



# 14 Aquatic Drive, Frenchs Forest

## Waste Management Plan

### Goodman Property Services (Aust) Pty Ltd

The Hayesbery  
1-11 Hayes St  
Rosebery NSW 2018

Prepared by:

**SLR Consulting Australia**

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## Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Goodman Property Services (Aust) Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

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## Table of Contents

<b>Basis of Report .....</b>	<b>i</b>
<b>1.0 Introduction .....</b>	<b>1</b>
1.1 Overview .....	1
1.2 Objectives .....	2
<b>2.0 Proposed Development .....</b>	<b>2</b>
<b>3.0 Better Practice for Waste Management and Recycling .....</b>	<b>3</b>
3.1 Waste Management Hierarchy .....	3
3.2 Benefits of Adopting Better Practice .....	4
<b>4.0 Waste Legislation and Guidance.....</b>	<b>4</b>
4.1 Northern Beaches Waste Management Guidelines .....	4
4.1.1 Introduction .....	5
4.1.2 Chapter 1 – Demolition.....	5
4.1.3 Chapter 2 – Construction.....	5
4.1.4 Chapter 5 – On-going waste management for non-residential developments .....	6
4.2 Other Legislation and Guidance .....	6
<b>5.0 Demolition and Construction Waste and Recycling Management.....</b>	<b>8</b>
5.1 Targets for Resource Recovery .....	8
5.2 Waste Streams and Classifications .....	8
5.3 Demolition Waste Types and Quantities.....	10
5.3.1 Demolition Waste Generation Rates.....	10
5.3.2 Buildings for Demolition.....	11
5.4 Construction Waste Types and Quantities.....	12
5.5 Waste Avoidance Strategies.....	13
5.6 Re-use, Recycling and Disposal .....	14
5.7 Waste Separation, Storage and Servicing .....	15
5.7.1 Waste Separation and Storage.....	15
5.7.2 Waste Storage Areas .....	15
5.7.3 Waste Servicing and Record Keeping .....	16
5.7.4 Waste Servicing and Transport .....	16
5.8 Signage.....	17
5.9 Site Inductions.....	17
5.10 Monitoring and Reporting .....	18
5.11 Roles and Responsibilities .....	18
<b>6.0 Operational Waste and Recycling Management .....</b>	<b>19</b>



6.1	Targets for Resource Recovery .....	19
6.2	Waste Streams and Classifications .....	19
6.3	Estimated Quantities of Operational Waste .....	21
6.4	Waste Storage Area Size .....	22
6.4.1	Self Storage Area .....	22
6.4.2	Garbage and Recycling Bins .....	22
6.4.3	Bulky Waste .....	23
6.4.4	Total Waste Storage Area .....	23
6.5	Location of waste storage areas .....	24
6.6	Waste System Description .....	24
6.7	Waste Vehicle Access .....	25
6.8	Waste Avoidance, Reuse and Recycling .....	25
6.8.1	Waste avoidance .....	25
6.8.2	Re-use .....	25
6.8.3	Recycling.....	25
6.9	Communication Strategies .....	26
6.10	Signage.....	26
6.11	Roles and Responsibilities .....	27

## Tables

Table 1	A list of legislation and guidance relevant to this report.....	7
Table 2	Potential waste types, classifications and management methods for demolition and construction .....	9
Table 3	Demolition waste generation rates .....	11
Table 4	Estimated types and quantities of demolition waste .....	12
Table 5	Construction waste generation rates.....	12
Table 6	Estimated types and quantities of construction waste .....	12
Table 7	Suggested roles and responsibilities for site preparation, demolition and construction waste management .....	18
Table 8	Potential waste types, classifications and management methods for operational waste .....	20
Table 9	Operational waste generation rates .....	21
Table 10	Estimated operational quantities .....	22
Table 11	Dimensions and approximate footprint of bins .....	22
Table 12	Recommended number of bins and storage area .....	23
Table 13	Suggested operational waste-related roles and responsibilities .....	27



## Figures

Figure 1 – Site location .....	2
Figure 2 - Concept design – Ground (left), Level 1 (middle) and Level 2 (right).....	3
Figure 3 - Waste management hierarchy .....	4
Figure 4 - Current site .....	11
Figure 5 - Examples of NSW EPA labels for waste and skip bins.....	17
Figure 6 – Full sized waste storage locations Level 1.....	24
Figure 7 –Waste storage location Level 2 .....	24
Figure 8 Example NSW EPA labels for ongoing waste .....	27

## Appendices

<b>Appendix A</b>	<b>Council Waste Management Forms</b>
<b>Appendix B</b>	<b>L1 Floor Plan</b>
<b>Appendix C</b>	<b>L2 Floor Plan</b>



## 1.0 Introduction

### 1.1 Overview

This waste management plan (WMP) has been prepared by SLR Consulting on behalf of Goodman Property Services (Aust.) Pty Ltd (Goodman) to accompany a development application for self-storage units and warehouse and distribution centre uses at 14 Aquatic Drive, Frenchs Forest.

This site is located on the southern side of Warringah Road and within the broader Frenchs Forest Business Park. It currently hosts an existing four storey commercial building which is proposed for demolition under this application.

The proposed development comprises construction of a three-storey industrial building including:

- 153 self-storage units;
- 72 warehouse units on Levels 1 and 2;
- 123 car parking spaces across all levels;
- outdoor breakout spaces for staff at ground floor and Level 2;
- shared lobby across all levels;
- landscaping; and
- associated infrastructure/servicing works.

Approval is sought for 24/7 operation of the proposed self-storage and warehouse and distribution units. The location of the site is shown in Figure 1 below.





**Figure 1 – Site location**

The development application will likely be regionally significant development with the Sydney North Planning Panel as the determining authority

This WMP has been prepared to calculate waste quantities, ensure enough space is allowed for waste storage and that waste is properly handled during the demolition, construction and operational phases of the project. It has been prepared to address the relevant sections of the *Northern Beaches Council Waste Management Guidelines* (Council Guidelines).

## 1.2 Objectives

The principal objective of this WMP is to identify all potential wastes likely to be generated at the Development during the demolition, construction and operational phases, including a description of how waste would be handled, processed and disposed of, or re-used or recycled, in accordance with Northern Beaches Council's requirements.

The specific objectives of this WMP are:

- To encourage the minimisation of waste production and maximisation of resource recovery.
- To assist in ensuring that any environmental impacts during the operational life of the Development comply with Council's development consent conditions and other relevant regulatory authorities.

## 2.0 Proposed Development

The proposed development comprises construction of a three-storey industrial building including:

- 153 self-storage units at ground floor
- 72 warehouse units on Levels 1 and 2
- 123 car parking spaces across all levels





- Outdoor breakout spaces for staff at ground floor and Level 2
- Shared lobby across all levels
- Landscaping and
- Associated infrastructure and servicing works.

Approval is sought for operation of the proposed self-storage and warehouse and distribution units 24 hours per day, seven days per week.

The concept design is shown in Figure 2 below.



Figure 2 - Concept design – Ground (left), Level 1 (middle) and Level 2 (right)

## 3.0 Better Practice for Waste Management and Recycling

### 3.1 Waste Management Hierarchy

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

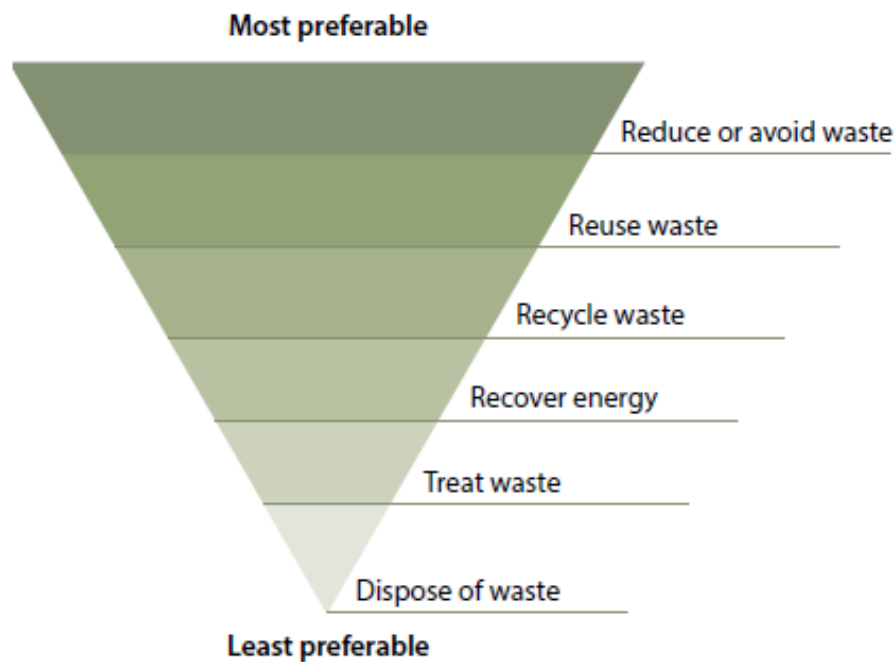
The waste management hierarchy comprises the following principles, from most to least preferable:

- 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.



