for the residents, Council and Council's waste contractors.

b) Clear of any obstructions and security devices.

c) Incorporated entirely within the site boundary and, if it is an external structure, be designed to reduce visual impact and clutter.

d) No closer than 3m from any dwelling openings.

e) Clear of any entry points to stormwater systems and prevent waste water from entering any stormwater system.

4.4. Pathway, access and door requirements

The pathway and access between the Waste Storage Area and Collection Point will be:

a) Solid, concrete, continuous, non-slip and clear of any obstructions and steps.

b) A maximum ramp gradient of 1 in 8.

c) Hazard free and not via a pathway with vehicular traffic.

d) A minimum width of 1200mm.

Any doors fitted on the Waste Storage Area, pathway and access will be:

e) A minimum width of 1200mm.

f) Able to be latched in an open position.

g) Unobstructed by any locks and security devices.

h) Openable in an outward direction.

4.5. Bulky goods waste storage area requirements

To assist with the storage of goods for Council clean-ups, where the development exceeds 10 dwellings, a bulky goods waste storage area must be provided that will be:

a) A minimum of 4m³ per 10 dwellings fit for the purpose of storing bulky goods.

b) A room or caged area separate from the Waste Storage Area.

c) Incorporated entirely within the site boundary and not visible to the public

4.6. Kerbside (on-street) waste collection requirements

For developments with 3 – 80 dwellings, the pathway and access between the Waste Storage Area and property boundary must be a maximum distance of 6.5m.

4.8. Indemnity Requirements

The applicant will need to indemnify Council and its contractor/s from and against all claims, actions, costs, expenses, loss or damage while providing the waste service. See Appendix E for Indemnity templates (Positive Covenant). The template/s that must be completed will be included as a condition of consent in the approved DA.

6.1.5 Chapter 6 – On-going waste management for mixed-use developments

6.2. Non-residential components of mixed-use developments

For the non-residential components of the development, applicants must refer to 'Chapter 5 – On-going waste management for non-residential developments' and complete section 5 of the Waste Management Plan.

6.3. Residential components of mixed-use developments

For the residential components of the development, applicants must refer to 'Chapter 3 On-going waste management for one or two dwellings,' or, 'Chapter 4 - On-going waste management for three or more dwellings' and complete section 3 or 4 of the Waste Management Plan.

6.1.6 APPENDIX C Waste Garbage Chute Requirements

Council does not recommend the use of waste chutes. Considerations will be given on a case by case basis and must be discussed at a pre-lodgment (sic) meeting. Detailed information and specification regarding waste chutes is contained below, however, manufacturers specifications should always take precedence:

a) Garbage Chutes are not permitted for recyclable materials and must be clearly labelled to discourage improper use.

b) Access to the Waste Garbage Chute must be provided by an inlet hopper (or service opening) which must be located within designated Waste Service Rooms. The Waste Service Room must also provide interim disposal areas for the temporary storage of recyclables.

c) Chutes, charging devices and service openings must be constructed of fire resistant material which is additionally smooth, durable, impervious and non-corrosive.

d) Garbage Chutes must be constructed in accordance with the requirements of the Building Code of Australia.

e) Chutes must be designed to reduce noise impact.

f) Chutes, service openings and charging devices must be constructed of material (such as metal) which is smooth, durable, impervious and non-corrosive.

g) Chutes must be cylindrical and should have a diameter of at least 500mm.

h) There must not be any bends (or sections of reduced diameter) in the main shaft of the chute.

i) Internal overlaps in the chute must follow the direction of waste flow.

j) Chutes must deposit rubbish directly into a bin or compactor located within a designated Waste Storage Area.

k) A cut-off device must be located at or near the base of the chute so that the bottom of the chute can be closed when the bin or compacting device at the bottom of the chute is withdrawn or being replaced.

l) Any charging device required for each service opening must be self-closing and must not project waste into the main chute.

m) Any required charging devices are to:

n) Effectively close the service opening in the chute when the device is open for loading;

o) Permit free transfer of waste into the chute;

p) Not project into the chute;

q) Return to the closed position after use automatically;

r) Permit easy cleaning of the device and the connection between the service opening and the chute.

s) The chute, charging device and service opening must be designed to enable easy cleaning.

t) Chutes must be ventilated to ensure that air does not flow from the chute through any service opening.

u) Branches connecting service openings to the main chute are to be no more than 1m long.

v) Any mechanical compaction device within the building shall comply with the following requirements

i. maximum compaction rate of 2:1;

ii. designed to accommodate general household garbage only; and

iii. not be used to compact recyclables

6.2 Other Legislation and Guidance

The legislation and guidance outlined in Table 1 below should be referred to during the demolition, construction and operational phases of the Development.

Table 1 Legislation and guidelines

Legislation and Guidelines	Objectives
Building Code of Australia (BCA) and relevant Australian Standards	The BCA has the aim of achieving nationally consistent, minimum necessary standards of relevant health and safety, amenity and sustainability objectives efficiently.
Council of Australian Governments National Construction Code 2016	The National Construction Code 2016 sets the minimum requirements for the design, construction and performance of buildings throughout Australia.
NSW EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012	These better practice guidelines present information on waste minimisation and resource recovery as well as information on commonly used waste management provisions. The guidelines also provide benchmarks for assessing waste production rates within Australia.
NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027	Replacing the NSW Waste Avoidance and Resource Recovery Strategy (2014-21), the NSW Waste and Sustainable Materials Strategy 2041 focuses on the transition of NSW to a circular economy. The strategy focuses on minimising what is thrown away, and to use and reuse resources more efficiently, making them as productive as possible. The strategy identifies the need to identify infrastructure needs, the mandating of separation of some organic waste streams, and incentivising biogas generation from waste materials.
NSW EPA Resource Recovery Orders and Resource Recovery Exemptions	The NSW EPA has issued several resource recovery orders and resource recovery exemptions under the POEO (Waste) Regulation 2014 for a range of wastes that may be recovered for beneficial re-use. These wastes typically include those from demolition and construction works, as well as operational wastes such as food waste. • Resource recovery orders present conditions which generators and processors of waste must meet to supply the waste material for beneficial re-use. • Resource recovery exemptions contain the conditions which consumers must meet to use waste for beneficial re-use.
NSW EPA's Waste Classification Guidelines 2014	The NSW EPA Waste Classification Guidelines assists waste generators to effectively manage, treat and dispose of waste to ensure the environmental and human health risks associated with waste are managed appropriately and in accordance with the POEO Act 1997 and is associated regulations.
Protection of the Environment Operations Act (POEO) 1997 and Amendment Act 2011	The POEO Act 1997 and POEO Amendment Act 2011 are administered by the NSW Environment Protection Authority (NSW EPA) to enable the NSW Government to establish instruments for setting environmental standards, goals, protocols and guidelines. They outline the regulatory requirements for lawful disposal of wastes generated during the demolition, construction and operational phases of a development, as well as the system for licencing waste transport and disposal.
The Work Health and Safety Regulation 2017	The Work Health and Safety Regulation 2017 provide detailed actions and guidance associated with the topics discussed in The Work Health and Safety Act 2011. The primary aim of the regulation is to protect the health and safety of workers and ensure that risks are minimised in work environments. Workplaces are to ensure that they are compliant with the requirements specified in the regulations. The regulations discuss items such as actions that are prohibited or obligated in work environments, the requirements for obtaining licences and registrations, and the roles and responsibilities of staff in workplaces.

