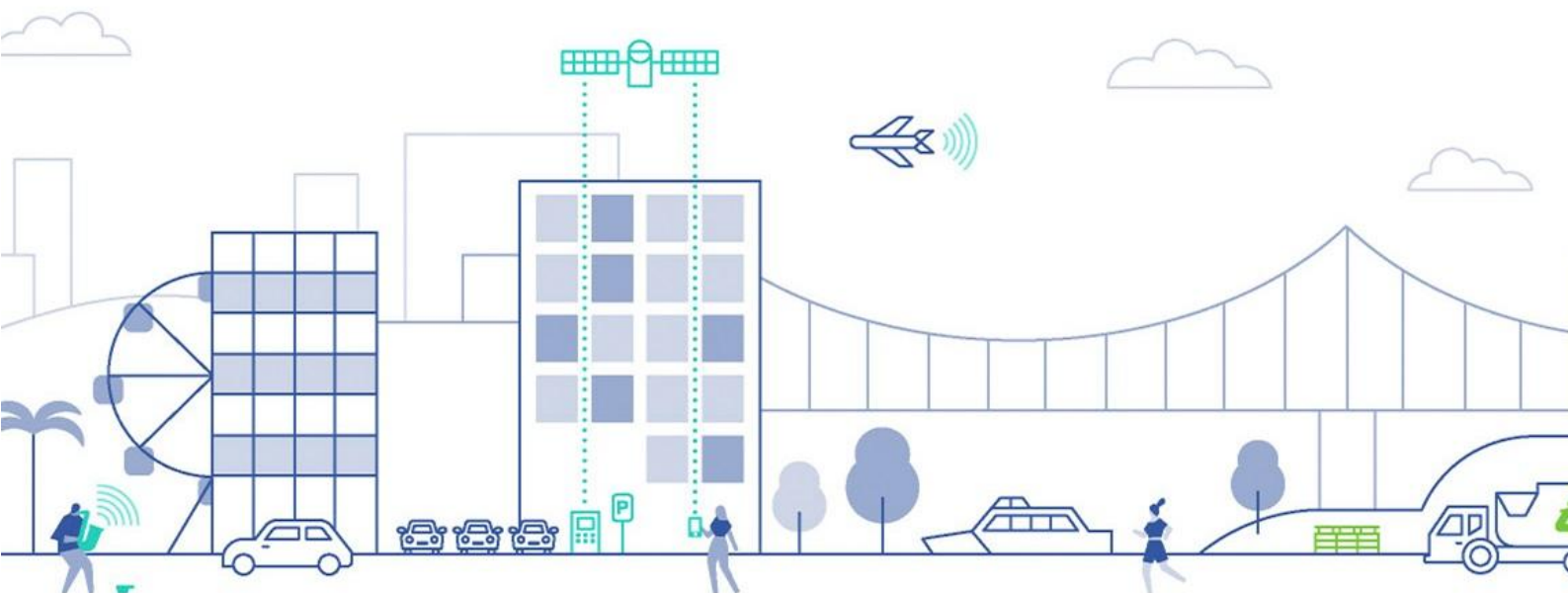


Waste Management Plan

At 601 Pacific Highway, St Leonards

On Behalf of Stockland Development Pty Limited



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1. Introduction

1.1 Background

Stockland Development (Stockland) submitted an EOI for an SSDA and concurrent rezoning proposal on 17 January 2025 through the Housing Delivery Authority Pathway (HDA). At its Briefing on 19 February 2025, the HDA recommended to the Minister that the applicant's project be declared SSD, for the reason that it sufficiently satisfied the objectives and criteria of the HDA. The project was declared as SSD in the State Significant Development Declaration Order 2025 (No 2) (26 February 2025).

A request for SEARs was lodged on the 6th of June 2025 with SEARS received on the 4th of July 2025.

1.2 Scope

This Waste Management Plan (WMP) has been prepared by Colliers International Engineering & Design and is submitted to the Department of Planning, Housing and Infrastructure (DPHI) in support of a State Significant Development Application (SSDA) (SSD-85848713) and concurrent rezoning proposal for a new mixed-use development at 601 Pacific Highway, St Leonards (the site).

The proposal seeks consent for the following:

- An amendment to the North Sydney Local Environmental Plan 2013 (NLEP 2013) to rezone the site from E2 Commercial Centre to MU1 Mixed Use and to amend the minimum non-residential floor space ratio development standard under Clause 4.4A from 20:1 to 1:1.
- Demolition of the existing 14 storey commercial office building that is currently on the site.
- Site excavation, remediation and other preparatory works.
- Construction and operation of a new 52 storey (RL264.50) mixed use shop top housing development, with a FSR of 20:1 (maximum GFA of 56,880m²), comprising:
 - 538 dwellings including 508 Build-to-Sell apartments and 30 Affordable Housing apartments across a mix of apartment typologies.
 - A contribution of 5% of the residential GFA toward Affordable Housing.
 - Retail and commercial land uses at the ground and podium levels.
 - Internal and external residential amenities provided throughout the building.
 - Six levels of basement carparking, comprising a total of 300 car spaces, bicycle parking, loading bays, waste areas, plant, and back of house.
- Vehicular access to the basement via Atchison Street.
- Landscaping and Public Domain works.