**Figure 3 - Waste management hierarchy**

### 3.2 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.

## 4.0 Waste Legislation and Guidance

### 4.1 Northern Beaches Waste Management Guidelines

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



#### **4.1.1 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.*

#### **4.1.2 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.*

#### **4.1.3 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.*

#### **4.1.4 Chapter 5 – On-going waste management for non-residential developments**

*Applicants must complete 'Section 5 – On-going Stage waste management for non-residential developments' of the Waste Management Plan in accordance with this Chapter.*

#### **5.2. Waste Storage Area design requirements**

*The applicant must ensure the design of the Waste Storage Area will be:*

- a) *A designated area to accommodate waste, recycling containers, crates, pallets and other reusable items.*
- b) *A minimum floor space capable of managing the proposed commercial development's waste generation rate. See Chapter 5.4 for non-residential waste generation rates.*
- c) *In accordance with the BCA, relevant AS and other legislation detailed in Chapter xii of the Introduction to the Waste Management Guidelines.*
- d) *Graded and drained to a Sydney Water approved drainage system.*
- e) *Easily kept clean and tidy at all times.*

#### **5.3. Waste Storage Area location requirements**

*The applicant must ensure the location of the Waste Storage Area will be:*

- a) *Incorporated entirely within the site boundary, not visible to the public and landscaped to reduce visual impact and clutter.*
- b) *No closer than 3m from any dwelling openings.*
- c) *Clear of any stormwater system and prevent waste water from entering the system.*

#### **5.4. Estimating non-residential waste generation rates**

The table in this section provides estimates of likely waste generation rates for non-residential development types including car parks, offices and warehouses. These are shown in **Error! Reference source not found.** on page **Error! Bookmark not defined.** of this waste plan.

## **4.2 Other Legislation and Guidance**

The waste legislation and guidance outlined in Table 1 below should be referred to during the operation of The Development.



**Table 1 A list of legislation and guidance relevant to this report**

Legislation and Guidance	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 2019	The National Construction Code 2019 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 in Australia.
NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027	Replacing the <i>NSW Waste Avoidance and Resource Recovery Strategy (2014-21)</i> , 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	<p>The NSW EPA has issued a number of 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 ongoing wastes such as food waste.</p> <ul style="list-style-type: none"> <li>Resource recovery orders present conditions which generators and processors of waste must meet to supply the waste material for beneficial re-use.</li> <li>Resource recovery exemptions contain the conditions which consumers must meet to use waste for beneficial re-use.</li> </ul>
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 <i>POEO Act 1997</i> and its associated regulations.
<i>Protection of the Environment Operations Act (POEO) 1997 and Amendment Act 2011</i>	The POEO Act 1997 and POEO Amendment Act 2011 are administered by the 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 provides 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.
<i>Waste Avoidance and Resource Recovery Act 2001</i>	<p>The <i>Waste Avoidance and Resource Recovery Act 2001</i> aims to promote waste avoidance and resource recovery and repeals the <i>Waste Minimisation and Management Act 1995</i>. Specific objectives of the <i>Waste Avoidance and Resource Recovery Act 2001</i> include:</p> <ul style="list-style-type: none"> <li>encouraging efficient use of resources</li> </ul>



Legislation and Guidance	Objectives
	<ul style="list-style-type: none"><li>• 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</li><li>• ensuring industry and the community share responsibility in reducing/dealing with waste, and</li><li>• efficiently funding of waste and resource management planning, programs and service delivery.</li></ul> <p>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.</p>

## 5.0 Demolition and Construction Waste and Recycling Management

### 5.1 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 the NSW EPA (2022-2023) indicates that construction and demolition waste recovery rates in 2022-2023 were 73%.<sup>1</sup>

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 wastes that are being, or have been, recycled during the site preparation, demolition and construction stages of The Development.

Waste generated during demolition and construction will be reused on site wherever possible, especially in the case of soil and fill. Waste and recyclables taken off site will be recycled, or disposed of, at facilities lawfully able to accept them.

### 5.2 Waste Streams and Classifications

The demolition and construction activities are anticipated to generate the following broad waste streams:

- Demolition waste as outlined in Section 5.3
- Construction waste as outlined in Section 5.4
- Packaging waste, and
- Work compound waste from on-site employees.

<sup>1</sup> <https://www.epa.nsw.gov.au/your-environment/waste/waste-overview/waste-performance-data>



A summary of likely waste types generated from demolition and construction activities, along with their waste classifications and proposed management methods are provided in Table 2. For further information on how to determine a waste's classification refer to the NSW EPA (2014) *Waste Classification Guidelines*.<sup>2</sup> Further information on managing site preparation, demolition and construction wastes is also available on the NSW EPA website.<sup>3</sup>

**Table 2 Potential waste types, classifications and management methods for demolition and construction**

Waste Types	NSW EPA Waste Classification	Proposed Management Method
<b>Demolition and Construction</b>		
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 – treated	General solid waste (non-putrescible)	Reused for formwork, bridging, blocking, propping or second-hand supplier
Timber - untreated		Off-site recycling, chip for landscaping, sell for firewood, reused for floorboards, fencing, furniture, mulched secondhand supplier and remainder to landscape supplies.
Doors, windows, fittings	General solid waste (non-putrescible)	Off-site recycling at secondhand 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	Special waste	Off-site disposal to a licensed landfill facility.
Fluorescent light fittings and bulbs	General solid waste (non-putrescible)	Off-site recycling or disposal, contact <i>FluoroCycle</i> for more information <sup>4</sup>

<sup>2</sup> Available online from <https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines>

<sup>3</sup> Available online from <http://www.epa.nsw.gov.au/your-environment/waste/industrial-waste/construction-demolition>

<sup>4</sup> Available online from <http://www.fluorocycle.org.au/> or <http://www.environment.gov.au/settlements/waste/lamp-mercury.html>



Waste Types	NSW EPA Waste Classification	Proposed Management Method
Paint	Liquid waste	Off-site recycling, Paintback collection <sup>5</sup> or disposal
Synthetic rubber or carpet underlay	General solid waste (non-putrescible)	Off-site recycling, reprocessed for other uses
Ceramics including tiles	General solid waste (non-putrescible)	Off-site recycling
Carpet	General solid waste (non-putrescible)	Off-site recycling, disposal or reuse
<b>Packaging</b>		
Packaging materials, including wood, plastic, including stretch wrap or LDPE, cardboard and metals	General solid waste (non-putrescible)	Off-site recycling
Wooden or plastic crates and pallets	General solid waste (non-putrescible)	Reused for similar projects, returned to suppliers, or off-site recycling. Contact <i>Business Recycling</i> for more information <sup>6</sup>
<b>Work Compound and Associated Offices</b>		
Food Waste	General solid (putrescible) waste	Dispose to landfill with general garbage
Recyclable beverage containers, such as glass and plastic bottles, aluminium cans and steel cans	General solid waste (non-putrescible)	Recycling at off-site licensed facility or at NSW container deposit scheme 'Return and Earn' facility <sup>7</sup>
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 and cardboard, food and polystyrene	General solid waste (non-putrescible) mixed with putrescible waste	Disposal at landfill

## 5.3 Demolition Waste Types and Quantities

### 5.3.1 Demolition Waste Generation Rates

Council's Guidelines provide typical waste generation rates for the demolition of an 'office block'. These have been used to estimate the quantities of demolition waste generated from the development. We have also referred to *Light Duty Asphalt Pavements - Design, Specification and Construction 2002* published by the Australian Asphalt Pavement Association in calculating car park waste demolition quantities.

The demolition waste generation rates used are shown in Table 5 below.

<sup>5</sup> Available online from <https://www.paintback.com.au/>

<sup>6</sup> Available online from <https://businessrecycling.com.au/>

<sup>7</sup> Available online from <http://returnandearn.org.au/>





**Table 3 Demolition waste generation rates**

Rate Type	Area (m <sup>2</sup> )	Waste types and quantities (m <sup>3</sup> )							
		Timber	Concrete	Bricks	Metal	Plasterboard	General Waste	Asphalt	Granular Base
Factory	1,000	56	6736	1142	45	83	155		
Office	1,000	2	407	158	35	3	18		
Carpark	1,000		22.5 <sup>8</sup>					30 <sup>9</sup>	125 <sup>10</sup>

### 5.3.2 Buildings for Demolition

The current site layout with boundary is shown in Figure 4 below.



**Figure 4 - Current site**

Images from Six Maps and Google Earth show that the structure is a three-storey glass and concrete office building with car parking and driveway. The image from SixMaps (Figure 4) has been used to calculate the areas of each building and car parking areas.

These areas are shown in Table 6 along with estimates of the quantities of demolition waste that may be generated.

