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16 April 2021

Eugen Bandas
Restifa & Partners
Suite 34, 330 Wattle Street
NORTH SYDNEY

Dear Eugen,

Re: NSWLEC 2020/341091 (Detailed DA) and NSWLEC 2020/341094 (Mod) – Cudgegong Road, Stages 3 & 4, Rouse Hill

I refer to the above and Blacktown City Council's Statement of Facts and Contentions (SOFAC) dated 9th February 2021 and our recent Section 34 conciliation meeting concerning waste management. We have updated and amended our Waste Management Plan in response to Council's contentions to both clarify and assist Council's assessment of the DA concerning waste – see **Attachment 1.**

In amending our Waste Management Plan, we bring the following to your attention:

BLACKTOWN CITY COUNCIL GROWTH CENTRE PRECINCTS DCP 2018 (AMENDED MARCH 2020)

1. In Part A Facts of Council's Statement of Facts and Contentions 9th February 2021, Council state the following:

> Development Control Plans
>
> 19. Blacktown City Council Growth Centre Precincts Development Control Plan 2018 **(Growth Centres DCP)** applies to the Subject Site.
>
> 20. The following sections of the Growth Centres DCP are relevant:
>
> a) Part 1 – Introduction;
>
> b) Part 2 – Precinct Planning Outcomes;
>
> c) Part 3 – Neighbourhood and Subdivision Design;
>
> d) Part 4 – Development in the Residential Zones; and
>
> e) Schedule 4 – Cudgegong Road (Area 20) Precinct.

2. The site is zoned *B4 Mixed Use* which indicates *Part 4 Development in Residential Zones* is not applicable but *Part 5 Centres development controls* is applicable. However, Table 1-3 on page 7 of the DCP indicates need to address particular sections of Part 4 concerning residential flat buildings. Regardless, the waste management controls in Part 4 for residential flat buildings are performance based.
3. *Part 5 Centres development controls* only refers to waste in *Section 5.2.6 Site Servicing* albeit in a limited manner.
4. *Part 9.8 Waste Management* lists largely performance based controls and refers to the requirements of Appendix F of the DCP
5. *Schedule Four – Cudgegong Road Station (Area 20) Precinct* does not contain specific controls concerning waste.
6. The waste management controls in the Growth Centres DCP are largely performance based and are not prescriptive in the manner reflected in Council's contentions.

COUNCIL'S PRE DA MEETING MINUTES

1. PAM Number C19/442948 minutes to 27th November 2019 pre DA meeting states a WMP is required. Council DA checklist states the general requirements of a WMP and refers to *Blacktown DCP Part G Site Waste Management and Minimisation* 2015 with a WMP template in Appendix 1. However, this DCP does not apply to land subject to SEPP Sydney Growth Centres and hence does not apply to this DA.
2. Pages 13 to 19 of the minutes list Council's requirements on waste for the DA. Many of these requirements are not referred in *Blacktown City Council Growth Centre Precincts DCP 2018* (amended March 2020).
3. Most of the requirements on Pages 13-19 are not even contained in *Blacktown DCP Part G Site Waste Management and Minimisation.*
4. It would appear Council's pre DA minutes concerning its assessment requirements for the development concerning waste have not been formally considered and included in the NSW governments *Blacktown City Council Growth Centre Precincts DCP 2018.*

EPA'S BETTER PRACTICE GUIDE FOR RESOURCE RECOVERY IN RESIDENTIAL DEVELOPMENTS 2019.

1. It would appear that many of Council's waste contentions have been derived from the EPA's *Better Practice Guide for Resource Recovery in Residential Developments 2019.*

2. Page 15 of the guide states the following:

> **Disclaimer**
>
> This document is a guide only and has no legal force. It does not override state and local planning control requirements. The principles and objectives of this guide should be read alongside all other applicable codes and policies or plans, in particular:
>
> - the *Apartment Design Guide 2015*
> - *Low Rise Medium Density Housing Code 2017*
> - individual council LEPs and DCPs relevant to the development location
> - Work Health & Safety legislation.

3. Pitt&sherry's WMP 7th April 2020 was prepared using the DCP and information sources and the application of industry best practice. This includes reference to the EPA's 2019 Better Practice Guide and consultation with Council's Waste Officer.

Now that Council has refused the DA for reasons listed in it's contentions, we confirm the assessment of the WMP and plans should be undertaken in accordance with Items 19 and 20 of Council's Statement of Facts and Contentions and *Blacktown City Council Growth Centre Precincts DCP 2018.*

Council's reference to the EPA's *Better practice guide* is not referred in the Growth Centres Precincts DCP. The EPA document is a guide only and has no legal force and therefore does not have determinative weight in the assessment and consideration of waste matters in the DA.

We trust this letter explains our approach in preparing the initial Waste Management Plan and it's subsequent updating and amending for the Section 34 conciliation process and why we have not advised Restifa to fully act upon Council's waste contentions.

Yours faithfully,

Trevor Allen
Senior Associate Environmental Planner
pitt&sherry
B.C.A; B.A.(Hons.); GDip. Nat. Res. Law & Policy
Member of Planning Institute of Australia (PIA) Member 68843

Attachment 1 P.20.1886-Cudgeong WMP- PLA – REP – REV03

pitt&sherry

Waste Management Plan

43 – 53 Cudgegong Road, Rouse Hill
Proposed Mixed-use Development

Prepared for
Restifa & Partners Pty Ltd

Client representative
Eugen Bandas

Date
16 April 2021

Rev 03

Table of Contents

List of figures

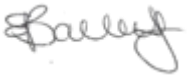
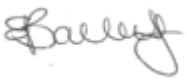
List of tables

Appendices

Appendix A — Asbestos Management Guidelines

Appendix B — Floor Plans showing waste and recycling arrangements for residential levels and garbage rooms.

Appendix C — Example Bin Lifter Mechanism, Motorised Bin Mover and Related Equipment Options and Waste Chute and Carousel

Prepared by — Elyse Ballesty		**18th December 2019**
Reviewed by — Elyse Ballesty		**18th December 2019**
Authorised by — Jessica Berry		**7th April 2020**

Revision History					
Rev No.	**Description**	**Prepared by**	**Reviewed by**	**Authorised by**	**Date**
A	Draft for Internal Review	E. Ballesty	J.Berry	E. Ballesty	3/12/2019
00	Draft for Client Review	E. Ballesty	J.Berry	E. Ballesty	21/02/2020
01	Final Waste Management Plan	L.Walker	J.Berry	J. Berry	07/04/2020
02	Draft Revised WMP	T. Allen	A. Butler	T.Allen	15/04/2021
03	Final WMP	T.Allen	A. Butler	T.Allen	16/04/2021

Glossary and Abbreviations

ACD	Asbestos Contaminated Dust or Debris
BCC	Blacktown City Council
DA	Development Application
DCP	Development Control Plan
DPIE	Department of Planning, Industry and Environment
EPA	Environment Protection Authority
GFA	Gross Floor Area
GST	Goods and Services Tax
HRV	Heavy Rigid Vehicle
LEP	Local Environmental Plan
MGB	Mobile Garbage Bin
MUD	Multi-Unit Dwelling/Development
NSW	New South Wales
WHS	Work, Health and Safety
WMP	Waste Management Plan

Executive Summary

This Waste Management Plan (WMP) has been prepared to support the design, construction and operation of a mixed use development that forms a local centre around Cudgegong Road Railway Station in accordance with *Cudgegong Road Station (Area 20) Precinct* under *Schedule 4 of Blacktown City Council Growth Centre Precincts DCP 2010.*

The development consists of two stages:

- Stage 3 involves development of Buildings 3A and 3B, consisting of 225 residential units and a supermarket and specialty retail stores and vehicle parking across three basement levels; and
- Stage 4 involves development of Buildings 4A and 4B, consisting of 231 residential units and a supermarket and specialty retail stores and vehicle parking spaces across three basement levels.

The WMP has been prepared in accordance with the *Blacktown City Council Growth Centre Precincts DCP 2010 (Oct 2020);* consultation with Blacktown Council, Council Pre-DA meeting minutes and design documentation for the development issued 5/3/21 by Zhinar Architects Pty Ltd.

In addition to identifying the reduction, reuse and disposal of waste during the construction, the WMP and development plans propose an operational waste management system for residents and retail tenants that includes the following:

- All residential floors are serviced by general waste chutes;
- All residential floors will have 2 x 240L recycling bins located adjacent/near waste chutes and when full will be rotated to garbage rooms for each building or to residential waste storage room on ground floor;
- Waste chutes will empty into 1100L bins in garbage rooms in basement and ground floor for compaction into 1100L bins and transfer by bin tugs to general waste rooms next to loading dock for collection. Bin numbers and garbage rooms for all residential units are all sized on a maximum of 17.14L /day/unit for a 3 BR unit although these units only constitute 12% and 10% of units in Stages 3 and 4 respectively.
- Bulky waste rooms are available on the ground floor for residents and retail tenants to use and are sized in accordance with council's requirements;
- Waste is managed entirely by building management and collected by private waste contractors from the loading dock as follows:

Waste Generator	Waste rates/day	Recycle rates/day	Stage 3 Bin sizes & No's at collection point	Stage 4 Bin sizes & No's at collection point	Minimum Collection Frequency/ per wk
Residential (per 3BR)	17.14L/day	17.14L/ day	1100L x 7 (general waste) 1100L x 16 (recycle).	1100L x 12 (gen. waste) 1100L x 21 (recycle).	3 x for general waste 2 x for recyclables
Retail (excluding supermarket)	80L/100m^2/day#	70L/100m^2/ day	1100L x 12 (general waste) 1100L x 12 (recycle) 8 x 660L spare bins (if required)	1100L x 10 (general waste) 1100L x 10 (recycle) 10 x 660L spare bins (if required)	3 x for general waste 3 x for recyclables
Supermarket*	240L/100m^2/day	300L/100m^2/day	1100L x 18 (general waste) 1100L x 23 (recycle)	1100L x 20 (general waste) 1100L x 25 (recycle)	3 x for general waste 3 x for recyclables
Centre Mgmt (office)	8L/100m^2/day	6L/100m^2/day	1100L x 1 (general waste) 1100 x 1 (recycle)	1100L x 1 (general waste) 1100 x 1 (recycle)	3 x for general waste 3 x for recyclables
Residential & retail bulk waste	N/A	N/A	N/A	N/A	As required
Grease trap and oil waste	N/A	N/A	N/A	N/A	As required

prior to compaction to 2:1

***** Supermarkets will manage their waste with their own equipment, systems, processes and contractors separate to building management. Bin sizes and numbers and collection frequency indicative only.

- Retail tenants will have access to retail waste rooms on the ground floor to compact and store general waste and recyclable material;
- The size of the residential garbage rooms and storage rooms, retail waste storage rooms and bulky waste storage rooms are sufficient for collection by private contractors and can adjust to the rise and fall of waste and recycling rates by residents and retail tenants over time.

This WMP can be used in the preparation of the waste management guidelines for the building and to manage the ongoing operations of the development once completed.

1. Introduction

1.1 Outline of Proposal

pitt&sherry has been engaged by Restifa & Partners Pty Ltd on behalf of Boronia Estates Pty Ltd to prepare a Waste Management Plan (**WMP**) to accompany the Development Application for Stages 3 and 4 of the proposed mixed-use development at 43-53 Cudgegong Road, Rouse Hill, New South Wales (the "**site**")

The proposed 40,470m^2 development site is situated within the NSW Government Priority Growth Area and is part of the North West Priority Land Release Area. The project will require demolition of existing residential dwellings, secondary buildings (such as sheds etc.), material waste on the site and vegetation before construction commences in a number of stages over the next five to seven years.

Stage 3 of the proposed development involves development of Buildings 3A and 3B, totalling 225 residential units, a supermarket and specialty retail outlets and parking and a car wash bay across three basement levels.

Stage 4 of the proposed development involves development of Buildings 4A and 4B, totalling 231 residential units, a supermarket and specialty retail outlets and parking and a car wash bay across three basement levels.

This WMP is based on the following:

- *Blacktown City Council Priority Growth Area Precincts Development Control Plan October 2020;*
- Consultation with the Waste Officer at Blacktown City Council;
- Blacktown City Council Pre-DA meeting minutes PAM C19/442948 - 27 November 2019;
- Design documentation for the development for Stage 3 8656 DA -3 101 to 801 Issue B 5/03/21 and for Stage 4 8656 DA 4 101 to 801 Issue C 10/03/21;

In preparing the WMP, we have considered *the NSW EPA Better Practice Guide for Resource Recovery in Residential Developments 2019.* We note this document is a guide only and is not referred by the NSW Government in the *Blacktown City Council Priority Growth Area Precincts DCP* October 2020.

1.2 Site Details

Table 1: Site and proposal details

Existing buildings and other current structures on site	• The site is approximately 40,470m^2 in area. • Existing buildings and structures include two small residential dwellings and vegetation (the vegetated area covers approximately 50% of site). There is also a small dam located in the south eastern corner of the site at 43 Cudgegong Road. • Existing vehicle access is available via Cudgegong Road. • The site history (both 43 and 53 Cudgegong Road) includes private residential use.
Description of proposed development	Stage 3 involves development of Lot 3 into Buildings 3A and 3B, consisting of 225 residential units, and commercial areas consisting of a supermarket and specialty retail outlets, with vehicle parking across three basement levels. Stage 4 involves development of Lot 4 into Buildings 4A and 4B, consisting of a total of 231 residential units, and commercial areas consisting of a supermarket and specialty retail outlets, with vehicle parking spaces across three basement levels. Note: unless otherwise specified, when referring to waste management for the proposed

	development, this Waste Management Plan refers to both Stages 3 and 4.

This development achieves the waste objectives set out in the DCP. The details on this form are the provisions and intentions for minimising waste relating to this project. All records demonstrating lawful disposal of waste will be retained and kept readily accessible for inspection by regulatory authorities such as council, NSW EPA or WorkCover NSW.

Contact Name and Client Details	Eugen Bandas Restifa & Partners Pty Ltd Address: Level 3, 123 Walker St, North Sydney NSW 2060 Phone: +61 (02) 9957 6330, Fax: +61 (02) 9922 4764, Mobile: +61 (0) 497 270 468 Email: eugen@restifa.com.au

Figure 1: The site of the proposed development (approximate boundary of 43 – 53 Cudgegong Road, Rouse Hill indicated in yellow, not to scale) Property boundaries for stages 1 and 2 (subject to prior approval) in green and stages 3 and 4 in blue

1.3 WMP Objectives

The principal objective of this WMP is to identify all potential wastes likely to be generated during the demolition, construction and operation of the development. This includes a description of how waste can be reduced, reused, recycled or disposed of, in accordance with local and state requirements.

The specific objectives of this WMP are as follows:

- To minimise resource requirements and construction waste through reuse and recycling and the efficient selection and use of resources
- To minimise demolition waste by promoting adaptability in building design, and focusing upon end of life deconstruction
- To maximise reuse or recycling of construction and demolition waste either on site or elsewhere
- To encourage building designs, construction and demolition techniques in general which minimise waste generation
- To assist applicants to develop systems for waste management that ensure waste is transported and disposed of in a lawful manner
- To provide guidance regarding space, storage, amenity and management of waste management facilities
- To ensure waste management systems are compatible with collection services
- To minimise risks associated with waste management at all stages of development.

1.4 Applicable Legislation or Guidelines

1.4.1 Waste Classification Guidelines

The NSW EPA has published the Waste Classification Guidelines which will be used in the preparation of an Asbestos Management Plan (if required), and for the classification of waste materials during all phases of the proposed development, especially when managing excavation material.

1.4.2 WorkCover Authority of NSW

All requirements of the Work Health and Safety Act 2011 and associated WHS Regulation and Codes of Practice must be met with all work practices and operations on site during all stages of the development – demolition, construction and on-going operations.

1.4.3 Council Requirements Pre-Development Application

As per Council's requirements stipulated in a pre-DA meeting held on 27 November 2019, a Contamination Report will be prepared by a suitably qualified and EPA recognised geotechnical engineer. If the preliminary report recommends further testing, then a stage 3 or 4 report will be developed and, if required, a Remediation Action Plan (RAP) prepared, necessary to make the site suitable for the end use.

2. Demolition Stage

The DA seeks approval for the demolition of two existing dwellings and excavation of approximately 180,000 m^3 of spoil. **Tables 2** and **3** provide management options for this demolition and excavation waste. The principal aim of managing this activity is to maximise resource recovery and minimise residual waste from demolition activities.

A Demolition Plan will detail all structures to be demolished. Further, approval has already been granted for the demolition and construction works relating to Stages 1 and 2 and subdivision for road construction of the proposed development. As such, this WMP refers only to Stages 3 and 4 of the proposed development. Due to the staged nature of the development, demolition activities may occur in a staged nature over a number of years with road subdivision, demolition and constructions works occurring ahead of the works for the construction of any buildings at the proposed development and Stage 3 being progressed before Stage 4.

2.1 Demolition Waste Recycler and Disposal Points

Table 2 provides the contact details for the waste and recycling disposal facilities that will be used to remove waste and recyclables during the demolition and construction phase. Although a preliminary site inspection has not identified the presence of asbestos, we have included the contact details for Wetherill Park Resource Recovery Facility.

Table 2: Material reuse, recycling and disposal facilities which can be used to dispose of waste and recyclables during the demolition stage

Name of Company	Address	Opening Hours	Contact Details	Distance (km)
Rock and Dirt Recycling	Lot 306 Racecourse Road, Windsor,	7am – 5pm	4574 1377	17.4
Back to Earth - The Mulch Makers	132 Burfitt Road, Riverstone,	7am – 5pm	9627 5758	6.8
Blaxland Waste Mgmt Facility (asbestos)	Attunga Road, Blaxland,	8am – 4:45pm	4739 2432	42.8
Enviro Pallets	164 Station Street Unit 4, Penrith	24 hrs	9673 3309	33.7
Bingo Recycling Centre St Marys	25 Dunheved Circuit, St Mary's	24 hrs	1300 424 646	20
Cardboard King	8 Kommer Place, St Mary's	9am – 5pm	9673 1660	20.1
Sims Metal St Marys	76 Christie Street, St Mary's	8am – 4pm	8886 5900	19.8
Hi Quality Group St Marys	37 Lee Holm Road, St Mary's	6am – 4:30pm	9833 0883	20.1
A&C Recycling Services St Marys	33-37 Plasser Crescent, North St Mary's	9am – 5pm	1800 502 468	18.2
Cleanaway	48 Quarry Road, Erskine Park	7am – 4pm	9864 0400	23.5
Genesis Xero Waste (asbestos)	Honeycomb Drive, Eastern Creek	9am – 5pm	9832 3333	18
Veolia Horsley Park Waste Mgmt Facility (asbestos)	716-56 Wallgrove Rd, Horsley Park,	6am – 4pm	9620 1944	18.7
Cleanaway (Paint only)	6-8 Rayben Street, Glendenning,	7am – 4pm	9621 7222	10.5
Sell and Parker Blacktown	45 Tattersall Road, Blacktown,	7am – 4pm	9621 2633	10.3
SUEZ Elizabeth Drive Landfill Facility	1725 Elizabeth Drive, Kemps Creek,	7am – 5pm	13 13 35	37.4
Wastefree (AUST) Pty Ltd	0/12 Artisan Rd, Seven Hills NSW	8:30am – 4:30pm	9620 6060	12.5
VISY Recycling	6 Herbert Place, Smithfield	8 am – 5 pm	1300 368 479	22.7

Table 3 provides the contact details of contractors that can collect waste from site and may also be engaged to remove waste and recyclables during the demolition phase.

Table 3: Material reuse, recycling and collection companies which can be used to collect and remove waste and recyclables during the demolition phase

Name of Company	Head Office Address	Website	Contact
G Bins	Riverstone	www.gbins.com.au	02 9627 2825
Enviro Pallets	164 Station St Unit 4, Penrith	www.enviropallets.com.au	02 9673 3309
Bingo Recycling Centre	25 Dunheved Circuit, St Mary's	www.bingoindustries.com.au	1300 424 646
Camel's Bins	8 Links Road, St Mary's	www.camelsbins.com.au	02 9623 5599
Cardboard King	8 Kommer Place, St Mary's	Not specified	02 9673 1660
Hi Quality Group St Marys	37 Lee Holm Road, St Mary's	www.hiquality.com.au	02 9833 0883
Anyfil Skip Bin (asbestos)	3 Benaud Court, St Clair	www.anyfil.com.au	02 9670 5885
Budget Waste Control	12 Penelope Cr, Ardnell Park	www.budgetwasteservices.com.au	02 9672 1555
IS Recycling	14 Rowood Road, Prospect	www.is-recycling.com.au	0423 699 338

Any material moved offsite must be transported in accordance with the requirements of the Protection of the Environment Operations Act (1997).

2.2 Demolition Material

Demolition material estimates are based on the design documentation and the current size and materials of the existing onsite structures as per C&D generation rates (McGregor Environmental Service, 2000). **Table 4** summarises the main demolition waste streams that will be generated. Standard dust suppression methodologies will be adopted for managing dust from the demolition material handling on site.

All records demonstrating lawful disposal of waste will be retained and kept readily accessible for inspection by regulatory authorities such as council, DPIE or WorkCover NSW.

The Australian Reusable Resource Network, the Sydney Waste Exchange and Planet Ark's Business Recycling network will be used where possible for any excess materials that are reusable. These organisations allow people to list recyclable and reusable items they either wish to dispose of or obtain and provide locations of local recycling options for a wide number of Demolition and Construction materials. The following website can be used as a resource: www.businessrecycling.com.au.

Table 4: Expected Overall Demolition and Excavation Waste Generation Estimates and Method of Management

Waste Type	Reuse (m^3)	Recycling (m^3)	Disposal (m^3)	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
Demolition of Existing Structures and Removal of Vegetation				
Timber		25		Separated on site. Treated timber sent to landfill at Bingo Recycling Centre St Mary's. Untreated timber to be mulched for landscaping or sent to second hand timber suppliers. Recyclable timber sent to Bingo Recycling Centre St Mary's or Back to Earth The Mulch Makers.
Concrete		30		Sent to concrete recycling or reprocessing as other materials e.g. road base (Rock and Dirt Recycling or Hi Quality Group St Mary's).
Bricks	10	45		Sent to concrete recycling Facility for reprocessing as road base / aggregate (Rock and Dirt Recycling, or Bingo Recycling Centre St

				Mary's). Provide to the reuse market where condition allows.
Tiles	2.0	8.6		Crushed and used for drainage, landscaping and driveways, for reuse on-site or off-site. Sent to Bingo Recycling Centre St Mary's, or A&C Recycling Services St Mary's for processing. Provide to reuse market where condition allows.
Metal (incl. structural steel)		15		Sent to Sims Metal St Mary's for metal recycling.
Glass		1.8		Glass can be disposed of by Anyfil Skip Bins or sent for reprocessing into various appropriate products.
Fixtures, fittings and plasterboard	1.0	5.0	1.8	Disposal to a building material recycling/ reprocessing facility such as Bingo Recycling Centre St Mary's or collected by Anyfil Skip Bins. Provide to the reuse market where condition allows.
Floor coverings		1.0	0.5	Depending on the type of floor covering either disposal to Bingo Recycling Centre St Mary's or A&C Recycling Services St Mary's.
Garden organics (vegetation, shrubs etc)	32	97		Sent to Back to Earth The Mulch Makers for green waste recycling. Shrubs reused in landscaping for the proposed development where condition allows. Native vegetation clearance from the site will be in accordance with conditions of consent.
Residual waste (demolition operations)			0.5	Disposal to SUEZ Elizabeth Drive landfill.

2.2.1 Asbestos/Fibro Cement Material

Findings from Stage 1 of the proposed development indicate that dwellings and structures existing on the site (53 Cudgegong Road) contained asbestos. For managing asbestos waste, the only management option available will be secure collection and disposal at a landfill facility licensed to accept hazardous materials. The material will be wrapped and sealed in heavy-duty plastic before being removed from site.

The laws of handling and disposing of asbestos at work are provided in WorkCover NSW publication *'How to Manage and Control Asbestos in the Workplace: Code of Practice (Aug 2019)'* as an approved code of practice under section 274 of the Work Health and Safety Act 2011 (the WHS Act).

Asbestos originating from within the Blacktown City LGA can only be sent to a licensed landfill facility for safe disposal. Restifa and Partners (or a contractor) will complete and submit to Blacktown City Council the NSW Environment Protection Authority's WasteLocate form as evidence of correct disposal of any asbestos identified on site in accordance with Condition of Consent.

2.2.2 Excavation material

Both Stages 3 and 4 of the proposed development require three floors of underground car parking areas and a subterranean basement / lower ground floor level. We understand that for both stages, one of these floors in the underground carpark area will be utilised for residential parking spaces while the two highest parking floors will be utilised for retail parking spaces. The estimated amount of spoil from this excavation is 180,000 m^3 (refer Section 3.1).

2.2.3 Bins for Enabling Reuse

It is proposed the following bins will be made available during demolition and construction to facilitate the separation of materials that will be reused on-site or sent for recycling. All bins will be stored within the site perimeter and removed as required by private contractor.

- A (skip) bin(s) or tipper truck for all brick materials - clearly marked with a 'Brick Materials Only' sign. Note that

this will only be available during the demolition phase of the development;

- A (skip) bin(s) for all ceramic materials – clearly marked with a 'Tile/Ceramic Materials Only' sign;
- A (skip) bin(s) or tipper truck for all concrete materials – clearly marked with a 'Concrete Materials Only' sign;
- A (skip) bin(s) for other recyclable materials – to capture other potentially recyclable materials such as untreated timber, metals etc;
- A designated area or (skip) bin(s) for all excavation material – clearly sign posted 'Excavation Material Only':
    - Construction staff will be directed to reuse the material in this bin if it is suitable for fill purposes;
    - If a designated area is needed instead then the area should be bunded and covered with a tarp;
- A (skip) bin(s) for all residual waste – clearly marked with a 'Garbage Only' sign.

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

Standard dust suppression methods will be adopted for managing dust from the demolition material handling on site.

2.2.4 Demolition Waste Storage Areas

The proposed waste storage areas during demolition and construction phases are depicted in **Figure 2**. These areas (approximately 18m x 6m and 4m x 2m) have been nominated because they meet the requirements needed for a waste storage area, such as slope, drainage, location of waterways, stormwater outlets, truck and operator access and vegetation and allow for waste separation across the site. The proposed waste storage areas will not be visible and will be fenced off, secure and unable to be accessed by the public or nearby residents.

Figure 2: Current site (yellow), approximate stage 1 and 2 development area (subject to prior approval) (green), approximate stage 3 and 4 development area (blue) and proposed demolition and construction phase waste storage areas (in red) – map not to scale.

3. Construction Stage

3.1 Construction Material

pitt&sherry has estimated approximate waste generation amounts for major construction materials based on available C&D generation rates (**Table 5**) as per industry guidelines[1]. Quantities of specific waste generated during the construction phase of the commercial development is best estimated by site contractors due to their knowledge of the site and experience with similar development projects.

Table 5: Industry construction waste generation rates

Building Type	Construction waste generation rates (tonnes/1000m^2)						
	Timber	Concrete	Bricks	Gyprock	Sand/soil	Metal	Other
Block of flats / hotels	0.7	6.7	3.2	1.3	28.7	1.3	0.6

Table 6 summarises the expected waste streams and approximate quantities that will be generated by the proposed development during construction. Waste will be separated into heavies, lights and one or two other streams like cardboard, gyproc and timber on-site for easy management, in consultation with specific waste management companies.

Table 6: Estimated construction waste generation volumes from the proposed development

Waste generated	Reuse	Recycling	Disposal	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
Excavation material	25,000	105,000	25,000	Reuse portion (virgin only) as required as on-site fill in landscaping or other suitable works (such as dam levelling). Send to Bingo Recycling Centre St Mary's or A&C Recycling Services St Mary's for reprocessing as road base/aggregate.
Timber (off-cuts, studs etc)	2	22	4	Separated on site. Treated timber to Bingo Recycling Centre St Mary's. Untreated timber mulched for landscaping or sent to used timber suppliers. Recyclable timber to Bingo Recycling Centre St Mary's or Back to Earth The Mulch Makers.
Concrete		268		Sent to concrete recycling or reprocessing as other materials e. g road base (Rock and Dirt Recycling or Hi Quality Group St Mary's).
Bricks		128		Sent to recycling Facility for reprocessing as road base / aggregate (Rock and Dirt Recycling, or Bingo Recycling Centre St Mary's)
Tiles	6	18		Crushed, used for drainage, landscaping and driveways on or offsite to Bingo Recycling Centre St Mary's, or A&C Recycling Services St Mary's.
Metal (incl. structural steel)	2	50		Sent to Sims Metal St Mary's for metal recycling.
Glass		24		Anyfil Skip Bins or sent for reprocessing into various appropriate products.
Plasterboard (offcuts)		30	22	To a building material recycling / reprocessing facility such as Bingo Recycling Centre St Mary's or collected by Anyfil skip bins
Fixtures and fittings		24		To a building material recycling / reprocessing facility such as Bingo Recycling Centre St Mary's or collected by Anyfil skip bins
Floor coverings		6	18	Depending on type of floor covering either disposal to Bingo Recycling Centre St Mary's or A&C Recycling Services St Mary's.
Packaging (used pallets, pallet wrap)	5	2		Sent to Enviro Pallets or Bingo Recycling Centre St Mary's.
Containers (cans/plastic glass)		1		Sent to Wastefree (AUST) Pty Ltd for recycling.

[1] McGregor Environmental Services (2000) Predicting C&D waste quantities in the Inner Sydney Waste Board

Waste generated	Reuse	Recycling	Disposal	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
Paper/ cardboard		1		To Bingo Recycling Centre St Mary's or Cardboard King for recycling.
Residual waste			1	Disposal to SUEZ Elizabeth Drive landfill.

3.1.1 Reducing Waste During Construction

To mitigate the potential for excess construction material being delivered to site, the ordering of materials will be staged. The delivery of materials to arrive 'as needed' will also help prevent the degradation of materials through weathering and moisture damage. During project mobilisation, all sub-contractors will be assessed based on their waste minimisation strategies and any take-back recycling options will be favoured.

Additionally, the use of materials containing recycled content will be selected where appropriate in the construction of the proposed development in an effort to support a circular economy in NSW.

4. Waste and Recycling Generation Rates

The volume of waste generated from the buildings have been derived from the *Better Practice Guide for Resource Recovery in Residential Developments 2019*, consultation with the Sustainable Resources Project Officer at Blacktown City Council and pitt&sherry's industry experience in preparing waste management plans for mixed use developments. Waste and recycling generation rates are outlined within **Table 7**.

Table 7: Waste generation rates

Area of Generation	Daily Waste Generation Rate	Daily Recycling Generation Rate
Residential (per 3BR unit) (**Note 1**)	17.14L/day = 120L per week	17.14L/day = 120L per week
Retail (excluding supermarket – refer **Note 2)**	80L/100m^2/day* (refer **Note 3**)	70L/100m^2/day
Centre Management (office)	8L/100m^2/day	6L/100m^2/day

* Based on average waste generation rates from *Table F3: Calculating commercial and industrial waste and recycling generation rates* in *Better Practice Guide for Resource Recovery in Residential Developments 2019*

Note 1 – All units were calculated having waste and recycling generation rates of a 3 BR unit. Therefore, the less 3BR units the more conservative daily waste generation and size of garbage rooms. E.g. in Stage 3, 65, or 28.9% of units are 1 BR, 134 or 59.6 of units are 2BR whilst only 26 or 11.6% of units are 3 BR. This combined with a compaction rate of 2:1 indicates the waste management system has been conservatively designed.

Note 2: The two supermarkets will manage their waste with their own waste management equipment, systems, processes and contractors separate to building management. The supermarket areas have been designed in accordance with operator's space requirements that includes waste management. Accordingly, the plans do not indicate waste management arrangements within the supermarket GFA but do indicate floor levels and lifts between supermarket and loading docks for collection.

Note 3: Four key variables were considered in the retail waste calculations – average waste and recycling generation rates per ratio of 100m^2 of floor space, size of bins and frequency of collection. 80L per day for waste and recycling generation was selected as an average across the retail categories resulting in non-compacted waste collection per day ranging from 73L to 466L at collection (3x per week) placed in 1100L bins requiring 0.15 to 0.99 bins at collection. Bin numbers were rounded up to an entire bin i.e. many tenants would fill bins well below 50% every 2.34 days (3 x per week collection). The rounding up to providing an entire bin regardless for each tenant and 2:1 compaction provides significant capacity for contingencies. If, in the event, total retail bins were to regularly fill close to capacity prior to collection then either more bins can be provided, or collection frequency can be increased. e.g. for Stage 3 12 x 1100L bins are provided to accommodate 2153m^2 of retail floor space excluding the supermarket with capacity for additional 8 x 660L bins.

Table 8 and **9** provide a summary of the expected volumes of waste and recyclables that will be generated during residential and commercial operations. Note, the actual number of bins required is decided as per expected waste generation and expected collection frequencies. This summary provides details regarding the proposed on-site storage and treatment facilities e.g. garbage rooms and waste storage rooms and bin infrastructure that will be used on-site.

Table 8: Expected residential waste generated during ongoing operations for Stage 3 and 4

Waste Stream Generated	Expected Volume per Week (L)	Proposed On-site Storage and Treatment Facilities	Destination
General waste	53,631	Waste chutes are accessed on each floor and discharge into basement garbage rooms into 1100L bins and compacted 2:1. Full 1100L bins transferred by onsite staff using a motorised bin tug to the central storage room via lift for collection. General waste will be removed from site by private waste collection contractor, 3 x per week using a rear loader vehicle.	Disposal
Comingled recycling	53,631	240L bins in storage rooms on each floor/core/building. Full bins moved to garbage rooms or central storage room to await collection by contractor. 240L bin contents will be transferred into 1100L bins using a bin lifter and then returned to each floor/core within each building. Contractor will service 1100L recycling bins 2 x week using rear loader vehicle	Recycling
Garden organics	N/A	Removed by landscape / grounds keeping contractor at time of generation. With some reused as mulch around landscaped areas.	Recycling
Bulky waste	N/A	Bulky waste generation is sporadic. Residents will contact onsite caretaker for access to bulky waste storage areas on an as-needed basis. A private waste collection contractor will remove bulky waste as required.	Disposal and recycling

Table 9: Expected commercial waste generated during ongoing operations

Waste Stream Generated	Expected Volume per Week (L)	Proposed On-site Storage and Treatment Facilities	Destination
General waste	99,040	10-80L bins stored in retail tenants to enable waste separation and moved in trolleys to reduce labour to waste storage area at loading dock, whereby compactors are located for shared commercial use. General waste will be removed from site by private waste collection contractor, 3 x per week using a rear loader vehicle. Supermarket operator will manage their waste with a waste compactor.	Disposal
Co-mingled recycling	61,674	10-80L bins stored at source to enable waste separation. Recycled material moved in trolleys to reduce labour to waste storage area at the loading dock. Contractor will service 1100L recycling bins 3 x week using rear loader vehicle. Supermarket operator will manage their waste with a cardboard compactors and comingled recycling bins within their GFA.	Recycling
Grease trap waste	350L	Grease trap waste will be managed under separate contract with specialist collection vehicles - See section 4.8.	Treatment and disposal
Oil	40L	Monthly collection by specialist contractor from on-site storage at relevant oil-generating tenancy. Oil will be stored in suitable bunded containers within back-of-house areas of each relevant retail tenancy, which is to be determined according to internal fit-out in order to allow for 0.43m^2 storage space.	Recycling into biofuel

All retail tenancies types are not yet confirmed. Based upon conservative waste generation rates and size of and provision of bin numbers and excess capacity in the retail waste store rooms, there is considerable capacity to accommodate changes in waste generation should tenancies change in the future. Should retail/commercial waste volumes increase in the future, the private waste collection contractor can perform additional waste collection services, to increase from three up to five per week.