- Reticulation of site services and infrastructure (electricity, telecommunication, water, and sewer connections).

The content of this WMP is intended to provide information on the typical movement of waste streams from generation to collection. Information on refuse management is given for each use within the development. Detailed information including site plans, recommended refuse management equipment and system specifications, common refuse signage as well as a list of terms and abbreviations are provided in the appendices. The recommendations in this report relate to the operational phase and includes additional requirements for refuse management during or after demolition or construction phases.

The items covered within the WMP are described in Table 1.1.

Table 1.1: Scope Items

Item	Explanation
Regulatory requirements	Identification of relevant legislative and regulatory controls
Refuse streams	Identification of refuse streams & anticipated development refuse volumes likely to be produced
Refuse separation	Recommendations for appropriate segregation methods for each refuse stream
Refuse management equipment	Identification of recommended and optional refuse management systems and equipment
Refuse disposal	Recommendations for refuse disposal within the development
Refuse storage	Detailed analysis of refuse storage facilities and design
Building design	Recommendations for design of refuse management facilities
Refuse transfer	Assessment of refuse transfer between refuse storage and collections areas
Refuse collections	Assessment of refuse collection vehicle (RCV) access and manoeuvring
Refuse management operations	Recommendations for operational efficiency and ongoing management, including refuse minimisation, tenant education and safety

1.3 Relevant SEARs

This WMP has been prepared to address the following relevant Secretary's Environmental Assessment Requirements (SEARs) set out in Table 1.2 below.

Table 1.2: Secretary's Environmental Assessment Requirements relevant to this Report

SEARs	Location in Report
Item 17	Provide the measures to be implemented to manage, reuse, recycle and safely dispose of waste, including in accordance with any council waste management requirements.
	Identify appropriately sited waste storage areas, collection access paths/roads, and appropriate servicing arrangements for the site.

1.4 Site Analysis

The site is located on Cammeraygal country at 601 Pacific Highway, St Leonards within North Sydney (LGA). The site is legally described as Lot 71 in DP749690 and has a total area of 2,844m². The site is 4.5 km north of the Sydney CBD, 3 km from the North Sydney CBD, and within proximity to the centres of St Leonards, Chatswood, and Macquarie Park. The site is located 350 metres (walking distance) from St Leonards train station and approximately 400m (walking distance) from the Crows Nest Metro station.

The site is located within the North Sydney Council Local Government Area, is zoned as E2 Commercial Centre. The site has frontages on Pacific Highway (SP2 Classified Road), Mitchell St and Atchison Street. All vehicular access into the site will occur via Atchinson Street.

The site currently comprises of a 14-storey commercial office tower which will be demolished prior to construction.

A site aerial and location plan is provided in Figure 1.1.



Figure 1.1: Site Location

Source: Urbis

1.5 Development Information

The residential component includes both build-to-sell (BTS) and affordable housing units with shared amenity spaces and six levels of basement carparking. The commercial component includes retail spaces and four levels dedicated to commercial use. The relevant refuse generating areas are presented in Table 1.3. Note, the specific commercial uses for the non-residential tenancies are indicative only and subject to separate future development consent.

Table 1.3: Development Statistics

Component	Levels	Description	Measure*
Residential	6-51	Residential Units (BTS)	508
	2-4	Affordable Housing Units	30
	Total		538
Commercial	1-4	Commercial Tenancies	2,253m ²
	B1-1	Retail Tenancies	561m ²

* Areas ancillary to the above (i.e. communal areas i.e. residential amenities, corridors, storerooms) are non-generating areas and have been excluded.

2. Demolition & Construction Refuse Management

Significant waste volumes can be generated during the construction and demolition (C&D) phase and as such, this plan will assist to guide in reducing wastage and reusing materials. C&D waste can include excavated materials such as soil, rocks, vegetation, building materials such as bricks, concrete, timber, fittings, plasterboard and also contaminated or dangerous materials such as asbestos and contaminated soils. Some of these wastes have particular handling, transport and disposal requirements, and all waste has been identified by the NSW State government as having significant potential to contribute to the circular economy – recovering and recycling materials and reducing the need for virgin materials. As such, best practice waste management is required to not only comply with laws and guidelines, but also to contribute to improved environmental performance and also to reduce waste disposal costs.

The North Sydney Council Planning Controls and the Department of Planning, Housing and Infrastructure identifies the importance of minimising waste to landfill and maximising recovery of resources from wastes from construction activities. As such, it is a requirement to address the management strategy for C&D waste via waste minimisation, reuse, recycling and disposal options for all types of waste, and that the plan be implemented throughout the development process. During demolition and construction, the plan and proof of lawful waste disposal/recycling must be retained on site in a Waste Data File. Proof is to include a logbook with associated receipts/invoices, waste classification and site validation certificates.