<sup>8</sup> Estimate of kerb profile

<sup>9</sup> 30 mm depth for passenger car parking areas of this size. *Light Duty Asphalt Pavements - Design, Specification and Construction 2002* Australian Asphalt Pavement Association. Table 10 Passenger Car Parking Areas, 50-500 Bays

<sup>10</sup> 125 mm depth for passenger car parking areas of this size. *Light Duty Asphalt Pavements - Design, Specification and Construction 2002* Australian Asphalt Pavement Association. Table 10 Passenger Car Parking Areas, 50-500 Bays



**Table 4 Estimated types and quantities of demolition waste**

Area	Floors	GFA (m <sup>2</sup> )	Waste types and quantities (m <sup>3</sup> )							
			Timber	Concrete	Bricks	Metal	Plasterboard	General Waste	Asphalt	Granular Base
Main Office	3	4,932	276	33,222	5,632	222	409	764	-	-
Rear Office	1	1,266	71	8,528	1,446	57	105	196	-	-
Car Park	N/a	8,855	-	199	-	-	-	-	266	1,107
<b>Total</b>		<b>15,053</b>	<b>347</b>	<b>41,949</b>	<b>7,078</b>	<b>279</b>	<b>514</b>	<b>961</b>	<b>266</b>	<b>1,107</b>

## 5.4 Construction Waste Types and Quantities

Council's Guidelines provide typical waste generation rates for the construction of an 'Industrial/Factory'. These have been used to estimate the quantities of construction waste generated from the warehouse element of the development. We have also adopted the 'Office' waste generation rates from Appendix A of *The Hills' Development Control Plan* for estimating the type and quantities of waste generated from the office elements of the proposed buildings. The construction waste generation rates used are shown in Table 5 below.

**Table 5 Construction waste generation rates**

Rate Type	Area (m <sup>2</sup> )	Waste types and quantities (m <sup>3</sup> )							
		Timber	Concrete	Bricks	Plasterboard	Sand or Soil	Metal	Roof Sheeting	Other
Industrial/Factory	1,000	3	3	2			3	3	10
Office	1,000	5.1	18.8	8.5	8.6	8.8	2.75		5
Hardstand, carpark and ramps	1,000		2.1			4.8	0.6		0.5

The areas shown in Table 6 are based on the areas for the Development shown in:

- SK200 P12
- SK201 P10
- SK203 P10

Estimates of the quantities of construction waste generated from the Development are shown in Table 6 below.

**Table 6 Estimated types and quantities of construction waste**

Development Component	Area (m <sup>2</sup> )	Waste types and quantities (m <sup>3</sup> )									
		Timber	Concrete	Bricks	Plasterboard	Sand or Soil	Metal	Roof Sheeting	Other	Asphalt	Granular Base
Warehouse	2,302	69	69	46	-	-	69	69	230	-	-
Mezz office	1,025	52	193	87	88	90	28	-	51	-	-
Warehouse	2,250	68	68	45	-	-	68	68	225	-	-
Mezz office	1,183	60	222	101	102	104	33	-	59	-	-
Car park	1,824	-	4.1	-	-	-	-	-	-	5.5	23



Development Component	Area (m <sup>2</sup> )	Waste types and quantities (m <sup>3</sup> )									
		Timber	Concrete	Bricks	Plasterboard	Sand or Soil	Metal	Roof Sheetting	Other	Asphalt	Granular Base
<b>Total</b>	<b>8,584</b>	<b>249</b>	<b>556</b>	<b>279</b>	<b>190</b>	<b>194</b>	<b>197</b>	<b>137</b>	<b>566</b>	<b>5.5</b>	<b>23</b>

## 5.5 Waste Avoidance Strategies

The Building Contractor, Building Designer and/or those in equivalent roles should follow better practice waste management and the principles of Ecologically Sustainable Development.

Recommendations for the Building Designer include:

- Using prefabricated components
- Using low formaldehyde wood products, post-consumer reused timber and/or Forest Stewardship Council certified timber
- Using 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
- Preferentially using building materials, fittings and furnishings, including structural framing, roofing and façade cladding, that have longer life and better re-use and recycling potential
- Reducing the use of polyvinyl chloride products
- Preferentially using paints, floor coverings and adhesives with low VOC (volatile organic compound) content
- Avoiding unsustainable timber imports including western red cedar, oregon, meranti, luan or merbau
- Selecting materials based on low embodied energy properties that suit the Project, such as recycled materials including recycled steel and glass-wool insulation, or concrete with slag and fly ash content
- Centralising wet areas together to minimise piping, and
- Designing for deconstruction rather than demolition.

Recommendations for the Building Contractor include:

- Applying practical building designs and construction techniques
- Minimising excavation works
- Investigating leased equipment and machinery rather than purchase and disposal
- Sorting and segregating site preparation and construction wastes to ensure efficient recycling of wastes
- Preferentially selecting building materials, fittings and furnishings, including structural framing, roofing and façade cladding, that have longer life and better re-use and recycling potential



- Store wastes on-site appropriately to prevent cross-contamination and/or mixing of different waste types
- Reducing packaging waste by:
  - Returning packaging to suppliers where practicable to reduce waste further along the supply chain
  - 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.
- Arranging deliveries 'as needed' to mitigate degradation, weathering or moisture damage, and
- Ensure subcontractors are informed of and implement site waste minimisation and management procedures.

## 5.6 Re-use, 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.



## **5.7 Waste Separation, Storage and Servicing**

### **5.7.1 Waste Separation and Storage**

Waste materials produced from demolition and construction activities will be separated at the source and stored separately on-site.

It is anticipated that there will be enough space on-site for separate storage in, for example, separate skip bins or appropriately managed stockpiles, of the following waste types:

- Bricks, concrete and scrap metal
- Metal and steel, in a condition suitable for recycling at metal recycling facilities
- Timber
- Glass
- Hardstand rubble
- Uncontaminated excavation spoil, if present
- Contaminated excavation spoil, if present
- Hazardous waste, if present
- Paper and cardboard
- General co-mingled recycling waste, and
- Non-recyclable general waste.

If there is insufficient space on-site for full separation of waste types, the site manager, or equivalent role, should consult with the waste and recycling collection contractor to confirm which waste types may be co-mingled before removal from the site.

### **5.7.2 Waste Storage Areas**

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 will be delineated on the site, with regular transfers to dedicated skip bins for sorting.

Waste areas are demarcated on the L1 and L2 floor plans, 25m<sup>2</sup> and 20 m<sup>2</sup> per floor, 45m<sup>2</sup> in total. Refer to Appendix A and B for further insight.

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

Applicable weather protection measures should be considered for storage spaces.

In accordance with good practice waste management, areas designated for waste storage will:

- Allow unimpeded access by site personnel and waste disposal contractors





- Take into account environmental factors which could potentially cause an impact to the waste storage, such as slope, drainage and the location of watercourses and native vegetation
- Allow sufficient space for the storage of garden waste and other waste materials on-site
- Employ adequate environmental management controls to prevent off-site migration of waste materials and contamination from the waste. For example, consideration of slope, drainage, proximity relative to waterways, stormwater outlets and vegetation
- Consider visual amenity, safety and accessibility in their selection, and
- Not present hazards to human health or the environment.

### **5.7.3 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.

### **5.7.4 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.



## 5.8 Signage

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

Signs approved by the NSW EPA for labelling of waste materials are available online<sup>11</sup> and should be used where applicable. A selection of the EPA's signs is shown in Figure 5.



Figure 5 - Examples of NSW EPA labels for waste and skip bins

## 5.9 Site Inductions

All staff, including sub-contractors and labourers, employed during the site preparation and construction phases of the Development will undergo induction training regarding waste management.

Induction training will 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.

<sup>11</sup> NSW EPA approved waste materials signage <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/business-government-recycling/standard-recycling-signs>





## 5.10 Monitoring and Reporting

During the demolition and construction phases, the following monitoring practices will 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 will be maintained for all waste quantities that are recycled, reused or removed by a contractor. All demolition and construction waste dockets will be kept which show which facility received the material for recycling or disposal.

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 or equivalent role on a weekly basis or as required. These inspections will be used to identify and rectify any resource and waste management issues.

Waste audits should be carried out by the building contractor or equivalent role 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 will be re-examined.

## 5.11 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 site manager, or equivalent role, to implement the WMP, and the responsibility of employees and subcontractors to ensure that they comply with the WMP at all times.

Suggested roles and responsibilities for waste management at the site are provided in Table 7. Where possible, a construction environmental manager, or equivalent role, should be appointed for the site preparation and construction work. An equivalent construction environmental manager role is defined to be a person dedicated to overseeing the environmental compliance and performance of a development. Where a construction environmental manager is not appointed, responsibilities in Table 7 for the construction environmental manager will become those of the site manager.