Legislation and Guidelines	Objectives
Waste Avoidance and Resource Recovery Act 2001	The Waste Avoidance and Resource Recovery Act 2001 aims to promote waste avoidance and resource recovery and repeals the Waste Minimisation and Management Act 1995. Specific objectives of the Waste Avoidance and Resource Recovery Act 2001 include: • encouraging efficient use of resources • minimising the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste • ensuring industry and the community share responsibility in reducing/dealing with waste, and • efficiently funding of waste/resource management planning, programs and service delivery. As of 2016, the addition to the Act of Part 5 defines the legislative framework for the 'Return and Earn Container Deposit Scheme' whereby selected beverage containers can be returned to State Government authorities for a monetary refund.

7 Construction and Demolition Waste Management

7.1 Targets for Resource Recovery

Targets for new development are expected to contribute to state specific targets. The NSW Waste and Sustainable Materials Strategy 2041 (DPIE, 2021) sets a target of 80% average recovery rate from all waste streams by 2030. Analysis by DPIE (2021) indicates that construction and demolition waste recovery rates in 2018-2019 were 77%.

It is anticipated that the waste minimisation measures in the following sections will assist the Development to meet these targets. Waste reporting and audits can be used to determine the actual percentage of waste that are being, or have been, recycled during the site preparation, demolition and construction stages of The Development.

7.2 Waste Streams and Classifications

The demolition and construction phases of the Development will generate the following broad waste streams:

- demolition waste
- construction waste
- plant maintenance waste
- packaging waste, and
- work compound waste from on-site employees.

A summary of likely waste types generated from demolition and construction activities, along with their waste classifications and proposed management methods, is provided in Table 2.

For further information on how to determine a waste's classification refer to the NSW EPA (2014) Waste Classification Guidelines.[1] Further information on managing demolition and construction wastes is available from the NSW EPA website.[2]

[1] Available online from https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines
[2] http://www.epa.nsw.gov.au/your-environment/waste/industrial-waste/construction-demolition

Table 2 Potential waste types and their management methods

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Demolition and Construction		
Green waste including timber, pine and particle board	General solid waste (non-putrescible)	Separated, some chipped and stored on-site for landscaping, remainder to landscape supplies or off-site recycling. Stumps and large trees to landfill.
Clean fill	General solid waste (non-putrescible)	On-site re-use for filling or levelling
Contaminated fill	To be classified subject to the results of testing	Majority used off-site for beneficial reuse as detailed in the Remediation Action Plan
Excavated natural material (ENM) or virgin excavated natural material (VENM)	General solid waste (non-putrescible)	On-site re-use of topsoil for landscaping of the site, off-site beneficial re-use or send to landfill site.
Sediment fencing, geotextile materials	General solid waste (non-putrescible)	Reuse at other sites where possible or disposal to landfill
Concrete	General solid waste (non-putrescible)	Off-site recycling for filling, levelling or road base
Bricks and pavers	General solid waste (non-putrescible)	Cleaned for reuse as footings, broken bricks for internal walls, crushed for landscaping or driveway use, off-site recycling
Gyprock or plasterboard	General solid waste (non-putrescible)	Off-site recycling or returned to supplier
Sand or soil	General solid waste (non-putrescible)	Off-site recycling
Metals such as fittings, appliances and bulk electrical cabling, including copper and aluminium	General solid waste (non-putrescible)	Off-site recycling at metal recycling compounds and remainder to landfill
Conduits and pipes	General solid waste (non-putrescible)	Off-site recycling
Timber	General solid waste (non-putrescible)	Off-site recycling, Chip for landscaping, Sell for firewood Treated: reused for formwork, bridging, blocking, propping or second-hand supplier Untreated: reused for floorboards, fencing, furniture, mulched second-hand supplier Remainder to landscape supplies.
Doors, Windows, Fittings	General solid waste (non-putrescible)	Off-site recycling at second-hand building supplier
Insulation material	General solid waste (non-putrescible)	Off-site disposal
Glass	General solid waste (non-putrescible)	Off-site recycling, glazing or aggregate for concrete production
Asbestos	Hazardous waste	Off-site disposal at a licenced landfill facility.
Fluorescent light fittings and bulbs	Hazardous waste	Off-site recycling or disposal; contact FluoroCycle for more information[3]
Paint	Hazardous waste	Off-site recycling, Paintback collection[4] or disposal
Synthetic Rubber or carpet underlay	General solid waste (non-putrescible)	Off-site recycling; reprocessed and used in safety devices and speed humps
Ceramics including tiles	General solid waste (non-putrescible)	Off-site recycling at a crushing and recycling company

[3] Available online from http://www.fluorocycle.org.au/ or http://www.environment.gov.au/settlements/waste/lamp-mercury.html
[4] Available online from https://www.paintback.com.au/

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Carpet	General solid waste (non-putrescible)	Off-site recycling or disposal; cut to size for possible reuse in landscaping, insulation or equestrian
Plant maintenance		
Empty oil and other drums or containers, such as fuel, chemicals, paints, spill clean ups	Hazardous waste: Containers were previously used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid waste (non-putrescible): Containers have been cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at licensed facility
Air filters and rags	General solid waste (non-putrescible)	Off-site disposal
Oil filters	Hazardous waste	Off-site recycling
Batteries	Hazardous waste	Off-site recycling, Contact the Australian Battery Recycling Initiative[5] for more information
Packaging		
Packaging materials, including wood, plastic, including stretch wrap or LLPE, cardboard and metals	General solid waste (non-putrescible)	Packaging will be eliminated or removed before delivery to the site
Wooden or plastic crates and pallets	General solid waste (non-putrescible)	Reused for similar projects, returned to suppliers, or off-site recycling. Contact Business Recycling for more information[6]
Work compound and associated offices		
Food waste	General solid (putrescible) waste	Dispose to landfill with general garbage
Recyclable beverage containers including glass and plastic bottles, aluminium cans and steel cans	General solid waste (non-putrescible)	Co-mingled recycling at off-site licensed facility or deliver to local NSW container deposit scheme 'Return and Earn' facility[7]
Clean paper and cardboard	General solid waste (non-putrescible)	Paper and cardboard recycling at off-site licensed facility
General domestic waste generated by workers such as soiled paper, cardboard and polystyrene	General solid waste (non-putrescible) mixed with putrescible waste	Disposal at landfill

7.3 Demolition Waste Types and Quantities

7.3.1 Buildings for demolition

Figure 4 below shows the proposed development site and the existing buildings that will require demolition.