5. Ongoing Waste Operations and Management

Ongoing operation of the proposed development will provide two waste streams (residential and commercial) that will need to be collected and managed separately. The commercial waste storage areas will be separated from the residential waste storage areas, in secure and clearly signed waste storage rooms.

Waste collection is proposed to be managed entirely by private waste collection contractors. As such, the proponent would accept a Condition of Consent for a Private Contractor to service the constructed development in perpetuity.

5.1 Residential Waste Operations and Management

5.1.1 Operational Overview

Each residential level provides residents access to a general waste chute and 2 x 240L comingled recycling bins (refer **Appendix B** for mark up in green of residential floor plans indicating chutes and recycling bins)

Residential general waste is disposed via a chute, for each building, level and/or core and discharged into 1100L bins and compacted 2:1 in each garbage room. Tracks will rotate bins to reduce overfilling. Once full, 1100L bins will be moved by the onsite building manager, using bin tug equipment (refer Section 4.2.4) to the central bin storage area to await collection by the private waste collection contractor on the Ground Floor. Residents will not have access to the chute discharge garbage rooms or the central bin storage rooms.

Comingled recycling generated from units will be stored within 2 x 240L (Mobile Garbage Bin) MGBs on each level. Based on unit numbers and expected generation of recyclable materials, 1 x 240L MGB will be adequate to store at least one days' worth of commingled recycling. The 240L MGBs will be rotated, with full bins taken to the garbage room of each respective core or directly to the storage room adjacent to each loading bay. A bin lifter will empty the 240L MGB into the dedicated 1100L MGBs to await transfer to the waste room next to the loading dock or collection from the garbage rooms.

Waste chutes and recycling bins are mostly contained in waste rooms. Where space and layout prevent a waste room, the waste chute and recycling bins are positioned away from dwelling doors towards the end of hallways and away from high foot traffic areas. Consultation with Council's Sustainable Resources Project Officer suggested this would be acceptable in principle. Ensuring residents continue to source separate will require resident awareness, education and clear labelling of the chutes and recycling bins (refer Section 5.10).

Automated tracks (linear and/or rotating, depending on space availability and layout) will be used in the garbage rooms. Video surveillance of waste storage areas will allow the caretaker to ensure that bins do not overflow. The chute discharge garbage rooms will not be accessible by residents and will be secured under lock and key, only to be accessed by cleaners and/or the Building Manager.

The transfer of 1100L general waste and recycling bins from the Basement garbage rooms to the collection point in the loading dock will be via pedestrian operated or ride on bin tugs and service elevators.

If, in the unlikely event, all resident, retail and service elevators were to fail, the residential waste and recycling system that uses the garbage rooms in the basement, can continue to deliver to the collection point by the bin tugs taking bins up the vehicle ramps to the ground floor residential waste storage room for collection.

Bulky waste storage

The rate of storage space for bulky waste is $4m^2$ for every 40 dwellings and $1m^2$ for every 20 dwellings after that (as per council pre-DA minutes). The required bulky waste storage area for Stage 3 is $14m^2$ (225 residential units) whilst Stage 4 allows for a minimum of $14m^2$ (231 residential units) with a dedicated storage room on the Ground floor for both stages. Residents will not have access to these rooms as they will only be accessed by waste collection contractors and the Building Manager.

Residents will contact the building manager to arrange collection of bulky waste from their apartments and transported via the lift to the bulky waste storage area located in the central storage area within each loading dock zone. Bulky waste will be removed on an as-needed basis by a private waste collection contractor. Stage 3 design allows for direct loading of bulky waste materials to a waste collection vehicle. For Stage 4, the hoist will be operated to assist with accessing bulky waste materials up to the allowable size of 2 x 1.2 x 1m from the storage space to a waste collection vehicle.

Bulk cardboard

The building manager will collect bulk cardboard from residents known to have such waste streams. Bulk cardboard will be managed by the onsite caretaker and recycled within the 1100L commingled recycling bins in the central bin storage area. Residents will not have access to the central bin storage rooms. In the event that excess bulk cardboard is required for removal, the private waste collection contractor will remove this waste stream from the site as required. Additionally, space has been allowed for within the bulky waste storage room for the management of bulk cardboard.

Electronic Waste

Electronic waste e.g. batteries, computers and televisions will be collected in a small container at each bulky waste storage room in each building. Large e-waste items will be recycled where possible by private waste collection contractors performing the bulky waste collection services. These items will be recycled periodically on an as-needed basis. Alternatively, residents are able to utilise local organisations (such as Battery World or ALDI for recycling batteries, or Officeworks) for e-waste.

5.2 Residential Waste Bins and Garbage Rooms

General waste and comingled recycling bins will be located adjacent to each other, to encourage source separation of recyclables from waste sent to landfill.

The following bins (as per **Figure 3**) will be used on site:

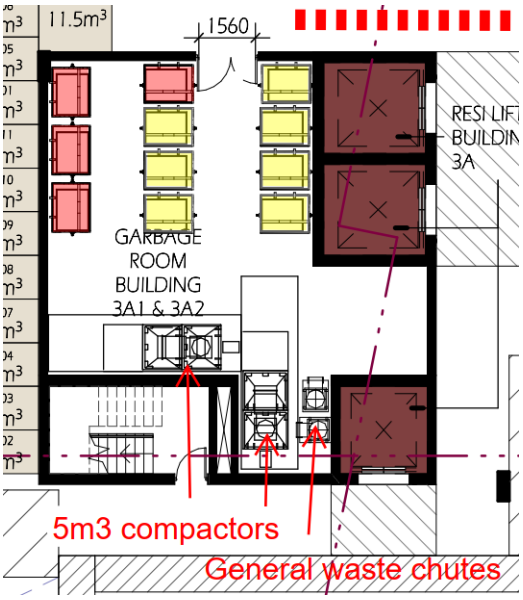
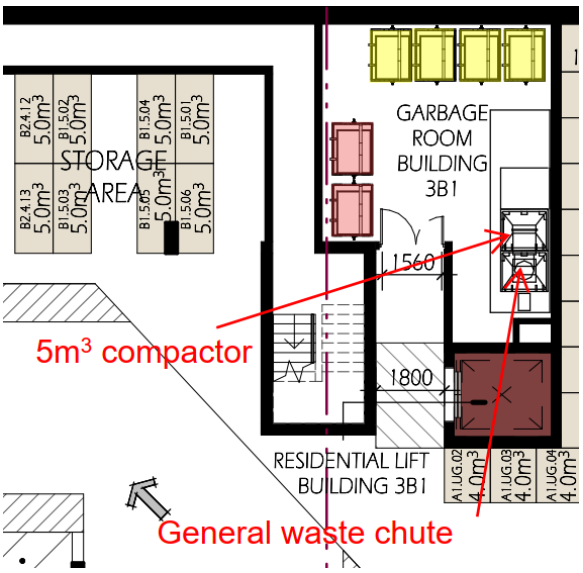
- 10-80L bins in back-of-house retail areas to enable source separation of both general waste and recycling;
- 240L MGBs used for collection of residential commingled recycling on each floor for each core, in each residential building before being rotated to the central bin storage area of each building; and
- 1100L MGBs used for collection of residential general waste and recycling.

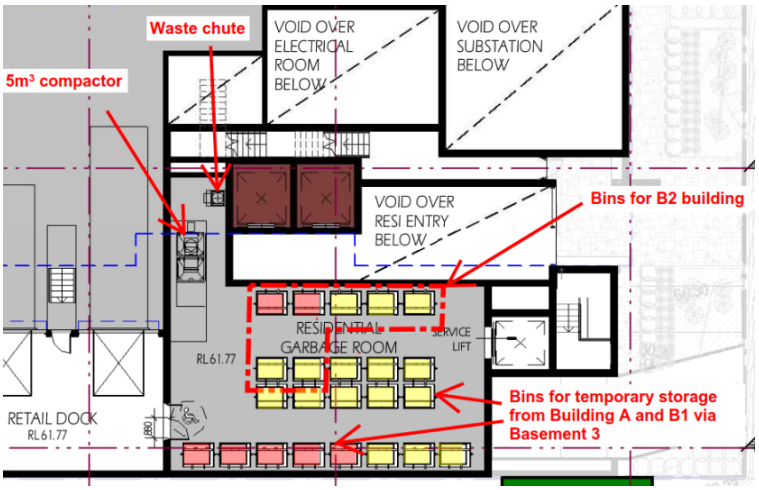
Figure 3: Typical Range of Mobile Garbage Bins (MGBs) Source: TPI Cleanaway, 2017

5.2.1 Stage 3 Residential Waste Operations and Management

Table 10 indicates the bin numbers and bin types required for Stage 3 residential dwellings and how they have been allocated in specific garbage rooms.

Table 10: Residential Bin Numbers and garbage rooms for Stage 3

Stage/ Building/ Core	Residential Bin Numbers	
3A1	2 x 1100L general waste bins, serviced 3 x per week and compacted at a ratio of 2:1 4 x 1100L comingled recycling bins, serviced 2 x per week, 1 x 240L rotational comingled recycling bin on each residential level (7 levels)	
3A2	2 x 1100L general waste bins, serviced 3 x per week and compacted at a ratio of 2:1 3 x 1100L comingled recycling bins serviced 2 x per week, 1 x 240L rotational comingled recycling bin on each residential level (7 levels)	
Total	**4 x 1100L general waste bins** **7 x 1100L comingled recycling bins** **14 x 240L rotational comingled recycling bins**	Waste chutes in Building 3A1 and 3A2 are adjacent to each other and empty into a common garbage room in Basement 3 (DA-3-101). An annotated extract from DA 3 101 showing 3A1 and 3A2 garbage room, bin numbers and type is illustrated below.  Plans for 3A1 and 2 indicate 2 x 240L recycling bins on each floor (including Levels 5 and 6 that have less dwellings than levels below). The total 240L recycling bins provided for 3A1 and 3A2 is 28 bins.
3B1	2 x 1100L general waste bins, serviced three times each week and compacted at a ratio of 2:1 4 x 1100L commingled recycling bins, serviced twice each week, 1 x 240L rotational commingled recycling bin available on each residential level (6 levels)	
Total	**2 x 1100L general waste bins** **4 x 1100L comingled recycling bins** **12 x 240L rotational comingled recycling bins**	Waste chute for 3B1 empties into garbage room in Basement 3. An annotated extract from DA 3 101 of 3B1 garbage room, bin numbers and type is shown below.  Plans for 3B1 indicate 2 x 240L recycling bins on each floor totalling 12 bins.

3B2	2 x 1100L general waste bins, serviced 3 x each week and compacted at a ratio of 2:1. 4 x 1100L commingled recycling bins, serviced 2 x each week. 1 x 240L rotational commingled recycling bin available per residential level (6 levels).	
Total	**2 x 1100L general waste bins, serviced 3 x per week** **4 x 1100L comingled recycling bins, serviced 2 x per week** **6 x 240L rotational comingled recycling bin**	The waste chute for Building 3B2 empties into the garbage room on ground floor adjacent to retail loading dock. (DA- 3-105). This garbage room is also used to store waste and recycling from Building 3A1 and 3A2 and 3B1). An annotated extract from DA 3 105-1 showing 3B2 garbage room, bin numbers and type is illustrated below.  Plans for 3B2 indicate 2 x 240L recycling bins on each floor totalling 12 bins.

5.2.2 Stage 3 bin movements from Garbage Rooms to Collection Point

There are a range of motorised bin tugs in the market that vary in size and capability that are either pedestrian operated or ride on tugs (**Figure 4**). Bins will be moved out of the garbage rooms and trained across the basement to the service lift by either pedestrian operated bin tugs or ride on bin tugs.

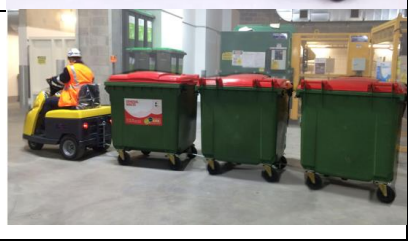
Pedestrian bin tug	Ride on bin tug
 	
 	

Figure 4 Bin tug types

The movement of waste bins from the garbage rooms 3A1/3A2 and 3B1 in Basement 3 will by via motorised bin tugs to a service lift up to garbage room 3B2 on the ground floor adjacent to the loading dock for collection (refer **Figure 5)**. Bin tugs on basement level 3 where residential parking is located will be secured as notated on DA 3 - 101. For loading docks where access is restricted to authorised persons, there is no demonstrable need for secure storage of bin tugs.

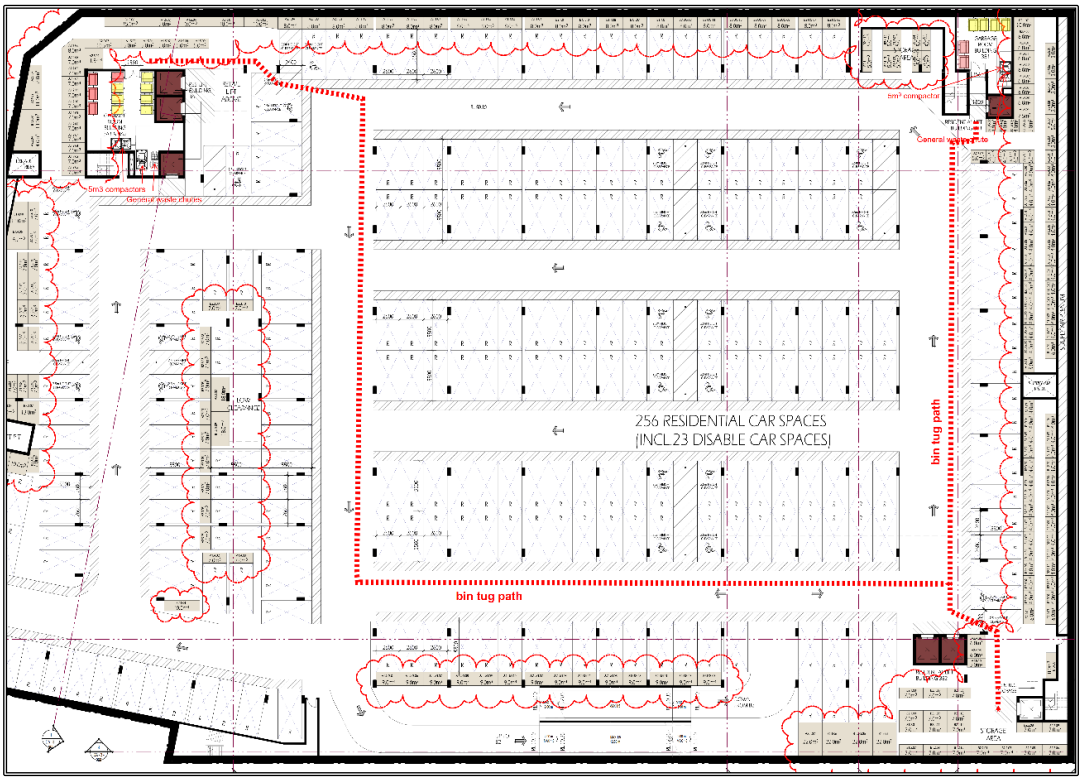
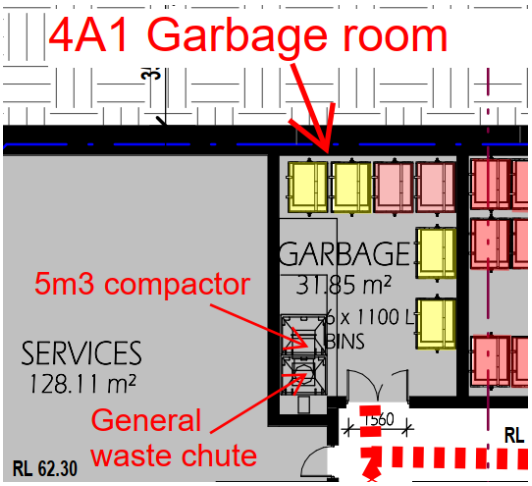


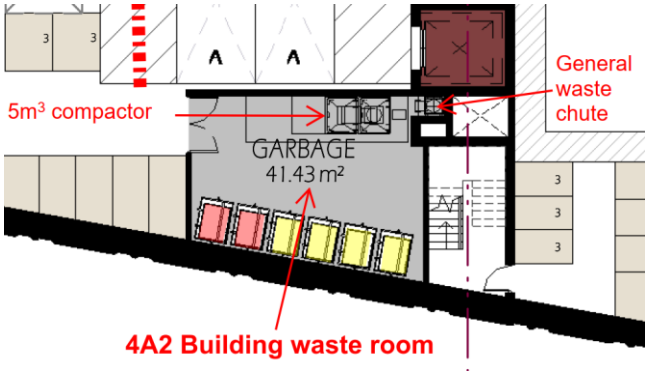
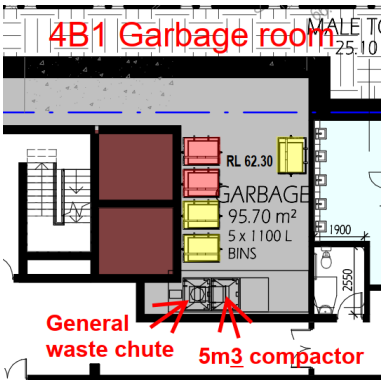
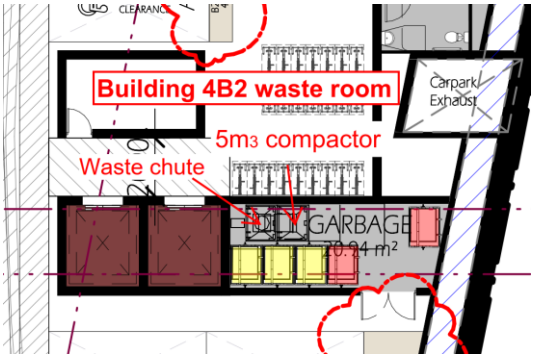
Figure 5 Annotated DA 3 -101 showing indicative bin tug paths from 3A1&2 garbage room and 3B1 garbage room to service lift to residential garbage room on ground level for collection by private contractor.

5.2.3 Stage 4 Residential Waste Operations and Management

Table 11 indicates what bin numbers and bin types are required for Stage 4 residential dwellings and how they have been allocated in specific garbage rooms – 2 are located on ground floor and 2 are located in the basement.

Table 11 Residential Bin Numbers and garbage rooms for Stage 4

4A1	2 x 1100L general waste bins, serviced 3 x per week and compacted at a ratio of 2:1 4 x 1100L commingled recycling bins, serviced 2 x each week, 1 x 240L rotational commingled recycling bins per level (7 levels)	
Total	**2 x 1100L general waste bins** **4 x 1100L comingled recycling bins** **7 x 240L rotational commingled recycling bins**	Waste chutes for Building 4A1 empty into the garbage room on ground floor adjacent to retail loading dock. (DA 4-104). An annotated extract from DA 4 104 showing 4A1 garbage room, bin numbers and type is illustrated below.  Plans for 4A1 show 2 x 240L recycling bins on each floor (incl. Levels 5 & 6 that have less dwellings than levels below). The total 240L recycling bins provided are 14 bins.

4A2	2 x 1100L general waste bins, serviced three times each week and compacted at a ratio of 2:1 4 x 1100L commingled recycling bins, serviced twice each week, 1 x 240L rotational commingled recycling bins per level (6 levels)	
Total	**2 x 1100L general waste bins** **4 x 1100L comingled recycling bins** **6 x 240L rotational commingled recycling bins**	Waste chutes for Building 4A2 empty into garbage room in Basement 3 (DA 4-101). An annotated extract from DA 4 101 showing 4A2 garbage room, bin numbers and type is illustrated below.  Plans for 4A2 show 2 x 240L recycling bins on each floor. The total 240L recycling bins provided are 12 bins.
4B1	2 x 1100L general waste bins, serviced 3 x per week and compacted at a ratio of 2:1 3 x 1100L commingled recycling bins, serviced twice each week 1 x 240L rotational commingled recycling bin per residential level (7 levels)	
Total	**2 x 1100L general waste bins** **3 x 1100L comingled recycling bins** **7 x 240L rotational commingled recycling bins**	Waste chutes for Building 4B1 empty into the garbage room on the ground floor (DA 4-104). An annotated extract from DA 4 104 showing 4B2 garbage room, bin numbers and type is illustrated below.  Plans for 4B1 show 2 x 240L recycling bins on each floor (incl. Levels 5 & 6 that have less dwellings than levels below). 14 bins are provided.
4B2	2 x 1100L general waste bins, serviced three times each week and compacted at a ratio of 2:1 3 x 1100L comingled recycling bins, serviced twice each week, 1 x 240L rotational commingled recycling bin per residential level (6 levels)	
Total	**2 x 1100L general waste bins** **3 x 1100L comingled recycling bins** **6x 240L rotational comingled recycling bins**	Waste chutes for 4B2 empty in the garbage room in Basement 3 (DA-4-101  Plans for 4B2 show 2 x 240L recycling bins on each floor totalling 12 bins.

As there is a maximum of 12 units on each level in each core (e.g. Stage 4, Building A, Level 3, Core A2), the 240L recycling bin allocated to each level is adequate to store at least one days' worth of recycling, before the contents are rotated into the 1100L bins within the respective waste room or central storage area. However, as can be seen in the plans, each level regardless of number of units, has two 240L recycling bins adjacent or near the waste chute.

5.2.4 Stage 4 bin movements from Garbage Rooms to Collection Point

Bins will be moved out of the garbage rooms and trained across the basement to the service lift by either pedestrian operated bin tugs or ride on bin tugs (**Figure 5**).

The movement of waste bins from the 4A2 and 4B2 garbage rooms in Basement 3 to a service lift will be via bin tugs (**Figure 6)**. The service lift will take the bins up to the ground floor to the residential garbage room adjacent to the loading dock for collection (**Figure 7**). Garbage Rooms 4A1 and 4B1 are adjacent or near the residential garbage room and accordingly, with significant space capacity, there can be an iterative use for storing and collecting waste and recycling between these three rooms to the loading dock via the hoist.

Bin tugs on basement level 3 where residential parking is located will be secured as notated on DA 4 - 101. For loading docks where access is restricted to authorised persons, there is no demonstrable need for secure storage of bin tugs.

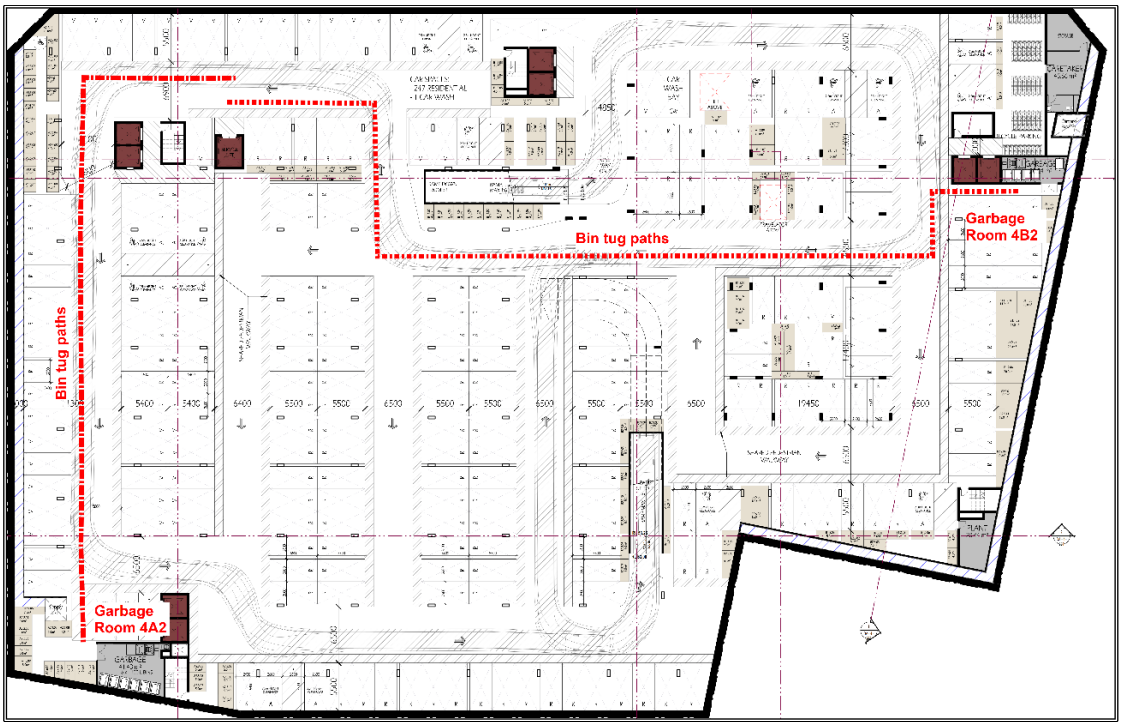


Figure 6 Indicative bin tug paths from garbage rooms 4A2 and 4B2 in Basement 3

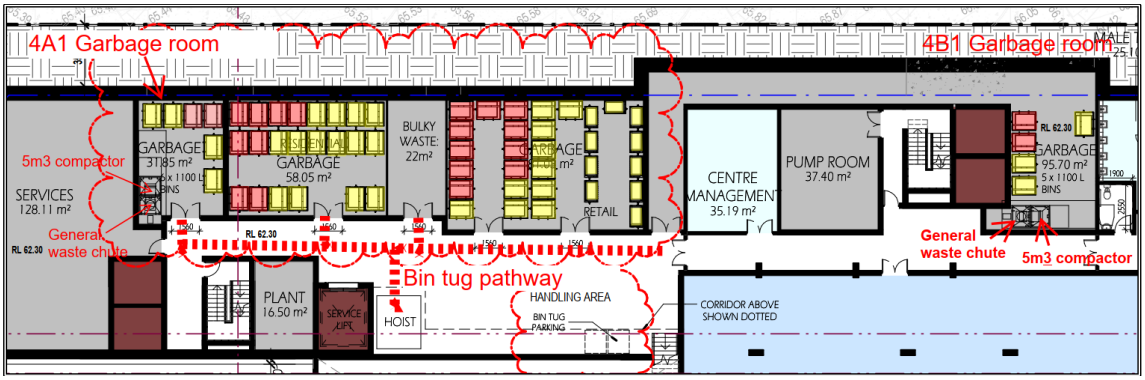


Figure 7 Annotated DA-4-104 showing Residential Garbage Room as collection point for waste and recyclable material from garbage rooms 4A2 and 4B2 on Basement 3

5.3 Commercial Waste Management

5.3.1 Operational Overview

In addition to bins types indicated in **Figure 4**, the following will be used for commercial waste storage and collection:

- 10-80L bins in back-of-house retail areas to enable source separation of both general waste and recycling
- 1100L MGBs used for collection of commercial waste and recycling
- 40L drums used for the collection of waste oil from the facility, stored in each oil-generating tenancy as required
- 5m^3 Integrated compactors used for managing retail and commercial waste, as managed by respective tenants.

All retail and commercial general waste, bulky waste and commingled recycling will be managed by private waste collection contractors. Retail waste will be stored in bins (10-80L dependent on tenant requirements) located in back-of-house areas confined within each tenancy.

Waste collection trolleys (**Figure 8**) may be used for transferring waste (particularly light cardboard and packaging wastes) from back of house areas such as a kitchen or storeroom to the central waste storage area in the loading dock. Foldable trolleys are lightweight and will not require storage space in limited retail tenancies when not in use. Trolleys will be stored in back of house areas.

The supermarket will manage all waste generated onsite within their GFA using a 5m^3 compactor for general waste, alongside a cardboard compactor for packaging related waste. This equipment will be located on Lower Ground, Stage 3 and Ground, Stage 4 within the Supermarket back-of-house areas and the loading dock area.

Figure 8: Waste trolley (Source: Reflex Equip, 2019)

Stage 3 Retail Bin storage

For retail tenancies located on Lower Ground (RL59.30), waste trolleys will be wheeled up the service passage along the southern boundary to retail dock on Ground level (RL 61.77) to the retail bin storage room ahead of collection. Retail tenancies located on Ground Floor (RL62) will access the lift down to Lower Ground and then access same service passage to retail dock. A general waste compactor is located in the retail loading dock on Lower Ground (**Figure 9**).

Where a retail/commercial tenant requires assistance with transferring waste and recyclable materials to the central storage area, the onsite caretaker can assist with the use of equipment options (as outlined within Appendix C).

Based upon a 3820m^2 supermarket, uncompacted general waste will require 13 x 1100L bins whilst comingled recyclable material will require 7 x 1100L bins (number of bins rounded up). These bins will be contained within the supermarket Gross Floor Area.

Based on 2153m^2 of retail floor area, uncompacted general waste will require 12 x 1100L bins and comingled recyclable material will require 12 x 1100L bins (number of bins rounded up). The retail waste room in DA 3 105 has 12 bins each for general waste and recyclables with another 8 x 660L available for additional capacity (**Figure 9**).

Stage 3 Bulky waste storage

In addition to 14m^2 residential bulky waste storage, 8m^2 bulky waste storage for retail tenants has been combined into an 22m^2 bulky waste storage room on the ground floor next to the retail loading dock (**Figure 9)**. Bulky waste will be removed on an as-needed basis by private waste contractor and as such, the storage space allocated is sufficient.

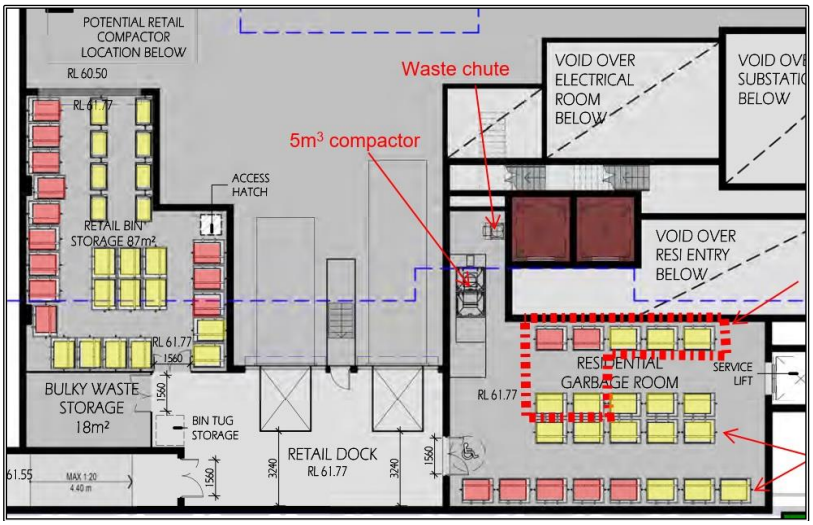


Figure 9 Stage 3 retail bin storage room and bulky waste storage room annotated from DA 3 105

Stage 4 retail bin storage

For retail tenancies located on Ground, waste trolleys will be wheeled to the loading dock for storage in the retail central storage location ahead of collection (Ground floor) (**Figure 7**). Retail tenancies located on Upper Ground, will use trolleys to transfer waste via the ramp/travelator to the retail central storage location located on Ground.

Private waste collection contractors will use the dedicated hoist to access bins from the central storage area to facilitate bin servicing.

Where a retail/commercial tenant requires assistance with transferring waste and recyclable materials to the central storage area, the onsite caretaker can assist with the use of equipment options (as outlined within Appendix C).

Based upon a 3587m^2 supermarket, uncompacted general waste will require 12 x 1100L bins and comingled recyclable material will require 7 x 1100L bins (number of bins rounded up) to be contained within the supermarket Gross Floor Area.

Based upon 2104m^2 of retail floor space, uncompacted general waste will require 10 x 1100L bins and comingled recyclable material will require 12 x 1100L bins (number of bins rounded up). The retail waste room in DA 3 105 has 10 bins each for general waste and recyclables with another 10 x 660L available for additional capacity (**Figure 7**).

Stage 4 Bulky waste storage

In addition to the 14m^2 required for residential bulky waste storage, 4m^2 of bulky waste storage for commercial tenants has been combined into an 18m^2 bulky waste storage room on the ground floor next to the retail loading dock (**Figure 7**). Private waste collection contractors will use the dedicated hoist to remove bulky waste from the bulky waste storage room.

Bulky waste will be removed on an as-needed basis by private waste contractor and as such, the storage space allocated is sufficient.

5.4 Collection Service Arrangements

Residential general waste, bulky waste and commingled recycling will be collected by a private waste collection contractor. Private licensed waste and recycling contractors will be engaged for collections of retail and commercial general waste and recyclables. Waste collection contractors will be chosen through tender processes once the proposed mixed-use development site has been constructed.

Swept paths in the loading bay have allowed for a Heavy Rigid Vehicle to access loading docks. Therefore, a Medium Rigid Vehicle and Typical Waste Collection Vehicle can access the site for on-site servicing. A clearance height of 4.5m in the loading dock areas (both Stage 3 and 4) has been provided to enable on-site waste collection. Swept path diagrams have been included in Appendix B. Waste collection vehicles will not require use of the turntable (Stage 4) – the turntable has been provided for Heavy Rigid Vehicle access only.

To match these access requirements, a private waste collection contractor will be able to provide a rear loader collection vehicle to service 1,100L bins and collection of bulky waste materials. Vehicle specifications are provided in **Table 12.** Figure 10 shows the typical type of vehicle that will be used for waste collection services of residential and retail wastes.

Table 12: Australian Standards for Medium Rigid Vehicle and Typical Waste Collection Vehicle (Source: Better Practice Guide for Resource Recovery in Residential Developments 2019)

	Medium Rigid Vehicle	Typical Waste Collection Vehicle
Vehicle clearance height (m)	4.5	3.9
Vehicle clearance length (m)	8.8	10.5
Vehicle width (m)	2.5	2.5
Swept circle (m)	21.6	25
Weight payload (tonnes)	26	10

There is no risk of plantings and landscaping hindering safe and efficient collection of bins and bulky waste materials from the proposed development.

Loading dock areas cater for a Heavy Rigid Vehicle, and in doing so, there is therefore an additional 3m rear clearance behind a waste collection vehicle when servicing bins from the site. Trucks can service the bins without hindering traffic flow as detailed within the DA drawings and swept path diagram. Waste collection vehicles will enter and exit the site in a forward-moving motion.