**Table 7 Suggested roles and responsibilities for site preparation, demolition and construction waste management**

Role	Responsibilities
Site Manager	<ul style="list-style-type: none"><li>• Ensuring plant and equipment are well maintained</li><li>• Ordering only the required amount of materials</li><li>• Keeping materials segregated to maximise reuse and recycling</li><li>• Ensuring that waste sorting and storage areas are maintained in a tidy and functional state and do not present hazards to human health or the environment</li><li>• Ensure hazardous or contaminated materials are appropriately managed and disposed</li></ul>



Role	Responsibilities
	<ul style="list-style-type: none"> <li>• Ensure site records and documentation is kept and is complete</li> <li>• Ensure this WMP are implemented, and</li> <li>• Liaise with Council and regulatory authorities as required.</li> </ul>
Construction Environmental Manager or equivalent	<ul style="list-style-type: none"> <li>• Ensuring staff and contractors are aware of site requirements for waste management</li> <li>• Establishing separate skips and stockpiles and recycling bins for effective waste segregation and recycling purposes</li> <li>• Developing or identifying, and using, local commercial opportunities for re-use of materials where re-use on-site is impractical</li> <li>• Facilitate correct waste collection</li> <li>• Engage suitable waste collection and disposal contractors</li> <li>• Approval of off-site waste disposal locations and checking licensing requirements</li> <li>• Arranging for the assessment of potentially hazardous or contaminated materials</li> <li>• Arranging for appropriate contaminated waste management and approval of off-site waste transport, disposal locations and checking licensing requirements</li> <li>• Monitor and maintain site environmental controls and</li> <li>• Monitoring, inspection and reporting requirements.</li> </ul>

## 6.0 Operational Waste and Recycling Management

### 6.1 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 the NSW EPA (2022-2023) indicates that the commercial and industrial waste recovery rate in 2022-2023 was 51%.<sup>12</sup>

It is anticipated that the waste minimisation measures in the following sections will assist the Development to achieve this recycling rate. Waste reporting and audits can be used to determine the actual percentage of wastes that are being or have been recycled during operation.

### 6.2 Waste Streams and Classifications

The operation of the Development is likely to generate the following broad waste streams:

- Domestic type waste generated by employees, including food waste
- Bulk packaging waste, including polystyrene, plastic wrapping and cardboard boxes
- Office waste
- Garden organic waste from landscaped areas
- Bulky waste items such as furniture and e-waste.

<sup>12</sup> <https://www.epa.nsw.gov.au/your-environment/waste/waste-overview/waste-performance-data>



Potential waste types, their associated waste classifications, and management methods are provided in Table 8. For further information on how to determine a waste's classification, refer to the NSW EPA (2014) *Waste Classification Guidelines*<sup>13</sup>. Recycling drop off locations and contacts can be found on <https://businessrecycling.com.au/> for each waste type.

**Table 8 Potential waste types, classifications and management methods for operational waste**

Waste Types	NSW EPA Waste Classification	Proposed Management Method
<b>General Operations</b>		
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
Lead-acid or nickel-cadmium batteries	Hazardous waste	Off-site recycling, Contact the Australian Battery Recycling Initiative <sup>14</sup> for more information
Other batteries	General solid waste (non-putrescible)	
Mobile Phones	General solid waste (non-putrescible)	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	General solid waste (non-putrescible)	Off-site recycling
Printer toners and ink cartridges	General solid waste (non-putrescible)	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
Packaging materials, including wood, plastic, including stretch wrap or LDPE, cardboard and metals	General solid waste (non-putrescible)	Off-site recycling
Wooden or plastic crates and pallets	General solid waste (non-putrescible)	Reused for similar projects, returned to suppliers, or off-site recycling.
Sanitary waste, nappies	General solid (putrescible) waste	Contractor disposal at licensed facility
<b>Maintenance</b>		

<sup>13</sup> Available online from <https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines>

<sup>14</sup> <http://www.batteryrecycling.org.au/home>



Waste Types	NSW EPA Waste Classification	Proposed Management Method
Spent smoke detectors <sup>15</sup> - some commercial varieties	Hazardous waste	Disposal to landfill, or off-site disposal at licensed facility
Spent smoke detectors - others	General solid (non-putrescible) waste,	
Glass, other than containers	General solid (non-putrescible) waste	Off-site recycling
Light bulbs and fluorescent tubes	General solid (non-putrescible) waste	Off-site recycling or disposal, contact FluoroCycle <sup>16</sup> or Lamp Recyclers <sup>17</sup> for more information
Empty oil and other drums or containers, such as fuel, chemicals, paints, spill clean ups that were previously used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming.	Hazardous waste	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at licensed facility
Empty oil and other drums or containers, such as fuel, chemicals, paints, spill clean ups that have been cleaned by washing or vacuuming.	General solid waste (non-putrescible)	
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
Air-conditioning parts and filters	General solid (non-putrescible) waste	Off-site recycling or disposal to landfill

### 6.3 Estimated Quantities of Operational Waste

For estimating the type and quantities of waste generated from the operational activities of the Project, SLR has used waste generation rates in the NBC Guidelines (see Section 0 above). These operational waste generation rates used are shown below in Table 9.

**Table 9 Operational waste generation rates**

Type of Use	Garbage Generation (L/100 m <sup>2</sup> /day)	Recycling Generation (L/100 m <sup>2</sup> /day)
Car park	2	0
Offices	10	10
Warehouse	30	30

Using the waste generation rates in Table 9 above, the approximate weekly waste quantities for the development have been calculated and taking into account the following assumptions:

- The floor areas shown in the drawings:
  - SK200 P12
  - SK201 P10
  - SK203 P10

<sup>15</sup> 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.

<sup>16</sup> <https://www.fluorocycle.org.au/>

<sup>17</sup> <https://www.lamprecyclers.com.au/>



- The proportions of the recycling stream are as follows:<sup>18</sup>
  - Paper and cardboard - 93%
  - Plastic bags and wrap - 5%
  - Recyclable containers - 2%
- A week comprising seven days of operation.

The estimated quantities of operational waste generated by the development are shown in Table 10.

**Table 10 Estimated operational quantities**

Level	Use	Area (m <sup>2</sup> )	Litres per Day		Litres per Week			
			General Waste	Recycling	General Waste	Paper and Cardboard	Plastic Wrap and Bags	Recyclable Containers
1	Warehouse	2,302	691	691	4,834	4,496	242	97
	Office	1,025	103	103	718	667	36	14
2	Warehouse	2,250	675	675	4,725	4,394	236	95
	Office	1,183	118	118	828	770	41	17
Car park		1,824	36	-	255	-	-	-
<b>Total</b>		<b>8,584</b>	<b>1,623</b>	<b>1,586</b>	<b>11,360</b>	<b>10,327</b>	<b>555</b>	<b>222</b>

## 6.4 Waste Storage Area Size

### 6.4.1 Self Storage Area

SLR recommends that no waste storage or bins be provided in the self storage area on the ground level. Customers using this facility should be responsible for removing all their own waste from the facility.

Providing waste bins in this area provides an opportunity for customers to misuse the system and dump waste that they could remove themselves, especially as the facility would be most likely unstaffed for long periods each day. This waste would then have to be removed at the operator's expense.

### 6.4.2 Garbage and Recycling Bins

The waste storage areas must be large enough to adequately store all quantities of operational waste and recycling between collections. Given the sizes of the warehouses in the development, a rear lift waste collection service using 1100 L bins is the most likely.

Typical bin dimensions are shown in Table 11, although these can vary between manufacturer and supplier.

**Table 11 Dimensions and approximate footprint of bins**

Bin Capacity	Height (mm)	Depth (mm)	Width (mm)	Footprint (m <sup>2</sup> )
1100 L	1460	1280	1370	1.75

<sup>18</sup> Industry fact sheets - Commercial offices EPA 2012/0341 November 2012 ISBN 978-1-74293-876-9



To allow for ready movement of bins into and out of the bin storage area, the bin storage area is to provide a floor area of at least 200% of the total minimum bin footprint. This can also act as a contingency in the event of spikes in waste generation.

### 6.4.3 Bulky Waste

This stream includes broken pallets, broken furniture, e-waste and other materials that cannot be disposed of in the general or recyclable waste stream. There is no requirement for bulky waste storage in non-residential development in the NBC Guidelines. SLR recommends 4 m<sup>2</sup> be allocated for bulky waste storage.

### 6.4.4 Total Waste Storage Area

The estimated number of bins required for weekly storage of operational waste and recycling are based on:

- The estimated quantities of operational waste and recycling generated are shown in Table 10
- Bin dimensions shown in Table 11.

The number of bins and waste storage space required are shown in Table 12 below.