[5] http://www.batteryrecycling.org.au/home
[6] Available online from http://businessrecycling.com.au/search/
[7] Available online from http://returnandearn.org.au/

Figure 4 Current site

The current buildings are a mixture of styles and materials. As far as it is possible to do so using SixMaps and Google Street View, details of the buildings for demolition have been determined and are shown in Table 3.

Table 3 Buildings for demolition

Address	Construction Materials	Approximate Area (m^2)
37-35 Belgrave Street	Glass, masonry and ceramic tiles at street level. Masonry and roof tiles on level 1	238
	Three levels of brick walls with metal roof	171
39 Belgrave Street	Two levels of masonry with glass street front and tiled roof	197
41 Belgrave Street	Two levels of brick walls and tiled roof	184
43 Belgrave Street	Three levels of brick walls with glass street frontage and tiled roof	226

7.3.2 Demolition Waste Generation Rates

The NBC Guidelines provides figures for demolition waste quantities that have been adapted for this development.

The demolition waste generation rates used are shown in Table 4 below.

Table 4 Demolition waste generation rates

Rate Type	Area (m^2)	Waste types and quantities (m^3)						
		Brick	Concrete	Timber	Metal	Plasterboard	General Waste	Roof Tiles
Residential Flats	1,000	504	739	10	14	15	26	25
Industrial Factory	1,000	158	407	2	35	3	18	0

Using the waste generation rates shown in Table 4 and the areas of the buildings shown in Figure 4 the estimates of the amounts of waste likely to be generated have been calculated and are shown in Table 5 below.

Table 5 Estimated types and quantities of demolition waste

Building	GFA	Floors	Classification	Waste types and quantities (m^3)						
				Brick	Concrete	Timber	Metal	Plasterboard	General Waste	Roof Tiles
37-35 Belgrave Street	238	2	Factory	75.2	193.7	1.0	16.7	1.4	8.6	-
	171	3	Flats	258.6	379.1	5.1	7.2	7.7	13.3	12.8
39 Belgrave Street	197	2	Factory	62.3	160.4	0.8	13.8	1.2	7.1	-
41 Belgrave Street	184	2	Flats	185.5	272.0	3.7	5.2	5.5	9.6	9.2
43 Belgrave Street	226	3	Flats	341.7	501.0	6.8	9.5	10.2	17.6	17.0
Total				923.2	1,506.2	17.3	52.3	26.0	56.2	39.0

7.4 Construction Waste Types and Quantities

The NBC Guidelines provides construction waste generation rates for multi-unit dwellings. These are shown in Table 6 below.

Table 6 Construction waste generation rates

Rate Type	GFA (m^2)	Waste types and quantities (m^3)					
		Brick	Concrete	Plasterboard	Timber	Metal	Other
Multi-unit dwellings	1,000	4	7	2	2	2	15

The construction waste quantities anticipated from the Development are shown below in Table 7.

Table 7 Estimated types and quantities of construction waste

Level	GFA (m^2)	Waste types and approximate quantities (m^3)					
		Brick	Concrete	Plasterboard	Timber	Metal	Other
B2	1,060	4.2	7.4	2.1	2.1	2.1	15.9
B1	1,060	4.2	7.4	2.1	2.1	2.1	15.9
GF	1,060	4.2	7.4	2.1	2.1	2.1	15.9
L1	1,060	4.2	7.4	2.1	2.1	2.1	15.9
L2	1,060	4.2	7.4	2.1	2.1	2.1	15.9
L3	1,060	4.2	7.4	2.1	2.1	2.1	15.9

Level	GFA (m^2)	Waste types and approximate quantities (m^3)					
		Brick	Concrete	Plasterboard	Timber	Metal	Other
L4	1,060	4.2	7.4	2.1	2.1	2.1	15.9
Total	7,420	30	52	15	15	15	111

7.5 Waste Avoidance

In accordance with Council's waste policy, better practice waste management and the principles of ESD, the Building Contractor will identify opportunities for waste avoidance by:

- appropriate sorting and segregation of construction waste to ensure efficient recycling of wastes
- selecting construction materials taking into consideration their long lifespan and potential for reuse
- ordering materials to size and ordering pre-cut and prefabricated materials
- reuse of formwork
- planned work staging
- use of prefabricated components for internal fit outs
- reducing packaging waste on-site by returning packaging to suppliers where possible and practicable, purchasing in bulk, requesting cardboard or metal drums rather than plastics, requesting metal straps rather than shrink wrap and using returnable packaging such as pallets and reels
- careful on-site storage and source separation
- reducing the amounts of materials used in construction where possible, such as:
  - exposing structures to reduce the use of floor, ceiling and wall cladding and finishes
  - ventilating buildings naturally to reduce use of ductwork
- subcontractors informed of site waste management procedures, and
- co-ordination and sequencing of various trades.

The Building Contractor will investigate material selection for the reduction of embodied energy and resource depletion. This includes:

- the use of recycled concrete and steel
- the reduction of PVC use
- the use of low VOC (volatile organic compounds) paints, floor coverings and adhesives
- the use of low formaldehyde wood products and post-consumer reused timber or Forest Stewardship Council certified timber where possible
- the use of fittings and furnishings that have been recycled, are made from or incorporate recycled materials, and have been certified as sustainable or environmentally friendly by a recognised third-party certification scheme
- the use of building materials, fittings and furnishings including structural framing, roofing and façade cladding chosen with consideration to their longevity, adaptation, disassembly, reuse and recycling potential, and

- the use of materials that have been certified as environmentally friendly by a recognised third-party certification scheme.

7.6 Reuse, Recycling and Disposal

Effective management of construction materials and waste, including options for reuse and recycling where applicable and practicable, will be conducted. Only waste that cannot be cost effectively reused or recycled is to be sent to landfill or appropriate disposal facilities.

Refer to Table 2 for an outline of the proposed reuse, recycling and disposal methods for potential waste streams generated by the development.

The following specific procedures should be implemented:

- concrete, tiles and bricks should be reused or recycled off-site
- steel should be recycled off-site, and all other metals should be recycled where economically viable
- framing timber should be reused on-site or recycled off-site
- windows, doors and joinery should be recycled off-site, where possible
- all used crates should be stored for reuse unless damaged
- all glass that can be economically recycled should be recycled
- all solid waste timber, brick, concrete, rock that cannot be reused or recycled should be taken to an appropriate facility for treatment to recover further resources or for disposal to landfill in an approved manner
- all asbestos, hazardous and/or intractable wastes should be disposed of in accordance with SafeWork NSW and NSW EPA requirements
- provision for the collection of batteries, fluorescent tubes, smoke detectors and other recyclable resources should be provided on site, and
- all waste and recycling should be disposed of through a council approved system.

7.7 Waste Storage and Servicing

7.7.1 Waste Segregation

The Development will be managed ensuring effective source separation and appropriate collection of waste during demolition and construction works.