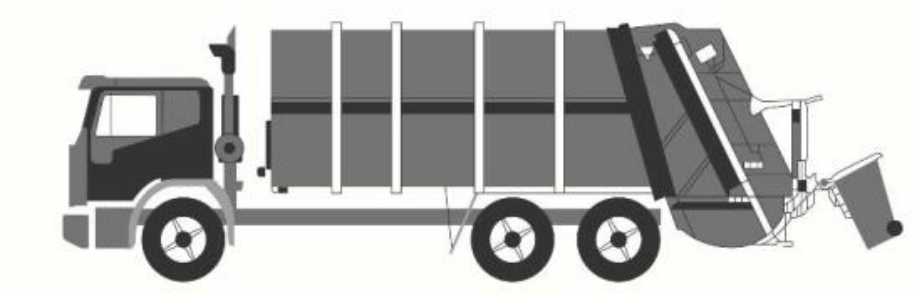


Figure 10: Rear-loader collection vehicle (Source: Better Practice Guide for Resource Recovery in Residential Developments 2019)

5.5 Design of Garbage Storage Areas

All waste storage areas will be designed and constructed with the following specifications as shown in **Table 13**.

Table 13: Internal waste storage area design and construction specifications

Layout	• Entry of vermin will be prevented • Provide separate storage areas for waste and recycling bins to facilitate use and collection – separate by at least 1.2m and ensure bins will not be placed one in front of another, or in such a way as to restrict access to the bins for use or removal • Ensure bins are easily accessible both for use by staff and movement by collectors

	• Gradient of floors and associated access ramps must be sufficiently level so that access for the purpose of emptying containers can occur in accordance with WorkCover NSW OH&S requirements.
	• Waste and recycling rooms must be ventilated by either:
	  ○ Permanent, unobstructed natural ventilation openings not less than 5% of floor area; or
	  ○ mechanical exhaust ventilation system exhausting at a rate of 5L/m^2 floor area;
	• Provided with artificial light controlled by switches located both outside and inside the room.

Floors	• Constructed of impervious material, well drained and connected to the sewer • Must be finished to a smooth even surface covered at the intersection with walls and plinths • Must be finished with a light colour • Must be provided with hot and cold water mixed through a centralised mixing valve with hose cock
Walls	• To be constructed of impervious material and cement rendered; • Intersection of floors and walls shall be covered with a minimum radius of 50mm; • Waste and recycling receptacles will have adequate separation from walls; • Storage and drainage racks will be made of a durable, impervious, non-corrosive material and will be separated from walls to allow easy access; • A bump rail 50mm clear of walls or flat sheet iron installed flush with walls will be provided.
Ceiling	• To be constructed of an impervious material and cement rendered so that it has a durable and smooth finish; • Will be of a suitable height for the type of service; • Must be finished with a rigid smooth faced non-absorbent material capable of being easily cleaned.
Doors	• Will be durable, lockable, close fitting, self-closing doors that can be opened from inside and outside; • Will be a sufficient width for movement of waste and recycling receptacles; • Close fitting and self-closing and be opened from within the room.
Collection	• Use defined borders to prevent the parking of vehicles on bin presentation areas; • Provide access openings (minimum 1.2m wide) for collection. In the case of commercial collections, sufficient to accommodate the containers proposed in this waste plan; • Access to the waste storage and recycling area shall be readily available on collection days. There shall be no conflict with the delivery or after service vehicles, loading docks and the like.
Other features	• Clear signage will be displayed describing how to use the waste facilities correctly • Facilities will be clean and healthy – dust free, with litter managed appropriately and odour and noise issues addressed as described in Section 5.6.

5.6 On-site Cleaner/Caretaker

An onsite cleaner or caretaker/s will ensure the ongoing management of general waste and separation of recyclables is carried out in a clean, safe and efficient manner – achieving maximum diversion of recyclable materials. The cleaner/caretaker will also undertake all tasks in adherence to and ensure all activities regarding waste management comply with this WMP.

The cleaner/caretaker will be responsible for transporting bins safely from the building garbage store areas to the loading dock collection area on bin collection days. Bins and waste storage/collection areas will be regularly cleaned and inspected by the on-site cleaners and caretakers. On-site staff will monitor bin fill levels and operation of chutes and compactors in order to prevent blockages or overfilling. On-site staff presence will also deter illegal dumping by enabling residents to regularly gain access to bulky waste storage areas for applicable water materials.

5.7 Seafood, Poultry and Meat Waste

It is not anticipated that large volumes (in excess of 50L a day) of seafood, poultry or meat waste will be produced from the proposed retail tenants. The small amounts of seafood, poultry and meat waste from plate scrapings and leftover

food will be disposed of with other general waste. General waste will be collected three times each week. Therefore, it is not expected that there will be any odour or vermin issues associated with this waste, as it is stored on-site for a very short time period.

Seafood, meat and poultry waste generated from the proposed supermarkets will be managed by the Supermarkets, who will be responsible for any associated odour generating from their operations. Based on experience, Woolworths will procure collection services in line with waste generation and manage frequency of collections to avoid odour.

5.8 Waste Avoidance & Sustainable Purchasing

It is anticipated that a Purchasing Policy can be implemented for the restaurant/café management, and will include strategies for waste minimisation, such as:

- Procurement of materials containing recycled content, such as paper, napkins and paper towels etc
- Purchasing in bulk to minimise single use packaging
- Investigation of third-party packaging for options to incorporate recycled content and reduce packaging
- Stop the use of polystyrene foam and petroleum-based plastic takeaway packaging
- Provide ceramic cups, mugs, crockery and cutlery rather than disposable
- Review serving sizes to reduce waste from uneaten food.

5.9 Grease Trap Waste

Waste grease from commercial and retail tenants will be collected on-site through the use of a grease trap. This waste is to be collected by a private contractor every three to four months. Endeavour Liquid Waste are a potential contractor to access the site using a ute and trailer, requiring only 1.9m height clearance. Endeavour are servicing Rouse Hill Shopping Centre via ute and trailer arrangements.

Stage 3 will cater for 3 x 5,000L grease traps as per the DA drawings. Two grease arrestors for commercial tenants will be located on Basement 1, in addition to the supermarket grease arrestor. Stage 4 will cater for 1 x 5,000L grease arrestor located on Basement 1 as per the DA drawings. This enables fats, oils and grease to be gravity fed, as per Sydney Water's requirements, before collecting in the grease trap, while being serviced by a suitable vehicle. Collection schedules can be adjusted in the future to accommodate any changes in waste grease generation. The development will satisfy the requirements of Sydney Water in their correspondence dates 1 March 2018.

5.10 Signage

Signage, as shown in **Figure 11** will be displayed at eye level in the internal garbage store. In addition to bin labels provided by the waste management contractor, bin stickers, such as those shown below, will be affixed to the lids and front faces of the MGBs. In addition, clear and easy to read "NO STANDING" signs and "DANGER" warning signs must be fixed to the external face of each waste and recycling room where appropriate.

Source: NSW Department of Environment & Climate Change Better Practice Guide for Waste Management in MUDs, 2008
Figure 11: Bin and Storage Area Signage

5.11 Amenity Management

Amenity impact on the surrounding communities and environment will be managed according to the mitigation measures set out in **Table 14**.

Table 14: Amenity Management Methods

Impact	Mitigation/ management method
Noise	To further ameliorate noise impacts on surrounding residents, any removal of waste from retail tenancies to waste storage or bin location is to be done during daytime hours only. Bin collections will take place during the day within an acceptable time period deemed by the private waste collection contractor. Waste chute will be installed such that the chute is a suitable distance from residential premises to ensure noise associated with waste falling is minimised.
Odour	General waste collections will occur on a thrice weekly basis. As putrescible waste is stored on-site for a very short time period and that high-risk items such as seafood will be appropriately bagged and sealed by the retail operators before disposal, it is not expected there will be any odour issues. Hot water taps for bin washing will be installed and the walls will be constructed of an impervious material for easy cleaning reducing the risk of odour. Adequate ventilation will be provided to reduce odours. Storage areas will be designed to prevent the entry of vermin.
Visibility from street levels	Since waste and recyclable bins will be stored in the internal garbage store, bins and other receptacles will not be visible from street level.

Managing Asbestos Guidelines

Appendix A

pitt&sherry

Asbestos Management in Blacktown City 2016

Council disclaimer

This document was formulated to be consistent with Council's legislative obligations and within the scope of Council's powers. This document should be read in conjunction with relevant legislation, guidelines and codes of practice. In the case of any discrepancies, the most recent legislation should prevail.

This document is based on the *Model Asbestos Policy for NSW Councils* developed by the Heads of Asbestos Coordination Authorities to promote a consistent Local Government approach to asbestos management across NSW.

This document does not constitute legal advice. Legal advice should be sought in relation to particular circumstances and liability will not be accepted for losses incurred as a result of reliance on this document.

Contents

1. Introduction

Blacktown City Council acknowledges the serious health hazard of exposure to asbestos.

In Australia, asbestos was gradually phased out of building materials in the 1980s and the supply and installation of asbestos containing goods has been prohibited since 31 December 2003. Yet asbestos legacy materials still exist in many homes, buildings and other assets and infrastructure. It is estimated that one in three Australian homes contains asbestos.

In Blacktown there is a significant residential base with many homes built prior to the banning of asbestos. This presents a significant challenge as Council is required to regularly deal with asbestos issues as home renovations are carried out by unskilled home owners and as older homes are demolished to make way for new developments. Cleaning up illegally dumped asbestos on Council lands and public roads is an increasing cost to Council.

Where material containing asbestos is in a non-friable form (that is, cannot be crushed by hand into a powder), undisturbed and painted or otherwise sealed, it may remain safely in place. However, where asbestos containing material is broken, damaged, disturbed or mishandled, fibres can become loose and airborne posing a risk to health. Breathing in dust containing asbestos fibres can cause asbestosis, lung cancer and mesothelioma.

It is often difficult to identify the presence of asbestos by sight. Where a material cannot be identified or is suspected to be asbestos, it is best to assume that the material is asbestos and take appropriate precautions. Further information about asbestos and the health impacts of asbestos can be found in Appendix A and website links to additional information are provided in Appendix B.

Council has an important dual role in minimising exposure to asbestos, as far as is reasonably practicable, for both:

- Residents and the public within the Local Government Area (LGA)
- Workers (employees and other persons) in Council workplaces.

Council's legislative functions for minimising the risks from asbestos apply in various scenarios including:

- As a responsible employer
- Contaminated land management
- Council land, building and asset management
- Emergency response
- Land use planning (including development approvals and demolition)
- Management of naturally occurring asbestos
- Regulation of activities (non-work sites)
- Waste management and regulation.

1.1 Purpose

This document aims to outline:

- The role of Council and other organisations in managing asbestos
- Council's relevant regulatory powers
- Council's approach to dealing with naturally occurring asbestos, sites contaminated by asbestos and emergencies or incidents
- General advice for residents on renovating homes that may contain asbestos
- Council's development approval process for developments that may involve asbestos and conditions of consent
- Waste management and regulation procedures for asbestos waste in the LGA

- Council's approach to managing asbestos containing materials in Council workplaces
- Sources of further information.

1.2 Scope

This document applies to all of the Blacktown LGA within Council's jurisdiction.

This document provides information for Council workers, the local community and wider public. Part 1 of this document includes the sections that are likely to be of most interest to the local community and wider public. Part 2 is information that applies to workers associated with Council including employees, contractors, consultants, and volunteers, as defined by the *Work Health and Safety Regulation 2011* (NSW). Definitions for key terms used in the document are provided in Appendix C and acronyms are listed in Appendix D.

This document applies to friable, non-friable (bonded) and naturally occurring asbestos (where applicable) within the LGA.

This document outlines Council's commitment and responsibilities in relation to safely managing asbestos and contains general advice. For specific advice, individuals are encouraged to contact Council or the appropriate organisation (contact details are listed in Appendix E).

This document does not provide detail on specific procedures. Practical guidance on how to manage risks associated with asbestos and asbestos containing material can be found in the:

- *Code of practice on how to manage and control asbestos in the workplace* (catalogue no. WC03560) published by SafeWork NSW.
- *Code of practice on how to safely remove asbestos* published by SafeWork NSW (catalogue no. WC03561) published by SafeWork NSW.
- Additional guidance material listed in Appendix B.

Detailed information on Council's procedures and plans may be found in other documents, which are referenced in part 2 under section 18.1.

2. Definitions

Definitions are provided in Appendix C.

3. Roles and responsibilities of Council

3.1 Educating residents

Council shall assist residents to access appropriate information and advice on the:

- Prohibition on the use and re-use of asbestos containing materials
- Requirements in relation to development, land management and waste management
- Risks of exposure to asbestos
- Safe management of asbestos containing materials
- Safe removal and disposal of minor quantities of asbestos containing materials.

Information and website links for educational materials can be found in Appendices A and B.

3.2 Managing land

Council is responsible for managing public land. This may include land with naturally occurring asbestos as described in section 5 and land contaminated with asbestos as outlined in section 6.

3.3 Managing waste

Where Council is the appropriate regulatory authority, Council is responsible for:

- Issuing clean up notices to address illegal storage or disposal of asbestos waste or after an emergency or incident (under the *Protection of the Environment Operations Act 1997* (NSW)*).*
- Issuing prevention or clean up notices where asbestos waste has been handled (including stored, transported or disposed of) in an unsatisfactory manner (under the *Protection of the Environment Operations Act 1997* (NSW))*.*
- Issuing penalty infringement notices for improper transport of asbestos (under the *Protection of the Environment Operations Act 1997* (NSW))*.*
- Applying planning controls to proposals to dispose of asbestos waste on-site, seeking advice from the Environment Protection Authority (EPA) on this matter and making notation on planning certificates (section 149 certificates) where on-site disposal is permitted.

Waste facilities that are licensed to accept asbestos waste are listed in Appendix F.

3.4 Regulatory responsibilities

Council has regulatory responsibilities under the following legislation, policies and standards in situations where Council is the appropriate regulatory authority or planning authority:

- *Demolition work code of practice 2015 (catalogue no. WC03841) Contaminated Land Management Act 1997* (NSW)
- *Environmental Planning and Assessment Act 1979* (NSW)
- *Environmental Planning and Assessment Regulation 2000* (NSW)
- *Local Government Act 1993* (NSW)
- *Protection of the Environment Operations Act 1997* (NSW)
- *Protection of the Environment Operations (General) Regulation 2009* (NSW)
- *Protection of the Environment Operations (Waste) Regulation 2014* (NSW)
- *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*
- *State Environmental Planning Policy No. 55 – Remediation of Land.*

Additional legislation, policies and standards relating to the safe management of asbestos are listed in Appendix G.

The situations in which Council has a regulatory role in the safe management of asbestos are listed in Table 1.

Table 1: Situations in which Council has a regulatory role in managing asbestos

Issue	Council's role	Section of policy
Contaminated land	• All section 149 certificates issued by Council are to notify applicants of Council's Asbestos Policy. • Maintain and update Council's workplace asbestos register which is kept as per clause 425 of the *Work Health and Safety Regulation 2011* (NSW). • Notify stakeholders of land use planning policy requirements relating to contamination. • Manage residential asbestos contaminated land that is not declared 'significantly contaminated' under the *Contaminated Land Management Act 1997* (excluding oversight of removal or remediation work which is the role of SafeWork NSW).	Sections 5 and 6
Development assessment	• Assess development applications for approval under the *Environmental Planning and Assessment Act 1979* (NSW). • Set conditions of consent for renovations, alterations, additions, demolitions or other developments requiring consent and which may involve disturbance of asbestos containing materials. • Ensure compliance with development conditions. • Apply conditions relating to development involving friable and non-friable asbestos material under the relevant legislation and planning codes and as outlined in section 9.	Section 9
Demolition	• Approve demolition under the *Environmental Planning and Assessment Act 1979* (NSW). • Council certifiers approve development as complying development under the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.	Section 9
Emergencies and incidents	• Regulate the clean up of asbestos waste following emergencies where sites are handed over to the Council or a local resident by an emergency service organisation (excluding oversight of licensed removal or remediation work which is the role of SafeWork NSW). Council may consider the need to issue a Clean Up Notice, Prevention Notice or Cost Compliance Notice under the *Protection of the Environment Operations Act 1997* (NSW).	Section 7
Naturally occurring asbestos	• Verify compliance with environmental planning and assessment legislation for development applications that could disturb naturally occurring asbestos. • Prepare an asbestos management plan for Council workplaces or road works which occur on land containing naturally occurring asbestos.	Section 5
Residential premises	• Respond to any public health risks (risks to Council workers and wider public) relating to the removal of asbestos containing materials or asbestos work at residential properties that does not involve a business or undertaking. • Respond to complaints about unsafe work at a residential property that is undertaken by a resident (not a worker, which is the role of SafeWork NSW). • Respond to public health risks posed by derelict properties or asbestos materials in residential settings.	Section 9
Waste	• Manage waste facilities in accordance with environmental protection legislation. • Respond to illegal storage, illegal dumping and orphan waste. • Regulate non-complying transport of asbestos containing materials.	Section 10

3.5 Responsibilities to workers

Council is committed to fulfilling its responsibilities to workers under the *Work Health and Safety Act 2011* (NSW) and *Work Health and Safety Regulation 2011* (NSW) and maintaining a safe work environment through Council's:

- General responsibilities
- Education, training and information for workers
- Health monitoring for workers
- Procedures for identifying and managing asbestos containing materials in Council premises.

These responsibilities are outlined in part 2.

4. Other stakeholders involved in managing asbestos

Council is committed to working collaboratively with other government agencies and where appropriate, other stakeholders as needed to respond to asbestos issues.

Appendix E notes useful contacts and Appendix H notes agencies involved in managing asbestos. Various asbestos scenarios requiring stakeholders to work together are outlined in Appendix I.

Part 1 – Asbestos in the Local Government Area: Information for the community

5. Naturally occurring asbestos

There is the potential for asbestos to be found as a naturally occurring mineral. Council is not aware of any naturally occurring asbestos within Blacktown City.

Naturally occurring asbestos only poses a health risk when elevated levels of fibres are released into the air, either by human activities or by natural weathering and these fibres are breathed in by people. Information on naturally occurring asbestos, work processes that have the potential to release naturally occurring asbestos fibres into the air and known locations of naturally occurring asbestos in NSW is provided in Appendix A under section 2.1. This information is indicative, and not a complete picture of all naturally occurring asbestos in NSW.

5.1 Responsibilities for naturally occurring asbestos

For naturally occurring asbestos that will remain undisturbed by any work practice, Council is the lead regulator.

Where development applications propose activities that may disturb areas of naturally occurring asbestos (such as excavation), any consent or approval should contain conditions requiring: testing to determine if asbestos is present, and the development of an asbestos management plan if the testing reveals naturally occurring asbestos is present. Council will verify compliance with environmental planning and assessment legislation and together with the EPA and SafeWork NSW will coordinate enforcement where non-compliance is suspected.

Where naturally occurring asbestos will be disturbed due to a work process, including roadwork, excavation and remediation work, SafeWork NSW is the lead regulator. Requirements for workplaces are summarised in the *Naturally-occurring asbestos fact sheet* (catalogue no. WC03728) published by SafeWork NSW. Where naturally occurring asbestos is part of a mineral extraction process, NSW Department of Industry is the lead regulator.

5.2 Managing naturally occurring asbestos

Where naturally occurring asbestos is encountered or suspected, the risk from disturbance of the naturally occurring asbestos should be assessed by an occupational hygienist.

The management of naturally occurring asbestos that stays in its natural state is not prohibited if managed in accordance with an asbestos management plan. Requirements for risk management, asbestos management plans and provisions for workers are outlined in the *Naturally-occurring asbestos fact sheet* (catalogue no. WC03728) published by SafeWork NSW.

The SafeWork NSW website provides further information on naturally occurring asbestos and supporting documents on what people can do to avoid contact with naturally occurring asbestos.

5.2.1 Management of naturally occurring asbestos by Council

If naturally occurring asbestos is discovered in the local government area, Council will develop risk controls and an asbestos management plan in relation to the naturally occurring asbestos and provide guidance materials where necessary.

6. Contamination of land with asbestos

Background information on contamination of land with asbestos and potential disturbance of asbestos contaminated sites can be found in Appendix A under sections 2 and 3. The nature of asbestos contamination of land can vary significantly and there can be a number of different mechanisms available to address this contamination depending upon its source and extent.

6.1 Responsibilities for contaminated land

Responsibility for cleaning up contaminated land lies with the person responsible for contaminating the land or the relevant landowner.

Council may issue a Clean Up Notice to the occupier of premises at or from which Council reasonably suspects that a pollution incident has occurred, or is occurring, requiring asbestos waste to be removed (under part 4.2 of the *Protection of the Environment Operations Act 1997* (NSW)*).*

Council may also issue Prevention Notices (under part 4.3 of the *Protection of the Environment Operations Act 1997* (NSW)*)* to ensure good environmental practice. If a person does not comply with a Prevention Notice given to the person, Council employees, agents or contractors may take action to cause compliance with the notice.

Any reasonable costs incurred by Council in monitoring or enforcing Clean Up and Prevention Notices may be recovered through a compliance cost notice (under part 4.5 of the *Protection of the Environment Operations Act 1997* (NSW)*).* Council shall keep records of: tasks undertaken; the hours Council employees have spent undertaking those tasks; and expenses incurred.

During site redevelopment Council will consider contamination with asbestos containing materials in the same way as other forms of contamination as stipulated by the *Environmental Planning and Assessment Act 1979* (NSW)*.* That is, Council will apply the general requirements of *State Environmental Planning Policy (SEPP) No. 55 – Remediation of Land* and the *Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land*.

Council provides information about relevant matters affecting the land on planning certificates (issued under section 149 of the *Environmental Planning and Assessment Act 1979* (NSW)*)* as outlined in section 6.2.

For sites that are ‘significantly contaminated’ and require a major remediation program independent of any rezoning or development applications, the EPA and SafeWork NSW are the lead regulatory authorities as outlined in Appendix A under section 2.4.2.

The management of Council workplaces contaminated with asbestos is outlined in section 14.4.

6.2 Finding out if land is contaminated

Any site may potentially be contaminated. To find out if land is contaminated advice should be sought from an occupational hygienist. The occupation hygienist will carry out an assessment of the land, determine the likely level

of risk, any appropriate controls or works required and issue a clearance certificate to verify that the site is safe for use.

Council may issue notices to land owners or occupiers requiring information about land it has reason to believe may be contaminated by asbestos using section 192 and section 193 of the *Protection of the Environment Operations Act 1997 (NSW)*.

Council provides information on planning certificates issued under Section 149 of the *Environmental Planning and Assessment Act 1979 (NSW)*. The information relates to any relevant matters affecting the land that Council may be aware of and also notes whether the land is affected by a Council policy. Council's Asbestos Policy relates to all land in the LGA to ensure that asbestos is handled in accordance with this document.

6.3 Duty to report contaminated land

A person whose activities have contaminated land or a landowner whose land has been contaminated is required to notify the EPA when they become aware of the contamination (under section 60 of the *Contaminated Land Management Act 1997* (NSW)*).* Situations where this is required are explained in the document: *Guidelines on the duty to report contamination under the Contaminated Land Management Act 1997* (NSW)*.*

The EPA will inform Council of contaminated land matters relating to the LGA as required under section 59 of the *Contaminated Land Management Act 1997* (NSW).

6.4 Derelict buildings

Concerns regarding potential health risks from derelict properties may be directed to Council. Derelict properties include abandoned buildings, fire damaged buildings and otherwise dilapidated buildings. Where derelict properties contain friable asbestos and asbestos is exposed, either from human activities or weathering, this poses a potential risk to public health.

Council may respond to derelict properties that pose a demonstrable public health risk using a range of regulatory tools according to the particular circumstances.

Council may issue a Clean Up Notice or Prevention Notice and Compliance Cost Notice as noted in section 6.1.

Council may also order a person to demolish or remove a building if the building is so dilapidated as to present harm to its occupants or to persons or property in the neighbourhood (under section 121B 2(c) of the *Environmental Planning and Assessment Act 1979* (NSW)*)*. An Order may require immediate compliance with its terms in circumstances which the person who gives the order believes constitute a serious risk to health or safety or an emergency (under section 121M of the *Environmental Planning and Assessment Act 1979* (NSW)*).* If a person fails to comply with the terms of an order, Council may act under section 121ZJ of the *Environmental Planning and Assessment Act 1979* (NSW) to give effect to the terms of the order, including the carrying out of any work required by the order.

If the derelict building is on a site that is a workplace then SafeWork NSW is the lead agency responsible for ensuring that asbestos is removed by appropriately licensed removalists.

7. Responding to emergencies and incidents

Emergencies and incidents such as major collapses, cyclones, explosions, fires, storms, or vandalism can cause damage to buildings or land that contain asbestos. This may include working with state agencies in accordance with the NSW Asbestos Emergency Plan and the Disaster Assistance Guidelines. This can create site contamination issues and potentially expose emergency service workers and the wider public to asbestos. Emergencies or incidents can arise from natural hazards, or from accidental or deliberate human activities including criminal activity.

7.1 Responsibilities in the clean up after an emergency or incident

Council may play a role in ensuring that asbestos containing materials are cleaned up after an emergency or incident. If the emergency or incident occurs at a workplace, SafeWork NSW is the lead agency.

Council may issue a Clean Up, Prevention, Cost Compliance or Penalty Infringement Notice as outlined in section 3.3 and section 6.1.

Alternatively, Council may act under the *Environmental Planning and Assessment Act 1979* (NSW) as outlined in section 6.4 of this document.

Council will determine an appropriate response depending on the nature of the situation.

This may include to:

- Seek advice from an occupational hygienist on the likely level of risk and appropriate controls required
- Liaise with or consult the appropriate agencies
- Inform emergency personnel of any hazards known to Council as soon as practicable
- Follow the *Code of practice on how to safely remove asbestos* (catalogue no. WC03561) published by SafeWork NSW
- Ensure that any Council workers attending the site have appropriate training and are wearing appropriate personal protective equipment
- Exclude the public from the site
- Inform the public of the potential sources of exposure to asbestos, health risks and emergency management response
- Minimise the risks posed by any remaining structures (see section 6.4)
- Address the risks posed by disturbed asbestos containing materials by engaging a licensed removalist (as outlined in section 14.6.2) or issuing a clean up or prevention notice (as outlined in section 6.4) to ensure asbestos containing materials are removed for disposal
- Ensure that the site is kept damp, at all times or sprayed with PVA glue, particularly where friable asbestos is present, if considered appropriate (noting that in some instances this may not be appropriate, for example if there are live electrical conductors or if major electrical equipment could be permanently damaged or made dangerous by contact with water)
- Ensure that asbestos containing materials are disposed of at a facility licensed to accept asbestos waste and sight proof of appropriate disposal through weighbridge dockets or similar documentation.

7.2 Advice to the public regarding clean up after an emergency or incident

During a clean up after an emergency or incident, the possibility of neighbours being exposed to asbestos fibres may be very low if precautions are taken to minimise the release and inhalation of asbestos dust and fibres.

As a precautionary measure, where Council is involved in a clean up, Council may consider advising those in neighbouring properties to:

- Avoid unnecessary outdoor activity and do not put any laundry outside during the clean up
- Close all external doors and windows and stay indoors during the clean up
- Consider avoiding using air conditioners that introduce air from outside into the home during the clean up
- Dispose of any laundry that may have been contaminated with asbestos as asbestos waste after the clean up (advice on disposing of asbestos waste is provided in section 10)
- Use a low pressure hose on a spray configuration to remove visible dust from pathways after the clean up

- Wipe dusty surfaces with a damp cloth and bag and dispose of the cloth as asbestos waste after the clean up (advice on disposing of asbestos waste is provided in section 10)
- Any other measures recommended by an occupational hygienist following assessment of the situation.

8. Council's process for changing land use

Council recognises the need to exercise care when changing zoning for land uses, approving development or excavating land due to the potential to uncover known or unknown asbestos material from previous land uses (for example, where a site has been previously been used as a landfill or for on-site burial of asbestos waste).

State Environmental Planning Policy No. 55 – Remediation of Land states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed.

Managing sites contaminated with asbestos material is addressed in section 6.

9. Council's process for assessing development

This section applies to development applications assessed under the *Environmental Planning and Assessment Act 1979* (NSW) and complying development applications assessed under the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or Council's complying codes (see section 9.5.2). This includes alterations and additions to residential development, which may include internal work as well as extensions to the existing main structure, or changes to outbuildings, sheds or garages.

This section also covers renovations that do not require development consent or a complying development certificate. Development consent is not required to maintain an existing structure. For example, the replacement of windows, doors and ceilings may involve the removal of asbestos but is categorised as exempt development under the *Environmental Planning and Assessment Act 1979* (NSW) and does not require development consent. In these instances, Council has an educative role in providing owners and occupiers with advice and information about the identification and safe management of asbestos.

9.1 Responsibilities for approving development

Council is the consent authority for the majority of development applications in the LGA. The Joint Regional Planning Panel (JRPP) is also consent authority for certain local or regional development. Council may have representation on the JRPP.

Council or the JRPP may impose conditions of consent and a waste disposal policy to a development consent to ensure the safe removal of asbestos, where asbestos has been identified or may be reasonably assumed to be present.

Either Council or a private certifier may assess a complying development certificate. Where a private certifier is engaged to assess a complying development certificate, the private certifier is responsible for ensuring that the proposed development activities include adequate plans for the safe removal and disposal of asbestos.

This also applies to the demolition of buildings. Certifiers are able to issue a complying development certificate under the Demolition Code of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*. Further information on demolition is provided in section 9.4.

When a private certifier issues a complying development certificate and is appointed as the Principal Certifying Authority for the development it is the certifier's responsibility to follow up to ensure that works including asbestos handling, removal and disposal if present, are carried out appropriately in accordance with the *Environmental Planning and Assessment Regulation 2000* (clause 136E) (NSW). Compliance is covered in section 9.7.

9.2 Providing advice to home owners, renovators and developers

Council is committed to providing information to minimise the risks from asbestos in the LGA. Information is provided below and in Appendix A. Appendix B lists additional sources of information on how to deal safely with the risks of asbestos and Appendix J lists asbestos containing products that may be found around the home.

The key points are:

- Before any renovation, maintenance or demolition work is carried out, any asbestos or asbestos containing materials should be identified (refer to section 9.3)
- Where a material cannot be identified or it is suspected to be asbestos, it is best to assume that the material is asbestos and take appropriate precautions
- If asbestos containing materials can be maintained in good condition it is recommended that they be safely contained, left alone and periodically checked to monitor their condition, until demolition or redevelopment. If asbestos materials cannot be safely contained, they should be removed as outlined in section 9.4.
- Demolition or redevelopment works may require a development application and you need to Contact Council to discuss this further. During demolition and redevelopment works, any asbestos containing materials should be safely removed and disposed of prior to the work commencing.

Anyone who is undertaking renovations themself without a contractor is encouraged to refer to Appendices A and B for more information and contact Council where they require further advice or clarification. Anyone engaging an asbestos removal contractor may contact SafeWork NSW with any queries as SafeWork NSW regulates asbestos removal by workers (as explained in section 9.4). Contact details for Council and SafeWork NSW are provided in Appendix E.

9.3 Identifying asbestos

Information on common places where asbestos is likely to be found in residential, commercial and industrial premises with materials from prior to 2004 on the premises is provided in Appendix A.

A person may apply to Council for a planning certificate (called a section 149 certificate) for the relevant land. Council may provide information on a planning certificate including whether Council has a policy to restrict the use of land due to risks from asbestos contamination, as outlined in section 6.2.

Council aims to ensure that records are, as far as possible, accurate. In some instances, Council may not have up-to-date information about asbestos for a property. Council may be able to provide general advice on the likelihood of asbestos being present on the land based on the age of the buildings or structures on the land. A general guide to the likelihood of asbestos presence based on building age is provided in Appendix A under section 2.2.

The most accurate way to find out if a building or structure contains asbestos is to obtain an asbestos inspection by a person competent in the identification and assessment of asbestos, such as an occupational hygienist (a competent person is defined by the *Work Health and Safety Regulation 2011*(NSW)*).* This is highly advisable before undertaking major renovations to buildings constructed, or containing materials from prior to 2004.

Property owners and agents are encouraged to inform any tenants or occupiers of the presence of asbestos and to address any potential asbestos hazards where appropriate.

Property owners who let their properties out are required to identify any asbestos within those properties before any work is carried out (this includes residential properties).

The *Work Health and Safety Regulation 2011* (NSW) states that the person conducting a business or undertaking in any building constructed before 31 December 2003 must identify if there is any asbestos in the building.

All commercial properties that contain asbestos must have and maintain a current asbestos register and asbestos management plan.

9.4 Removing asbestos, refurbishments and demolitions

9.4.1 Removing asbestos at domestic premises

If development is undertaken by contractors, as is the case with a lot of home renovations, then the work is considered to be at a workplace and is regulated by SafeWork NSW under the *Work Health and Safety Regulation 2011* (NSW). This requires that a person conducting a business or undertaking who is to carry out refurbishment or demolition of residential premises must ensure that all asbestos that is likely to be disturbed by the refurbishment or demolition is identified and, so far as reasonably practicable, is removed before the refurbishment or demolition is commenced.

Depending on the nature and quantity of asbestos to be removed, a licence may be required to remove the asbestos. The requirements for licenses are outlined below and summarised in the table in Appendix K. SafeWork NSW is responsible for issuing asbestos licences.

Friable asbestos must only be removed by a licensed removalist with a friable (Class A) asbestos removal licence. Except in the case of the removal of:

- Asbestos containing dust associated with the removal of non-friable asbestos, or
- Asbestos containing dust that is not associated with the removal of friable or non-friable asbestos and is only a minor contamination (which is when the asbestos contamination is incidental and can be cleaned up in less than one hour).

The removal of more than 10 square metres of non-friable asbestos or asbestos containing material must be carried out by a licensed non-friable (Class B) or a friable (Class A) asbestos removalist.

The removal of asbestos containing dust associated with the removal of more than 10 square metres of non-friable asbestos or asbestos containing material requires a non-friable (Class B) asbestos removal licence or a friable (Class A) asbestos removal licence.

Removal of 10 square metres or less of non-friable asbestos may be undertaken without a licence. However, given the risks involved, Council encourages residents to consider engaging a licensed asbestos removal contractor. The cost of asbestos removal by a licensed professional is comparable in price to most licensed tradespeople including electricians, plumbers and tilers.

All asbestos removal should be undertaken in accordance with the *Code of practice on how to safely remove asbestos* (catalogue no. WC03561).

If a residential premise is a workplace, the licensed asbestos removalist must inform the following persons before licensed asbestos removal work is carried out:

- The person who commissioned the work
- A person conducting a business or undertaking at the workplace
- The owner and occupier of the residential premises
- Anyone occupying premises in the immediate vicinity of the workplace (as described in section 467 of the *Work Health and Safety Regulation 2011* (NSW)*).*

In certain circumstances, a premise may be used for both residential and commercial purposes and is therefore classified as a workplace.

All licensed asbestos removal must be:

- Supervised by a supervisor named to SafeWork NSW notified to SafeWork NSW at least five days prior to the work commencing.

Requirements for the transport and disposal of asbestos waste are covered in section 10.