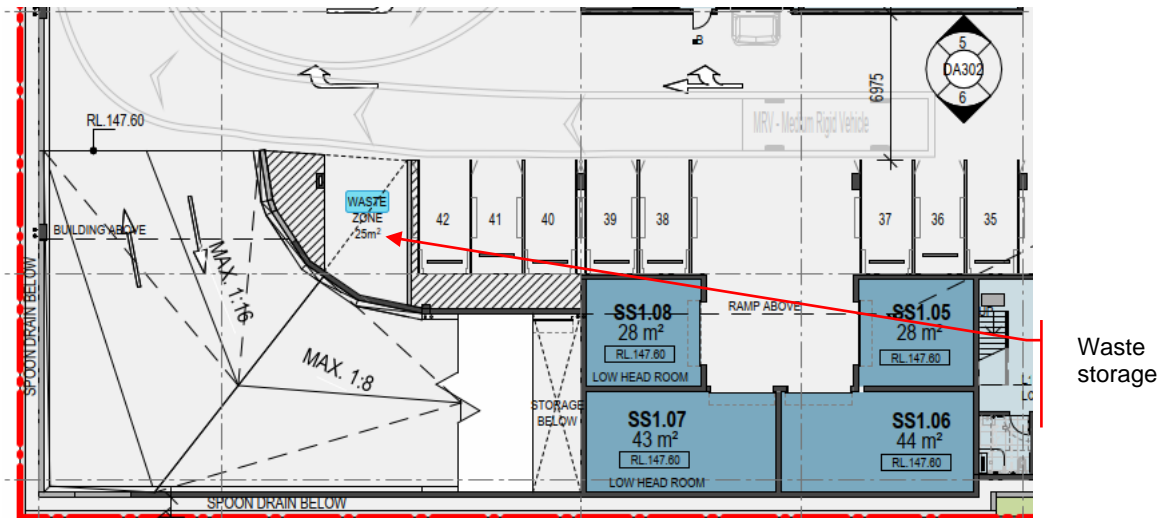
**Table 12 Recommended number of bins and storage area**

Bin Capacity		1100 L
Total per Week (L)	Garbage	11,360
	Paper and Cardboard	10,327
	Plastic Wrap and Bags	555
	Recyclable Containers	222
Minimum collections per week	Garbage	3
	Paper and Cardboard	3
	Plastic Wrap and Bags	0.5
	Recyclable Containers	1
Number of bins	Garbage	4
	Paper and Cardboard	4
	Plastic Wrap and Bags	1
	Recyclable Containers	1
	<b>Total</b>	<b>10</b>
Area Required (m <sup>2</sup> )	Garbage	7.0
	Paper and Cardboard	7.0
	Plastic Wrap and Bags	1.8
	Recyclable Containers	0.43
	<b>Total Bins Only</b>	<b>16.2</b>
	<b>Total including Manoeuvring</b>	<b>32.4</b>
Bulky waste		4.0
<b>Total Waste Storage Space (m<sup>2</sup>)</b>		<b>36.4</b>



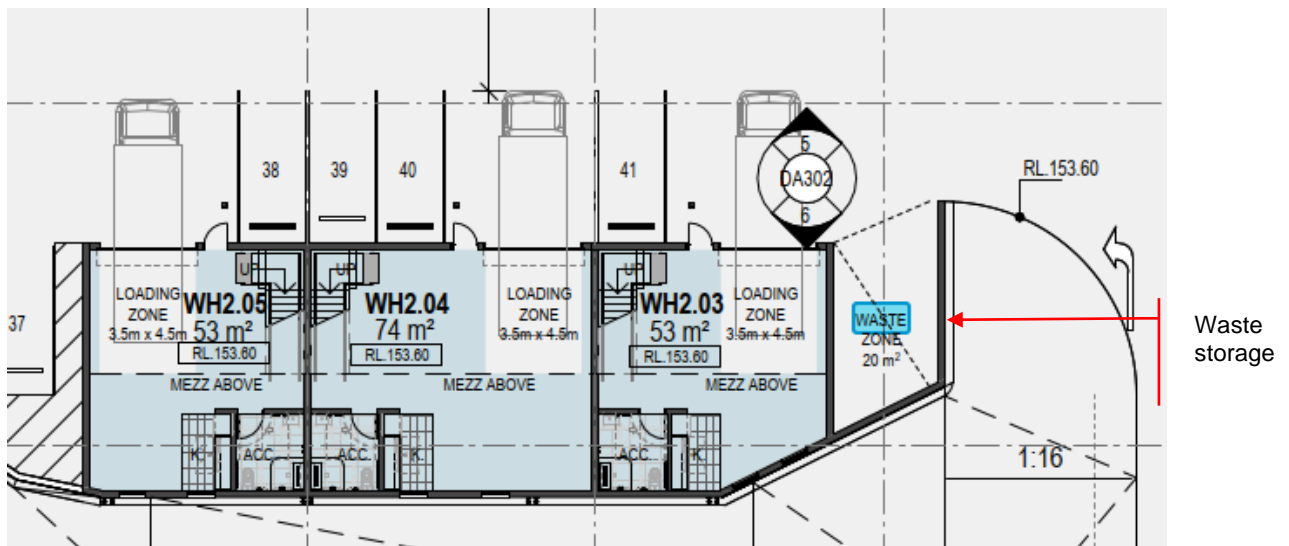
## 6.5 Location of waste storage areas

A full-sized waste storage area would be provided on Level 1 for all warehouses shown in Figure 6 below.



**Figure 6 – Full sized waste storage locations Level 1**

Waste storage areas could also be provided on each level for the warehouses on those levels. An example for Level 2 is shown in Figure 7.



**Figure 7 –Waste storage location Level 2**

## 6.6 Waste System Description

Warehouse tenants will place waste in the central waste storage areas, from where it will be collected by a contractor.





## **6.7 Waste Vehicle Access**

The following access provisions will apply for collections:

- Collection vehicles will be able to enter and exit the site in a forward direction
- Unobstructed access, adequate driveways and ramps of sufficient strength to support waste collection vehicle have been allowed for.

## **6.8 Waste Avoidance, Reuse and Recycling**

### **6.8.1 Waste avoidance**

Waste avoidance measures include:

- Returning packaging materials like cardboard to the suppliers through the services of the supplier delivery trucks, allowing the reduction of waste further along the supply chain
- Providing ceramic cups, mugs, crockery and cutlery rather than disposable items
- Bulk purchasing and the purchasing of items that use minimal packaging
- Presenting all waste reduction initiatives to staff and tenants as part of their induction program, and
- Leasing equipment and machinery rather than outright purchase and disposal.

### **6.8.2 Re-use**

Possible re-use opportunities include establishing systems with in-house and supply chain stakeholders to transport products in re-useable packaging where possible.

### **6.8.3 Recycling**

Recycling opportunities include:

- Collecting and recycling e-wastes
- Printer toners and ink cartridges, if purchased, are collected in allocated bins for appropriate contractor recycling
- Paper recycling trays provided in communal and staff areas for scrap paper collection and recycling
- Providing separate receptacles for general waste, recycling and paper and cardboard throughout public areas, as well as within staff areas, to encourage source-separation of waste streams
- Work with tenants to investigate opportunities for the use of recycled paper bags or reusable bags in place of plastics bags
- Separating, by a reasonable distance, the storage areas for recyclables from the general waste storage areas to avoid cross contamination, and
- Development of 'buy recycled' purchasing policy.



## 6.9 Communication Strategies

Education and communication on waste management initiatives and measures will be regularly and clearly conveyed to staff, cleaners and visitors. 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 which can incur a collection contractor penalty fee
- Increased recovery of recyclables and organics material, if implemented, and
- Greater contribution to state-wide targets for waste reduction and resource recovery.

To realise these benefits, the following communications strategies are recommended for the Facilities Manager:

- Use consistent signage and colour coding throughout the Development
- Ensure all staff are informed of correct waste separation and management procedures
- Provide directional signage to show locations and routes to waste storage areas
- Repair signs and labels promptly to avoid a breakdown in communication
- Clearly label general and comingled waste bins to ensure no cross contamination and to identify the types of waste that may be disposed of in each bin, and
- Educate all staff and contractors associated with the Development, ensuring they adhere to this WMP.

## 6.10 Signage

Signs which clearly identify waste management procedures and provisions to contractors, staff and visitors will be posted at the Development as appropriate.

The design and use of safety signs will comply with Australian Standard *AS 1319 Safety Signs for the Occupational Environment* and clearly describe the types of materials designated for each bin.

Colour-coded and labelled bin lids are necessary for identifying bins and the Australian Standard *AS 4123.7-2006 (R2017) Mobile waste containers Part 7: Colours, markings, and designation requirements* provides recommendations for the designated colours for waste bins depending on the type of waste the bins are to receive. The colours that will apply to ongoing waste generated by the Development are:

- Blue: Paper and cardboard
- Yellow: Recyclables (other than paper and cardboard)



- Red: General waste.

All bin signage should also follow the NSW EPA's standard signage.<sup>19</sup>

Other key signage considerations include:

- 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 8
- 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 that complies with AS 4123, and a system for signs throughout the Development, and
- Emergency contact information for reporting issues associated with waste or recycling management.