For construction stages, minimum dedicated skips, bins and stockpiles should be considered for these materials:

- Timber and wood
- Steel and scrap metal
- Bricks
- Concrete
- General waste, and
- Other waste such as materials that may be re-used on future projects.

Where limited room is available for segregation of construction materials, consultation with recycling facilities is to be undertaken to determine which materials can be disposed of in the same skip and still be easily sorted post collection.

Separate receptacles for the safe disposal of hazardous waste types, such as light bulbs and batteries among others, will also be provided.

7.7.2 Space and Siting Requirements

Waste storage areas will be accessible and allow sufficient space for storage and servicing requirements. The storage areas will also be flexible in order to cater for change of use throughout the project. Where space is restricted, dedicated stockpile areas are to be delineated on the site, with regular transfers to dedicated skip bins for sorting.

The positions of the designated waste holding areas on site will change according to building works and the progression of the development, but must consider visual amenity, safety and accessibility in their selection. Appropriate siting of waste stockpile locations will consider slope and drainage factors to avoid contamination of stormwater drains during rain events.

All waste placed in skips or bins for disposal or recycling will be adequately contained to ensure that the waste does not fall, blow, wash or otherwise escape from the site. Waste containers and storage areas are to be kept clean and in a good state of repair.

7.7.3 Waste Servicing and Record Keeping

The Site Manager or equivalent role will:

- Arrange for suitable waste collection contractors to remove any construction waste from site
- Ensure waste bins are not filled beyond recommended filling levels
- Ensure that all bins and loads of waste materials leaving site are covered
- Maintain waste disposal documentation detailing, at a minimum:
  - Descriptions and estimated amounts of all waste materials removed from site
  - Details of the waste and recycling collection contractors and facilities receiving the waste and recyclables
  - Records of waste and recycling collection vehicle movements, for example, date and time of loads removed, licence plate of collection vehicles, tip dockets from receiving facility, and
  - Waste classification documentation for materials disposed to off-site recycling or landfill facilities.
- Ensure lawful waste disposal records are readily accessible for inspection by regulatory authorities such as Council, SafeWork NSW or NSW EPA, and
- Remove waste during approved hours.

If skips and bins are reaching capacity, removal and replacement will be organised as soon as possible. All site-generated building waste collected in the skips and bins will leave the site and taken to a site lawfully able to accept them.

7.7.4 Waste Servicing and Transport

The frequency of the waste removal will, in most cases, be dictated by the quantities of material being deposited into each of the dedicated skip bins. All skips leaving the site will be covered with a suitable tarpaulin to ensure that the spillage of waste from the skips while in transit is eliminated.

All waste collections for construction works will be conducted between hours nominated in the approvals. All site generated building waste collected in the skips and/or bins will leave the site and be deposited at sites lawfully able to accept them.

7.8 Site Inductions

All staff, including sub-contractors and labourers, employed during the demolition and construction phases of the Development must undergo induction training regarding waste management for the Development.

Induction training is to cover, as a minimum, an outline of the WMP including:

- Legal obligations and targets
- Emergency response procedures on-site
- Waste priorities and opportunities for reduction, reuse and recycling
- Waste storage locations and separation of waste
- Procedures for suspected contaminated and hazardous wastes
- Waste related signage
- The implications of poor waste management practices, and
- Responsibilities and reporting, including identification of personnel responsible for waste management and individual responsibilities.

It is the responsibility of the Site Manager or Building Contractor to notify Council of the appointment of waste removal, transport or disposal contractors.

7.9 Signage

Standard signage is to be posted in all waste storage and collection areas. All waste containers should be labelled correctly and clearly to identify stored materials.

Signs approved by the NSW EPA for labelling of waste materials are available online[8] and should be used where applicable. A selection of signs prepared by NSW EPA is provided in Figure 5.

[8] NSW EPA approved waste materials signage https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/business-government-recycling/standard-recycling-signs

Figure 5 Examples of NSW EPA labels for waste skips and bins

7.10 Monitoring and Reporting

A person should be nominated to be responsible for ensuring that targets are met and that waste dockets are retained from disposal and recycling facilities.

The following monitoring practices are to be undertaken to improve demolition and construction waste management and to obtain accurate waste generation figures:

- Conduct waste audits of current projects where feasible.
- Note waste generated and disposal methods.
- Look at past waste disposal receipts.
- Record this information to track waste avoidance, reuse and recycling performance and to help in waste estimations for future waste management plans.

Records of waste volumes recycled, reused or contractor removed should be maintained. This can include dockets or receipts verifying recycling and disposal in accordance with this WMP. This evidence should also be presented to regulatory bodies when required.

Daily visual inspections of waste storage areas will be undertaken by site personnel and inspection checklists and logs recorded for reporting to the Site Manager on a weekly basis or as required. These inspections will be used to identify and rectify any resource and waste management issues.

Waste audits are to be carried out by the Building Contractor to gauge the effectiveness and efficiency of waste segregation procedures and recycling and reuse initiatives. Where audits show that the above procedures are not carried out effectively, additional staff training will be undertaken and signage re-examined.

7.11 Roles and Responsibilities

All personnel have a responsibility for their own environmental performance and compliance with all legislation. It will be the responsibility of the Building Contractor to implement the WMP, and an employee and subcontractor responsibility to ensure that they always comply with the WMP.

Where possible, an Environmental Management Representative should be appointed for the Development. Suggested roles and responsibilities are provided in Table 8.

Table 8 Suggested roles and responsibilities for demolition and construction waste management

Responsible Person	General Tasks
Construction Site Manager	Ensuring plant and equipment are well maintained.
	Ordering only the required amounts of materials.
	Keeping materials segregated to maximise reuse and recycling.
	Ultimately responsible for routinely checking waste sorting and storage areas for cleanliness, hygiene and safety issues, contaminated waste materials, and also ensuring that all monitoring and audit results are well documented and carried out as specified in the WMP.
Construction Environmental Manager or equivalent	Approaching and establishing the local commercial reuse of materials where reuse on-site is not practical.
	Establishing separate skips and recycling bins for effective waste segregation and recycling purposes.
	Ensuring staff and contractors are aware of site requirements.
	Provision of training of the requirements of the WMP and specific waste management strategies adopted for the Development.
	Contaminated waste management and approval of off-site waste transport, disposal locations and checking licensing requirements.
	Approval of off-site waste disposal locations and checking licensing requirements.
	Assessment of suspicious potentially contaminated materials, hazardous materials and liquid wastes.
	Monitoring, inspection and reporting requirements.

Daily visual inspections of waste storage areas may be delegated to other on-site staff. All subcontractors will be responsible for ensuring that their work complies with the WMP through the project induction and contract engagement process.

8 Operational Waste Management

8.1 Targets for Resource Recovery

Targets for new development are expected to contribute to state-specific targets. The NSW Waste and Sustainable Materials Strategy 2041 (DPIE, 2021) sets a target of 80% average recovery rate from all waste streams by 2030. Analysis by DPIE (2021) indicates that commercial and industrial waste recovery rates in 2019 were 53%.