9.4.2 Removing asbestos at workplaces

The *Work Health and Safety Regulation 2011* (NSW) specifies requirements for demolition and refurbishment at a workplace with structures or plants constructed or installed before 31 December 2003. SafeWork NSW is the lead agency for regulating the safe management of asbestos at workplaces.

9.4.3 Obtaining approval for demolition

Demolition work is classified as high risk construction work in the *NSW Work Health and Safety Regulation 2011* and demolition licenses are required for some demolition work. The *Demolition work code of practice 2015* provides practical guidance on how to manage the risks associated with the demolition of buildings and structures.. In most circumstances demolition of a structure requires development consent or a complying development certificate. Applicants need to enquire to Council as to whether and what type of approval is required. Where a development application is required Council's standard conditions need to be applied to ensure that asbestos is safely managed. Council's conditions for development consent are referred to in section 9.6.

A wide range of development, including residential, industrial and commercial development, can be approved for demolition as complying development under the Demolition Code of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* and the *Environmental Planning and Assessment Regulation 2000* (NSW) provides mandatory conditions for complying development certificate applications.

Demolition of development that would be exempt development under the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* is also exempt development and does not require consent. This includes minor features such as carports, fences, sheds and the like.

9.5 Exempt or complying development

9.5.1 Exempt development

Exempt development does not require any planning or construction approval if it meets the requirements of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

This means that there is no ability for Council or a private certifier to impose safeguards for the handling of asbestos through conditions of development consent. However, Council advises that all asbestos removal work should be carried out in accordance with the *Code of practice on how to safely remove asbestos* (catalogue no. WC03561).

9.5.2 Complying development

The *Environmental Planning and Assessment Regulation 2000* (NSW) (clause 136E) outlines conditions under which a complying development certificate can be issued for development that involves building work or demolition work and friable or non-friable asbestos.

Applications for complying development certificates must include details of the estimated area (if any) in square metres of friable and/or non-friable asbestos material that will be disturbed, repaired or removed in carrying out the development (under Schedule 1 part 2 of the *Environmental Planning and Assessment Regulation 2000* (NSW)*).*

Where more than 10 square metres of non-friable asbestos is to be removed, a contract evidencing the engagement of a licensed asbestos removal contractor is to be provided to the principal certifying authority. The contract must specify the landfill site lawfully able to accept asbestos to which the removed asbestos will be delivered.

If the contract indicates that asbestos will be removed to a specified landfill site, the person having the benefit of the complying development certificate must give the principal certifying authority a copy of a receipt from the operator of the landfill site stating that all the asbestos material referred to in the contract has been received by the operator.

If the work involves less than 10 square metres of non-friable asbestos and is not undertaken by a licensed contractor, it should still be undertaken in a manner that minimises risks as detailed in the *Code of practice on how*

to safely remove asbestos (catalogue no. WC03561). In instances where asbestos removal is less than 10 square metres of non-friable asbestos and not from a place of work, then SafeWork NSW would not be the agency responsible for regulating this activity. Concerns or complaints may be directed to Council as outlined in section 11.

The *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* outlines the requirements for the applicant to notify their neighbours that works may include asbestos removal.

Further requirements to inform other persons of licensed asbestos removal are described in section 467 of the *Work Health and Safety Regulation 2011* (NSW) as noted in section 9.4.1 of this document.

9.6 Development applications

If a proposed building does not meet the requirements of exempt or complying development then the alternative planning approval pathway is a development application (DA). A DA can only be approved by a local council, the JRPP or, for very large, State-significant development proposals, the State Government. A development application needs to be prepared and it will be assessed in accordance with the requirements of relevant environmental planning instruments and the development standards established by council. Council may undertake a site inspection as part of the DA assessment.

9.6.1 Pre-development application advice regarding asbestos

Council's pre-DA service enables proponents to discuss asbestos-related issues with Council prior to lodging a DA, if the issue is raised. Council may inform applicants of this document, fact sheets or websites. Generally this may be most relevant to structures erected or modified before the 1980s and any other structure that could be reasonably suspected to contain asbestos including those with building materials from prior to 2004.

9.6.2 Conditions of consent

Where a Development Application is lodged with Council to demolish an existing building that may incorporate building elements containing asbestos, the following conditions (or conditions having the same effect) shall be attached to any Notice of Determination (Development Consent):

- a Hazardous Materials Survey (Survey) is to be conducted by an appropriately qualified person licensed by SafeWork NSW (demolition contractor, occupational hygienist or site auditor) prior to any demolition works;
- any demolition work of a building identified by the Survey as containing any asbestos or other hazardous material is to be undertaken by a licensed demolition contractor;
- a Clearance Certificate is to be issued by the licensed person upon completion of the demolition work and prior to the issue of a Construction Certificate for any new work on the development site; and
- a copy of the Clearance Certificate is to be attached to any Construction Certificate issued in relation to the development site.

Where a building suspected of containing asbestos or other hazardous material is demolished without the necessary Development Consent, the matter shall be investigated to ensure the development /activity complies with the relevant requirements of the *Environmental Planning and Assessment Act 1979* (NSW) and the *Protection of the Environment Operations Act 1997* (NSW) and, where appropriate, the land owner is to be served with a:

- Prevention Notice or Clean-Up Notice under the provisions of the *Protection of the Environment Operations Act 1997* (NSW), which shall include a requirement to produce a Clearance Certificate; and
- Penalty Infringement Notice under the provisions of the *Environmental Planning and Assessment Act 1979* (NSW) for the unauthorised development.

Should land be identified as having asbestos contamination such as buried asbestos during assessment stage, it may mean that the land cannot be completely remediated as the extent of contamination could be difficult to

determine. In these instances, a condition is to be included that ensures that the applicant submit an 'Asbestos Management Plan' prepared by an appropriately qualified person (occupational hygienist or site auditor) in which recommendations are given on how the asbestos is to be managed rather than removed.

Further information is provided in the *Guide to the Model Asbestos Policy*.

9.7 Compliance and enforcement

9.7.1 Responsibilities for compliance and enforcement

The controls rely on information being provided and checked by the principal certifying authority which may be either the local Council or a private certifier. A private certifier has powers under the *Environmental Planning and Assessment Act 1979* (NSW) to issue construction certificates, compliance certificates, complying development certificates, occupation certificates and to carry out mandatory inspections. Councils will not always be the principal certifying authority. When a Council is not nominated as the principal certifying authority for a complying development certificate or development application, the Council may not have any knowledge of the asbestos matter. Accordingly, coordination of compliance and/or enforcement actions between the Council and the private certifier will be required.

Council may take action on any development for which Council has issued the development consent, even when not appointed as the principal certifying authority to ensure enforcement. Where Council receives a complaint about a development for which Council is not the principal certifying authority, Council should consider whether Council is the appropriate authority to resolve the matter. Complaints that warrant action by Councils because of their greater enforcement powers include:

- Urgent matters, for example, a danger to the public or a significant breach of the development consent or legislation
- Matters that are not preconditions to the issue of the occupation/subdivision certificate.

In relation to naturally occurring asbestos, Council is to verify compliance with environmental planning and assessment legislation and together with the EPA and SafeWork NSW is to coordinate enforcement where non-compliance is suspected.

9.7.2 Compliance strategies

Illegal works include:

- Works that are undertaken without a required development consent or complying development certificate
- Works that are undertaken that do not comply with the conditions of the development consent or complying development certificate.

Where Council becomes aware of illegal work involving asbestos or asbestos containing materials, Council will notify SafeWork NSW if the site is a workplace.

The *Environmental Planning and Assessment Act 1979* (NSW) empowers Council to issue orders to direct specific work be undertaken to comply with a development consent.

Council may need to issue an order under the *Local Government Act 1993* (NSW) (section 124) to direct a person to 'do or refrain from doing such things as are specified in the order to ensure that land is, or premises are, placed or kept in a safe or healthy condition.'

Council may also issue a Clean Up Notice or Prevention Notice under the *Protection of the Environment Operations Act 1997* (NSW) as outlined in section 6.1 of this document.

Council may audit asbestos-related demolition works which Council has recently approved by using a legal notice under section 192 of the *Protection of the Environment Operations Act 1997* (NSW) to require developers to provide information and records regarding disposal of their asbestos waste.

10. Managing asbestos as a waste

It is illegal to dispose of asbestos waste in domestic garbage bins or to recycle, reuse, bury or illegally dump asbestos waste. Asbestos must not be placed in general waste skip bins, yet there have been instances where asbestos has been illegally placed in skip bins by third parties. Members of the public need to be aware of this hazard and may need to secure their skip bins to prevent a third party from illegally disposing of asbestos in the skip bin.

Asbestos waste (in any form) must only be disposed of at a landfill site that may lawfully receive asbestos waste.

10.1 Responsibilities for asbestos waste management

Council's responsibilities for asbestos waste management are outlined in section 3.3.

The handling and, where appropriate, temporary storage of asbestos waste at worksites is regulated by SafeWork NSW.

The EPA regulates premises that have or require an environment protection licence in accordance with the *Protection of the Environment Operations Act 1997* (NSW). A licence is required where more than 5 tonnes of asbestos waste, brought from off-site, is stored at any time. All other sites where asbestos waste is stored, typically those that are non-work sites, are regulated by local Councils.

10.2 Handling asbestos waste for disposal

The *Code of practice on how to safely remove asbestos* (catalogue no. WC03561) provides details on waste containment and disposal and controls applicable to all types of asbestos removal (in section 4.8 of the Code).

10.3 Transporting asbestos waste

The following requirements apply to the transport of asbestos waste and non-compliance with these requirements is an offence under clause 78 of the *Protection of the Environment Operations (Waste) Regulation 2014*:

a) Any part of any vehicle in which the person transports the waste is covered, and leak-proof, during the transportation, and

b) If the waste consists of bonded asbestos material-it is securely packaged during the transportation, and

c) If the waste consists of friable asbestos material-it is kept in a sealed container during transportation, and

d) If the waste consists of asbestos–contaminated soils-it is wetted down.

Asbestos waste that is transported interstate must be tracked in accordance with the *Protection of the Environment Operations (Waste) Regulation 2014*. The transport of asbestos waste in NSW must be recorded from the place of generation to its final destination. The waste tracking system is administered by the EPA. Operations that use the EPA's WasteLocate system will be in compliance with these requirements.

Information about EPA's WasteLocate system can be found at:

www.epa.nsw.gov.au/wasteregulation/transport-asbestos-tyres.htm

An environment protection license issued by the EPA is required to transport asbestos waste interstate where any load contains more than 200 kilograms of asbestos waste.

It is an offence to transport waste to a place that cannot lawfully receive that waste, or cause or permit waste to be so transported (under section 143 of the *Protection of the Environment Operations Act 1997*(NSW)*).* Penalty notices may be issued for $7,500 (to individuals) and $15,000 (to corporations). NSW courts may impose penalties up to $250,000 (for individuals) and $1,000,000 (for corporations) found guilty of committing this offence

10.4 Disposing of asbestos waste at waste facilities

Asbestos waste can be disposed of at one of 2 locations within Blacktown city, please see below for locations:

- SUEZ Eastern Creek – Wallgrove Road, Eastern Creek, phone 1300 651 116
- Genesis Eastern Creek – Honeycomb Drive, Eastern Creek, phone 9832 3333

Always contact the landfill before taking asbestos waste to the landfill to find out whether asbestos is accepted, hours of operation and any requirements for the delivery.

Waste facilities that do not accept asbestos waste:

- SUEZ Seven Hills Transfer Station – Station Street, Seven Hills phone 131 335
- Blacktown Waste Services – 920 Richmond Rd, Marsden Park, phone 9835 1995

Please refer to Council's website www.blacktown.nsw.gov.au/planning_and_development for more information regarding the disposal of asbestos waste within our LGA.

Persons delivering waste to a landfill site must comply with the following requirements:

- A person delivering waste that contains asbestos to a landfill site must inform the landfill occupier of the presence of asbestos when delivering the waste
- When unloading and disposing of asbestos waste at a landfill site, the waste must be unloaded and disposed of in such a manner as to prevent the generation of dust or the stirring up of dust.

Non-compliance with these requirements is an offence under the *Protection of the Environment Operations (Waste) Regulation 2014* (NSW) and these offences attract strong penalties.

Development consent pertaining to waste management facilities will contain conditions that limit the types of waste materials that will be handled at the facility. Such conditions are enforceable under the *Environment Planning and Assessment Act 1979* (NSW). Waste facilities that meet the requirements set out in Schedule 1 of the *Protection of the Environment Operations Act 1997* (NSW) are also licensed by the EPA.

10.4.1 Situations in which asbestos waste may be rejected from waste facilities

Asbestos waste may be rejected from a waste facility if the waste is:

- Not correctly packaged for delivery and disposal (as per sections 10.2 and 10.3)
- Not disclosed by the transporter as being asbestos or asbestos containing materials
- Taken to a waste facility that does not accept asbestos waste, or
- Not provided appropriate notification.

Where waste is rejected, the waste facility must inform the transporter of the waste of a waste facility to which the waste may be transported, that is, a waste facility at which the waste can be legally accepted (as required by the *Protection of the Environment Operations (Waste) Regulation 2014* (NSW).

Individuals may be fined $7,500 and corporations may be fined $15,000 under the *Protection of the Environment Operations Act 1997* (NSW) and *Protection of the Environment Operations (Waste) Regulation 2014* (NSW) for transporting asbestos waste to a facility that cannot lawfully receive asbestos waste.

10.5 Illegal dumping of asbestos waste

Illegal dumping is the unlawful deposit of waste onto land. That is waste materials dumped, tipped or otherwise deposited onto private or public land where no licence or approval exists to accept such waste. Illegal landfilling, which is waste used as fill material with the consent of the owner or occupier of the land and without the necessary Council or EPA approvals, is also considered to be illegal dumping and pollution of land.

Illegal dumping of asbestos waste in public places such as parks, streets or nature strips can attract regulatory action including:

- On the spot fines of up to $15,000 prosecution for pollution of land of up to $1 million for a corporation and $120,000 for each day the offence continues (under section 142A of the *Protection of the Environment Operations Act 1997* (NSW)*)*, or
- Up to $1 million, or seven years imprisonment, or both for an individual (under section 119 of the *Protection of the Environment Operations Act 1997* (NSW)*).*

The responsibility for cleaning up illegally dumped waste lies with the person or company that deposited the waste. If they cannot be identified the relevant occupier or landowner becomes the responsible party.

Local Councils are the appropriate regulatory authority for illegal dumping unless:

- The activity was part of the carrying on of an activity listed in Schedule 1 of the *Protection of the Environment Operations Act 1997* (NSW)
- The activity was carried out by a public authority or the state, or
- The site is regulated by a different authority such as the Minister for Planning A handbook to assist Aboriginal communities to prevent and arrange the clean up of illegal dumping (published by the EPA) is noted in Appendix B.

10.6 Asbestos remaining on-site

The disposal of asbestos on site is not encouraged as it requires an effective ongoing system of long term management to ensure the material does not pose unacceptable risks to future site activities and occupants. For on-site burial of asbestos waste, Council will seek advice from the EPA. Council will confirm if on-site disposal is permitted under planning controls whether or not consent is required and will require recording of on-site disposal on the zoning certificate (section 149 certificate).

11. Complaints and investigations

Complaints and inquiries may be directed to Council about incidents in public places and private properties. Complaints and inquiries regarding a workplace should be directed to SafeWork NSW. Complaints and inquiries regarding licensed premises under the *Protection of the Environment Operations Act 1997* (NSW) should be directed to the EPA.

Council will respond to complaints and inquiries regarding:

- Council's requirements in relation to development, land management and waste management
- Derelict properties
- General asbestos safety issues
- Illegal dumping
- Safe removal and disposal of minor quantities of asbestos materials
- Unsafe work at a residential property conducted by a homeowner or tenant.

Complaints about Council in relation to asbestos may be directed to the NSW Ombudsman.

Part 2 – Management of asbestos risks within Council

12. Rights and responsibilities of workers at the Council workplace

12.1 Duties of Council workers at the Council workplace

12.1.1 The General Manager

The General Manager has a duty to exercise due diligence to ensure that Council complies with the *Work Health and Safety Act 2011* (NSW) and the *Work Health and Safety Regulation 2011* (NSW). This includes taking reasonable steps to ensure that Council has and uses appropriate resources and processes to eliminate or minimise risks associated with asbestos.

12.1.2 Workers

Workers have a duty to take reasonable care for their own health and safety and that they do not adversely affect the health and safety of other persons. Accordingly workers:

- Must comply with this document and any reasonable instruction or procedure relating to health and safety at the workplace
- Must use any personal protective equipment provided, in accordance with information, training and reasonable instruction provided so far as the worker is reasonably able
- May cease, or refuse to carry out, work if the worker has a reasonable concern that to carry out the work would expose them, or other persons, to a serious health or safety risk, emanating from an immediate or imminent exposure to a hazard
- Should ensure they are using the latest version of all relevant procedures, plans, guidelines and legislation (refer to Appendix G).

Managers are responsible for ensuring workers who report to them have access to this document and appropriate information, documentation and training.

12.1.3 Prohibited work activities

Council will not permit the use of the following on asbestos or asbestos containing material:

- High pressured water spray (unless for firefighting or fire protection purposes), or
- Compressed air.

Council will not permit the following equipment to be used on asbestos or asbestos containing material unless the use of the equipment is controlled in accordance with the *Work Health and Safety Regulation 2011* (NSW)*:*

- Power tools
- Brooms (note brooms are allowed for use on vinyl floor tiles), or
- Any other implements that cause the release of airborne asbestos into the atmosphere.

12.2 Responsibilities of Council to Council workers

12.2.1 Council's general responsibilities

Council has general responsibilities under the *Work Health and Safety Act 2011* (NSW) and the *Work Health and Safety Regulation 2011* (NSW). Accordingly Council will:

- Not use any asbestos containing materials (unless in accordance with part 8.1 (419) of the *Work Health and Safety Regulation 2011* (NSW)*)* and will not cause or permit asbestos waste in any form to be reused or recycled
- Ensure that exposure of a person at the workplace to airborne asbestos is eliminated so far as is reasonably practicable
- Ensure that the exposure standard for asbestos (defined in Appendix C) is not exceeded in the workplace
- Notify SafeWork NSW immediately if persons are likely to be affected by asbestos fibres or if an air monitoring process records respirable asbestos fibre levels above 0.02 fibres/ml of air
- Ensure that any contractors engaged to undertake the removal of asbestos for Council are appropriately licensed

- Consult with workers as required by the *Work Health and Safety Act 2011* (NSW).

Council will not import asbestos or asbestos containing material into Australia as prohibited under the *Customs (Prohibited Imports) Regulations 1956*. If plant or other materials are imported from countries where asbestos is not yet prohibited, Council shall ensure the plant or materials do not contain asbestos prior to supply or use in the workplace.

12.2.2 Education, training and information for workers

As required by the *Work Health and Safety Act 2011* (NSW) and *Work Health and Safety Regulation 2011* (NSW), Council will:

- Provide any information, training, instruction or supervision that is necessary to protect all persons at the workplace from risks to their health and safety arising from work carried out as part of the conduct of Council business
- Ensure workers who Council reasonably believes may be involved in asbestos removal work or the carrying out of asbestos-related work in the workplace are trained in the identification, safe handling and suitable control measures for asbestos and asbestos containing material.

Workers who are involved in any activity listed in Appendix A, section 3 on behalf of, or for, Council shall be provided with access to a copy of this document and information and training suitable to their role and the activity.

Council may also provide information and training to Council employees who may need to respond to asbestos issues related to renovations and developments as outlined in section 9.

Topics training may cover are outlined in the *Code of practice on how to safely remove asbestos* (catalogue no. WC03561).

Education and training will only be provided by appropriately accredited individuals. Council's Learning & Development Section conduct an annual training needs analysis in consultation with workers to evaluate the need for asbestos removal or asbestos awareness training.

Managers ensure toolbox talks are carried out for workers exposed to asbestos using Tool Box Talk 0061 and Council's WHS system includes templates for use in the management of asbestos.

A record of asbestos training undertaken by each worker will be kept until five years after the day the worker ceases to work for Council. The Learning and Development section shall maintain training records for workers.

Managers shall maintain and keep available a list of workers who have received the appropriate training to respond to asbestos hazards.

12.2.3 Health monitoring for workers

Council will ensure health monitoring is provided to a worker if they are carrying out licensed asbestos removal work, other ongoing asbestos removal work or asbestos-related work at the workplace for Council and are at risk of exposure to asbestos when carrying out the work.

The health monitoring will be consistent with the *Code of practice on how to safely remove asbestos* (catalogue no. WC03561) and meet the requirements of the *Work Health and Safety Regulation 2011* (NSW) (part 8.5 Division 1).

Health counselling may be appropriate where a heightened sense of concern exists for individuals possibly exposed to elevated levels of airborne asbestos fibres.

Employees who were exposed to asbestos in the past and if there is a risk to the health of the employee as a result of that exposure, are covered by the *Work Health and Safety Regulation 2011* (NSW) (clauses 435-444). Council will ensure these employees are kept on the health monitoring program.

Council's Work Health & Safety System includes health monitoring provisions;

- SOP008 – Employment Process
- SOP056 – Hazardous Chemicals

- SOP061 – Asbestos

Managers shall liaise with the Safety section and nominate workers that require health monitoring. The Safety section shall arrange for a referral to appropriately qualified medical practitioners to conduct health monitoring and maintain the records in the employee health register. The Safety section shall provide workers with the result of their health monitoring and maintain records in a confidential file.

The safety management system documents the processes to be applied for asbestos management;

- SOP061 – Asbestos Management
- WHS061.1 – Asbestos Management Plan Flowchart (establishes procedural to health monitoring)
- WHS061.2 – Site Asbestos Management Plan
- WHS061.3 – Asbestos Removal Checklist Workplace & Public Spaces/Reserves
- WHS061.4 Asbestos removal Checklist Structures

13. Identifying and recording asbestos hazards in the Council workplace

This section outlines how Council will identify and record asbestos hazards in the workplace. This section does not cover naturally occurring asbestos which is addressed in section 5 or illegal dumping which is addressed in section 10.5.

13.1 Identifying asbestos

Council will ensure, so far as is reasonably practicable, that all asbestos or asbestos containing material at the workplace is identified by a competent person (as defined by the *Work Health and Safety Regulation 2011* (NSW)*)*.

If a material cannot be identified or accessed, it will be assumed to be asbestos. This does not apply if Council has reasonable grounds to believe that asbestos or asbestos containing material is not present.

13.1.1 Material sampling

Council may choose to identify asbestos or asbestos containing material by arranging for a sample to be analysed. Where Council arranges sampling of asbestos containing material, this will be undertaken by an appropriately trained and competent Council worker or a competent person will be contracted to undertake this task. Analysis of the sample must only be carried out by a National Association of Testing Authorities (NATA) accredited laboratory (refer to Appendix E) or a laboratory approved or operated by the regulator.

13.2 Indicating the presence and location of asbestos

Council will clearly indicate the presence and location of any asbestos or asbestos containing material identified or assumed at the workplace. Where it is reasonably practicable to do so, Council will indicate the presence and location of the asbestos or asbestos containing material by a label.

13.3 Asbestos register

Council has an asbestos register which is located on Council's Work Health and Safety intranet page (http://safety/public/index.cfm?appreset=true). Site Asbestos Management Plans are attached to each site's risk register.

Council's asbestos register will be maintained to ensure the register lists all identified (or assumed) asbestos in the workplace and information in the register is up to date. The asbestos register will be accessible, reviewed, revised and otherwise managed as mandated by the *Work Health and Safety Regulation 2011* (NSW) (clauses 425 – 428).

Council will ensure that any worker carrying out or intending to carry out work at a Council workplace that involves a risk of exposure to airborne asbestos is given a copy of the asbestos register.

13.4 Suspected asbestos

If a worker suspects there is asbestos in a Council workplace, they should inform their manager or supervisor. A competent worker should check the asbestos register for existing asbestos locations and control measures and may need to arrange for an inspection and sampling of the material (refer to section 13.1.1). If it is likely that asbestos or suspected asbestos is present, the asbestos register will be updated and workers will be notified of any newly identified asbestos locations.

Council may need to manage the suspected asbestos as outlined in section 14. If the suspected asbestos has been disturbed and has, or could, become airborne, Council may need to respond immediately as outlined in section 15.

14. Managing asbestos-related risks in the Council workplace

14.1 Asbestos management plan

Due to the diversity of Council's operations, the geographic locations of facilities and the nature of work, asbestos management is documented through Safety Management System Standard Operating Procedure SOP061, the Asbestos Management Plan flowchart WHS061.1 and associated documents to ensure that workers and other person's exposure to asbestos is either eliminated or kept as low as reasonably practicable.

The Asbestos Management flowchart WHS061.1 identifies four processes where workers may be exposed to asbestos or asbestos containing material;

- Structures – Council buildings
- Public spaces or reserves – Orphan waste
- Workplaces – Construction sites
- Regulatory visits - Private premises (asbestos management plan is not required).

Each function has unique aspects requiring the control of asbestos in the workplace. Managers shall apply the procedures outlined in SOP061 Asbestos Management and the Asbestos Management Plan Flowchart WHS061.1.

Council has an asbestos management plan for asbestos in the Council workplace which is accessible, reviewed, revised and otherwise managed as mandated by the *Work Health and Safety Regulation 2011* (NSW) clause 429.

14.2 Asbestos management plan for naturally occurring asbestos

Council is not aware of any naturally occurring asbestos in the city.

14.3 Management options for asbestos-related risks in the Council workplace

Council's asbestos management plan includes decisions and reasons for decisions about the management of asbestos at the workplace.

Options for managing asbestos-related risks include:

- Removal of asbestos or asbestos containing materials (preferred wherever reasonably practicable)
- Interim control measures: enclosure (only for non-friable asbestos), encapsulation (when the original asbestos bond is still intact) or sealing (where the sealed material is unlikely to be subject to mechanical damage) asbestos containing material, to be implemented along with regular inspections by a competent person
- Leaving asbestos containing material in situ (deferring action).

Council may undertake an asbestos risk assessment, in consultation with workers and/or their representatives, in order to inform decision-making. Only competent persons will perform risk assessments or any subsequent reviews or revisions of risk assessments.

For all asbestos work or asbestos-related work, safe work practices will be in place and suitable personal protective equipment will be used.

14.4 Sites contaminated with asbestos that are Council workplaces

Where asbestos is identified as contaminating a workplace, the site will be included in Council's asbestos register and asbestos management plan.

Council may need to ensure that an exposure assessment is undertaken and that appropriate risk management options are determined and implemented.

For asbestos in soil or aggregate, a suitably qualified occupational hygienist must carry out an assessment if the material in the soil and aggregate is unknown or classified as friable.

Council should engage specialists, who may include asbestos removalists, for all cases except in the case of minor, non-friable contaminations.

Further details on managing land contaminated with asbestos may be found in section 6.

14.5 Demolition or refurbishment of Council buildings and assets

Council will ensure that before any demolition or refurbishment of a Council structure or plant constructed or installed before 31 December 2003 is undertaken, the asbestos register is reviewed and a copy provided to the business undertaking the demolition or refurbishment. Council will ensure that any asbestos that is likely to be disturbed is identified and, so far as is reasonably practicable removed.

14.6 Removal of asbestos in the Council workplace

Removal of asbestos or asbestos containing materials in the Council workplace will be undertaken in accordance with the:

- *Work Health and Safety Act 2011* (NSW).
- *Work Health and Safety Regulation 2011* (NSW).

Council may also refer to the *Code of practice on how to safely remove asbestos* (catalogue no. WC03561).

For licensed asbestos removal work, a licensed asbestos removalist must meet the requirements of the *Work Health and Safety Regulation 2011* (NSW) including the requirements to:

- Notify SafeWork NSW at least five days prior to the asbestos removal work commencing. However, in the case of emergency work, such as burst pipes, fires and illegally dumped asbestos, Council may request to SafeWork NSW that this five days period be waived
- Prepare, supply and keep an asbestos removal control plan
- Obtain a copy of the asbestos register for the workplace before carrying out the asbestos removal work at the workplace (this does not apply if the asbestos removal work is to be carried out at residential premises, for example cleaning up asbestos that has been illegally dumped at a residential premises)
- Inform the person with management or control of the workplace that the licensed asbestos removal work is to be carried out at the workplace
- Erect signs and barricades
- Limit access to the asbestos removal area
- Properly dispose of asbestos waste and dispose of, or treat, contaminated personal protective equipment
- Arrange a clearance inspection and clearance certificate.

Where Council is informed that asbestos removal work is to be carried out at the workplace, Council will inform workers and those in the immediate vicinity of the workplace and limit access to the asbestos removal area as per the *Work Health and Safety Regulation 2011* (NSW).

14.6.1 Removal by Council employees

Council does not employ any workers with a Class A or B license for asbestos removal. Asbestos removal by a competent person who does not hold a Class A or Class B asbestos removal licence is permitted if the asbestos being removed is:

- 10m² or less of non-friable asbestos (approximately the size of a small bathroom)
- Asbestos containing dust or debris that is not more than a minor contamination and is associated with the removal of 10 m² or less of non-friable asbestos.

NOTE: Friable asbestos materials shall not be removed by a person who does not have a Class A asbestos licence.

A Council worker carrying out asbestos removal work must be trained in the identification and safe handling of asbestos prior to carrying out asbestos removal work without a licence. This allows a person to remove small amounts of non-friable asbestos and replace it with non-asbestos alternatives if they come across it during renovations, refurbishments, or service and maintenance work. However, this person shall still use safe working methods to ensure the work is not creating a risk to the health and safety of persons at the workplace. Managers shall maintain records of competent employees that meet the competency requirements as detailed in SOP061 Asbestos Management.

Managers shall ensure that before any Council employee undertakes asbestos (or suspected asbestos) removal work they are:

- Appropriately trained
- Adequately supervised
- Provided with appropriate personal protective equipment and clothing
- Provided access to this document
- Provided with information about the health risks and health effects associated with exposure to asbestos and the need for, and details of, health monitoring.

14.6.2 Removal by contractors

Where Council commissions the removal of asbestos at the workplace, Council will ensure asbestos removal work is carried out only by a licensed asbestos removalist who is appropriately licensed to carry out the work, unless specified in the *Work Health and Safety Regulation 2011* (NSW) that a licence is not required.

Where Council requires the services of asbestos removalists, Council will require the licence details of asbestos removalists prior to engaging their services and will verify the licence details with SafeWork NSW Certification Unit prior to entering a contract or agreement with the licensed asbestos removalists.

Council is required to ensure that the work is carried out by a competent person who has been trained in the identification and safe handling of, and suitable control measures for, asbestos and asbestos containing material. Council will therefore require a statement in a written contract or agreement with the licensed asbestos removalist that the licensed asbestos removalist who will undertake the work has been adequately trained and is provided with appropriate health monitoring by their employer.

The licensed asbestos removalist is to provide the following documentation prior to carrying out asbestos removal work:

- Asbestos removal control plan
- Public liability certificate of currency

- Workers compensation certificate of currency
- SafeWork NSW confirmation details to carry out the removal work.

Council will provide a copy of the asbestos register to the licensed asbestos removalist.

Where Council becomes aware of any breaches by licensed asbestos removalists, Council will report this to SafeWork NSW.

14.6.3 Clearance inspections and certificates

Where Council commissions any licensed asbestos removal work, Council will ensure that once the licensed asbestos removal work has been completed, a clearance inspection is carried out and a clearance certificate is issued by an independent licensed asbestos assessor (for Class A asbestos removal work) or an independent competent person (in any other case) before the asbestos removal area is re-occupied.

The friable asbestos clearance certificate will require visual inspection as well as air monitoring of the asbestos removal site. Air monitoring is mandatory for all friable asbestos removal. The air monitoring must be conducted before and during Class A asbestos removal work by an independent licensed asbestos assessor.

The friable asbestos clearance certificate is to state that there was no visible asbestos residue in the area or vicinity of the area where the work was carried out and that the airborne asbestos fibre level was less than 0.01 asbestos fibres/ml.

15. Accidental disturbance of asbestos by workers

In situations where asbestos is accidentally disturbed by Council work and has, or could, become airborne, Council will act to minimise exposure of workers and the wider public to airborne asbestos. Managers shall apply the processes outlined in SOP061 Asbestos Management.

16. Council's role in the disposal of asbestos waste

16.1 Responding to illegal dumping

Removal of illegally dumped asbestos material or suspected asbestos material by Council employees will be undertaken in accordance with section 14.6.1 or section 14.6.2.

Where Council commissions the removal of illegally dumped asbestos material or suspected asbestos material, Council will ensure this is undertaken in accordance with section 14.6.2.

Where Council becomes aware of illegally dumped asbestos material outside of Council's jurisdiction, Council will promptly notify the relevant authority.

16.2 Transporting and disposing of asbestos waste

Council will transport and dispose of waste in accordance with the legislation and as outlined in section 10.

16.3 Re-excavation of landfill sites

The re-excavation of a Council landfill site where significant quantities of asbestos waste are deposited is not encouraged and should only be considered with reference to any available records on the nature, distribution and quantities of asbestos waste required under the relevant legislation, and consultation with the Environment Protection Authority (as the appropriate regulatory authority under the *Protection of the Environment Operations Act 1997* (NSW)).

17. Advice to tenants and prospective buyers of Council owned property

Council may provide advisory notes to tenants and prospective buyers of Council owned property that is likely to contain asbestos.

Council may request that tenants in Council property:

- Advise Council of any hazards relating to asbestos
- Minimise damage to asbestos containing material
- Co-operate with Council in facilitating any risk management work arranged by Council
- Act on advice from Council to minimise risks from asbestos.

18. Implementing Council's asbestos policy

18.1 Supporting documents

The implementation of this document is supported by Council's:

- Asbestos Policy
- Blacktown Development Control Plan 2006

Council also has several internal documents that support this document.

- SOP008 – Employment Process
- SOP056 – Hazardous Chemicals
- SOP061 – Asbestos Management
- WHS061.1 – Asbestos Management Plan Flowchart (establishes procedural to health monitoring)
- WHS061.2 – Site Asbestos Management Plan
- WHS061.3 – Asbestos Removal Checklist Workplace & Public Spaces/Reserves
- WHS061.4 – Asbestos removal Checklist Structures
- TB061 – Asbestos Management

18.2 Public availability

This is a publicly available document. The document is to be made available via:

- Council's Administration Centre, 62 Flushcombe Road, Blacktown
- Council's website www.blacktown.nsw.gov.au

All employees shall receive information about this document at induction from Coordinator H.R. Services.

Any workers (including employees, contractors, consultants and, where relevant, volunteers and members of the public) who are involved in any activity or activities listed in Appendix A under section 3 on behalf of, or for, Council shall be provided with access to a copy of this document and relevant supporting documents. This includes any workers involved in commencing, arranging, undertaking, regulating, inspecting or supervising a potentially hazardous activity or activities. Managers are responsible for ensuring workers who report to them have access to this document and appropriate information, documentation and training in asbestos awareness (as per the *Work Health and Safety Regulation 2011* (NSW)*)* prior to planning the activity or activities. Further information about training is noted in section 12.2.2 of this document.

Council shall incorporate a statement regarding compliance with this document in all relevant contracts and agreements with workers (including employees, contractors, consultants and, where relevant, volunteers and members of the public).