**Figure 8 Example NSW EPA labels for ongoing waste**

## 6.11 Roles and Responsibilities

It is the responsibility of the Facilities Manager, or equivalent role, to implement this WMP and a responsibility of all tenants and staff to follow the waste management procedures set out by the WMP. SLR recommends that all subcontractors have the roles and responsibilities of all waste management personnel identified and The Development's waste management system clearly explained. A summary of recommended roles and responsibilities are provided in Table 13.

Suggested roles and responsibilities for site preparation, demolition and construction waste management

**Table 13 Suggested operational waste-related roles and responsibilities**

Responsible Person	General Tasks
Facilities Manager or equivalent role	Ensure the WMP is implemented throughout the life of the operation.
	Update the WMP as needed to ensure the plan remains applicable to the site.

<sup>19</sup> NSW EPA waste signs/posters <http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm>



Responsible Person	General Tasks
	Undertake liaison and management of contracted waste and recycling collections with Council, contractors and any relevant authorities.
	Regularly conduct waste audits to review system performance and identify any additional materials that could be recovered.
	Manage any complaints and non-compliances reported through waste audits and other sources.
	Ensure all monitoring and audit results are well documented and conducted as specified in this WMP.
	Conduct regular waste sorting, physical condition and cleanliness inspections of bins, waste storage rooms and all other waste management equipment for functionality, hygiene and safety.
	Organise cleaning and maintenance requirements for waste management equipment as required.
	Ensure waste and recycling storage rooms are kept tidy.
	Monitor bins to ensure no overfilling occurs and manage unexpected waste quantities to mitigate waste overflow in storage areas
	Ensure effective signage, communication and education is provided to alert visitors, employees, site management staff 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.
	Manage ongoing education on correct source separation and waste management at least every three months.
	Ensure that regular cleaning and daily transfer of bins is correctly being undertaken by the cleaners.
	Ensure all waste compactors and balers are maintained and operational.
	Ultimately responsible for the management of all waste management equipment, cleaning requirements, waste transfer and collection arrangements.
Cleaners and caretakers	Transfer general waste, recyclables, cardboard waste and hazardous waste from public spaces to the waste and recycling storage areas on a daily basis or as required.
	Maintain and operate compactors and balers, if obtained, and ensure no overfilling occurs.
	Cleaning of all bins and waste and recycling rooms as per the direction of the site manager, or equivalent role.
	Monitor bins to ensure no overfilling occurs.
	Ensure bins and waste storage areas are kept tidy and clean.
	Compliance with the provisions of this WMP.
Tenants	Transfer general waste, recyclables, cardboard waste and hazardous waste to allocated waste and recycling storage areas in the loading docks.
	Adhere to all waste management directions and comply with The Development's waste management provisions as outlined by the Facilities Manager.





# **Appendix A    Council Waste Management Forms**

**14 Aquatic Drive, Frenchs Forest**

**Waste Management Plan**

**Goodman Property Services (Aust) Pty Ltd**

SLR Project No.: 610.31042.00603

1 May 2025

# NORTHERN BEACHES COUNCIL

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## Waste Management Plan

(For development in the area of WLEP 2011 and WLEP 2000)

This plan is to be completed  
in accordance with Council's

## Waste Management Guidelines

(For development in the area of WLEP 2011 and WLEP 2000)

**Effective Date: 25 October 2016**

### TABLE OF CONTENTS

Purpose of the Waste Management Plan .....	2
Structure of the Waste Management Plan .....	2
Applicant and Project Details .....	3
Section 1 – Demolition .....	5
Section 2 – Construction .....	7
Section 3 – On-going waste management for one or two dwellings.....	9
Section 4 – On-going waste management for three or more dwellings.....	10
Section 5 – On-going waste management for non-residential developments .....	11
Section 6 – Private roadway developments.....	12

## 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) submitted under WLEP 2011 or WLEP 2000. 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 <sup>^</sup>
<b>Section 1 – Demolition</b>	All
<b>Section 2 – Construction</b>	All
<b>Section 3 – On-going waste management for one or two dwellings</b>	One or two dwelling developments Mixed-use developments containing one or two dwellings
<b>Section 4 – On-going waste management for three or more dwellings</b>	Three or more dwelling developments Mixed-use developments containing three or more dwellings
<b>Section 5 – On-going waste management for non-residential and mixed use developments</b>	Commercial developments Industrial developments Mixed-use developments
<b>Section 6 – Private roadway developments</b>	Private roadways

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



## Applicant and Project Details

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

### Applicants' Details

Name: (must be the same as the DA form)	
Address: (must be the same as the DA form)	
Phone Number:	
Email Address:	

### Property Details

Lot No: Deposited Plan (DP) No: or Strata Plan (SP) No:	
Unit No: House No: Street: Suburb: Postcode:	14 Aquatic Drive Frenchs Forest 2086

### Project Details

Description of proposed development:	Three-storey industrial building including 145 self-storage units, 72 warehouse units, car parking, landscaping and associated infrastructure and servicing works
Structures to be demolished:	Office building

### Applicant Declaration

I declare that:

1. This plan has been completed in accordance with the Waste Management Guidelines
2. To the best of my knowledge, the details on this form are accurate and correct

I understand that:

1. All records demonstrating lawful disposal of waste will be retained and kept readily accessible for inspection by regulatory authorities such as Council, NSW Environment Protection Authority or WorkCover NSW.
2. A bond in accordance with Council's fees and charges may apply to this development and must be paid to Council prior to any works commencing.
3. The bond will only be refunded when Council is satisfied that all waste outlined in this plan has been managed as per the plan, and evidence such as photos, receipts and statutory declarations must be supplied where appropriate.

Signature of Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

## Section 1 – Demolition

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

MATERIALS ON SITE	DESTINATION <i>Evidence such as weighbridge dockets and invoices for waste disposal or recycling must be retained on site for inspection</i>					
	REUSE AND RECYCLING (MOST FAVOURABLE)				DISPOSAL (LEAST FAVOURABLE)	
Types of Waste Material	Estimated Volume (m <sup>3</sup> ) or Weight (t)	<b>ONSITE RE-USE</b> ✓ Specify how material will be reused on site	<b>OFFSITE RECYCLING</b> ✓ Recycling Outlet (RO) ✓ Waste Transport Contractor (WTC)		<b>OFFSITE DISPOSAL</b> ✓ Specify landfill site (LS) ✓ Specify Waste Transport Contractor (WTC)	
			WTC	RO	WTC	LS
Excavated Material	1107 m <sup>3</sup>	100%				
Garden Organics						
Bricks	7078 m <sup>3</sup>			100%	OPTION NOT AVAILABLE: These materials must be re-used or separated on or off site and sent for recycling.	
Tiles						
Concrete	41,949 m <sup>3</sup>			100%		
Timber	347 m <sup>3</sup>			100%		
Plasterboard	514 m <sup>3</sup>			100%		
Metals	279 m <sup>3</sup>			100%		
Asphalt	266 m <sup>3</sup>			100%		
Other waste (please specify)	General waste 961 m <sup>3</sup>					100%
Estimated Total % Recovered	98%					

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: <ul style="list-style-type: none"> <li>The structures to be demolished.</li> <li>Storage areas for waste to be reused, recycled, or disposed of.</li> <li>Materials storage (if the development also includes construction)</li> </ul>	<input type="checkbox"/>
The table on the previous page, completed in accordance with 'Chapter 1 – Demolition' in the guidelines.	<input type="checkbox"/>

## Section 2 – Construction

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

MATERIALS ON SITE	DESTINATION <i>Evidence such as weighbridge dockets and invoices for waste disposal or recycling must be retained on site for inspection</i>					
	REUSE AND RECYCLING (MOST FAVOURABLE)				DISPOSAL (LEAST FAVOURABLE)	
Types of Waste Material	Estimated Volume (m <sup>3</sup> ) or Weight (t)	ONSITE RE-USE ✓ Specify how material will be reused on site	OFFSITE RECYCLING ✓ Specify recycling outlet (RO) ✓ Specify Waste Transport Contractor (WTC)		OFFSITE DISPOSAL ✓ Specify landfill site (LS) ✓ Specify Waste Transport Contractor (WTC)	
* Please specify			WTC	RO	WTC	LS
Excavated Material	194 m <sup>3</sup>	100%				
Garden Organics						
Bricks	279 m <sup>3</sup>			100%	OPTION NOT AVAILABLE: These materials must be re-used or separated on or off site and sent for recycling.	
Roof sheeting	137 m <sup>3</sup>			100%		
Concrete	556 m <sup>3</sup>			100%		
Timber*	249 m <sup>3</sup>			100%		
Plasterboard	190 m <sup>3</sup>			100%		
Metals*	197 m <sup>3</sup>			100%		
Asphalt	5.5 m <sup>3</sup>			100%		
Other waste*	556 m <sup>3</sup>					100%
Estimated Total % Recovered	76.4%					