It is anticipated that the waste minimisation measures in the following sections will assist the Development to meet these targets. Waste reporting and audits can be used to determine the actual percentages of waste that are, or have been, recycled during operation.

8.2 Waste Streams and Classifications

The operation of the Development will generate the following broad waste streams:

- domestic wastes, such as general waste, recyclable paper and cardboard and comingled containers
- bulk packaging wastes, such as cardboard boxes

- garden organic wastes from the landscaping areas
- food waste, and
- bulky waste items, such as furniture.

Potential waste types, their associated waste classifications, and management methods are provided in Table 9. For further information on how to determine a waste's classification, refer to the NSW EPA (2014) Waste Classification Guidelines.[9] Suggestions for recycling drop off locations and contacts can be found on https://businessrecycling.com.au/ for each waste type.

Table 9 Potential operational waste types, classifications and management methods

Waste Types	NSW EPA Classification	Proposed Management Method
General operations		
Clean office paper	General solid (non-putrescible) waste	Paper recycling at off-site licensed facility
Cardboard including bulky cardboard boxes	General solid (non-putrescible) waste	Cardboard recycling at off-site licensed facility
Recyclable beverage containers, glass and plastic bottles, aluminium cans, steel cans	General solid (non-putrescible) waste	NSW container deposit scheme 'Return and Earn', container recycling at off-site licensed facility
Food waste	General solid (putrescible) waste	Compost on or off-site or dispose to landfill with general garbage
Batteries	Hazardous waste	Off-site recycling, alternatively contact the Australian Battery Recycling Initiative for more information
Mobile Phones	Hazardous waste	Off-site recycling; can be taken to the Mobile Muster program. Contact Mobile Muster for more information
Bulky polystyrene	General solid (non-putrescible) waste	Off-site recycling or disposal at landfill
Furniture	General solid (non-putrescible) waste	Off-site reuse or disposal to landfill
E-waste	Hazardous waste	Off-site recycling
Printer toners and ink cartridges	Hazardous waste	Off-site recycling, free disposal box or bags and pickup service exists for printer toners and ink cartridges
General garbage, including non-recyclable plastics	General solid (putrescible and non-putrescible) waste	Disposal at landfill
Maintenance		
Spent smoke detectors[10]	General solid (non-putrescible) waste, or Hazardous waste (some commercial varieties)	Disposal to landfill, or off-site disposal at licensed facility
Glass, other than containers	General solid (non-putrescible) waste	Off-site recycling

[9] Available online from https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines

[10] The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) require that when more than 10 smoke alarms (particularly americium-241 sources) are collected for bulk disposal they must be treated as radioactive waste and the requirements of the National Health and Medical Research Council's Code of practice for the near-surface disposal of radioactive waste in Australia (1992) must be met.

Waste Types	NSW EPA Classification	Proposed Management Method
Light bulbs and fluorescent tubes	Hazardous waste	Off-site recycling or disposal, contact FluoroCycle[11] or Lamp Recyclers[12] for more information
Cleaning chemicals, solvents, area wash downs, empty oil or paint drums, chemical containers	Hazardous waste if containers used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid (non-putrescible) waste if containers cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at licensed facility.
Garden organics, lawn mowing, tree branches, hedge cuttings, leaves	General solid (non-putrescible) waste	Reuse on-site or contractor removal for recycling at licenced facility

8.3 Waste Quantities, Bins and Space

8.3.1 Residential

The development includes 24 residential apartments. Appendix A Waste Storage Area Requirements for developments of 3 or more dwellings in the NBC Guidelines requires that a development with 24 apartments have the following number of 240 L bins:

- eight for garbage
- five for paper
- five for bottles
- two for vegetation.

The total number of 240 L bins required therefore is 20. The NBC Guidelines also say that 4 m^2 of space must be allowed for every ten residential units. For 24 units this would be 8 m^2. Taking these requirements into account, the area of waste storage space required is shown in Table 10 below.

Table 10 Bin numbers and space requirements

Number of Units	Bin capacity	Number of Bins				Bin Footprint (m^2)				Total Bin Space Required	Bulky Waste Storage	Total Waste Storage Space
		Garbage	Paper	Bottles	Vegetation	Garbage	Paper	Bottles	Vegetation			
24	240 L	8	5	5	2	3.6	2.3	2.3	0.9	17.1 m^2	8 m^2	25.1 m^2

The drawings show a residential waste room of 25.5 m^2, which is adequate for the proposed number of bins.

Chutes for garbage and recycling are proposed with doors for access on each floor and chutes emptying into bins in the residential waste storage room. No compaction or bin changing equipment is proposed.

The development features four levels of premium residential accommodation and requiring residents to carry their waste to the waste room in the lift is not ideal.

[11] https://www.fluorocycle.org.au/
[12] https://www.lamprecyclers.com.au/

8.3.2 Retail

There are four retail areas on the ground floor. Two of these will be for food and beverage, most likely a restaurant and a takeaway shop, the other two will be speciality retailers. Using the proposed retail mix and the waste generation rates in the NBC Guidelines, estimates have been made for the amounts of waste that may be generated from the retail areas.

The calculations are based on the following assumptions:

- The proposed retail mix
- The floor areas shown in 230620_6693_A21_Belgrave St_Building.pdf
- The retailers will be operating seven days per week.

The proposed retail mix, waste generation rates and estimates of weekly waste quantities are shown in Table 11 below.

Table 11 Retail waste quantities

Assumed Retail Mix	Council's Classification	Assumed GFA (m²)	L/100 sqm/day		Total per Week (L)	
			Garbage	Recycling	Garbage	Recycling
Food and beverage	Takeaway	115.0	150	150	1,208	1,208
Food and beverage	Restaurant	150.0	660	200	6,930	2,100
Speciality	Retail non-food	98.1	50	50	343	343
Speciality	Retail non-food	77.9	50	50	273	273
Total		441			8,754	3,924

The table shows that about 8.7 m^3 of garbage and 3.9 m^3 of recyclables could be generated each week.

The size of access to the commercial waste room means that 660 L and 240 L bins are the most viable options and these are typically used in a retail setting like that proposed. The ultimate decision on what size and type of bin is used and the collection frequency will be up to the tenants and/or the building managers.

Table 12 below shows the number of bins and the space required, assuming 660 L bins are used.

Table 12 Retail bin numbers and space

Tenant	GFA (m²)	Collection Frequency per Week		Total Number of 660 L Bins		Space Bin Required (m²)		Total - Bins Only	Total Space including Manoeuvring (m²)
		Garbage	Recycling	Garbage	Recycling	Garbage	Recycling		
F&B – takeaway	115.0	2	1	1	2	1.2	2.3	3.5	7.0
F&B – restaurant	150.0	2	1	6	4	7.0	4.7	11.6	23.3
Speciality – retail non-food	98.1	1	1	1	1	1.2	1.2	2.3	4.7
Speciality – retail non-food	77.9	1	1	1	1	1.2	1.2	2.3	4.7
Total	441			9	8	10.5	9.3	19.8	39.6

The table shows that a minimum of 39.6 m^2 of retail waste storage space should be allowed for assuming 660 L bins are used. The drawings show a commercial waste room of 40.7 m^2, which is adequate for the proposed number of bins.