In the case of any substantive revisions to this document, the revisions will be approved by the General Manager and the General Manager will notify all persons who may have cause to undertake, arrange or supervise any activities listed in Appendix A under section 3 on behalf of, or for, Council.

18.3 Non-compliance

Failure by workers to adhere to this document and failure by managers to adequately inform relevant workers of this document shall be considered non-compliance with this document.

The appropriate supervisor, manager, director, or the General Manager, shall take action in the case on non-compliance with this document and this may include providing education and training, issuing a verbal or written warning, altering the worker's duties, or in the case of serious breaches, terminating the worker's services. Each case shall be assessed on its merits with the aim of achieving a satisfactory outcome for all parties.

Workers should approach their supervisor or manager if they are experiencing difficulties in understanding or implementing this document or if they are concerned that other workers are not complying with this document.

19. Variations

Council reserves the right to review, vary or revoke this document. The General Manager may allow variations to this document for minor issues in individual cases.

Appendices

Appendix A – General information and guidance

1. What is asbestos?

Asbestos is the generic term for a number of naturally occurring, fibrous silicate materials. If asbestos is disturbed it can release dangerous fine particles of dust containing asbestos fibres. Breathing in dust containing elevated levels of asbestos fibres can cause asbestosis, lung cancer and mesothelioma.

There are two major groups of asbestos:

- the serpentine group contains chrysotile, commonly known as white asbestos
- the amphibole group contains amosite (brown asbestos) and crocidolite (blue asbestos) as well as some other less common types (such as tremolite, actinolite and anthophyllite).

Further information about the different types of asbestos can be found in Environmental Health Standing Committee (enHealth), *Asbestos: A guide for householders and the general public*, Australian Health Protection Principal Committee, Canberra, 2013 (available at: www.health.gov.au/internet/publications/publishing.nsf/Content/asbestos-toc~asbestos-about).In Australia, in the past asbestos was mined and widely used in the manufacture of a variety of materials. Asbestos was gradually phased out of building materials in the 1980s and the supply and installation of asbestos containing goods has been prohibited in Australia since 31 December 2003.

Asbestos legacy materials still exist in many homes, buildings and other assets. It is estimated that 1 in 3 Australian homes contains building materials with asbestos. Where the material containing asbestos is in a non-friable form (or bonded), undisturbed, and painted or otherwise sealed, it may remain safely in place. However, where the asbestos containing material is broken, damaged or mishandled, fibres can become loose and airborne posing a risk to health. Disturbing or removing asbestos unsafely can create a health hazard.

It is often difficult to identify the presence of asbestos by sight. If you are in doubt, it is best to assume that you are dealing with asbestos and take every precaution. The most accurate way to find out whether a material contains asbestos is to obtain an asbestos inspection by a person competent in the identification and assessment of asbestos such as an occupational hygienist. It can be unsafe for an unqualified person to take a sample of asbestos. Licensed asbestos removalists can be found by using the telephone directory. Council encourages residents to ask the contractor for a copy of their licence prior to engaging them. Residents can then check with SafeWork NSW (phone 13 10 50) to confirm the contractor has the appropriate class of licence for the asbestos removal job.

2. Where is asbestos found?

Asbestos can be found where it occurs naturally and in a variety of materials (from prior to 2004) in residential, commercial and industrial premises and on public and private land.

2.1 Naturally occurring asbestos

Naturally occurring asbestos refers to the natural geological occurrence of asbestos minerals found in association with geological deposits including rock, sediment or soil.

Asbestos is found as a naturally occurring mineral in many areas of NSW. Asbestos may occur in veins within rock formations. The map provided in Appendix L gives an indication of areas in NSW known to have naturally occurring asbestos. Council is not aware of areas of naturally occurring asbestos within the LGA.

Work processes that have the potential to inadvertently release naturally occurring asbestos into the air include:

- Agriculture
- Forestry
- Landscaping
- Mining
- Other excavation or construction activities
- Pipe works and telecommunications works
- Road construction and road works.

Further information can be found in this document under section 5 and in the *Naturally-occurring asbestos fact sheet* (catalogue no. WC03728) published by SafeWork NSW, which provides a photograph of naturally occurring asbestos.

The SafeWork NSW website provides further information on naturally occurring asbestos and supporting documents on what people can do to avoid contact with naturally occurring asbestos.

2.2 Residential premises

As a general rule, a house built:

- Before the mid 1980s – is highly likely to contain asbestos containing products.
- Between the mid 1980s and 1990 – is likely to contain asbestos containing products.
- After 1990 – is unlikely to contain asbestos containing products. However, some houses built in the 1990s and early 2000s may have still used asbestos cement materials until the total ban on any activity involving asbestos products became effective from December 2003.

Pipelines installed prior to 1992, particularly black surface coated and grey surface pipes, may contain asbestos.

It is important to note, the most accurate way to find out whether a material contains asbestos is by engaging a licensed asbestos removalist or occupational hygienist to inspect and arrange testing where necessary.

Fibre cement sheeting, commonly known as ‘fibro’, ‘asbestos sheeting’ or ‘AC sheeting’ (asbestos containing sheeting) is the most commonly found legacy asbestos material in residential premises. Other asbestos containing materials were used in ‘fibro’ houses but also found in brick and timber housing stock from that period. Asbestos materials were sold under a range of commercial names. Some asbestos containing materials found in New South Wales domestic settings are listed in Appendix J.

Common places where asbestos is likely to be found in and around homes include:

Outside

- Backyard garden sheds, carports, garages and dog kennels
- Electrical meter boards
- Imitation brick cladding
- Lining under eaves
- Wall and roof materials (flat, patterned or corrugated asbestos sheeting).

Inside

- Insulation materials in heaters and stoves
- Interior walls and sheeting

- Sheet materials in wet areas (bathroom, toilet and laundry walls, ceilings and floors)
- Vinyl floor tiles, the backing to cushion vinyl flooring and underlay sheeting for ceramic tiles including kitchen splash back.

Asbestos can also be found in:

- Angle mouldings (internal and external)
- Board around windows and fireplaces
- Brake pads and clutch pads to vehicles
- Buried and dumped waste materials
- Carpet underlay
- Ceilings (ceiling tiles or sprayed coatings or loose in the ceiling cavity and may have moved to wall cavities, cornices and sub-floor areas)
- Cement flooring
- External toilets
- Fencing
- Guttering, downpipes and vent pipes
- Inside appliances e.g. irons, whitegoods
- Gable ends
- Outbuildings
- Ridge capping
- Swimming pools – reinforcing marble swimming pools
- Ventilators – internal and external.

Other places asbestos can be found are listed in Appendix J.

2.3 Commercial and industrial premises

In commercial and industrial premises, asbestos may be found in the abovementioned places and also:

- Asbestos rope or fabric in expansion joints (for example exhaust flues) and insulation
- Bitumous waterproof membrane on flat roofs
- Brake disc pads and brake linings
- Cloth, tapes, ropes and gaskets for packing
- Electrical switchboards and duct heater units
- Fillers and filters
- Fire doors
- Lagging on pipes such as heater flues
- Lift motor rooms
- Pipes, casing for water and electrical/ telecommunication services
- Rubber, plastics, thermosetting resins, adhesives, paints, coatings, caulking compounds and sealants for thermal, electrical and insulation applications

- Structural beams of buildings
- Yarns and textiles e.g. fire blankets.

Other places asbestos can be found are listed in Appendix J.

2.4 Sites contaminated with asbestos

Contamination of soils from asbestos or asbestos containing materials can present a risk in urban and rural environments if the asbestos can give rise to elevated levels of airborne fibres that people can breathe. Whilst buried material may not give rise to airborne asbestos fibres if securely contained, inappropriate disturbance of this waste could give rise to harmful levels of asbestos fibres in air. Activities such as those listed in section 3 of this Appendix have the potential to encounter and disturb asbestos waste or contamination, particularly where the contamination is not known to be present at the site or has not been appropriately considered.

2.4.1 Situations where asbestos contamination may occur

Situations where asbestos contamination may occur include:

- Industrial land, e.g., asbestos-cement manufacturing facilities, former power stations, and rail and ship yards, especially workshops and depots
- Waste disposal or dumping sites, including sites of illegal dumping e.g., building waste
- Sites with infill or burial of asbestos waste from former asbestos mining or manufacture processes
- Buildings or structures damaged by fire or storm (particularly likely for those with pre-1980s building materials but also possible for those with materials from prior to 2004)
- Land with fill or foundation material of unknown composition
- Sites where buildings or structures have been constructed from asbestos containing material or where asbestos may have been used as insulation material, e.g., asbestos roofing, sheds, garages, reservoir roofs, water tanks, boilers and demolition waste has been buried onsite
- Sites where buildings or structures have been improperly demolished or renovated, or where relevant documentation is lacking (particularly likely for those with pre-1980s building materials but also those with materials from prior to 2004)
- Disused services with asbestos containing piping such as water pipes (including sewage systems, water services and irrigation systems), underground electrical and telephone wires and telecommunications trenches or pits (usually within 1 metre of the surface).

2.4.2 Significantly contaminated land

For sites that are significantly contaminated, the EPA and SafeWork NSW are the lead regulatory authorities. The *Contaminated Land Management Act 1997* (NSW) applies to significantly contaminated land. In general, significant contamination is usually associated with former asbestos processing facilities or where large quantities of buried friable asbestos waste has been uncovered and is giving rise to measureable levels of asbestos fibres in air. Such sites require regulatory intervention to protect community health where the source of the contamination is not being addressed by the responsible person. The Environment Protection Authority has details of sites that have been nominated as significantly contaminated on its Public Register at: www.epa.nsw.gov.au/clm/publiclist.htmIf land is contaminated but not determined to be 'significant enough to warrant regulation' then the *Contaminated Land Management Act 1997* (NSW) does not apply. In such cases the provisions within the planning legislation and/or the *Protection of the Environment Operations Act 1997* (NSW) may be the appropriate mechanism for management of such contamination.

Guidance on assessing land can be found in the document: *Guidelines on the duty to report contamination under the Contaminated Land Management Act 1997* (NSW).

3. Potentially hazardous activities

A number of activities could cause asbestos to be inadvertently disturbed and consequently create a health risk.

Before undertaking any of the activities listed below, it should be considered whether asbestos containing materials may be present. If asbestos is present, these activities may be illegal or certain precautions may be required, or an appropriately licensed person may be required to undertake the activity.

Members of the public could inadvertently disturb asbestos through activities including:

- Renovations, refurbishments or repairs particularly those involving power tools, boring, breaking, cutting, drilling, grinding, sanding or smashing asbestos containing materials
- Sealing, painting, brushing and cleaning asbestos cement products
- Demolitions of homes or other structures (dismantling or destruction)
- Relocating a house, building or structure
- Using compressed air on asbestos containing materials
- Water blasting asbestos containing materials
- Cleaning gutters on asbestos cement roofs
- Handling asbestos cement conduits or boxes
- Maintenance work such as plumbing and electrical work on or adjacent to asbestos containing materials such as working on electrical mounting boards
- Maintenance or servicing of materials from vehicles, plant or equipment
- Checking, removing or replacing ceiling insulation which contains asbestos.

Council could inadvertently disturb asbestos through activities such as:

- Abovementioned activities
- Asset and building maintenance
- Certifying
- Inspections of sites and premises
- Transport and disposal of illegally dumped materials
- Collection, transport and disposal of incorrectly disposed of materials.

Naturally occurring asbestos and contaminated sites could be inadvertently disturbed during:

- Road building
- Site and construction work
- Other excavation activities
- Vehicle movements.

Natural processes can create a risk of exposure to asbestos including:

- Extensive fire or storm damage to asbestos cement roofs or building materials
- Extensive weathering and etching of unsealed asbestos cement roofs.

In addition, work that intentionally disturbs asbestos, such as sampling or removal, should be conducted by a competent person and in accordance with the relevant codes of practice and legislation.

4. Health hazards

Asbestos fibres can pose a risk to health if airborne, as inhalation is the main way that asbestos enters the body. The World Health Organisation has stated that concentrations of asbestos in drinking water from asbestos cement pipes do not present a hazard to human health.

Breathing in asbestos fibres can cause asbestosis, lung cancer and mesothelioma. The risk of contracting these diseases increases with the number of fibres inhaled and the risk of lung cancer from inhaling asbestos fibres is greatly increased if you smoke. Small fibres are the most dangerous and they are invisible to the naked eye. People who are at most risk are those who have been exposed to high levels of asbestos for a long time. The symptoms of these diseases do not usually appear for some time (about 20 to 30 years) after the first exposure to asbestos.

Asbestosis is the irreversible scarring of lung tissue that can result from the inhalation of substantial amounts of asbestos over a period of years. It results in breathlessness that may lead to disability and, in some case, death.

Lung cancer can be caused by asbestos. Lung cancer is related to the amount of fibre that is breathed in and the risk of lung cancer is greatly increased in those who also smoke tobacco.

Mesothelioma is a cancer of the pleura (outer lung lining) or the peritoneum (the lining of the abdominal cavity). Mesothelioma rarely occurs less than 15 years from first exposure, and most cases occur over 30 years after first exposure. Accordingly, the rates of malignant mesothelioma (an incurable cancer) are expected to rise from the year 2012 to 2020 and are expected to peak in this time.

If asbestos fibres are in a stable material, for example bonded in asbestos-cement sheeting (such as fibro), and these materials are in good condition they pose little health risk. However, where fibro or other non-friable asbestos sheeting is broken, damaged or mishandled, fibres can become loose and airborne posing a risk to health. Disturbing or removing asbestos containing materials unsafely can create a hazard.

The occupational standard for asbestos is 0.1fibre/ml of air and the environmental standard is 0.01fibre/ml in air.

When someone has potentially been exposed to asbestos, or receives or expects they may receive a diagnosis of an asbestos-related disease, they may experience psychological distress, including anxiety and may be in need of support. Their family and those around them may also be vulnerable to psychological distress.

Appendix B – Further information

Aboriginal communities

Illegal dumping prevention and clean-up. Handbook for Aboriginal communities, 2008 (EPA)
www.environment.nsw.gov.au/waste/illdumpabcommshandbook.htm

Asbestos contractors

Choosing an asbestos consultant fact sheet (catalogue no. WC04547) (SafeWork NSW)
www.safework.nsw.gov.au/formspublications/publications/Pages/Choosinganasbestosconsultant.aspx

For a listing of asbestos removal contractors in your area, refer to your local telephone directory or the Yellow Pages www.yellowpages.com.au or by contacting the Asbestos Removal Contractors Association NSW (ARCA) www.arca.asn.au Phone: (02) 8586 3521.

An asbestos removal contractor's licence can be verified by contacting the SafeWork NSW's Certification Unit on 13 10 50.

Demolition & Contractors Association (DCA) NSW
http://demolitioncontractorsassociation.com.au

Asbestos waste

Crackdown on Illegal Dumping: A Handbook for Local Government, 2007 (EPA)
www.environment.nsw.gov.au/resources/warr/200845IllegalDumping.pdf

Management of asbestos in recycled construction and demolition waste, 2010 (SafeWork NSW)
http://www.safework.nsw.gov.au/formspublications/publications/Pages/asbestoswaste.aspx

Safely disposing of asbestos waste from your home, 2009 (EPA and SafeWork NSW)
www.environment.nsw.gov.au/resources/waste/asbestos/09235Asbestos.pdf

For information on illegal dumping and safely disposing of asbestos waste visit the EPA website:
www.environment.nsw.gov.au

Contaminated land

Guidelines on the duty to report contamination under the Contaminated Land Management Act 1997, 2009 (EPA).
www.environment.nsw.gov.au/resources/clm/09438gldutycontclma.pdf

Managing land contamination: Planning guidelines SEPP 55 – Remediation of land, 1998 (Department of Planning and EPA)
www.planning.nsw.gov.au/assessingdev/pdf/gu_contam.pdf

Environmental risk assessment

Environmental health risk assessment: Guidelines for assessing human health risks from environmental hazards, 2002 (Commonwealth of Australia)
http://www.nphp.gov.au/enhealth/Council/pubs/pdf/envhazards.pdf

Health

Asbestos and health risks fact sheet, 2007 (Ministry of Health)
http://www.health.nsw.gov.au/factsheets/environmental/asbestos_fs.html

Further advice concerning the health risks of asbestos can be obtained from your local public health unit. Contact details for public health units may be found at: www.health.nsw.gov.au/publichealth/infectious/phus.asp

Renovation and development

Asbestos: A guide for householders and the general public, 2012 (Commonwealth of Australia)
http://www.health.gov.au/internet/main/publishing.nsf/Content/7383C46948F649B7CA2579FA001AA20E/$File/asbestos-02-web-(8may12).pdf

Choosing and working with a principal certifying authority: A guide for anyone planning to build or subdivide, 2011 (Building Professionals Board)
http://www.bpb.nsw.gov.au/resources/683/final%20PCA%20brochure.pdf

Think asbestos website, 2011 (Asbestos Education Committee) (and Printable Website Handbook)
http://www.asbestosawareness.com.au

Working with asbestos guide, 2008 (Safework NSW)
http://www.safework.nsw.gov.au/formspublications/publications/Pages/Workingwithasbestosguide.aspx

Practical guidance

Code of practice on how to manage and control asbestos in the workplace (catalogue no. WC03560) published by SafeWork NSW
http://www.safework.nsw.gov.au/formspublications/publications/Documents/how-to-manage-control-asbestos-workplace-code-of-practice-3560.pdf

Code of practice on how to safely remove asbestos (catalogue no. WC03561) published by SafeWork NSW
http://www.safework .nsw.gov.au/formspublications/publications/Documents/how-to-safely-remove-asbestos-code-of-practice-3561.pdf

Tenants

Tenants rights Fact sheet 26 Asbestos and lead, 2010 (Tenants NSW)
http://www.tenants.org.au/publish/factsheet-26-asbestos-lead/index.php

Tenants – Housing NSW tenants

Asbestos fact sheet, 2010 (Housing NSW)
http://www.housing.nsw.gov.au/NR/rdonlyres/F4E1131F-2764-4CB1-BC07-98EB6C594085/0/Asbestos.pdf

Appendix C – Definitions

The terms used in this document are defined as below, consistent with the definitions in the:

- *Code of practice on how to manage and control asbestos in the workplace* (catalogue no. WC03560) published by SafeWork NSW
- *Code of practice on how to safely remove asbestos* (catalogue no. WC03561) published by SafeWork NSW
- *Contaminated Land Management Act 1997* (NSW)
- *Environmental Planning and Assessment Act 1979* (NSW)
- *Emergency Pollution and Orphan Waste Clean-Up Program Guidelines 2008*
- *Protection of the Environment Operations Act 1997* (NSW)
- *Waste classification guidelines part 1 classifying waste 2008*
- *Work Health and Safety Act 2011* (NSW)
- *Work Health and Safety Regulation 2011* (NSW).

accredited certifier in relation to matters of a particular kind, means the holder of a certificate of accreditation as an accredited certifier under the *Building Professionals Act 2005* (NSW) in relation to those matters.

airborne asbestos means any fibres of asbestos small enough to be made airborne. For the purposes of monitoring airborne asbestos fibres, only respirable fibres are counted.

asbestos means the asbestiform varieties of mineral silicates belonging to the serpentine or amphibole groups of rock forming minerals including the following:

a. Actinolite asbestos
b. Grunerite (or amosite) asbestos (brown)
c. Anthophyllite asbestos
d. Chrysotile asbestos (white)
e. Crocidolite asbestos (blue)
f. Tremolite asbestos
g. A mixture that contains 1 or more of the minerals referred to in paragraphs (a) to (f).

asbestos containing material (ACM) means any material or thing that, as part of its design, contains asbestos.

asbestos-contaminated dust or debris (ACD) means dust or debris that has settled within a workplace and is, or is assumed to be, contaminated with asbestos.

asbestos-related work means work involving asbestos that is permitted under the *Work Health and Safety Regulation 2011* (NSW), other than asbestos removal work.

asbestos removal licence means a Class A asbestos removal licence or a Class B asbestos removal licence.

asbestos removal work means:

a. Work involving the removal of asbestos or asbestos containing material, or
b. Class A asbestos removal work or Class B asbestos removal work.

asbestos removalist means a person conducting a business or undertaking who carries out asbestos removal work.

asbestos waste means any waste that contains asbestos. This includes asbestos or asbestos containing material removed and disposable items used during asbestos removal work including plastic sheeting and disposable tools.

certifying authority means a person who is authorised by or under section 85A of the *Environmental Planning and Assessment Act 1979* (NSW) to issue complying development certificates, or is authorised by or under section 109D of the *Environmental Planning and Assessment Act 1979* (NSW) to issue part 4A certificates.

Class A asbestos removal licence means a licence that authorises the carrying out of Class A asbestos removal work and Class B asbestos removal work by or on behalf of the licence holder.

Class A asbestos removal work means the removal of friable asbestos which must be licensed under clause 485 of the *Work Health and Safety Regulation 2011* (NSW). This does not include: the removal of ACD that is associated with the removal of non-friable asbestos, or ACD that is not associated with the removal of friable or non-friable asbestos and is only a minor contamination.

Class B asbestos removal licence means a licence that authorises the carrying out of Class B asbestos removal work by or on behalf of the licence holder.

Class B asbestos removal work means the removal of more than 10 square metres of non-friable asbestos or asbestos containing material work that is required to be licensed under clause 487, but does not include Class A asbestos removal work.

competent person means: a person who has acquired through training or experience the knowledge and skills of relevant asbestos removal industry practice and holds:

a. a certification in relation to the specified VET course for asbestos assessor work, or

b. a tertiary qualification in occupational health and safety, occupational hygiene, science, building, construction or environmental health.

complying development is a fast track, 10 day approval process where a building meets all of the predetermined standards established in either a state or local Council planning document. A complying development certificate can be issued by either a local Council or an accredited certifier.

complying development certificate

contaminant means any substance that may be harmful to health or safety.

contamination of land means the presence in, on or under the land of a substance at a concentration above the concentration at which the substance is normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment

control measure, in relation to a risk to health and safety, means a measure to eliminate or minimise the risk.

demolition work means work to demolish or dismantle a structure, or part of a structure that is load bearing or otherwise related to the physical integrity of the structure, but does not include:

a. the dismantling of formwork, falsework, or other structures designed or used to provide support, access or containment during construction work, or

b. the removal of power, light or telecommunication poles.

development means:

a. the use of land

b. the subdivision of land

c. the erection of a building

d. the carrying out of a work

e. the demolition of a building or work

f. any other act, matter or thing referred to in section 26 of the *Environmental Planning and Assessment Act 1979* (NSW) that is controlled by an environmental planning instrument.

development application means an application for consent under part 4 of the *Environmental Planning and Assessment Act 1979* (NSW) to carry out development but does not include an application for a complying development certificate.

emergency service organisation includes any of the following:

a. the Ambulance Service of NSW

b. Fire and Rescue NSW

c. the NSW Rural Fire Service

d. the NSW Police Force

e. the State Emergency Service

f. the NSW Volunteer Rescue Association Inc

g. the NSW Mines Rescue Brigade established under the *Coal Industry Act 2001* (NSW)

h. an accredited rescue unit within the meaning of the *State Emergency and Rescue Management Act 1989* (NSW).

exempt development means minor development that does not require any planning or construction approval because it is exempt from planning approval.

exposure standard for asbestos is a respirable fibre level of 0.1 fibres/ml of air measured in a person's breathing zone and expressed as a time weighted average fibre concentration calculated over an eight-hour working day and measured over a minimum period of four hours in accordance with the Membrane Filter Method or a method determined by the relevant regulator.

friable asbestos means material that:

a. is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry

b. contains asbestos.

health means physical and psychological health.

health monitoring, of a person, means monitoring the person to identify changes in the person's health status because of exposure to certain substances.

independent, in relation to clearance inspections and air monitoring means:

a. not involved in the removal of the asbestos

b. not involved in a business or undertaking involved in the removal of the asbestos, in relation to which the inspection or monitoring is conducted.

in situ asbestos means asbestos or asbestos containing material fixed or installed in a structure, equipment or plant, but does not include naturally occurring asbestos.

licence holder means: in the case of an asbestos assessor licence – the person who is licensed:

a. to carry out air monitoring during Class A asbestos removal work

b. to carry out clearance inspections of Class A asbestos removal work

c. to issue clearance certificates in relation to Class A asbestos removal work, or

- in the case of an asbestos removal licence – the person conducting the business or undertaking to whom the licence is granted, or
- in the case of a major hazard facility licence – the operator of the major hazard facility to whom the licence is granted or transferred.

licensed asbestos assessor means a person who holds an asbestos assessor licence.

licensed asbestos removalist means a person conducting a business or undertaking who is licensed under the *Work Health and Safety Regulation 2011* to carry out Class A asbestos removal work or Class B asbestos removal work.

licensed asbestos removal work means asbestos removal work for which a Class A asbestos removal licence or Class B asbestos removal licence is required.

NATA means the National Association of Testing Authorities, Australia.

NATA-accredited laboratory means a testing laboratory accredited by NATA, or recognised by NATA either solely or with someone else.

naturally occurring asbestos means the natural geological occurrence of asbestos minerals found in association with geological deposits including rock, sediment or soil.

non-friable asbestos means material containing asbestos that is not friable asbestos, including material containing asbestos fibres reinforced with a bonding compound.

Note. Non-friable asbestos may become friable asbestos through deterioration (see definition of friable asbestos).

occupational hygienist means a person with relevant qualifications and experience in asbestos management who is a full member of the Australian Institute of Occupational Hygienists (AIOH).

occupier includes a tenant or other lawful occupant of premises, not being the owner.

officer means an officer as defined in the *Work Health and Safety Act 2011* (NSW)

orphan waste means materials that have been placed or disposed of on a premises unlawfully that may have the potential to pose a risk to the environment or public health.

person conducting a business or undertaking a 'person' is defined in laws dealing with interpretation of legislation to include a body corporate (company), unincorporated body or association and a partnership.

personal protective equipment means anything used or worn by a person to minimise risk to the person's health and safety, including air supplied respiratory equipment.

respirable asbestos fibre means an asbestos fibre that:

a. is less than three micrometres wide
b. more than five micrometres long
c. has a length to width ratio of more than 3:1.

specified VET course means:

a. in relation to Class A asbestos removal work – the following VET courses:
    - remove non-friable asbestos
    - remove friable asbestos, or
b. in relation to Class B asbestos removal work – the VET course Remove non-friable asbestos, or
c. in relation to the supervision of asbestos removal work – the VET course Supervise asbestos removal, or
d. in relation to asbestos assessor work – the VET course Conduct asbestos assessment associated with removal.

structure means anything that is constructed, whether fixed or moveable, temporary or permanent, and includes:

a. buildings, masts, towers, framework, pipelines, transport infrastructure and underground works (shafts or tunnels)
b. any component of a structure
c. part of a structure
d. volunteer means a person who is acting on a voluntary basis (irrespective of whether the person receives out-of-pocket expenses).

waste includes:

- any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or
- any discarded, rejected, unwanted, surplus or abandoned substance, or
- any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, processing, recovery or purification by a separate operation from that which produced the substance, or
- any process, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations, or
- any substance prescribed by the regulations made under the *Protection of the Environment Operations Act 1997* (NSW) to be waste.

waste facility means any premises used for the storage, treatment, processing, sorting or disposal of waste (except as provided by the regulations).

worker a person is a worker if the person carries out work in any capacity for a person conducting a business or undertaking, including work as:

a. an employee, or
b. a contractor or subcontractor, or
c. an employee of a contractor or subcontractor, or
d. an employee of a labour hire company who has been assigned to work in the person's business or undertaking, or
e. an outworker, or
f. an apprentice or trainee, or
g. a student gaining work experience, or
h. a volunteer, or
i. a person of a prescribed class.

workplace a workplace is a place where work is carried out for a business or undertaking and includes any place where a worker goes, or is likely to be, while at work. Place includes: a vehicle, vessel, aircraft or other mobile structure, and any waters and any installation on land, on the bed of any waters or floating on any waters.

Appendix D – Acronyms

ACD	Asbestos Containing Dust (an acronym used in the legislation)
ACM	Asbestos Containing Material (an acronym used in the legislation)
ARA	Appropriate Regulatory Authority (an acronym used in the legislation)
DA	Development Application
EPA	Environment Protection Authority
JRPP	Joint Regional Planning Panel
LGA	Local Government Area
NATA	National Association of Testing Authorities
NSW	New South Wales
SEPP	State Environmental Planning Policy
VET	Vocational Education and Training

Appendix E – Relevant contacts

Blacktown City Council
62 Flushcombe Road, Blacktown NSW
Phone: (02) 9839 6000
Email: Council@blacktown.nsw.gov.au
Website: www.blacktown.nsw.gov.au

Western Sydney Local Health District
Institute Road, Westmead NSW
Phone: (02) 9845 9900
Website: www.wslhd.health.nsw.gov.au

SUEZ Eastern Creek
Wallgrove Road, Eastern Creek
Phone: 1300 651 116
Website: www.sita.com.au/facilities/map-of-australia/eastern-creek/

Genesis Eastern Creek
Honeycomb Drive, Eastern Creek
Phone: (02) 9832 3333
Website: http://www.dadi.com.au/genesis-xero-waste-facility.html

Asbestos-related disease organisations (non-exhaustive)

Asbestos Diseases Foundation Australia Inc
Phone: (02) 9637 8759
Helpline: 1800 006 196
Email: info@adfa.org.au
Website: www.adfa.org.au

Asbestos Diseases Research Institute
Phone: (02) 9767 9800
Email: info@adri.org.au
Website: www.adri.org.au

Australian Institute of Occupational Hygienists Inc.
Phone: (03) 9336 2290
Email: admin@aioh.org.au
Website: www.aioh.org.au

Dust Diseases Board

Phone: (02) 8223 6600
Toll Free: 1800 550 027
Email: enquiries@ddb.nsw.gov.au
Website: www.ddb.nsw.gov.au

Environment Protection Authority (EPA)

Phone: (02) 9995 5000
Environment line: 13 15 55
Email: info@environment.nsw.gov.au
Website: www.environment.nsw.gov.au/epa

Licensed Asbestos Contractors

For a listing of asbestos removal contractors in your area, refer to your local telephone directory or the Yellow Pages website: www.yellowpages.com.au or contact:

Asbestos Removal Contractors Association NSW (ARCA)
Phone: (02) 9642 0011
Email: info@arca.net.au
Website: www.arca.asn.au

Verification of an asbestos removal contractor's licence can be checked by contacting SafeWork NSW's Certification Unit Phone: 13 10 50

Civil Contractors Federation (CCF)
Phone: (02) 9009 4000
Email: mtearle@civilcontractors.com
Website: www.civilcontractors.com

Demolition & Contractors Association (DCA) NSW
Phone: (02) 8586 3555
Email: demolitionassn@bigpond.com
Website: http://demolitioncontractorsassociation.com.au

Local Government NSW
Phone: (02) 9242 4000
Email: lgnsw@lgnsw.org.au
Website: http://www.lgnsw.org.au/

NSW Ombudsman
Phone: (02) 9286 1000
Toll free (outside Sydney metro): 1800 451 524
Email: nswombo@ombo.nsw.gov.au
Website: www.ombo.nsw.gov.au

Training providers (non-exhaustive)

TAFE NSW
Phone: 1300 131 499
Website: www.tafensw.edu.au

Housing Industry Association (HIA)
Phone: (02) 9978 3333
Website: http://hia.com.au/

Local Government Training Institute
Phone: (02) 4922 2333
Website: www.lgti.com.au

Comet Training
Phone: (02) 9649 5000
Website: www.comet-training.com.au/site

Masters Builders Association (MBA)
Phone: (02) 8586 3521
Website: www.masterbuilders.com.au

Asbestos Removal Contractors Association NSW (ARCA)
Phone: (02) 9642 0011
Website: www.arca.asn.au

SafeWork NSW

SafeWork NSW Information Centre Phone: 13 10 50
SafeWork NSW – Asbestos/Demolition Hotline Phone: (02) 8260 5885
Website: www.safework.nsw.gov.au

Appendix F – Waste management facilities that accept asbestos wastes

Waste management facilities that can accept asbestos waste may be operated by Council, the State Government or private enterprise. The fees charged by the facility operators for waste received are determined by the facility.

Not all waste management centres accept asbestos waste from the public. Management of asbestos waste requires special precautions such as a separate disposal location away from other general waste and controls to prevent the liberation of asbestos fibres, such as the immediate covering of such waste.

Asbestos waste can be disposed of at one of 2 locations within the Blacktown LGA, please see below for locations-

- SUEZ Eastern Creek – Wallgrove Road, Eastern Creek, phone 1300 651 116
- Genesis Eastern Creek – Honeycomb Drive, Eastern Creek, phone 9832 3333

Always contact the landfill before taking asbestos waste to a landfill to find out whether asbestos is accepted, hours of operation and any requirements for delivering asbestos to the landfill.

Waste facilities that do not accept asbestos waste

- SUEZ Seven Hills Transfer Station – Station Street, Seven Hills phone 131 335
- Blacktown Waste Services – 920 Richmond Rd, Marsden Park, phone 9835 1995

Waste management facilities in other areas that accept asbestos wastes

A list of licensed landfills that may accept asbestos waste from the public is available on the EPA website at: http://www.epa.nsw.gov.au/managewaste/house-asbestos-land.htmSome of the landfills may accept non-friable asbestos waste but not friable asbestos waste. Some landfills may not accept large quantities of asbestos waste.

Always contact the landfill before taking asbestos waste to a landfill to find out whether asbestos is accepted and any requirements for delivering asbestos to the landfill. EPA does not endorse any of the landfills listed on the website or guarantee that they will accept asbestos under all circumstances.

Appendix G – Asbestos-related legislation, policies and standards

- *Demolition work code of practice 2015 (catalogue no. WC03841)Contaminated Land Management Act 1997* NSW)
- *Code of practice on how to manage and control asbestos in the workplace* (catalogue no. WC03560) published by SafeWork NSW
- *Code of practice on how to safely remove asbestos* (catalogue no. WC03561) published by SafeWork NSW
- *Code of practice for demolition work* published by Safe Work Australia, 2012
- *Environmental Planning and Assessment Act 1979* (NSW)
- *Environmental Planning and Assessment Regulation 2000* (NSW)
- *Local Government Act 1993* (NSW)
- *Local Government (General) Regulation 2005* (NSW)
- *Protection of the Environment Operations (General) Regulation 2009* (NSW)
- *Protection of the Environment Operations (Waste) Regulation 2014* (NSW)
- *Protection of the Environment Operations Act 1997* (NSW)
- *State Environmental Planning Policy No. 55 – Remediation of Land*
- *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*
- *Work Health and Safety Act 2011* (NSW)
- *Work Health and Safety Regulation 2011* (NSW)
- *Workers' Compensation (Dust Diseases) Act 1942*(NSW).
- *Blacktown City Council Development Control Plan 2006 – Part Q: Contaminated Lands*

Appendix H – Agencies roles and responsibilities

NSW organisations

Department of Planning (DP) and the Building Professionals Board (BPB)

DP's primary role in the management of asbestos relates to administration of State Environmental Planning Policies, and the *Environmental Planning and Assessment Act 1979* (NSW) (and associated Regulation).