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
<p>A site plan showing:</p> <ul style="list-style-type: none"> <li>• The structures to be demolished.</li> <li>• Potential storage areas for waste to be reused, recycled, or disposed of.</li> <li>• Materials storage</li> </ul>	<input type="checkbox"/>
<p>The table on the previous page, completed in accordance with 'Chapter 2 – Construction' in the guidelines.</p>	<input type="checkbox"/>

### 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.)	<input type="checkbox"/>
Waste Storage Area location requirements (Chapter 3.3.)	<input type="checkbox"/>



## 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 and Applicant Declaration

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

## 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: Warehouse and storage

Number of commercial premises: 217

Number of Waste Storage Areas: 1

### WMP Checklist

Do your architectural/landscape plans include the following:	Applicant Tick	N/A
Waste Storage Area design requirements (Chapter 5.2.)	<input checked="" type="checkbox"/>	-
Waste Storage Area location requirements (Chapter 5.3.)	<input checked="" type="checkbox"/>	-

## 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: \_\_\_\_\_

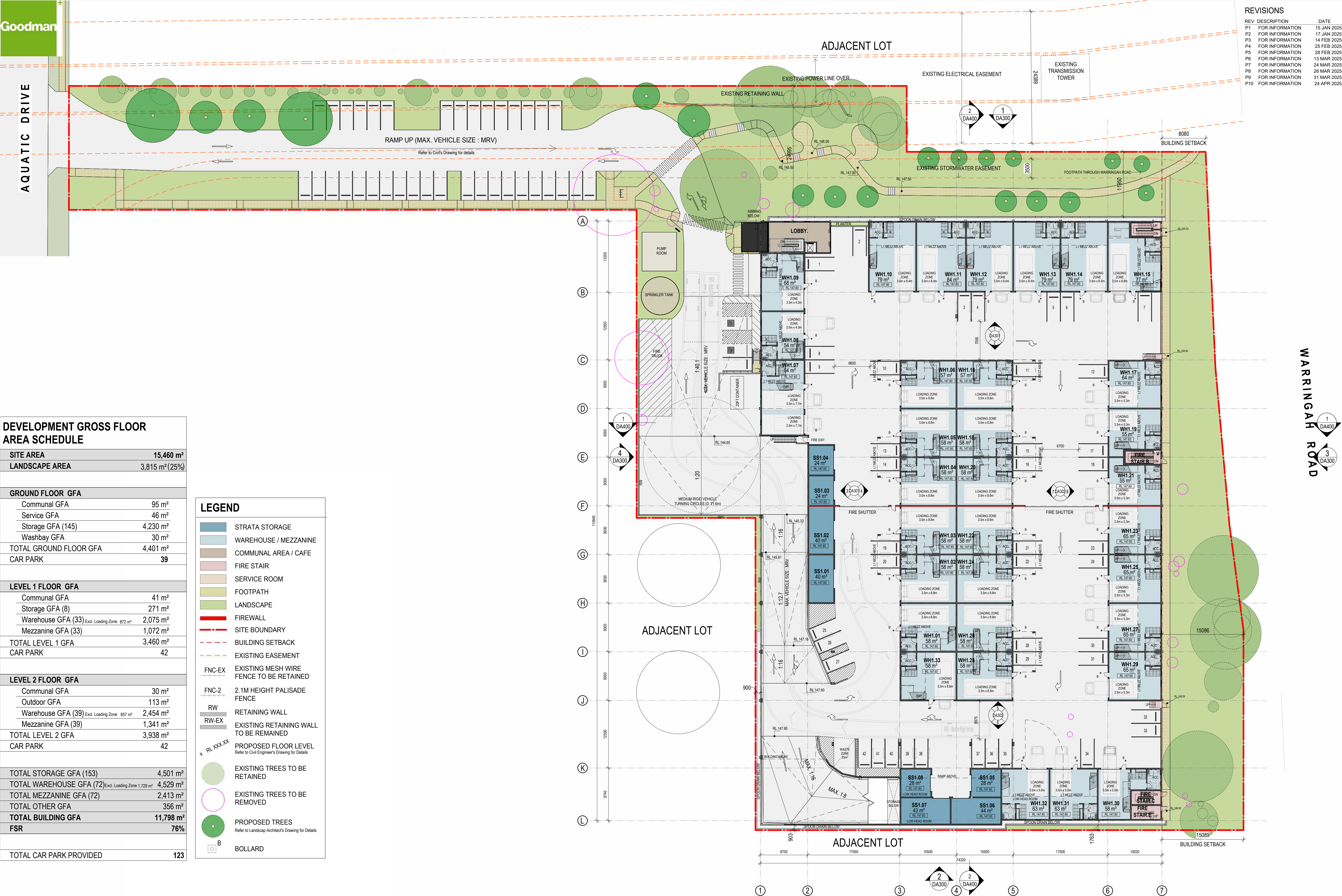
Number of dwellings: \_\_\_\_\_

(Only applicable for sub-divisions)

### WMP Checklist and Applicant Declaration

Do your sub-division plans include the following:	Applicant Tick	N/A
Council's waste vehicle design requirements (Chapter 7.2.)	<input type="checkbox"/>	<input type="checkbox"/>
Waste Storage Area requirements (Chapter 7.3.)	<input type="checkbox"/>	<input type="checkbox"/>





DEVELOPMENT GROSS FLOOR AREA SCHEDULE

SITE AREA	15,460 m <sup>2</sup>
LANDSCAPE AREA	3,815 m <sup>2</sup> (25%)

GROUND FLOOR GFA	
Communal GFA	95 m <sup>2</sup>
Service GFA	46 m <sup>2</sup>
Storage GFA (145)	4,230 m <sup>2</sup>
Washbay GFA	30 m <sup>2</sup>
TOTAL GROUND FLOOR GFA	4,401 m <sup>2</sup>
CAR PARK	39

LEVEL 1 FLOOR GFA	
Communal GFA	41 m <sup>2</sup>
Storage GFA (8)	271 m <sup>2</sup>
Warehouse GFA (33) Excl. Loading Zone	2,075 m <sup>2</sup>
Mezzanine GFA (33)	1,072 m <sup>2</sup>
TOTAL LEVEL 1 GFA	3,460 m <sup>2</sup>
CAR PARK	42

LEVEL 2 FLOOR GFA	
Communal GFA	30 m <sup>2</sup>
Outdoor GFA	113 m <sup>2</sup>
Warehouse GFA (39) Excl. Loading Zone	2,454 m <sup>2</sup>
Mezzanine GFA (39)	1,341 m <sup>2</sup>
TOTAL LEVEL 2 GFA	3,938 m <sup>2</sup>
CAR PARK	42

TOTAL STORAGE GFA (153)	4,501 m <sup>2</sup>
TOTAL WAREHOUSE GFA (72) Excl. Loading Zone	4,529 m <sup>2</sup>
TOTAL MEZZANINE GFA (72)	2,413 m <sup>2</sup>
TOTAL OTHER GFA	356 m <sup>2</sup>
TOTAL BUILDING GFA	11,798 m <sup>2</sup>
FSR	76%

TOTAL CAR PARK PROVIDED	123
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LEGEND