The NBC Guidelines make no mention of bulky waste storage space being required for retailers.

8.4 Waste storage room locations

The drawings show the locations of the retail and residential waste storage rooms. See Figure 6 below.

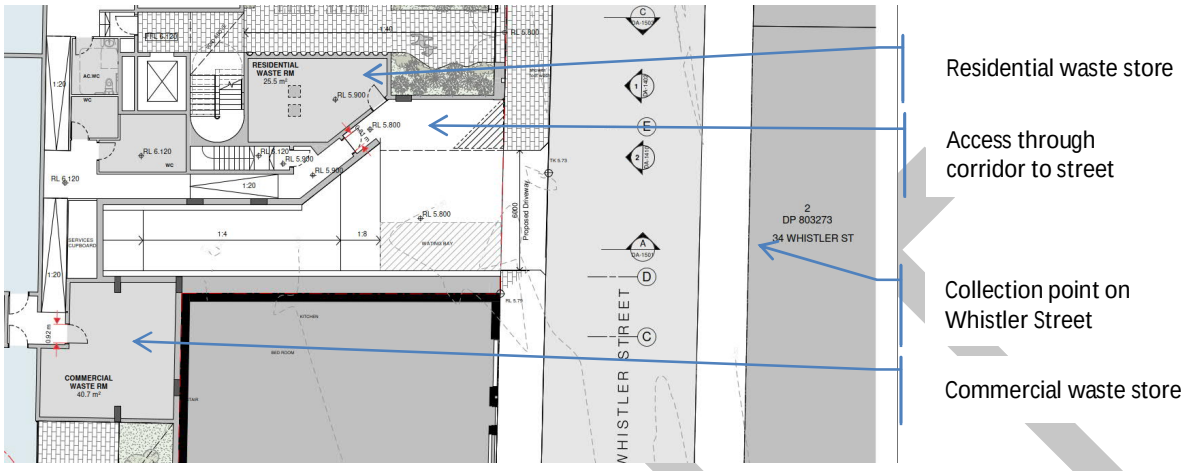

Figure 6 Waste storage room locations

8.5 Communication Strategies

Waste management initiatives and management measures will be clearly communicated to building managers, owners, employees, customers and cleaners. Benefits of providing this communication include:

- improved satisfaction with services
- increased ability and willingness to participate in recycling
- improved amenity and safety
- improved knowledge and awareness through standardisation of services
- increased awareness or achievement of environmental goals and targets
- reduced contamination of recyclables stream
- increased recovery of recyclables and organics material, if implemented, and
- greater contribution to targets for waste reduction and resource recovery, the environment and heritage conservation.

To realise the above benefits, the following communication strategies will be considered:

- Use consistent signage and colour coding throughout the Development
- Ensure all staff are trained in correct waste separation and management procedures
- Provide directional signage to show location of and routes to waste storage area
- General waste and co-mingled recycling bins should be clearly labelled and colour-coded to ensure no cross contamination, where applicable
- Employees and cleaners should adhere to the WMP for compliance, in consultation with management, and
- Repair signs and labels promptly to avoid breakdown of communications.

8.6 Signage

The waste storage and collection areas will be provided with appropriate signage. These signs will clearly identify waste management procedures and provisions to contractors, tenants and visitors will be distributed around the Development.

Key signage considerations are:

- Clear and correct labelling on all waste and recycling bins, indicating the correct type or types of waste that can be placed into a given bin, as shown in Figure 7
- Signposts and directions to location of waste storage areas
- Clear signage in all waste storage areas to instruct users how to correctly separate waste and recycling
- Maintaining a consistent style colour scheme and system for signs throughout the Development
- Emergency contact information for reporting issues associated with waste or recycling management, and
- Contractor information to be displayed in accordance with Council's Waste Management Local Approvals Policy.

Figure 7 Example of bin labels for operational waste

Colour-coded and labelled bin lids are necessary for identifying bins. Bins will be designed and colour-coded in accordance with the Australian Standard AS 4123: Mobile Garbage Containers.

All signage will conform to the relevant Australian Standard and use labels approved by the NSW EPA[13]. The design and use of safety signs for waste rooms and enclosures will comply with Australian Standard AS 1319 Safety Signs for the Occupational Environment and clearly describes the types of materials designated for each bin.

[13] NSW EPA waste signage and label designs http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm

8.7 Cleaning, Maintenance and Security

Regular cleaning of waste and recycling storage areas will be undertaken by cleaners or facilities management staff. Facilities management staff will erect and maintain suitable signage in the waste storage areas (see Section 8.6). All waste storage areas will be secured and access only available to tenants, facilities managers and collection contractors.

8.8 Monitoring and Reporting

Monitoring will ensure waste and recycling management arrangements and provisions for the Development are functional, practical and are maintained to the standard outlined in this plan, at a minimum.

Visual assessments of bins and bin storage areas will be conducted by the building manager, at minimum:

- Weekly, in the first two months of operation to ensure the waste management system is sufficient for the operation, and
- Every six months, to ensure waste is being managed to the standards outlined in this document.

In addition, audits may be conducted to ensure WMP provisions are maintained.

Quantities of waste and recycling associated with disposal of waste and recycling, including dockets, receipts and other physical records will be recorded by the Building Manager. This is to allow reviews of the waste management arrangements and provisions at the site over time. Records of waste disposal will also be available to regulatory authorities such as the NSW EPA and SafeWork NSW, upon request.

Any deficiencies identified in the waste management system, including unexpected waste quantities, will be rectified by the Building Manager as soon as it is practical. Where audits show that recycling is not carried out effectively, management will carry out additional staff training, signage re-examination and reviews of the waste management system where the audit or other reviewing body has deemed necessary. If this waste management plan no longer sufficiently meets the needs of the Development, review and updates to maintain suitability must be undertaken.

8.9 Roles and Responsibilities

It is the responsibility of the Building Manager, or equivalent role, to implement this WMP and a responsibility of all tenants and residents to follow the waste management procedures set out by the WMP. Any subcontractors enlisted by the Client will have roles and responsibilities identified and the Development's waste management system clearly explained. A summary of recommended roles and responsibilities is provided in Table 13.

Table 13 Operational waste management responsibility allocation

Responsible Person	General Tasks
Management	Ensure the WMP is implemented throughout the life of the operation.
	Regularly update the WMP to ensure the Plan remains applicable.
	Undertake liaison and management of contracted waste collections.
	Organise internal waste audits on a regular basis.
	Manage any complaints and non-compliances reported through waste audits and other means.