Whilst DP does not have an operational role in the management of asbestos, it has a regulatory function and provides policy support relating to asbestos and development. In assessing proposals for development under the *Environmental Planning and Assessment Act 1979* (NSW), consent authorities are required to consider the suitability of the subject land for the proposed development. This includes consideration of the presence of asbestos and its environmental impact.

Where asbestos represents contamination of the land (i.e. it is present in excess of naturally occurring levels), *State Environmental Planning Policy No. 55 – Remediation of Land* imposes obligations on developers and consent authorities in relation to remediation of the land and the assessment and monitoring of its effectiveness.

The *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* enables exempt and complying development across the state. While this includes demolition and the removal of asbestos, the *Environmental Planning and Assessment Regulation 2000* (NSW) specifies particular conditions that must be contained in a complying development certificate in relation to the handling and lawful disposal of both friable and non-friable asbestos material under the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

The Building Professionals Board (BPB) which reports to the Minister for Planning, also has a role in the management of asbestos. The BPB's role involves providing practice advice and educational programs to assist certifying authorities (private and Council) in carrying out their role and this includes education in relation to managing asbestos. The BPB certifies and audits both private and Council certifiers. Further information about the BPB may be found at: www.bpb.nsw.gov.au

Dust Diseases Board (DDB)

The DDB provides a system of no fault compensation to people who have developed a dust disease from occupational exposure to dust as a worker in New South Wales and to their dependants. The DDB's statutory function is to administer the *Workers' Compensation (Dust Diseases) Act 1942* (NSW). Services include:

- Payment of compensation benefits to eligible workers and dependants
- Co-ordination and payment of medical and related health care expenses of affected
- Medical examination of workers exposed to dust in the workplace
- Information and education.

Environment Protection Authority (EPA)

EPA's role is to regulate the classification, storage, transport and disposal of waste in NSW, including asbestos waste. The waste regulatory framework includes the *Protection of the Environment Operations Act 1997* (NSW) and the *Protection of the Environment Operations (Waste) Regulation 2014* (NSW). Clause 42 of the *Protection of the Environment Operations (Waste) Regulation 2014* (NSW) sets out the special requirements relating to the transportation and disposal of asbestos waste.

EPA is the appropriate regulatory authority for activities that require an environment protection licence or are carried out by public authorities such as local Councils, the Roads and Maritime Services and Sydney Water. Local Councils are the appropriate regulatory authority for activities that are not regulated by the EPA, which typically include building demolition, construction sites, residential properties, commercial sites and small to medium sized industrial facilities.

EPA is responsible for assisting Councils in fulfilling their regulatory responsibilities. EPA has developed resources to assist Local Government to regulate asbestos waste incidents and prevent illegal dumping. Website links to these resources are provided in Appendix B.

The EPA maintains the regulatory framework for the remediation of contaminated land (the *Contaminated Land Management Act 1997* (NSW)*)* and actively regulates land that is declared to be 'significantly contaminated' under the *Contaminated Land Management Act 1997* (NSW)*.*

Heads of Asbestos Coordination Authorities (HACA)

The HACA is chaired by the Chief Executive Officer of SafeWork NSW with senior officials from:

- Department of Planning and Environment NSW Department of Industry Office of Local Government Workers Compensation Dust Diseases Board
- Environment Protection Authority
- Local Government NSW
- Ministry for Police and Emergency Services
- Ministry of Health.

The HACA group will improve the management, monitoring and response to asbestos issues in NSW by developing coordinated prevention programs. These programs include a comprehensive public awareness campaign to promote the safe handling of asbestos and help prevent the risk of exposure to asbestos-related diseases in the NSW community. Further information about the HACA can be found on the SafeWork website: www.safework.nsw.gov.au.

Local Government NSW

Local Government NSW represent 152 general purpose Councils, 12 special purpose Councils and the NSW Aboriginal Land Council.

The Associations represent the views of these Councils by:

- Presenting Councils views to governments
- Promoting Local Government to the community
- Providing specialist advice and services.

The Associations hold annual conferences where members are able to vote on issues affecting Local Government. The Annual Conferences are the supreme policy making events.

In 2012, the Associations commenced a project funded by SafeWork NSW to assist Councils to adopt and implement a model asbestos policy. The project is outlined at http://www.lgsa.org.au/policy/asbestos-model-policy

NSW Ministry of Health

The NSW Ministry of Health does not have express statutory responsibilities for managing asbestos-related risks and incidents in NSW. The Ministry provides an expert advisory service to other governmental agencies on public health issues. This service may include technical information or assistance to prepare public health information bulletins.

NSW Ombudsman

The NSW Ombudsman is an independent and impartial watchdog body. The NSW Ombudsman is responsible for ensuring that public and private sector agencies and employees within its jurisdiction fulfil their functions appropriately. The NSW Ombudsman assists those agencies and their employees to be aware of their responsibilities to the public, to act reasonably and to comply with the law and best administrative practice.

SafeWork NSW

SafeWork NSW is responsible for the issuing and control of licences that are issued to all asbestos removal and demolition contractors. SafeWork NSW works with the employers, workers and community of NSW to achieve safer and more productive workplaces, and effective recovery, return to work and security for injured workers.

SafeWork NSW administers work health and safety, injury management, return to work and workers compensation laws, and manage the workers compensation system. SafeWork NSW's activities include: health and safety, injuries and claims, licensing for some types of plant operators, registration of some types of plant and factories, training and assessment, medical and healthcare, law and policy.

The SafeWork NSW website provides a wide range of asbestos resources, support networks and links at: www.safework.nsw.gov.au/newlegislation2012/health-and-safety-topics/asbestos/Pages/default.aspx

National organisations

National Association of Testing Authorities (NATA)

This body has the role of providing accreditation to firms licensed to remove asbestos.

NSW (Head Office) and ACT
Phone: (02) 9736 8222
National Toll Free: 1800 621 666
Website: www.nata.asn.au

Environmental Health Committee (enHealth)

The Environmental Health Committee (enHealth) is a subcommittee of the Australian Health Protection Committee (AHPC). enHealth provides health policy advice, implementation of the National Environmental Health Strategy 2007-2012, consultation with key players, and the development and coordination of research, information and practical resources on environmental health matters at a national level.
Website: www.health.gov.au/internet/main/publishing.nsf/content/ohp-environ-enhealth-committee.htm

Safe Work Australia

Safe Work Australia is an Australian Government statutory agency established in 2009, with the primary responsibility of improving work health and safety and workers' compensation arrangements across Australia.

Phone: (02) 6121 5317
Email: info@safeworkaustralia.gov.au
Website: www.safeworkaustralia.gov.au

Appendix I – Scenarios illustrating which agencies lead a response in NSW

The tables show which agencies are responsible for regulating the following scenarios in NSW:

- emergency management
- naturally occurring asbestos
- residential settings
- site contamination
- waste
- workplaces.

Further details are provided in the *Asbestos Blueprint: A guide to roles and responsibilities for operational staff of state and local government,* 2011 (NSW Government).

Emergency management

Scenario	Lead organisation	Other regulators
Emergency response	Emergency services	Fire and Rescue (Hazmat) SafeWork NSW
Handover to Local Council, owner of property or NSW Police – crime scene following a minor incident	Local Council NSW Police	
Handover to State Emergency Recovery Controller	State Emergency Recovery Controller	Recovery Committee Local Council EPA SafeWork NSW
Handover to Recovery Committee following a significant incident	Recovery Committee (formed by State Emergency Recovery Controller)	Local Council EPA SafeWork NSW
Remediation not requiring a licensed removalist	Local Council	Principal Certifying Authority SafeWork NSW (workers)
Remediation requiring licensed removal work	SafeWork NSW	Local Council Principal Certifying Authority
Clearance Certificate issued by an Asbestos Assessor	SafeWork NSW	Principal Certifying Authority

Naturally occurring asbestos

Scenario	Lead organisation	Other regulators
Naturally occurring but will be disturbed due to a work process including remediation work	Department of Industry	Local Council EPA *(Protection of the Environment Operations Act 1997* Scheduled Activities Public Authorities)
Naturally occurring asbestos part of a mineral extraction process	Department of Industry	Local Council EPA *(Protection of the Environment Operations Act 1997* Scheduled Activities Public Authorities)
Naturally occurring but will remain undisturbed by any work practice	Local Council	EPA *(Protection of the Environment Operations Act 1997* Scheduled Activities Public Authorities) SafeWork NSW (workers)
Soil contaminated with asbestos waste and going to be disturbed by a work practice	SafeWork NSW	EPA *(Protection of the Environment Operations Act 1997* Scheduled Activities Public Authorities, declared contaminated land sites)
Soil contaminated with asbestos waste but will remain undisturbed by any work practice	Local Council	EPA *(Protection of the Environment Operations Act 1997* Scheduled Activities Public Authorities, declared contaminated land sites) SafeWork NSW (workers on site)
Potential for exposure on public land	EPA *(Protection of the Environment Operations Act 1997* Scheduled Activities Public Authorities	Local Council SafeWork NSW (workers on site)
Soil contaminated with asbestos waste but at a mine site	Department of Industry EPA *(Protection of the Environment Operations Act 1997* Scheduled Activities Public Authorities)	Local Council

Residential settings

Scenario	Lead organisation	Other regulators
Safe Management of asbestos including: • identification • in situ management • removal requirements • disposal requirements.	Local Council Private Certifiers	SafeWork NSW EPA
Site contaminated due to past uses	Local Council	SafeWork NSW EPA
Licensed removal work required	SafeWork NSW	Local Council Private Certifiers
Removal does not require a licensed removalist	Local Council Private Certifiers	SafeWork NSW (workers)
Transport or waste disposal issues	Local Council	EPA
Derelict property with fibro debris	Local Council or Multi- agency	Multi- agency

Site contamination

Scenario	Lead organisation	Other regulators
Asbestos illegally dumped	Local Council	EPA SafeWork NSW
Site contamination at commercial premises	See Workplaces	
Site contamination at residential premises	See Residential settings	

Waste

Scenario	Lead organisation	Other regulators
Waste temporarily stored on-site	SafeWork NSW(worksites) EPA and Local Council (non-worksites)	
Waste transported by vehicle	EPA	SafeWork NSW
Waste disposed of onsite	Council or EPA as illegal dumping or pollution of land if no valid Council development consent	Local Council (consent required to dispose onsite) (section 149 property certificate and development assessment process)
Waste going to landfill site	EPA (advice)	Local Council (if managing licensed landfill)
Waste to be transported interstate	EPA	
Waste for export	Australian Customs and Border Protection Service	SafeWork NSW Department of Education, Employment and Workplace Relations

Workplaces

Scenario	Lead organisation	Other regulators
Asbestos installed/supplied after 2003 (illegally)	SafeWork NSW	Australian Customs and Border Protection Service Australian Competition and Consumer Commission (Imported Goods)
Risks to the health of workers	SafeWork NSW	
Asbestos management and asbestos going to be removed	SafeWork NSW Department of Industry	
Risks to the health of the public from worksites	SafeWork NSW (Risks to workers) Local Council (Risks to the wider public) Department of Planning and Environment(part 3A approvals) EPA *(Protection of the Environment Operations Act 1997* licensed sites)	
Waste stored temporarily on-site at worksites	SafeWork NSW	
Transport or waste disposal issues	EPA	SafeWork NSW Local Council
Asbestos contaminated clothing going to a laundry	SafeWork NSW	EPA Local Council
Contaminated land not declared under the *Contaminated Land Management Act 1997*	Local Council	EPA
'Significantly contaminated' land declared under the *Contaminated Land Management Act 1997*	EPA	Local Council

Appendix J – Asbestos containing materials

Some asbestos containing materials found in New South Wales domestic settings (non-exhaustive list)

Asbestos containing materials	Approximate supply dates
Cement sheets	Imported goods supplied from 1903 locally made 'fribrolite' from 1917
Cement roofing / lining slates	Imported goods supplied from 1903 locally made 'fribrolite' from 1917
Mouldings and cover strips	Available by 1920s and 1930s
Super-six (corrugated) roofing	Available by 1920s and 1930s – 1985
'Tilex' decorative wall panels	Available by 1920s and 1930s
Pipes and conduit piping	Available by 1920s and 1930s
Motor vehicle brake linings	Available by 1920s and 1930s
Striated sheeting	Available from 1957
'Asbestolux' insulation boards	Available from 1957
'Shadowline' asbestos sheeting for external walls, gable ends and fences	Available from 1958 – 1985
Vinyl floor tiles impregnated with asbestos	Available up until 1960s
Asbestos containing paper backing for linoleum	Available up until 1960s
'Durasbestos' asbestos cement products	Available up until 1960s
'Tilex' marbletone decorative wall panels	Available from early 1960s
'Tilex' weave pattern decorative wall panels	Available from early 1960s
'Hardiflex' sheeting	Available from 1960s – 1981
'Versilux' building board	Available from 1960s – 1982
'Hardiplank' and 'Hardigrain' woodgrain sheeting	Available from mid 1970s – 1981
Loose-fill, fluffy asbestos ceiling insulation	Supplied from 1968 – 1978 by a Canberra contractor and believed to be generally restricted to houses in the Australian Capital Territory with some materials supplied to the Queanbeyan area and some south coast towns
Asbestos rope gaskets for wood heaters. Heater and stove insulation	Dates of supply availability unknown but prior to 31 December 2003
Compressed fibro-cement sheets	Available from 1960s – 1984
Villaboard	Available until 1981
Harditherm	Available until 1984
Highline	Available until 1985
Coverline	Available until 1985
Roofing accessories	Available until 1985
Pressure pipe	Available until 1987

Source: NSW Government, 2011, *Asbestos Blueprint: A guide to roles and responsibilities for operational staff of state and local government.*

Asbestos containing materials that may be found in various settings (non-exhaustive list)

A

Air conditioning duct, in the exterior or interior acoustic and thermal insulation

Arc shields in lift motor rooms or large electrical cabinets

Asbestos-based plastics products as electrical insulates and acid resistant compositions or aircraft seats

Asbestos ceiling tiles

Asbestos cement conduit

Asbestos cement electrical fuse boards

Asbestos cement external roofs and walls

Asbestos cement in the use of form work for pouring concrete

Asbestos cement internal flues and downpipes

Asbestos cement moulded products such as gutters, ridge capping, gas meter covers, cable troughs and covers

Asbestos cement pieces for packing spaces between floor joists and piers

Asbestos cement (underground) pit as used for traffic control wiring, telecommunications cabling etc

Asbestos cement render, plaster, mortar and coursework

Asbestos cement sheet

Asbestos cement sheet behind ceramic tiles

Asbestos cement sheet over exhaust canopies such as ovens and fume cupboards

Asbestos cement sheet internal walls and ceilings

Asbestos cement sheet underlay for vinyl

Asbestos cement storm drain pipes

Asbestos cement water pipes (usually underground)

Asbestos containing laminates, (such as Formica) used where heat resistance is required

Asbestos containing pegboard

Asbestos felts

Asbestos marine board, eg marinate

Asbestos mattresses used for covering hot equipment in power stations

Asbestos paper used variously for insulation, filtering and production of fire resistant laminates

Asbestos roof tiles

Asbestos textiles

Asbestos textile gussets in air conditioning ducting systems

Asbestos yarn

Autoclave/steriliser insulation

B

Bitumen-based water proofing such as malthoid (roofs and floors, also in brickwork)

Bituminous adhesives and sealants

Boiler gaskets

Boiler insulation, slabs and wet mix

Brake disc pads

Brake linings

C

Cable penetration insulation bags (typically Telecom)

Calorifier insulation

Car body filters (uncommon)

Caulking compounds, sealant and adhesives

Cement render

Chrysotile wicks in kerosene heaters

Clutch faces

Compressed asbestos cement panels for flooring, typically verandas, bathrooms and steps for demountable buildings

Compressed asbestos fibres (CAF) used in brakes and gaskets for plant and automobiles

Ceiling insulation (which may have moved into wall cavities, cornices and sub-floor areas)

D

Door seals on ovens

E

Electric heat banks – block insulation

Electric hot water services (normally no asbestos, but some millboard could be present)

Electric light fittings, high wattage, insulation around fitting (and bituminised)

Electrical switchboards see Pitch-based

Exhausts on vehicles

F

Filler in acetylene gas cylinders

Filters: beverage wine filtration

Fire blankets

Fire curtains

Fire door insulation

Fire-rated wall rendering containing asbestos with mortar

Fire-resistant plaster board, typically on ships

Fire-retardant material on steel work supporting reactors on columns in refineries in the chemical industry

Flexible hosesFloor vinyl sheets

Floor vinyl tiles

Fuse blankets and ceramic fuses in switchboards

G

Galbestos™ roofing materials (decorative coating on metal roof for sound proofing)

Gaskets: chemicals, refineries

Gaskets: general

Gauze mats in laboratories/chemical refineries

Gloves: asbestos

H

Hairdryers: insulation around heating elements

Header (manifold) insulation

I

Insulation blocks

Insulation in electric reheat units for air conditioner systems

L

Laboratory bench tops

Laboratory fume cupboard panels

Laboratory ovens: wall insulation

Lagged exhaust pipes on emergency power generators

Lagging in penetrations in fireproof walls

Lift shafts: asbestos cement panels lining the shaft at the opening of each floor and asbestos packing around penetrations

Limpet asbestos spray insulation

Locomotives: steam, lagging on boilers, steam lines, steam dome and gaskets

M

Mastik

Millboard between heating unit and wall

Millboard lining of switchboxes

Mortar

P

Packing materials for gauges, valves, etc can be square packing, rope or loose fibre

Packing material on window anchorage points in high-rise buildings

Paint, typically industrial epoxy paints

Penetrations through concrete slabs in high rise buildings

Pipe insulation including moulded sections, water-mix type, rope braid and sheet

Plaster and plaster cornice adhesives

Pipe insulation: moulded sections, water-mix type, rope braid and sheet

Pitch-based (zelemite, ausbestos, lebah) electrical switchboard

R

Refractory linings

Refractory tiles

Rubber articles: extent of usage unknown

S

Sealant between floor slab and wall, usually in boiler rooms, risers or lift shafts

Sealant or mastik on windows

Sealants and mastik in air conditioning ducting joints

Spackle or plasterboard wall jointing compounds

Sprayed insulation: acoustic wall and ceiling

Sprayed insulation: beams and ceiling slabs

Sprayed insulation: fire retardant sprayed on nut internally, for bolts holding external building wall panels

Stoves: old domestic type, wall insulation

T

Tape and rope: lagging and jointing

Tapered ends of pipe lagging, where lagging is not necessarily asbestos

Tilux sheeting in place of ceramic tiles in bathrooms

Trailing cable under lift cabins

Trains: country – guards vans – millboard between heater and wall

Trains – Harris cars – sprayed asbestos between steel shell and laminex

V

Valve and pump insulation

W

Welding rods

Woven asbestos cable sheath

Source: NSW Taskforce Report: Loose-Fill Asbestos Insulation in NSW Homes (2015) http://www.fairtrading.nsw.gov.au/biz_res/ftweb/pdfs/Tenants_and_home_owners/Loose_Fill_Asbestos_Taskforce_Report.pdf (accessed October, 2015).

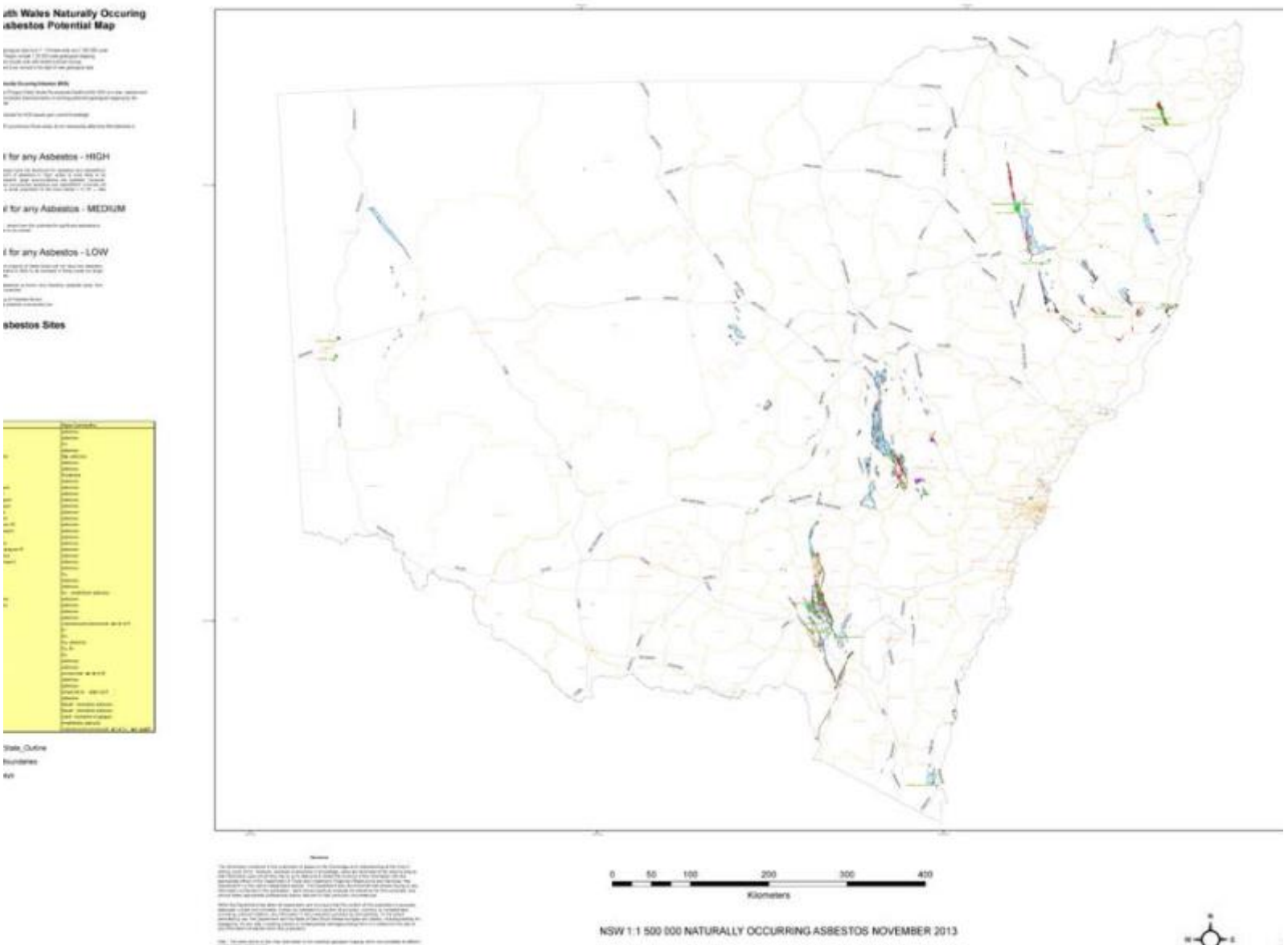
Appendix K – Asbestos licences

Type of licence	What asbestos can be removed?
Class A	Can remove any amount or quantity of asbestos or asbestos containing material, including: • any amount of friable asbestos or asbestos containing material • any amount of asbestos containing dust • any amount of non-friable asbestos or asbestos containing material.
Class B	Can remove: • any amount of non-friable asbestos or asbestos containing material **Note**: A Class B licence is required for removal of more than 10 m² of non-friable asbestos or asbestos containing material but the licence holder can also remove up to 10 m² of non-friable asbestos or asbestos containing material. • asbestos containing dust associated with the removal of non-friable asbestos or asbestos containing material. **Note**: A Class B licence is required for removal of asbestos containing dust associated with the removal of more than 10 m² of non-friable asbestos or asbestos containing material but the licence holder can also remove asbestos containing dust associated with removal of up to 10m² of non-friable asbestos or asbestos containing material.
No licence required	Can remove: • up to 10 m² of non-friable asbestos or asbestos containing material • asbestos containing dust that is: o associated with the removal of less than 10 m² of non-friable asbestos or asbestos containing material o not associated with the removal of friable or non-friable asbestos and is only a minor contamination.

An asbestos removal contractor's licence can be verified by contacting SafeWork NSW's Certification Unit on 131050.

Appendix L – Known areas of naturally occurring asbestos

Appendix L includes all GIS data sets utilised to construct the polygons where the potential for the naturally occurring asbestos to occur has been identified based on this assessment. In order to access this data go to www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/topics/NOA

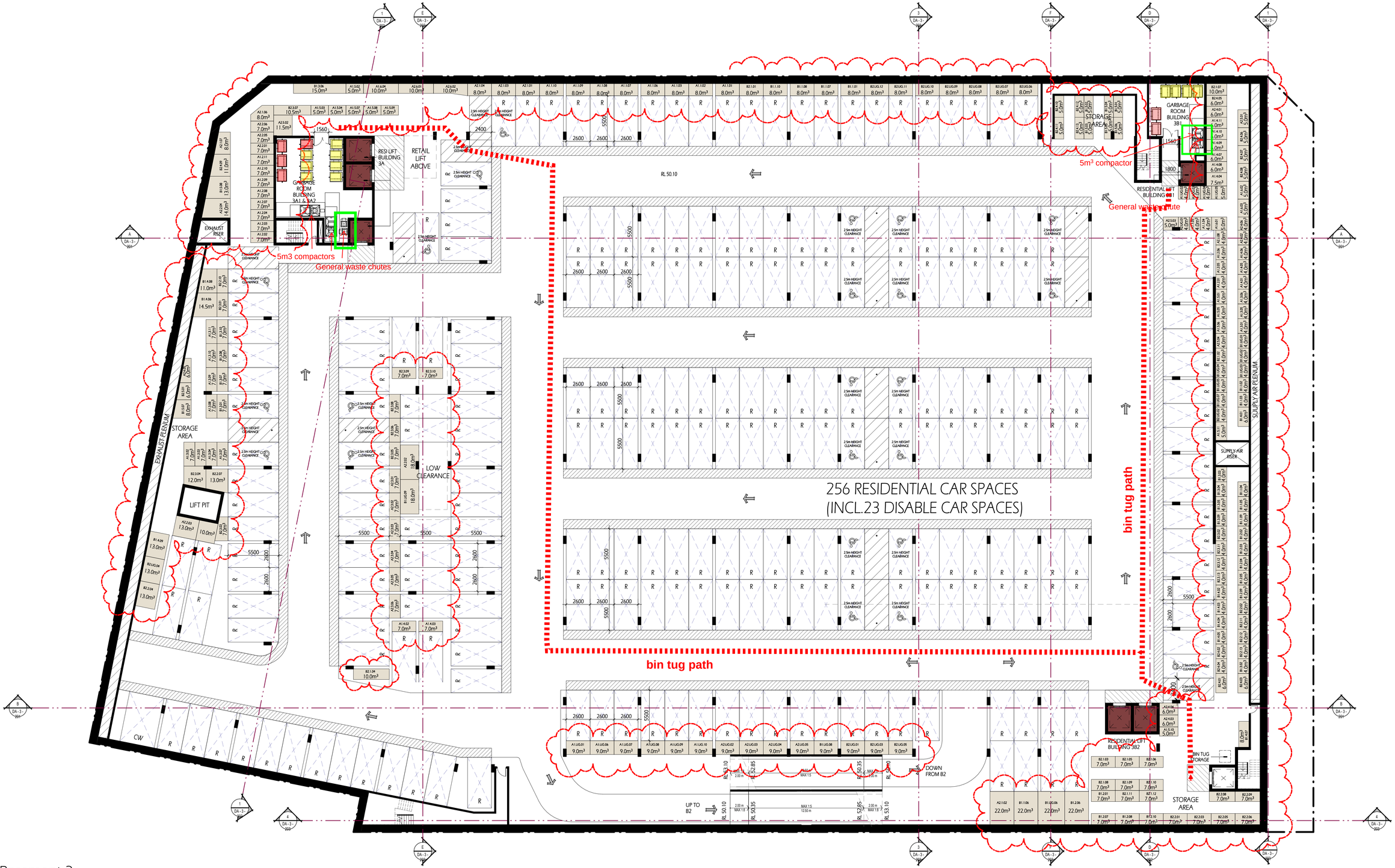


WC03899 1012

Floor Plans showing waste and recycling arrangements for residential levels and garbage rooms

Appendix B

pitt&sherry



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1 : 400 @ A3 sheet

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RESTIFA & PARTNERS
development managers - project managers

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SHEET TITLE:
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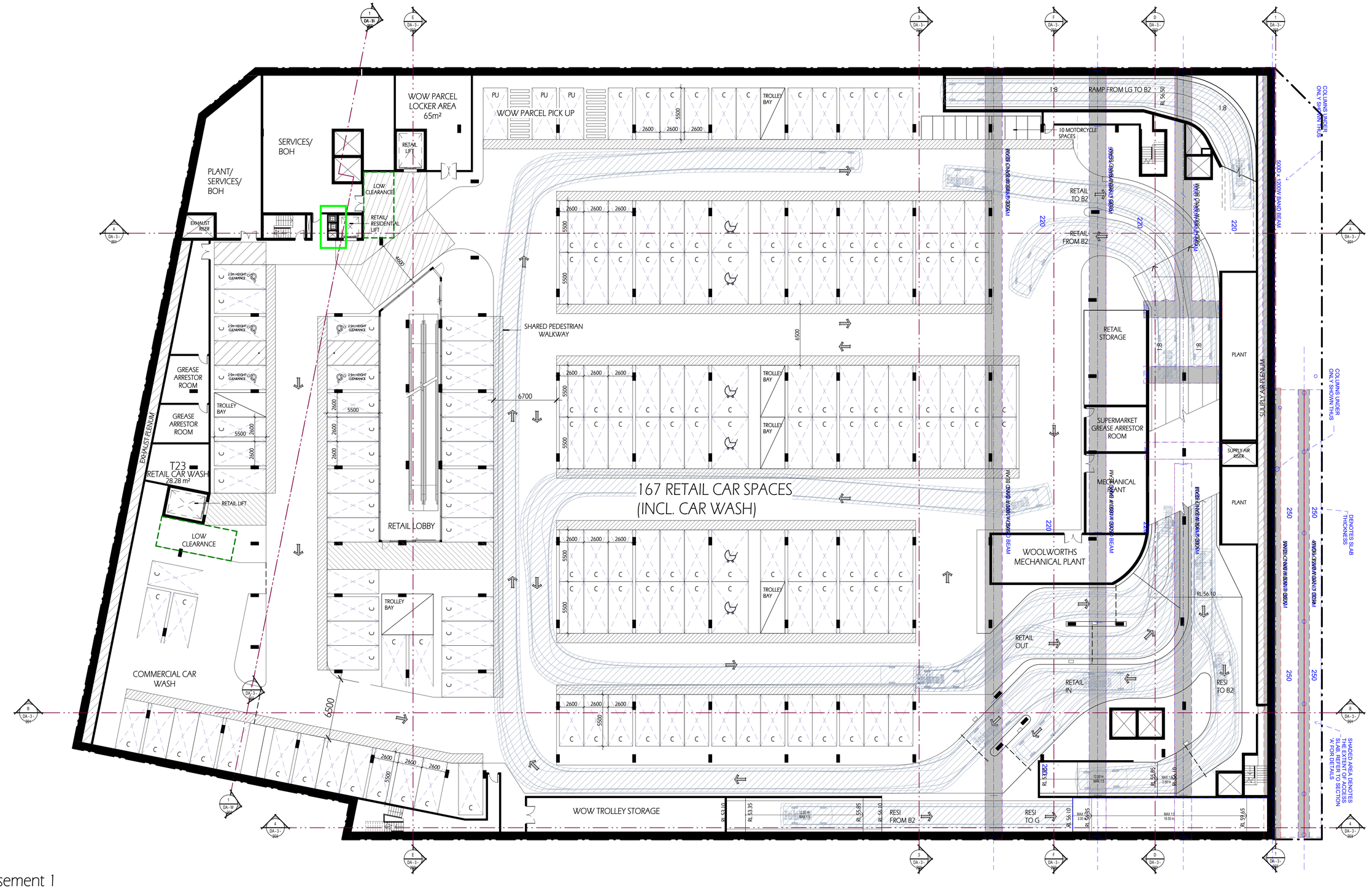

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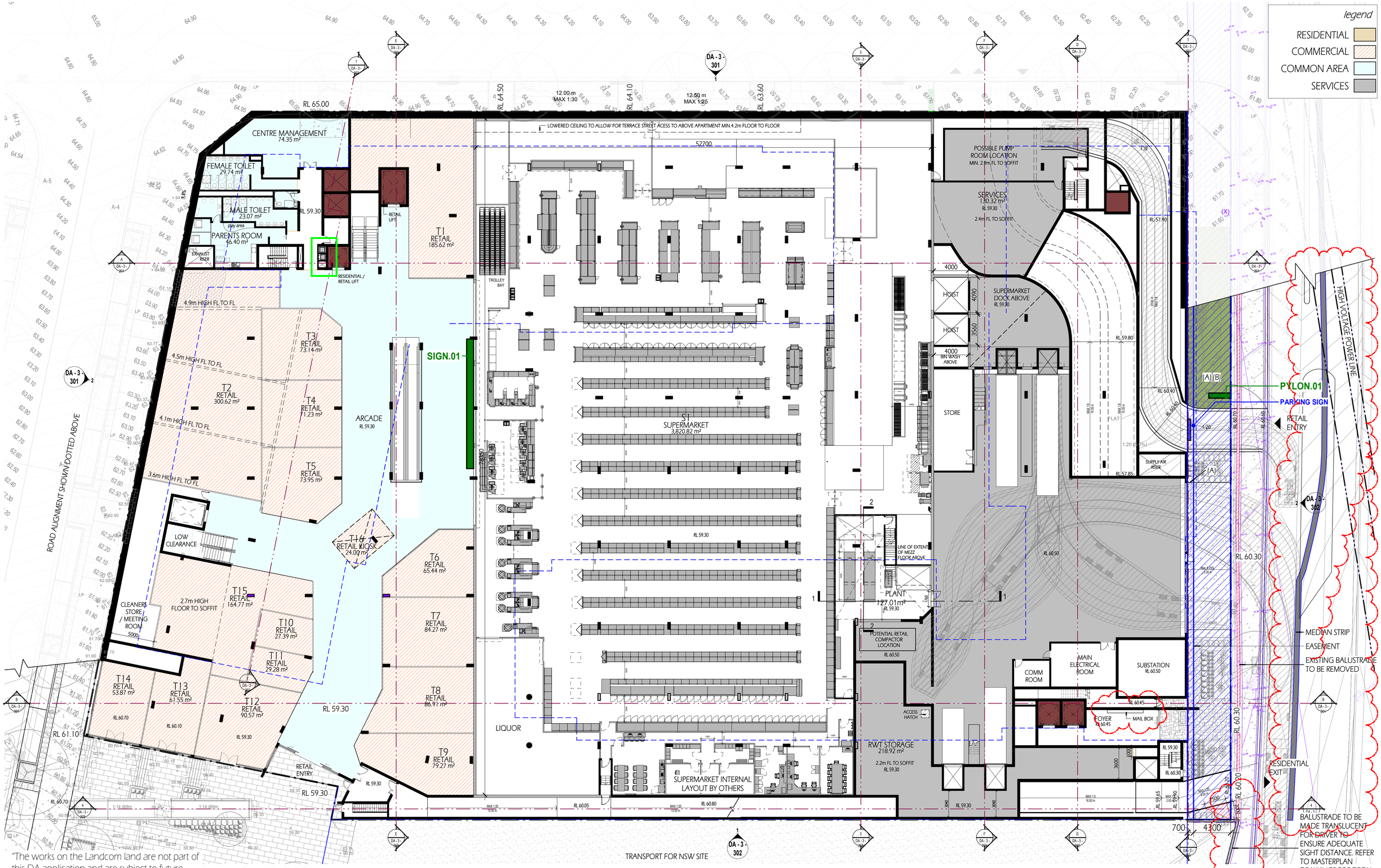

"The works on the Landcom land are not part of this DA application and are subject to future application by the land owner."