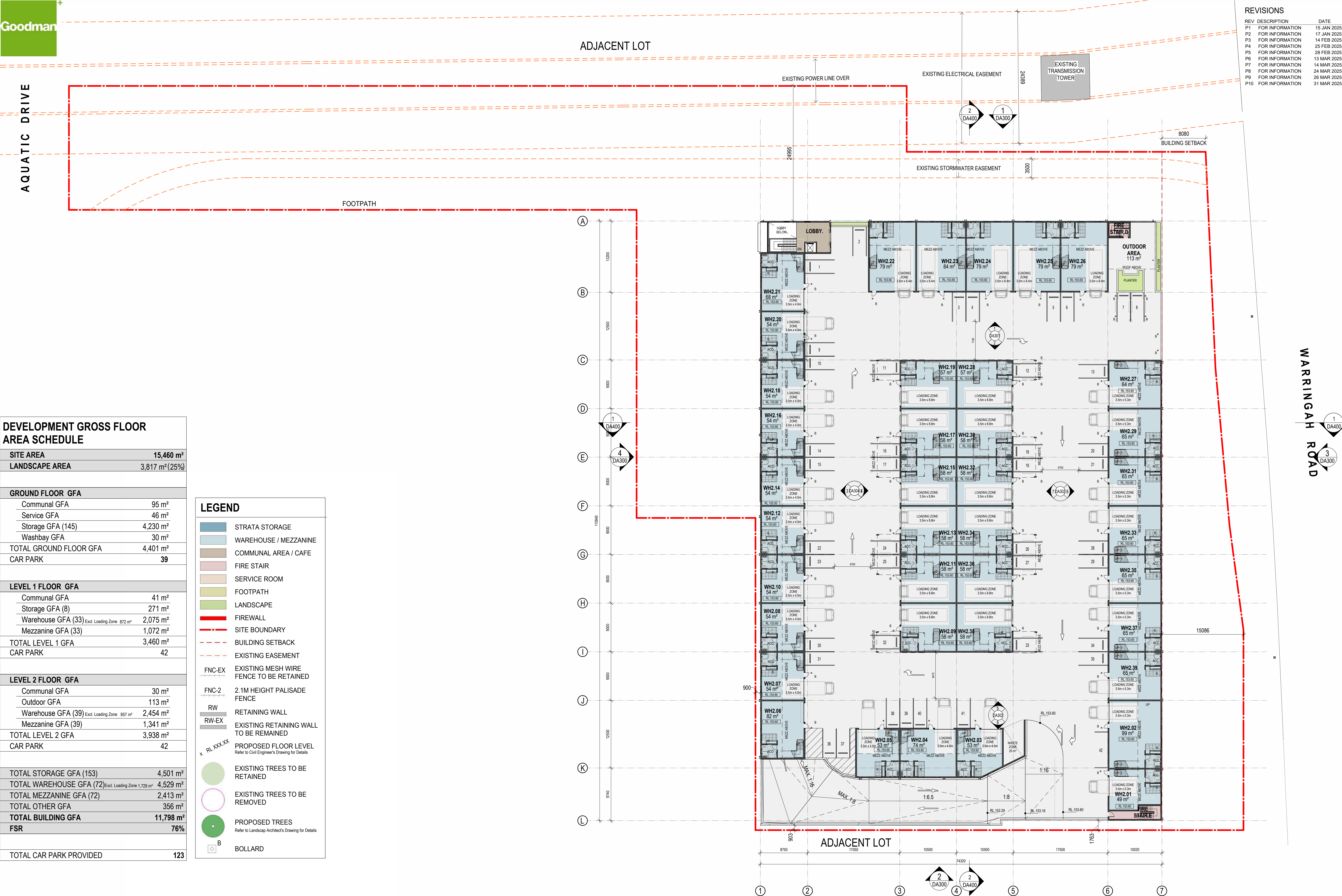
	STRATA STORAGE
	WAREHOUSE / MEZZANINE
	COMMUNAL AREA / CAFE
	FIRE STAIR
	SERVICE ROOM
	FOOTPATH
	LANDSCAPE
	FIREWALL
	SITE BOUNDARY
	BUILDING SETBACK
	EXISTING EASEMENT
	EXISTING MESH WIRE FENCE TO BE RETAINED
	2.1M HEIGHT PALISADE FENCE
	RETAINING WALL
	EXISTING RETAINING WALL TO BE REMAINED
	PROPOSED FLOOR LEVEL Refer to Civil Engineer's Drawing for Details
	EXISTING TREES TO BE RETAINED
	EXISTING TREES TO BE REMOVED
	PROPOSED TREES Refer to Landscap Architect's Drawing for Details
	BOLLARD

REVISIONS

REV	DESCRIPTION	DATE
P1	FOR INFORMATION	15 JAN 2025
P2	FOR INFORMATION	17 JAN 2025
P3	FOR INFORMATION	14 FEB 2025
P4	FOR INFORMATION	25 FEB 2025
P5	FOR INFORMATION	28 FEB 2025
P6	FOR INFORMATION	13 MAR 2025
P7	FOR INFORMATION	24 MAR 2025
P8	FOR INFORMATION	26 MAR 2025
P9	FOR INFORMATION	31 MAR 2025
P10	FOR INFORMATION	24 APR 2025



REV	DESCRIPTION	DATE
P1	FOR INFORMATION	15 JAN 2025
P2	FOR INFORMATION	17 JAN 2025
P3	FOR INFORMATION	14 FEB 2025
P4	FOR INFORMATION	25 FEB 2025
P5	FOR INFORMATION	28 FEB 2025
P6	FOR INFORMATION	13 MAR 2025
P7	FOR INFORMATION	14 MAR 2025
P8	FOR INFORMATION	24 MAR 2025
P9	FOR INFORMATION	26 MAR 2025
P10	FOR INFORMATION	31 MAR 2025



DEVELOPMENT GROSS FLOOR AREA SCHEDULE

SITE AREA	15,460 m <sup>2</sup>
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CAR PARK	42

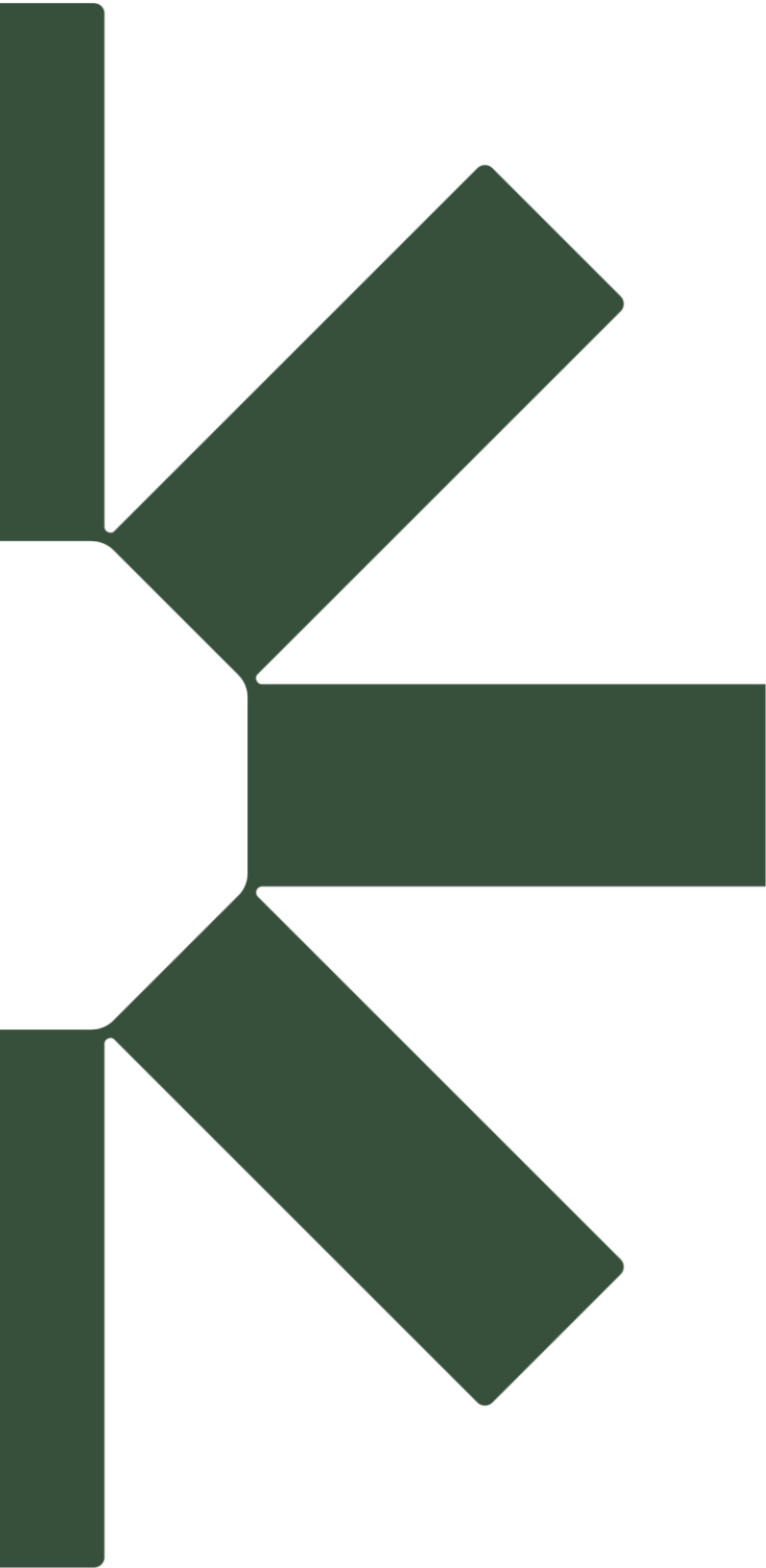
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TOTAL BUILDING GFA	11,798 m <sup>2</sup>
FSR	76%

TOTAL CAR PARK PROVIDED	123
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LEGEND

- STRATA STORAGE
- WAREHOUSE / MEZZANINE
- COMMUNAL AREA / CAFE
- FIRE STAIR
- SERVICE ROOM
- FOOTPATH
- LANDSCAPE
- FIREWALL
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- EXISTING EASEMENT
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- RW-EX EXISTING RETAINING WALL TO BE REMAINED
- \* RL XXX.XX PROPOSED FLOOR LEVEL Refer to Civil Engineer's Drawing for Details
- EXISTING TREES TO BE RETAINED
- EXISTING TREES TO BE REMOVED
- PROPOSED TREES Refer to Landscape Architect's Drawing for Details
- B BOLLARD



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