Responsible Person	General Tasks
	Perform inspections of all waste storage areas and waste management equipment on a regular basis.
	Organise cleaning and maintenance requirements for waste management equipment.
	Monitor bins to ensure no overfilling occurs.
	Ensure effective signage, communication and education is provided to alert visitors, employees and cleaners about the provisions of this WMP and waste management equipment use requirements.
	Monitor and maintain signage to ensure it remains clean, clear and applicable.
	Ensure waste and recycling storage rooms are kept tidy.
	Ensure that regular cleaning is being undertaken by the cleaners
	Ultimately responsible for the management of all waste management equipment, cleaning requirements and collection arrangements.
Cleaners and Staff	Cleaning of all bins and waste and recycling rooms as required.
	Compliance with the provisions of this WMP.
Gardening Contractor, as applicable	Removal of all garden organics waste generated during gardening maintenance activities for recycling at a site lawfully able to accept it or reuse as organic mulch on landscaped areas.

Appendix A:

NBC Waste Management Plan Form

NORTHERN BEACHES COUNCIL

Waste Management Plan

This plan is to be completed

in accordance with Council's

Waste Management Guidelines

Effective Date: 1 November 2016

TABLE OF CONTENTS

Purpose of the Waste Management Plan

This *Waste Management Plan (WMP)* will detail the arrangements for waste management during all stages of development and occupation.

The WMP must be completed in accordance with the Waste Management Guidelines (Guidelines).

A completed WMP is a mandatory requirement for any Development Application (DA) for which Council is the Consent Authority. DAs that are submitted without a completed WMP will be rejected or refused by Council.

Structure of the Waste Management Plan

All applicants are required to complete the 'Applicant and Project Details' part of the WMP and include it with the relevant Sections that apply to their proposed development.

The WMP is divided into Sections and applicants are only required to complete the relevant Sections in accordance with the Guidelines. The table below identifies which Sections are relevant to which development types.

For example, if the proposed development was to include demolition of an existing structure and construction of a single dwelling, the relevant Sections would be Sections 1, 2 and 3.

Section	Development Type^
Section 1 – Demolition	All
Section 2 – Construction	All
Section 3 – On-going waste management for one or two dwellings	One or two dwelling developments Mixed-use developments containing one or two dwellings
Section 4 – On-going waste management for three or more dwellings	Three or more dwelling developments Mixed-use developments containing three or more dwellings
Section 5 – On-going waste management for non-residential and mixed use developments	Commercial developments Industrial developments Mixed-use developments
Section 6 – Private roadway developments	Private roadways

^Note: the definitions of the development types are provided in Section vi of the Introduction to the Guidelines

Property and Project Details

Complete this page and the relevant Sections that apply to your proposed development.

Property Details

Lot No: Deposited Plan (DP) No: or Strata Plan (SP) No:	
Unit No: House No: Street: Suburb: Postcode:	 35-43 Belgrave Street Manly 2095

Project Details

Description of proposed development:	Mixed use development with 24 residential apartments and 441 m^2 of retail
Structures to be demolished:	Four existing buildings consisting of shops and over shop residences

Section 1 – Demolition

This section must be completed in accordance with 'Chapter 1 – Demolition' of the Waste Management Guidelines

<table>
<tr><td rowspan="3">MATERIALS ON SITE</td><td colspan="5">DESTINATION
Evidence such as weighbridge dockets and invoices for waste disposal or recycling must be retained on site for inspection</td></tr>
<tr><td colspan="3">REUSE AND RECYCLING (MOST FAVOURABLE)</td><td colspan="2">DISPOSAL (LEAST FAVOURABLE)</td></tr>
<tr><td>Types of Waste Material</td><td>Estimated Volume (m³) or Weight (t)</td><td>ONSITE RE-USE
✓ Specify how material will be reused on site</td><td colspan="2">OFFSITE RECYCLING
✓ Recycling Outlet (RO)
✓ Waste Transport Contractor (WTC)</td><td>OFFSITE DISPOSAL
✓ Specify landfill site (LS)
✓ Specify Waste Transport Contractor (WTC)</td></tr>
<tr><td colspan="3"></td><td>WTC</td><td>RO</td><td>WTC</td><td>LS</td></tr>
<tr><td>Excavated Material</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Garden Organics</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Bricks</td><td>923.2 m³</td><td>No reuse on site</td><td colspan="2">Disposal at a site lawfully able to accept it</td><td colspan="2" rowspan="6">OPTION NOT AVAILABLE:
These materials must be re-used or separated on or off site and sent for recycling.</td></tr>
<tr><td>Tiles</td><td>39.0 m³</td><td></td><td colspan="2"></td></tr>
<tr><td>Concrete</td><td>1506.2 m³</td><td></td><td></td><td></td></tr>
<tr><td>Timber</td><td>17.3 m³</td><td></td><td></td><td></td></tr>
<tr><td>Plasterboard</td><td>26.0 m³</td><td></td><td></td><td></td></tr>
<tr><td>Metals</td><td>52.3 m³</td><td></td><td></td><td></td></tr>
<tr><td>Asbestos</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Other waste (please specify)</td><td>56.2 m³</td><td></td><td></td><td colspan="2">Disposal at a site lawfully able to accept it</td></tr>
<tr><td>Estimated Total % Recovered</td><td>97.9%</td><td colspan="5"></td></tr>
</table>

Refer to the estimation tables in 'Chapter 1 – Demolition' of the Guidelines for assistance in completing this table.

The applicant must submit a Site Plan showing the structures to be demolished and storage areas for waste and construction materials (if the development also includes construction).

WMP Checklist

Have you included the following:	Applicant Tick
A site plan showing: • The structures to be demolished. • Storage areas for waste to be reused, recycled, or disposed of. • Materials storage (if the development also includes construction)	☐
The table on the previous page, completed in accordance with 'Chapter 1 – Demolition' in the guidelines.	☒

Section 2 – Construction

This section must be completed in accordance with 'Chapter 2 – Construction' of the Waste Management Guidelines