LOWER GROUND

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1 : 400 @ A3 sheet

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B	LANDCOM LAND NOTES AMENDED	24/07/20	JA	IC
A	ISSUE FOR DA SUBMISSION	30/03/20	VV	IC

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SHEET TITLE:
Lower Ground

SCALE
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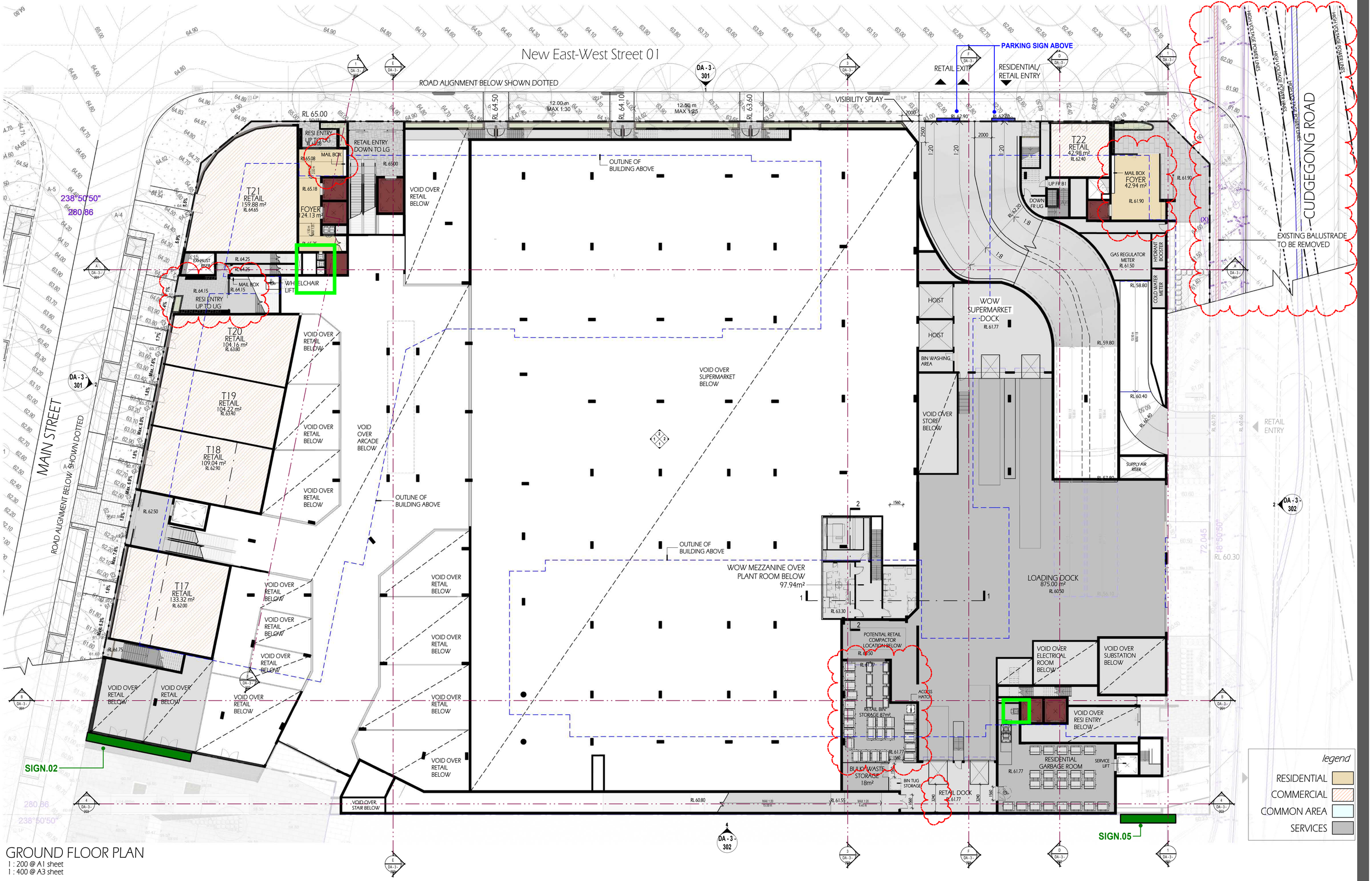

GROUND FLOOR PLAN

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SHEET TITLE:
Ground

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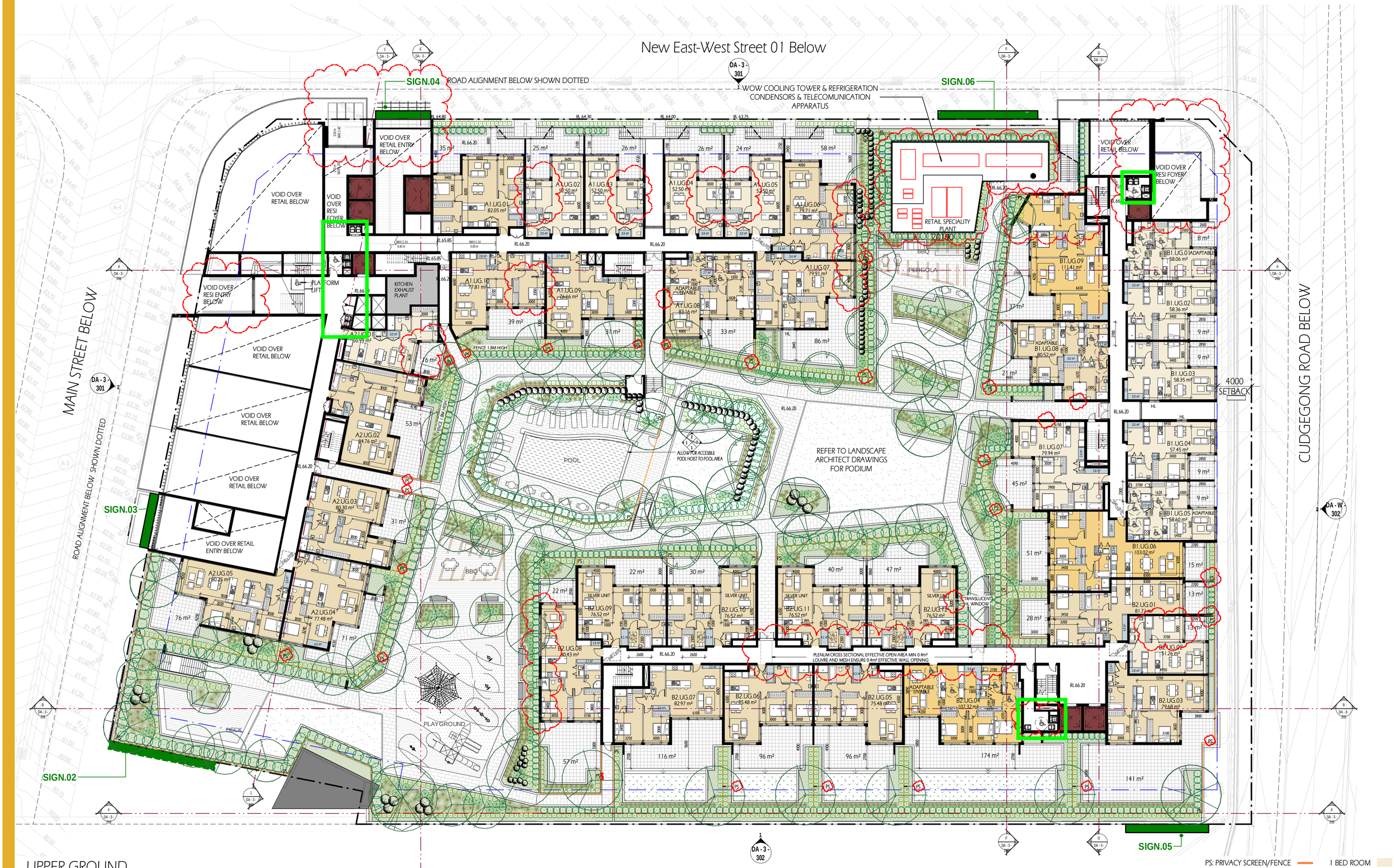

UPPER GROUND

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PS: PRIVACY SCREEN/FENCE
STORAGE
1 BED ROOM
2 BED ROOM
3 BED ROOM

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SHEET TITLE:
Upper Ground / Podium

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STORAGE
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2 BED ROOM
3 BED ROOM

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SHEET TITLE:
Level 1

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2 BED ROOM
3 BED ROOM

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STORAGE

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2 BED ROOM
3 BED ROOM

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SHEET TITLE:
Level 3

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SCALE

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PS: PRIVACY SCREEN/FENCE
STORAGE
1 BED ROOM
2 BED ROOM
3 BED ROOM

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SHEET TITLE:
Level 4

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SCALE

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PS: PRIVACY SCREEN/FENCE
STORAGE

1 BED ROOM
2 BED ROOM
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SHEET TITLE:
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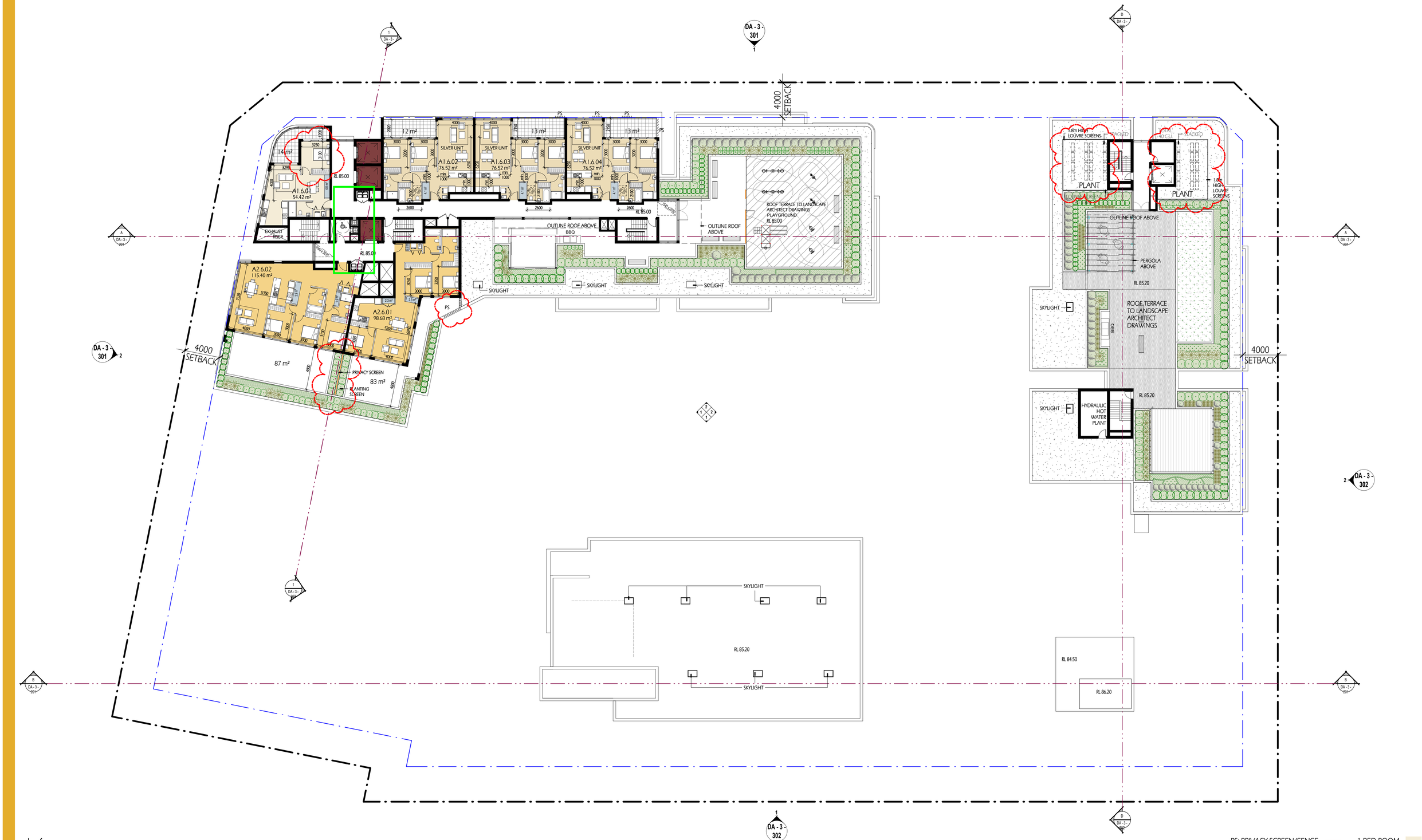

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PS: PRIVACY SCREEN/FENCE
STORAGE

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SHEET TITLE:
Level 6

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SCALE

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B3
1 : 200

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Rustom Wee Chung Kudinar-Kwee (reg. 4570) : Nominated Architect

RESTIFA & PARTNERS

PROJECT STATUS :
Development Application

DEVELOPMENT MANAGER :
Restifa & Partners

PROJECT NAME
Proposed Mixed Use Development (STAGE 4)
43-53 Cudgegong Road
Rouse Hill, NSW 2155

L.G.A.: Blacktown City Council

SHEET TITLE:
Basement 3

SCALE
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Rouse Hill, NSW 2155

L.G.A : Blacktown City Council

SHEET TITLE:
Basement 2

SCALE
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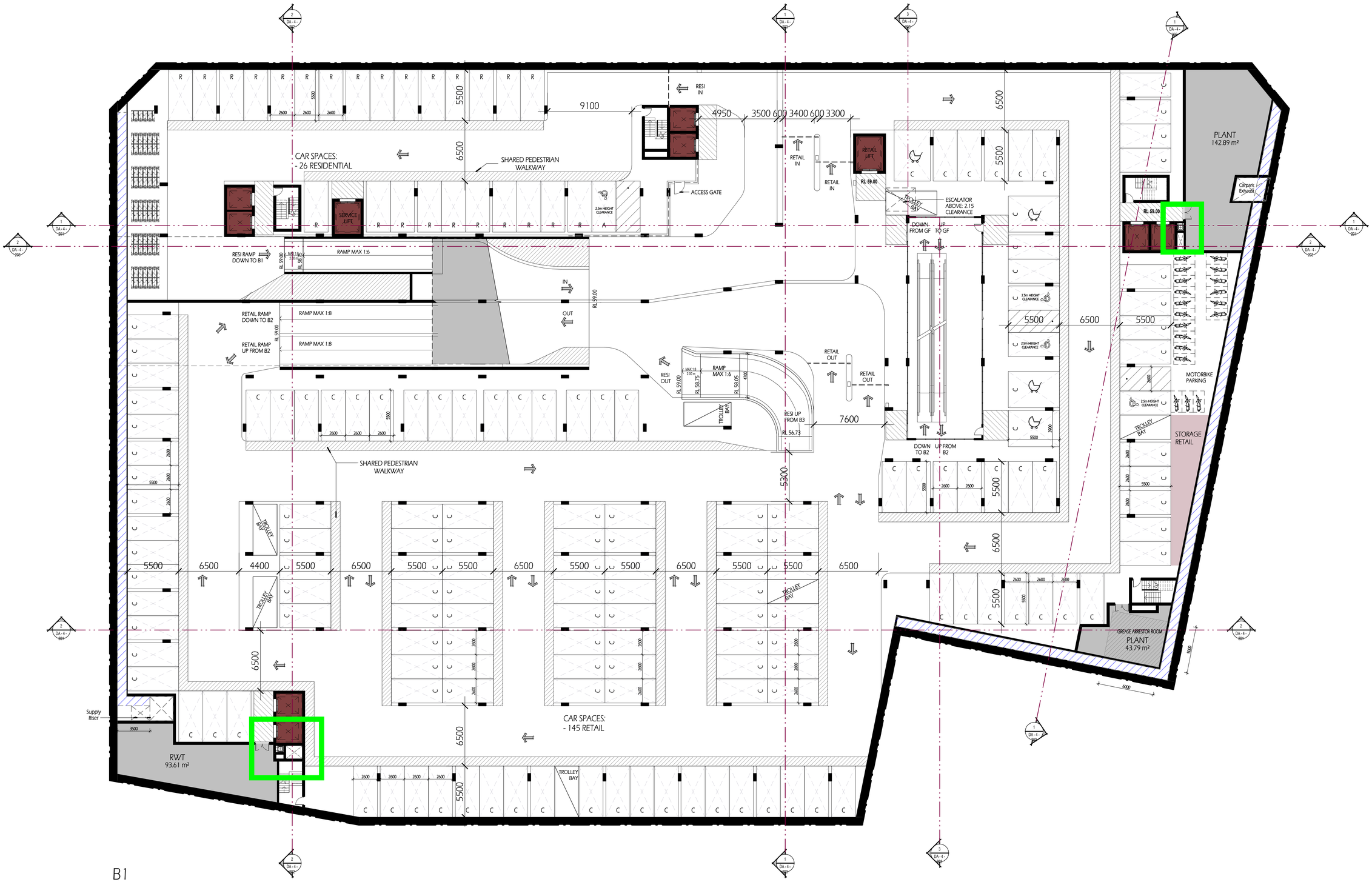

B1
1 : 200

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SHEET TITLE:
Basement 1

SCALE
1 : 200 @ A1 sheet

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DRAWING No. DA - 4 - 103
ISSUE C

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GROUND FLOOR PLAN

1 : 200

ROAD ALIGNMENT ABOVE SHOWN DOTTED

4A1 Garbage room

4B1 Garbage room

5m3 compactor

General waste chute

Bin tug pathway

SERVICES 128.11 m²

GARBAGE 37.85 m² 4 x 1100 L BINS

RESIDENTIAL GARBAGE 58.05 m²

BULKY WASTE: 22m²

GARBAGE 44.00 m²

RETAIL

PLANT 16.50 m²

SERVICE LIFT

HOIST

HANDLING AREA

BIN TUG PARKING

CENTRE MANAGEMENT 35.19 m²

PUMP ROOM 37.40 m²

GARBAGE 95.70 m² 5 x 1100 L BINS

MALE TOILET 25.10 m²

FEMALE TOILET 23.79 m²

PARENTS ROOM 44.53 m²

play area

RETAIL LIFT

CORRIDOR ABOVE SHOWN DOTTED

LOADING DOCK ABOVE

33600

RAMP 1:8 CARPARK ENTRY/EXIT

2m PEDESTRIAN REFUGE

GAS REGULATOR & METER

18m³ COMPACTOR

COLD WATER METER

TURNTABLE RL 63.70

ø 17500

2.5 x 2 m visual splay

S1 SUPERMARKET 2,821.16 m² RL 62.30

67500

MEZANINE ABOVE

ESCALATOR DOWN FROM UPPER G

SKYLIGHT ABOVE

DOWN TO B1

UP FORM B1

T1 RETAIL 588.32 m² RL 62.30

T2 RETAIL 69.13 m² RL 62.50

T3 RETAIL 66.11 m² RL 63.00

RETAIL ENTRY RL 62.50

T6 RETAIL 140.91 m² RL 62.30

T5 RETAIL 87.71 m² RL 62.50

T4 RETAIL 96.57 m² RL 62.50

T7 RETAIL 71.29 m² RL 61.50

T8 RETAIL 87.06 m² RL 61.50

T9 RETAIL 91.96 m² RL 61.35

RETAIL ENTRY

REFER TO LANDSCAPE DRAWINGS FOR DETAILS

CARPARK BELOW

PLANT ROOM BELOW

FLOOR ABOVE

Carpark Exhaust

MAIN STREET

NEW NORTH-SOUTH STREET 01

SUBSTATION 43.25 m² RL 63.00

SWITCHBOARD 37.94 m² RL 63.00

PLANT 13.48 m²

Supply Riser

T10 RETAIL 42.33 m² RL 62.05

RESIDENTIAL FOYER 32.63 m² RL 62.00

MAIL BOX

ACCESS RAMP

LOADING DOCK ABOVE

HOIST

"The works on the Landcom land are not part of this DA application and are subject to future application by the land owner.

RESIDENTIAL
COMMERCIAL
COMMON AREA
SERVICES

REFER SCHEDULE OF AMENDMENTS TO DA SPP-20-00001

D	ISSUE FOR S.34	10/03/21	JA	IC
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SHEET TITLE:
Ground

SCALE
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DRAWING No. DA - 4 - 104
ISSUE D

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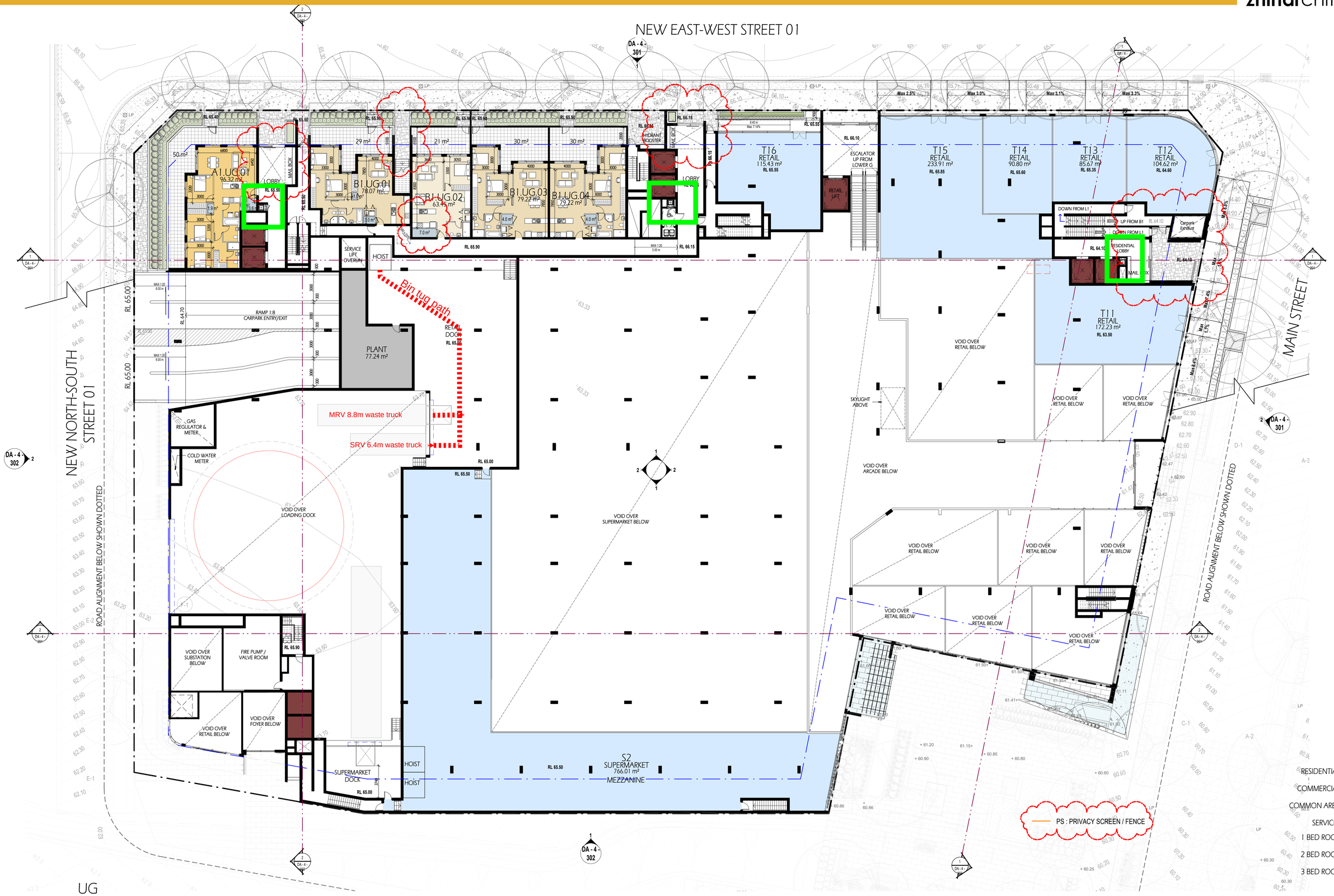

UG
1 : 200

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SHEET TITLE:
Upper Ground

SCALE
1 : 200 @ A1 sheet

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SHEET TITLE:
Level 1 / Podium

1 : 200 @ A1 sheet
SCALE

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L 2
1 : 200

PS : PRIVACY SCREEN / FENCE

1 BED ROOM
2 BED ROOM
3 BED ROOM

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SHEET TITLE:
Level 2

SCALE
1 : 200 @ A1 sheet

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DRAWING No. DA - 4 - 107
ISSUE C

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PS : PRIVACY SCREEN / FENCE

1 BED ROOM
2 BED ROOM
3 BED ROOM

L 3
1 : 200

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Rouse Hill, NSW 2155

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SHEET TITLE:
Level 3

SCALE
1 : 200 @ A1 sheet

JOB No. 8656
DRAWING No. DA - 4 - 108
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PS : PRIVACY SCREEN / FENCE

1 BED ROOM
2 BED ROOM
3 BED ROOM

L 4
1 : 200

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SHEET TITLE:
Level 4

SCALE
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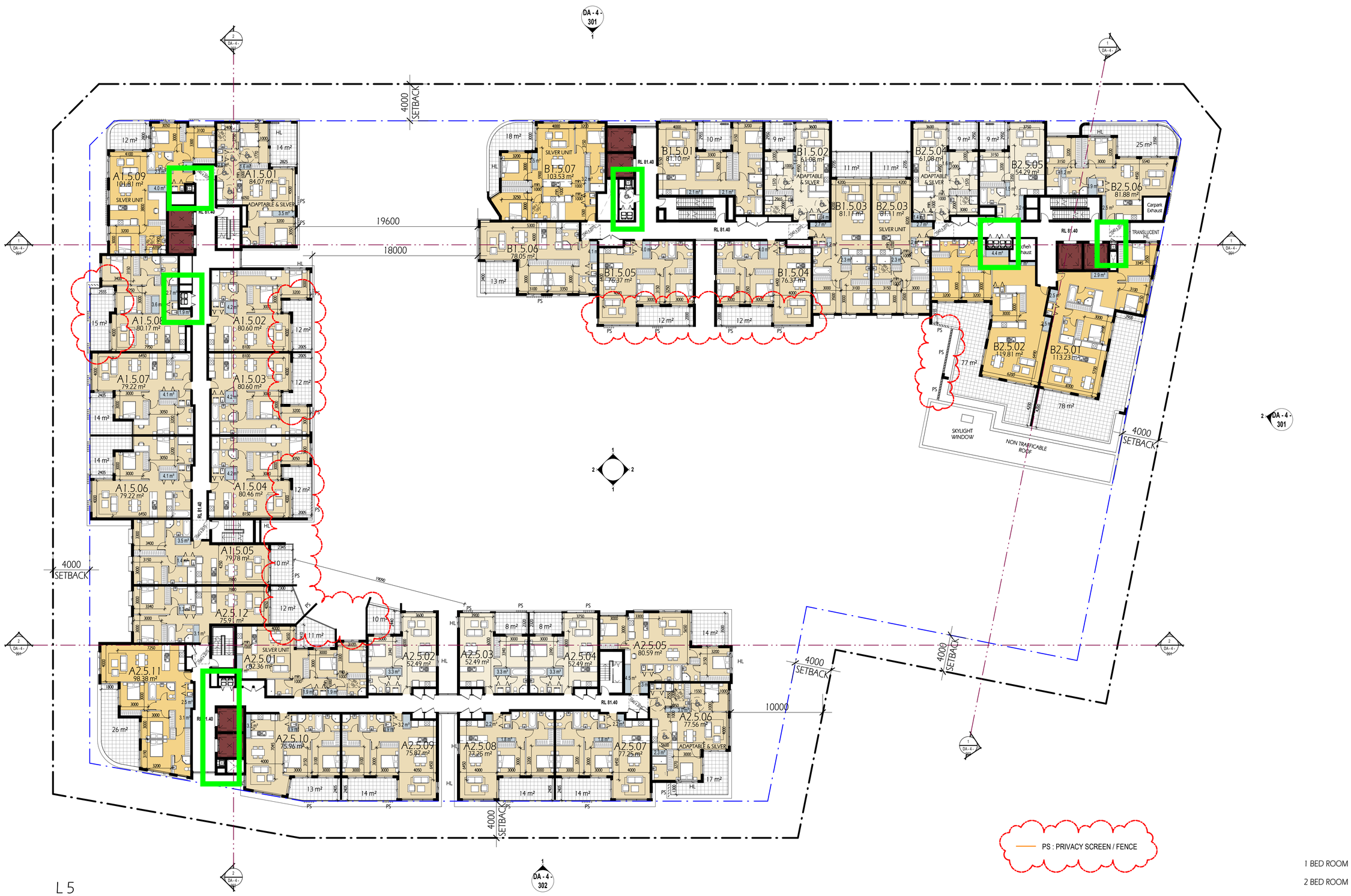

L 5
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SHEET TITLE:
Level 5

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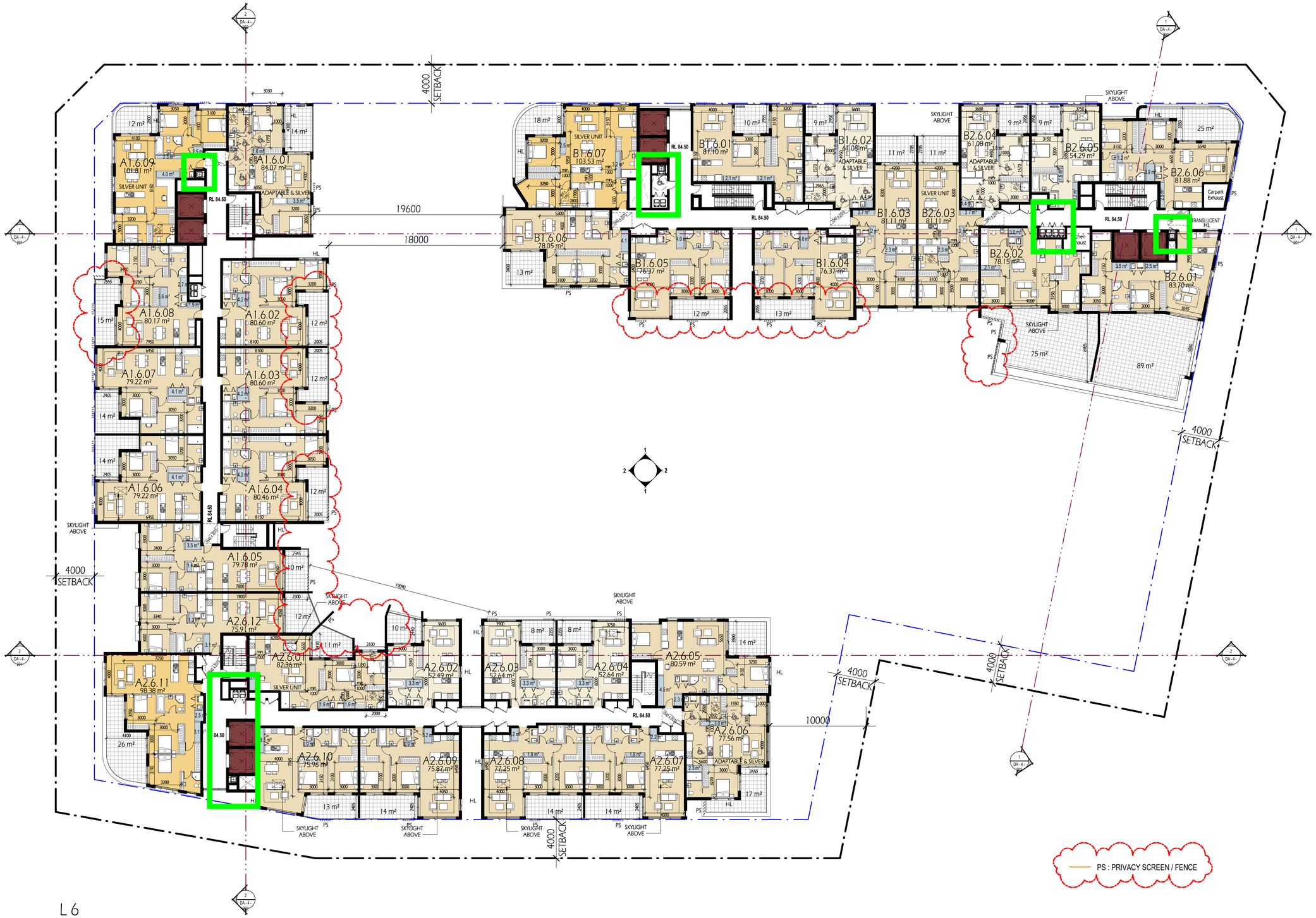

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SHEET TITLE:
Level 6

SCALE
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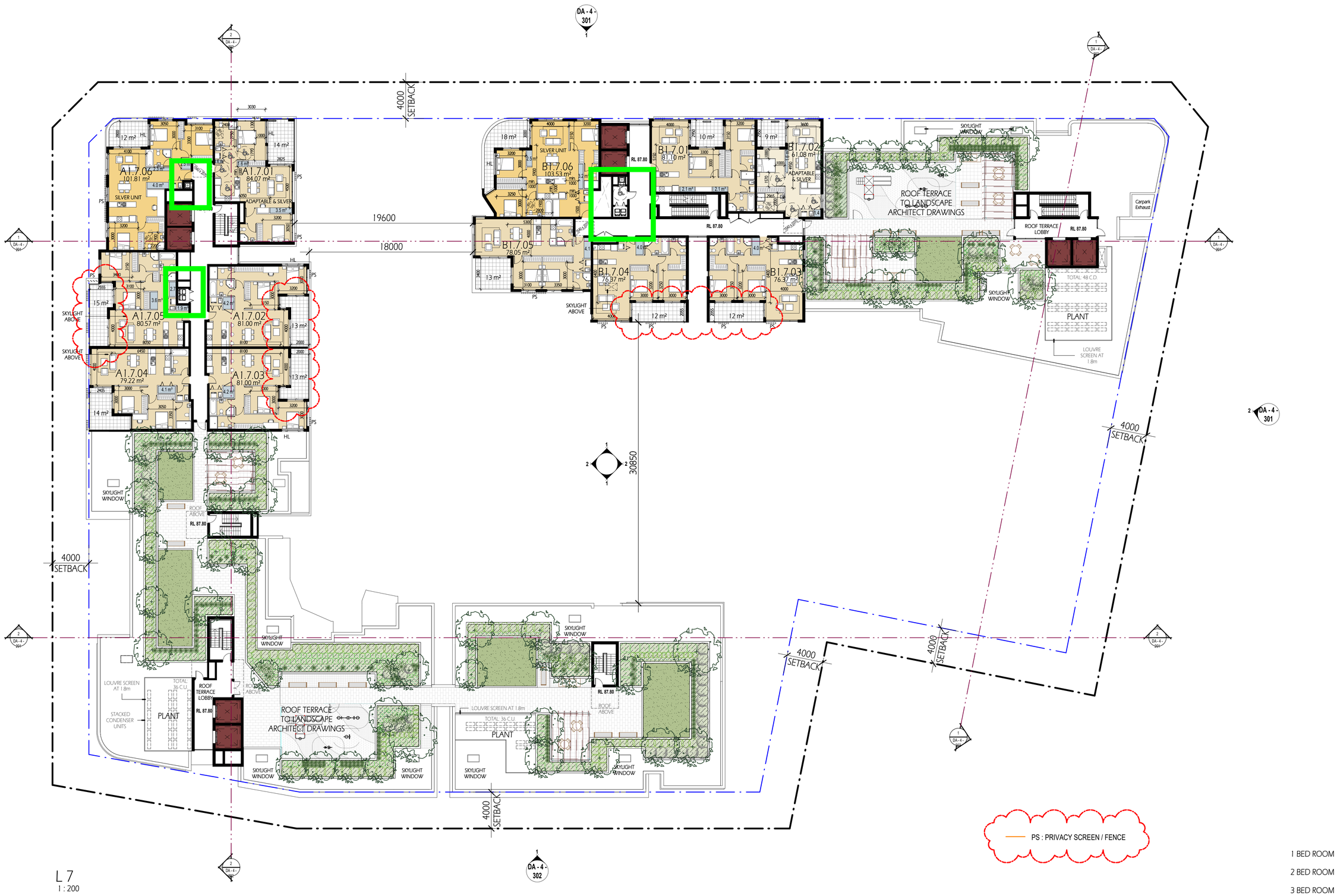

L 7
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SHEET TITLE:
Level 7

SCALE
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Example Bin Lifter Mechanism, Motorised Bin Mover and Related Equipment Options

Appendix C

pitt&sherry

Rugged (powered) BIN LIFTER

Designed with manoeuvrability in mind, its small footprint and light weight—combined with the 240V electro-hydraulic operation—make it the perfect solution for emptying heavy wheelie bins into steel skip bins on building and industrial sites.