<table>
<tr><td rowspan="2">MATERIALS ON SITE</td><td colspan="6">DESTINATION
Evidence such as weighbridge dockets and invoices for waste disposal or recycling must be retained on site for inspection</td></tr>
<tr><td colspan="3">REUSE AND RECYCLING (MOST FAVOURABLE)</td><td colspan="3">DISPOSAL (LEAST FAVOURABLE)</td></tr>
<tr><td>Types of Waste Material</td><td>Estimated Volume (m^3) or Weight (t)</td><td colspan="2">ONSITE RE-USE
✓ Specify how material will be reused on site</td><td colspan="2">OFFSITE RECYCLING
✓ Specify recycling outlet (RO)
✓ Specify Waste Transport Contractor (WTC)</td><td colspan="2">OFFSITE DISPOSAL
✓ Specify landfill site (LS)
✓ Specify Waste Transport Contractor (WTC)</td></tr>
<tr><td colspan="2">* Please specify</td><td colspan="2">WTC</td><td>RO</td><td>WTC</td><td>LS</td></tr>
<tr><td>Excavated Material</td><td></td><td colspan="2"></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Garden Organics</td><td></td><td colspan="2"></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Bricks</td><td>30 m^3</td><td colspan="2" rowspan="2">No reuse on site</td><td colspan="2" rowspan="2">Disposed of at a site lawfully able to accept it</td><td colspan="2" rowspan="6">OPTION NOT AVAILABLE:
These materials must be re-used or separated on or off site and sent for recycling.</td></tr>
<tr><td>Tiles</td><td></td></tr>
<tr><td>Concrete</td><td>52 m^3</td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td>Timber*</td><td>15 m^3</td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td>Plasterboard</td><td>15 m^3</td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td>Metals*</td><td>15 m^3</td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td>Asbestos</td><td></td><td colspan="2"></td><td colspan="2"></td><td></td><td></td></tr>
<tr><td>Other waste*</td><td>111 m^2</td><td colspan="2"></td><td colspan="2">Disposed of at a site lawfully able to accept it</td><td colspan="2"></td></tr>
<tr><td>Estimated Total % Recovered</td><td>53%</td><td colspan="6"></td></tr>
</table>

Refer to the estimation tables in 'Chapter 2 – Construction' of the Guidelines for assistance in completing this table.

The applicant must submit a Site Plan showing the structures to be demolished and storage areas for waste and construction materials (if the development also includes construction).

WMP Checklist

Have you included the following:	Applicant Tick
A site plan showing: • The structures to be demolished. • Potential storage areas for waste to be reused, recycled, or disposed of. • Materials storage	☐
The table on the previous page, completed in accordance with 'Chapter 2 – Construction' in the guidelines.	☒

Section 3 – On-going waste management for one or two dwellings

This section is to be completed in accordance with 'Chapter 3 – On-going waste management for one or two dwellings' of the Waste Management Guidelines.

Type of development: _____

Number of dwellings: _____

WMP Checklist

Do your architectural and landscape plans include the following:	Applicant Tick
Waste Storage Area design requirements (Chapter 3.2.)	☐
Waste Storage Area location requirements (Chapter 3.3.)	☐

Section 4 – On-going waste management for three or more dwellings

This section is to be completed in accordance with 'Chapter 4 – On-going waste management for three or more dwellings' of the Waste Management Guidelines.

Type of development: _____

Number of dwellings: _____

WMP Checklist

Do your architectural/landscape plans include the following:	Applicant Tick	N/A
Waste Storage Area design requirements (Chapter 4.2.)	☐	-
Waste Storage Area location requirements (Chapter 4.3.)	☐	-
Pathway, access and door requirements (Chapter 4.4.)	☐	-
Clean-up waste requirements (Chapter 4.5.)	☐	☐
Kerbside (on-street) waste collection requirements (Chapter 4.6.)	☐	☐
On-site (off-street) waste collection requirements (Chapter 4.7.)	☐	☐

Section 5 – On-going waste management for non-residential and mixed use developments

This section is to be completed in accordance with 'Chapter 5 – On-going waste management for non-residential developments' and 'Chapter 6 – On-going waste management for mixed use developments' of the Waste Management Guidelines.

Type of development: Mixed use, retail and residential

Number of commercial premises: Three

Number of Waste Storage Areas: Two

WMP Checklist

Do your architectural/landscape plans include the following:	Applicant Tick	N/A
Waste Storage Area design requirements (Chapter 5.2.)	X	-
Waste Storage Area location requirements (Chapter 5.3.)	X	-

Section 6 – Private roadway developments

This section is to be completed in accordance with 'Chapter 7 – Private roadway developments' of the Waste Management Guidelines.

Type of development: _____

Number of dwellings: _____

(Only applicable for sub-divisions)

WMP Checklist

Do your sub-division plans include the following:	Applicant Tick	N/A
Council's waste vehicle design requirements (Chapter 7.2.)	☐	☐
Waste Storage Area requirements (Chapter 7.3.)	☐	☐

ASIA PACIFIC OFFICES

ADELAIDE
60 Halifax Street
Adelaide SA 5000
Australia
T: +61 431 516 449
E: adelaide@slrconsulting.com

BRISBANE
Level 16, 175 Eagle Street
Brisbane QLD 4000
Australia
T: +61 7 3858 4800
E: brisbane@slrconsulting.com

CAIRNS
Level 1, Suite 1.06
14 Spence Street
Cairns QLD 4870
Australia
T: +61 7 4722 8090
E: cairns@slrconsulting.com

CANBERRA
GPO 410
Canberra ACT 2600
Australia
T: +61 2 6287 0800
E: canberra@slrconsulting.com

DARWIN
Unit 5, 21 Parap Road
Parap NT 0820
Australia
T: +61 8 8998 0100
E: darwin@slrconsulting.com

GOLD COAST
Level 2, 194 Varsity Parade
Varsity Lakes QLD 4227
Australia
M: +61 438 763 516
E: goldcoast@slrconsulting.com

MACKAY
1/25 River Street
Mackay QLD 4740
Australia
T: +61 7 3181 3300
E: mackay@slrconsulting.com

MELBOURNE
Level 11, 176 Wellington Parade
East Melbourne VIC 3002
Australia
T: +61 3 9249 9400
E: melbourne@slrconsulting.com

NEWCASTLE
10 Kings Road
New Lambton NSW 2305
Australia
T: +61 2 4037 3200
E: newcastleau@slrconsulting.com

PERTH
Level 1, 500 Hay Street
Subiaco WA 6008
Australia
T: +61 8 9422 5900
E: perth@slrconsulting.com

SUNSHINE COAST
Suite 2, 14-20 Aerodrome Rd
Maroochydore QLD 4558
Australia
T: +61 7 3858 4800
E: SunshineCoast@slrconsulting.com

SYDNEY
Tenancy 202 Submarine School
Sub Base Platypus
120 High Street
North Sydney NSW 2060
Australia
T: +61 2 9427 8100
E: sydney@slrconsulting.com

TOWNSVILLE
12 Cannan Street
South Townsville QLD 4810
Australia
T: +61 7 4722 8000
E: townsville@slrconsulting.com

WOLLONGONG
Level 1, The Central Building
UoW Innovation Campus
North Wollongong NSW 2500
Australia
T: +61 2 4249 1000
E: wollongong@slrconsulting.com

AUCKLAND
201 Victoria Street West
Auckland 1010
New Zealand
T: 0800 757 695
E: auckland@slrconsulting.com

NELSON
6/A Cambridge Street
Richmond, Nelson 7020
New Zealand
T: +64 274 898 628
E: nelson@slrconsulting.com

WELLINGTON
12A Waterloo Quay
Wellington 6011
New Zealand
T: +64 2181 7186
E: wellington@slrconsulting.com

SINGAPORE
39b Craig Road
Singapore 089677
T: +65 6822 2203
E: singapore@slrconsulting.com