The All Terrain model is perfect for outdoor use with its pneumatic wheels (pictured below).

The lift mechanism is a full-swing operation.

Made in Australia.

The Rugged Powered All Terrain model, with pneumatic wheels.

Note: The All Terrain is 140-150 mm higher than BLEH1500.

Typical applications

Suitable for construction sites, hotels, apartments, high-rise basements, caravan parks and other large outdoor areas

Features

Lifting	
Capacity:	150 kg
Mechanism:	Full-swing
Recommended use	
Per day:	50 lifts
Bin compatibility	
Wheelie:	80, 120, 140 and 240 litre
Skip:	1500 and 1800 mm
Operation	
Method:	Push-button hydraulic system
Mode:	Full-swing
Time:	35 seconds
Dimensions (L/W/H)	BLEH1500: 850/850/1700 mm BLEH1800: 850/850/1960 mm
Battery	• 12V rechargeable & smart charger • 10A main outlet
Highest tip point	BLEH1500/1500LL: 3278 mm BLEH1800: 3752 mm
Swept radius	BLEH1500/1500LL: 1629 mm BLEH1800: 1909 mm
Fits through internal doorways	Yes

Safety features

- Will only operate when connected to steel dumper bin.
- Braking castors for stability.

	ORDER CODE
Rugged Powered bin lifter for 1500 mm skip bins	BLEH1500
Rugged Powered All Terrain bin lifter for 1500 mm skip bins	BLEHAT1500
BLEH1500—lid lifter compatible	BLEH1500LL
Rugged Powered bin lifter for 1800 mm skip bins	BLEH1800

Multi-Tip bin-tippers

MT1200
with 120l bin

MT1600
with steel drum

Safe ◇ Economical ◇ Efficient

The new *Multi-Tip* bin-tipper from *Materials Handling Pty Ltd* offers the perfect solution to the problems of emptying heavy MGB bins and drums into larger bins for disposal.

MATERIALS Handling PTY LTD Working with ease...

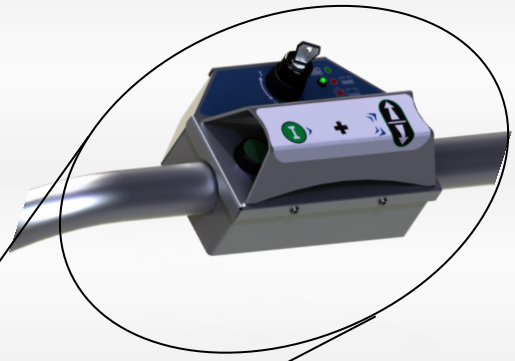
Our website: www.materialshandling.com.au
Phone us: 1300 65 00 35 Fax us: 1800 68 68 96
Email us: sales@materialshandling.com.au

Australia Wide Sales and Service

The ***Multi-Tip's*** outstanding features include:

- 150kg capacity
- The standard cradle is designed for 240 litre MGB wheelie bins. Optional bolt-on spring-loaded catch kits enable 80l, 120l, & 140l bins to be emptied as well.
- Cradles to suit plastic and steel drums, rectangular bins and many other containers can be simply fitted or exchanged.
- Available in 2 standard tipping heights – 1200mm and 1600mm.
- ***Multi-Tip*** bin-tippers are available with 1-phase, 3-phase, or battery power packs. Battery-powered tippers have a sealed battery and an industrial-quality 'float' charger built in.

- ***Multi-Tip*** bin-tippers require no regular maintenance, and are robustly built yet light and easy to move around.

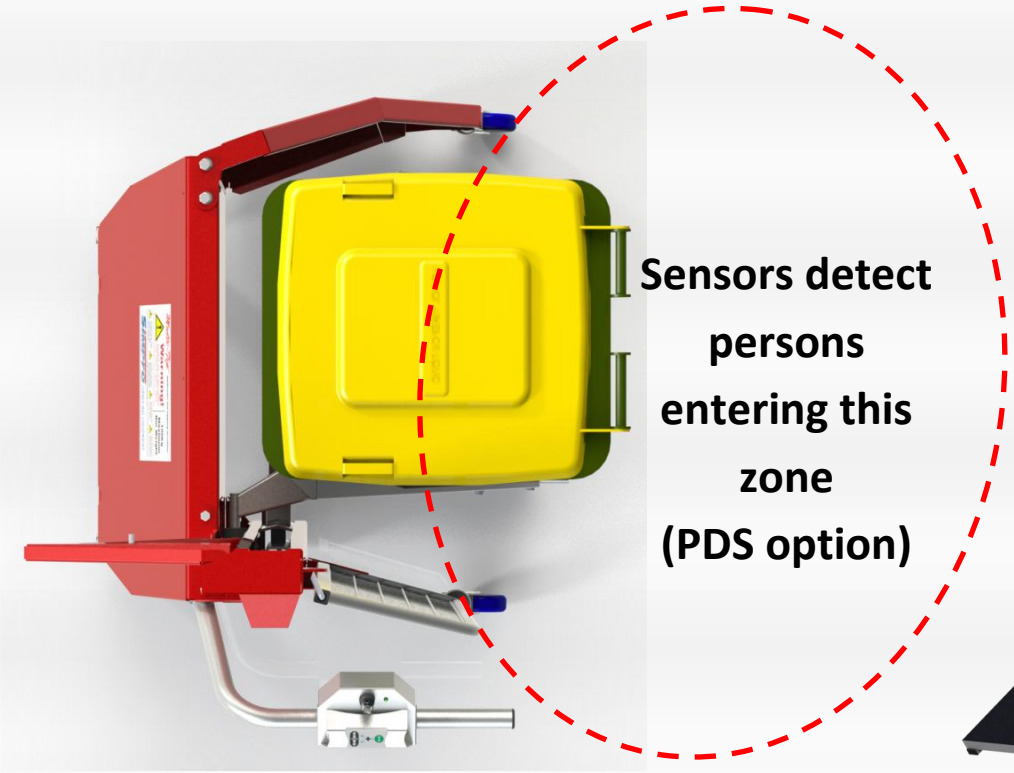


Both hands are needed to operate the machine.

- ***Multi-Tip*** bin-tippers are designed to be safe to use, with all operating components fully enclosed. This also allows the unit to be operated indoors or outdoors.

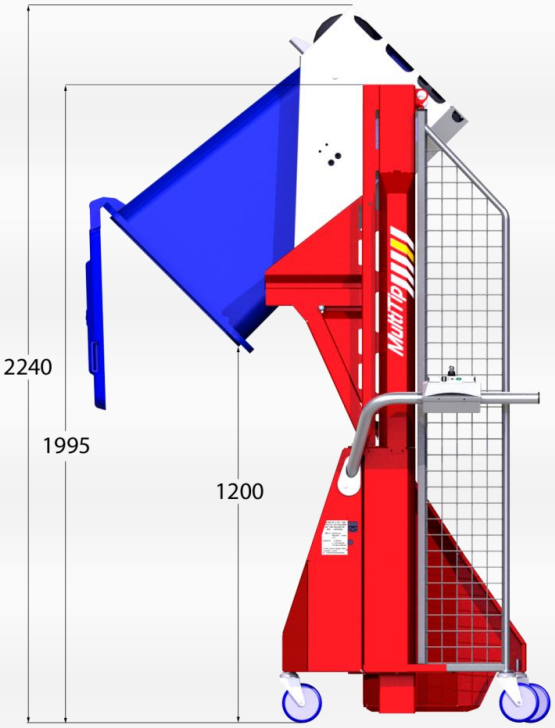
Multi-Tip Options:

- Partial or full stainless-steel construction.
- Cradles to suit almost any size and shape of bin.
- **PDS** - Multi-Tip tippers are available with a personnel detection system that works in a similar way to reversing sensors on a car. The sensors detect people within the danger zone and stop all motion of the cradle, but are programmed to ignore the movement of the cradle itself.

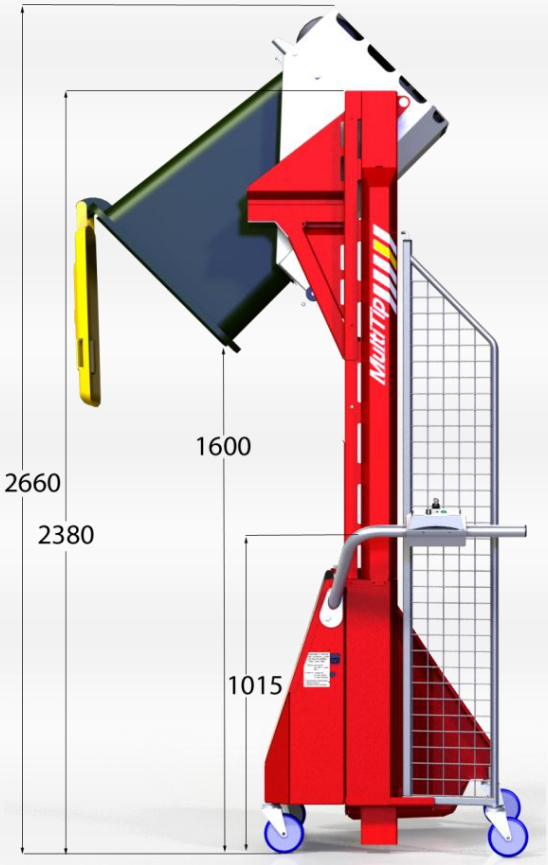


- Multi-Tip tippers are available with a solar panel to charge the battery. Depending on the amount of sunlight available and the tipping height, up to 2 tonnes of product may be emptied every day using solar charging alone. The standard charger is normally fitted as a backup.

Multi-Tip Dimensions

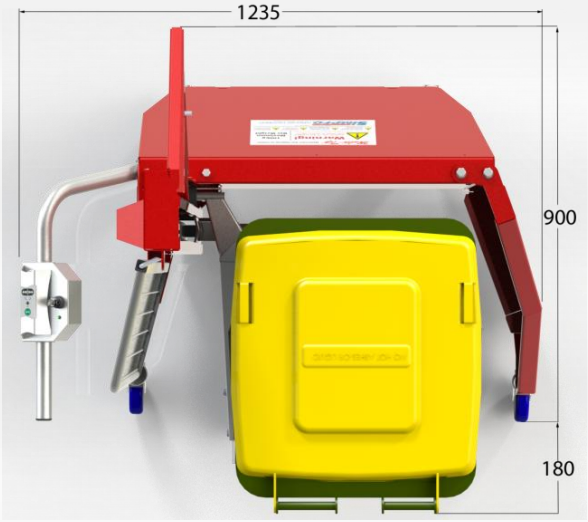


MT1200



MT1600

TOP VIEW



Also available:

Dumpmaster heavy-duty bin-tippers

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Tug Incliner POWERED TUG

Please note: *Wheel cover is not included.*

The Tug Incliner pedestrian operated electric tug has been designed to tow on slopes or ramps, and is capable of towing up to 1 tonne on a 10 degree ramp, or up to 500 kg up a 14 degree (4:1) incline with ease

The Tug Incliner is the ideal solution for moving 660 litre and 1100 litre bins on ramps with an incline of 1:4. Universal towing devices (to suit 660 and 1100 litre bins) are also available, as well as directional lock mechanisms for swivel castors to help improve your waste management.

The Tug Incliner is designed to improve safety and efficiency, whilst reducing the risk of accidents that can occur when manually moving very heavy loads.

See page 27 for hitch options.

MADE IN AUSTRALIA

Typical applications

Suitable for moving heavy bins and trolleys on sloped driveways/ramps, around high-rise building/apartment basements, or around caravan parks.

Features

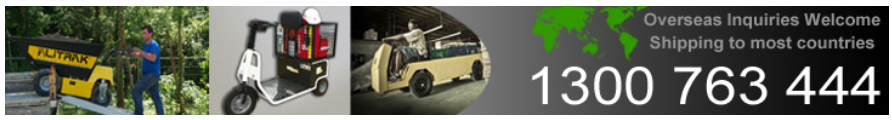
Tow capacity	• 1000 kg up a 10 degree incline • 500 kg up a 14 degree (4:1) incline
Max. speed	Up to 3 km/hour
Speed mode	Three speed control with forward, reverse and emergency stop.
Usability	• Ergonomic design with folding tiller handle. • Battery operated and rechargeable. • No driver's licence required. • Simple to use. • Quiet, smooth operation. • Zero emissions.
Hitching	• Supplied with a pin hitch. • Wide variety of hitches available for easy attachment to trolleys. • Universal towing device to suit 660 litre and 1100 litre bins available.
Towing options	• Can tow multiple bins. • Move 660 litre and 1100 litre bins on a 14 degree ramp or incline. • Directional lock mechanism for swivel castors is available.
Dimensions (L/W/H)	1687/898/912 mm
Battery	Two 12V 100Ah MK-gel batteries (deep cycle, long-lasting, maintenance-free) with 24V smart charger

Safety features

- Emergency stop button.
- Emergency back-off button.
- Electromechanical park brake.

	ORDER CODE
Tug Incliner 1 Tonne (including pin hitch)	TUGINCLINER1T

SPACEPAC IND P/L since 1982
ELECTRIC EQUIPMENT
Green Solutions



DEC Modena – BULL 2-4

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- Chassis: Fabricated in Tubular steel, arc welded the Chassis forms a rigid load bearing structure. Designed for easy access to all components.
- Traction Unit: Manufactured by Industry leader Benevelli for Reliability, Silent operation and high performance Powered by a High output Electric motor that is re-energised during operation. Service brakes on both rear wheels are applied by a pedal… Parking brake is mechanically applied by a lever.
- Drivers Position.: An adjustable position Drivers seat designed for comfort allows the operator to achieve a comfortable environment. The visible dashboard contains an Hour Meter as well as a Battery discharge indicator. Fitted with a start key (2 keys), Light switch and indicator lever…Front and rear

DEC MODENA PRODUCTS

- DEC Modena – TR2
- DEC Modena – TR6
- DEC Modena – BULL 08
- DEC Modena – BULL 08s
- DEC Modena – TRACTOVEP
- DEC Modena – TRACTOVEP M
- DEC Modena – TRP4
- DEC Modena – TRACTOVEP SE
- DEC Modena – BULL 2-4
- DEC Modena – BULL 1P-2P-4P
- DEC Modena – BULL 2-4 w Cabin
- DEC Modena – BULL 1P-2P-4P w Cabin
- DEC Modena – BULL 2/4W – 4/4W
- DEC Modena – BULL 6n
- DEC Modena – BULL 8
- DEC Modena – BULL 6-8 w Cabin

CONTACT US

* indicates required field

Subject:*

Name:*

Offline

twin lights are fitted for maximum vision in dark conditions.

- Steering: Fitted with a steering wheel and fast turn handle, the geared, low effort steering allows U turns in very small aisles.
- Wheels: The Puncture Proof, Pluryply Tyres and wheels are of large diameter to handle rougher floors and surfaces. Options are Non-Marking tyres for clean areas as well as Superelastic Tyres that give long life and traction with a more elastic tread.
- Electric System: The Fail safe electronics feature highly reliable circuits and wiring.,..This allows precision movements. An optional remote control “Inching” feature allows easier hitching positions when attaching trailers. In any case of failure, the electronic control inhibits movement.
- Safety Devices: The Design complies with accident prevention specification rules with regard to components, performance and stability
- Warranty: We offer an Industry leading parts and labour full warranty of 2 years on the machine and 1 year warranty on the batteries…
- Batteries.: The standard Pz Batteries have an estimated service life of 4 years when maintained and charged in accordance with the manual. An optional watering fill kit is available for time saving during regular use.
- Options: A full range of options are available… As well, Conditional road registration allows for location specific use.

Images/Videos

TECHNICAL DATA

Email:*

Message:*

CAPTCHA Code:*

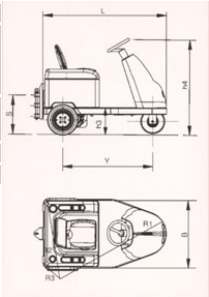
Submit

Offline

		UNIT M.	BULL 2	BULL 4
Manufacturer	DEC			
Model	BULL			
Platform loading cap.	Nominal capacity	kg	-----	-----
Pull capacity	Pull nominal capacity	kg	2000	4000
Power type	Electric - endotermic		electric	electric
Controltype	Standing / seated thiller / steer		seated / steer	seated / steer
Tyres	Pn=pneum. Se=superelastic		Pn	Pn
Wheels	N. front/rear - x drive	n.	1/2X	1/2X
Platform dimensions	L x B (lengh x width)	mm	-----	-----

DIMENSIONS

Platform hight	h6 = unload clearence	mm	-----	-----
Overal dimensions	L = lenght B = width h1 = foot leve h3 = Seat height h4 = Steer height	mm mm mm mm mm	1500 900 1820 310 1250	1600 930 1960 340 1330
Turning radius	R1 = front min. external R2 = rear min. external R3 = front min. internal	mm mm mm	1400 1000 400	1500 1000 400
Aisle width	A = 180° turn	mm	2200	2300
Tow hook height	s = center from ground	mm	220-350-490	240-380-520



PERFORMANCE

Speed	Without / with load	km/h	12-6	14/8
Drowbar pull Towing effort	Continuative work 60' Work for 5' in plane	kg kg	90 150	150 250
Gradeability	Without / with load	%	10/5	12/4
Weight	With battery	kg	550	740
Axle loads	Front / Rear	kg	160 / 390	175 / 495

This is box title

Tyres	Front diameter / width Rear diameter / width	mm mm	312/116 414/121	360/150 414/150
Wheel base	y = center	mm	1070	1170
Tread	Center of rear wheels	mm	710	710
Ground clearence	Lowest point Center of wheel base	mm mm	240 240	250 250
Service brake	Mech / Hydraul / Electronic Braking axle number	n.	Mech / Hydraul 1	Mech / Hydraul 1
Parking brake	Mech / Electric		manual by lever	manual by lever
Sospensions	Springs / Shock absorber		-----	-----
Steering	Mech / Elec thiller / Steer		mech	mech

PROPULSION

Offline

Battery	Type Capacity Optional capacity Weight	V/Ah kg	Reinforced 24/250 ----- 200	Reinforced 24/325 ----- 250
Electric motor	Translation, power S2=60' Steering	kw kw	2 -----	3,5AC -----
Electric system	Brand		Zapi	Zapi
Speed gear	Chopper		chopper	chopper
Transmission	Mechanic / Hydraulic		mech	mech
Tow hook	Manually / Automatic		manual	manual
Autonomy	Average load hours	h	6/8	6/8

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WHO WE ARE

Spacepac Industries Pty Ltd was established in 1982. Our Battery Electric Division provides sales, service and support for Non Polluting Towing, Pushing and material handling solutions for Industry, Manufacturing, Hospitality, Health and Aged Care support applications. We provide products with more than one application - products suitable for widely different uses in both the Commercial & Industrial fields. Most of our products are known around the world for versatility, durability and dependability. We offer a complete range of heavy-duty industrial material-handling vehicles, comfortable personnel transport and food & beverage vehicles.

PRODUCTS

- Battery Powered Burden Carriers
- Bin Lifters/Tippers
- High Lift Dumpers
- Lifters & Stackers
- Order Picker
- Pedestrian Tow Tugs
- Platform Trolleys
- Ride on / Seat on Tugs
- Shuttle Buses
- Tracked Carriers
- Utility Vehicles
- Wheelie Bin Trailers
- Wheelbarrow Tippers

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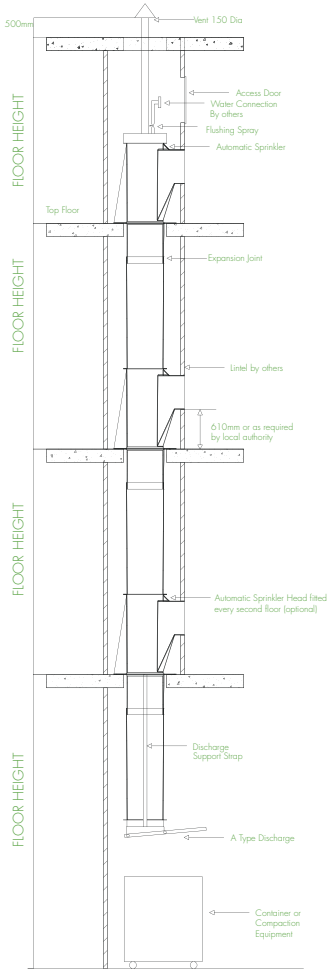
EnviroTube

EnviroTube – The Smooth Operator – is today's solution to a more cost effective and environmentally friendly Rubbish & Linen chute system. Made from a guaranteed blend of 100% recycled plastic materials*, the EnviroTube is engineered on the basis of fast and easy installation, low maintenance and an ultra smooth finish. As such, the EnviroTube is a cheaper and substantially quieter alternative to the traditional Steel Chute Systems.



envirotube

the smooth operator.

Key Features:

1. Guaranteed to be made from a blend of 100% recycled plastic materials*
2. Quieter & more cost effective alternative to steel & cement chutes
3. Faster & easier installation than standard metal & cement chutes
4. Greener & more hygienic solution

Modular Design Benefits:

- Light weight sections enable ease of installation
- 5mm thick sections reduce impact noise and vibration, resulting in a quieter chute solution
- Acoustic treatment is not required due to the thickness of each section
- Moulded connection of loading throat for a less restricted flow, no sharp angles and reduced impact
- Flexibility to cope with building variations

Cost Effective & Low Maintenance Benefits:

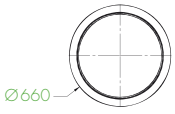
- Recycled plastic material is a more cost effective alternative to a traditional steel and cement chute
- Faster installation resulting in reduced labour costs
- Light weight sections eliminate the need for costly specialist lifting equipment
- Self cleaning unit reduces bacteria build up and resists offensive odours
- Ultra smooth finish means a cleaner non porous solution

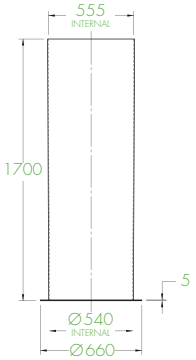
Designed & Manufactured in Australia:

- Supporting Australian made products and the Australian economy
- Fully engineered product for the Australian market ensures product quality and consistency
- Service and parts readily available through local suppliers together with unsurpassed after sales support

Safety & Compliant:

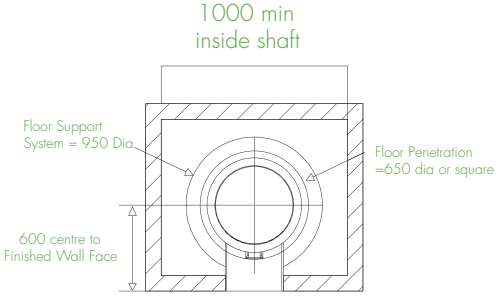
- Light weight sections reduce risk of injury
- Moulded sprinkler locations allow fire treatment of the chute system at all levels (builder can select levels that require fire treatment)
- Unit is non-operable until completely installed, eliminating premature use of chute and reducing the risk of injury





ENTRY CHUTE

INTERMEDIATE SECTION

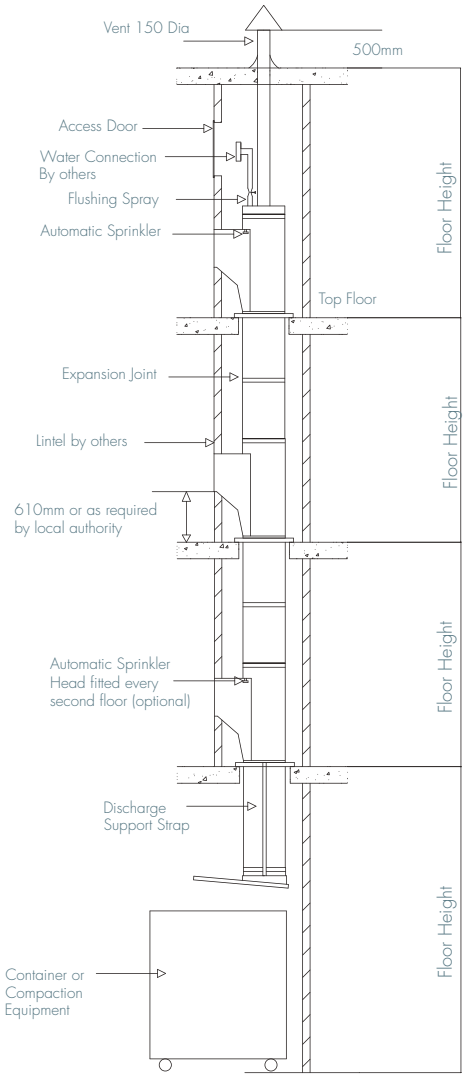


Fire Rated Door
With Close Off
550 Dia Garbage Chute

*Subject to availability

Steel Range **Garbage Chute**

All JD MacDonald Steel Chutes are designed, engineered and manufactured in Australia, proudly supporting Australian Made products and the Australian Economy. Each section of a JD MacDonald Steel Chute is specifically designed to fit directly into the section below; with no bolts, clips or other projections in order to successfully allow the continuous flow of all waste materials.



Key Features:

1. Proven & robust design
2. Chutes fully factory assembled, with all joints except those required to separate for shipment being welded
3. All sections flash into one another with no bolts, clips or other projections to obstruct flow of material
4. Can be individually fabricated to suit each projects needs including diameter

Modular Design Benefits:

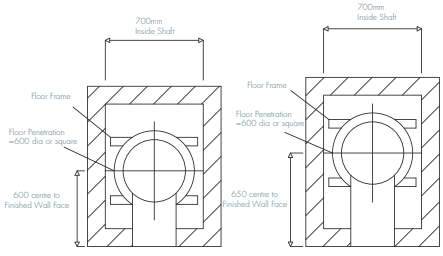
- Available in 1.6mm Zincalume, Stainless Steel or Galvabond
- Fire Rated Doors (FR) or Non Fire Rated Doors (NFR)
- FR Doors are high quality Stainless Steel, self closing, hydraulic, hand operated and bottom hinged
- FR Doors carry a two hour fire rating label and have a fire resistant level (FRL) of NA /120/30 for Australian Standards1530.4 – 1990
- A hydraulic check ensures FR Doors have a smooth quiet close whilst also makes opening the door easier
- NFR Doors are self closing, bottom hinged & non combustible
- NFR Doors are made from Zincaneal steel construction suitable for a paint finish

Safety & Compliant:

- Light weight sections reduce risk of injury
- Sprinkler locations allow fire treatment of the chute system at all levels (builder can select levels that require fire treatment)

Recommended Accessories:

- Flushing Spray
- Intake close-off devices
- Fire Sprinklers
- Sound Lagging
- Isolator Mounts

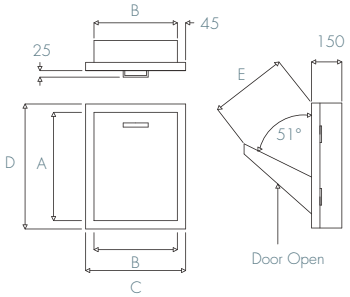


Fire Rated Door With Close Off 510 Dia Garbage Chute

Non Fire Rated Door With Close Off 510 Dia Garbage Chute

Garbage Chute Door Sizes (mm):

SIZE	A	B	C	D	E
381 x 457	470	394	508	584	330FR
533 x 457	470	546	660	584	330FR
610 x 610	622	622	737	737	450FR
360 x 340	350	325	430	410	230NFR



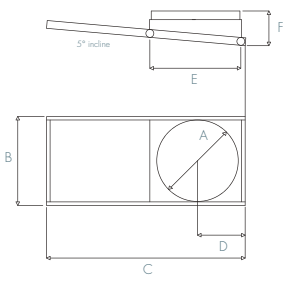
Garbage Chute Discharge Option:

A-Type Discharge:

- A-Type horizontal rolling door is used for garbage or linen chutes with an open end discharge
- The door is constructed from Zincalume Steel with an insulated filling but is not fire rated
- It is supported by four rollers on inclined tracks and held open by a fusible link. When excess heat breaks the link, gravity makes the door roll shut.

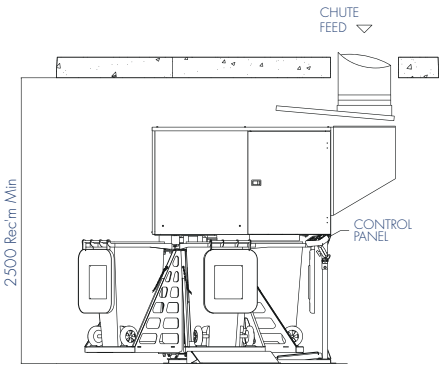
A-Type Discharge Dimensions (mm):

A	B	C	D	E	F
710	860	1551	391	762	263
610	760	1348	340	660	256
510	660	1146	289	559	248
457	610	1045	264	508	241

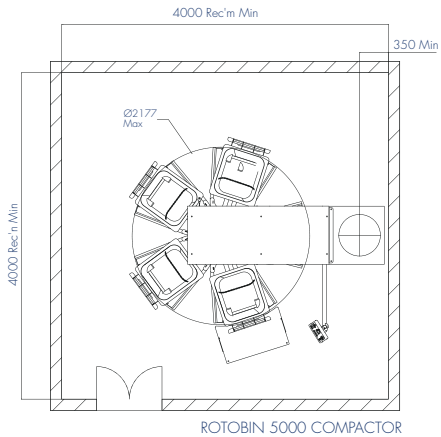


Rotobin **5000**

Rotobin 5000 is a cost effective, fully automated unit specifically designed for the collection and compaction of rubbish within high density, residential applications. Designed to fit directly under a garbage chute or loading dock, the Rotobin 5000 compacts rubbish into a 'wheelie bin' for removal by hand to the collection area. Working on a rotation basis, as each bin fills, the compactor base automatically rotates, positioning an empty bin under the chute when required. The Rotobin 5000 works perfectly in conjunction with either the EnviroTube or Steel Chute.



ROTOBIN 5000
COMPACTOR
WITH 5 x 240 LT BINS



ROTOBIN 5000 COMPACTOR

Modular Design Benefits:

- Fits through standard doorways, no special entry required
- Most efficient use of waste room space, can fit into tight waste rooms
- Can be retro fitted
- Low overall unit height
- Standard 5 x 240 litre configuration maximises volume storage per cycle
- Equipped with a control panel mounted to the outside of the machine (Machine may also be operated manually)

Cost Effective & Low Maintenance:

- High compaction with a reduction in bins required
- Direct compaction into awaiting bins ensures maximum volume per bin
- Increased payload per bin means less bin movements required
- Fully automatic operation with less staff involvement
- Quiet and efficient electric operation
- Reduction in power supply cost, as there is no need for 3 phase power, 240 volt GPO supply only
- No hydraulic leaks and no need for hydraulic expert to service unit

Safety & Compliant:

- Best practice equipment, OH&S and WorkCover compliant
- Simple operation, easy to diagnose faults messages, machine diagnostics and operation instructions
- Control system with user interface and diagnostics
- All components external to main control box have extra low voltage (24VDC and below)
- Operator's manual provided
- AS/NZS 3820:1998 compliant (essential safety requirements for low voltage electrical equipment)
- AS/NZS 3100:2002 compliant (Australian/New Zealand standards, general requirements for electrical equipment)
- AS4100 compliant (steel structures)
- Risk assessment available

Designed & Manufactured in Australia:

- Supporting Australian made products and Australian economy
- Fully engineered product for the Australian market ensures product quality and consistency
- Service and parts readily available through local suppliers together with unsurpassed after sales support

Rotobin Specifications:

Specification	Rotobin 5000
Number of Bins	5
Maximum Capacity	3600 litres
Bin Volume	240 Litres
Chute Opening	790 (H) X 560 (W)
Overall Length	2461 mm
Machine Height	2295 mm
Compaction Cycle Time (Unloaded)	70 sec per bin
Bin Index Cycle Time (1 Station)	8 sec
Compaction Ratio	3 to 1
Compaction Force*	6800 N
Compaction Stroke	500 mm
Compaction Speed (No Load)	15.7 mm/s
Compaction Speed (Full Load)*	12.7 mm/s
Supply Current	10 amps
Minimum Required Room Height	2500 mm
Maximum Machine (Diameter-Width)	2177 mm

The Rotobin requires the supply of primary voltage 240V AC/ single phase, 10 am &, 50Hz. The machine can either be hard wired or plugged into a standard 3 pin GPO.

*Subject to loading conditions and waste type

pitt&sherry

Waste Management Plan

Cudgegong Road, Rouse Hill mixed-use development - Waste Management Plan

Contact

Trevor Allen
0438 744 815
tallen@pittsh.com.au

Pitt & Sherry (Operations) Pty Ltd
ABN 67 140 184 309

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info@pittsh.com.au
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