The goal of this document is in line with the planning controls as well as the waste hierarchy (avoid or reduce, reuse, recycle, recover energy, treat and dispose), shown in Figure 2.1 overleaf and aims to:

- Minimise the amount of waste generated,
- Maximise the reuse, recycling and reprocessing of construction waste materials, and
- Minimise the volume of material disposed to landfill.

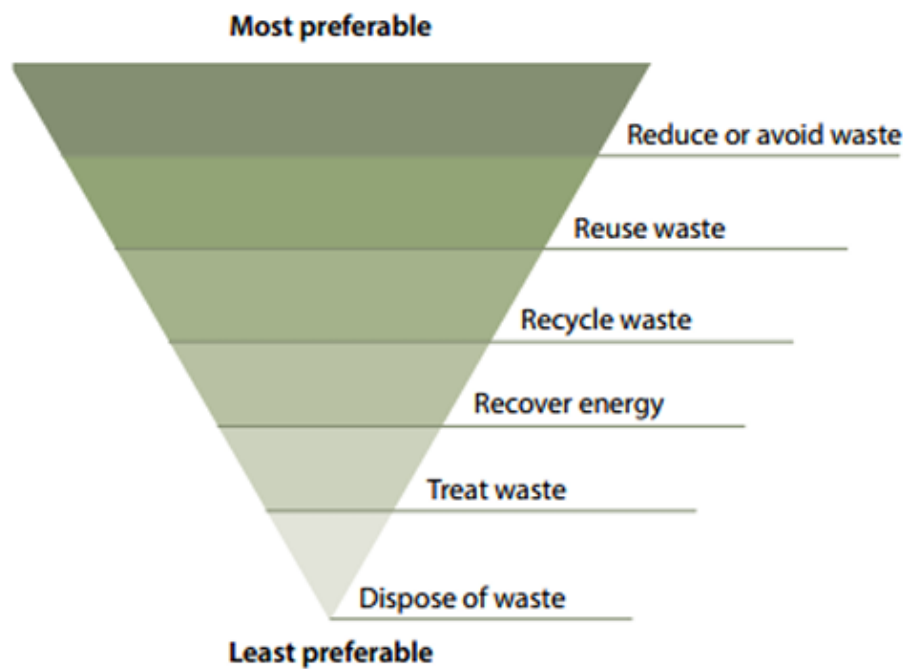


Figure 2.1: Waste Hierarchy

This plan will provide guidance on activities and design before works on site commence and will also outline the requirements to comply with North Sydney Council and NSW State legislation. This includes:

- North Sydney Council Development Control Plan 2025
- NSW *Waste Avoidance and Resource Recovery Act 2001* and Strategy 2014-2021

And where appropriate:

- Asbestos removal must be removed and disposed of in accordance with the requirements of Work Cover
- Lead-contaminated materials should be handled and disposed of in accordance with the relevant requirements of the NSW Environment Protection Authority (EPA) or applicable local guidelines.

2.1 Construction & Demolition Waste Legislation

The transfer, transport and disposal of particular wastes have a range of legislative requirements that will need to be adhered to during the life of the project. This legislation has bearing on both the owner of the waste and the transporter.

Under Section 143 of the *Protection of the Environment Operations Act 1997*, waste can only be transported to a place that can lawfully accept it. If wastes are transported to a place that cannot lawfully accept the material, both the owner of the waste and the transporter can be held liable for cleanup costs and for subsequent lawful disposal. Therefore, it is essential for the project managers/owners to ensure that due diligence is undertaken prior to transportation of waste materials. Additional measures that owners of waste can protect themselves from fines and penalties are outlined at <https://www.epa.nsw.gov.au/Your-environment/Waste/industrial-waste/construction-demolition>.

Prior to the commencement of site works, the contractor must classify the waste anticipated to be produced as per the NSW EPA Waste Classification Guidelines. Details are outlined in <https://www.epa.nsw.gov.au/Your-environment/Waste/classifying-waste/waste-classification-guidelines>. Materials which must comply with the Work Health and Safety Regulation 2017 include asbestos, contaminated land, lead-contaminated materials and hazardous materials.

While site works are being carried out, the Certifier must be satisfied all waste management is undertaken in accordance with the requirements outlined in this Construction Waste Management Plan (CWMP). Upon disposal of waste, the Contractor is to compile and provide records of the disposal to the Certifier, detailing the following:

- The contract details of the person(s) who removed the waste
- The waste carrier vehicle registration
- The data and time of waste collection
- A description of the waste (type of waste and estimated quantity) and whether the waste is expected to be reused, recycled or go to landfill
- The address of the disposal location(s) where the waste was taken
- The corresponding tip docket/receipt from the site(s) to which the waste is transferring, notifying date and time of delivery, description (type and quantity) of waste.

Both the logbook and associated receipts must be made available for inspection by the relevant authority at any time during site works and at the conclusion of works should be retained by the person responsible and made available for inspection by the relevant authority. A C&D waste management template is provided in *Appendix B* which can be completed by the Contractor.

2.1.1 Asbestos

Buildings constructed or renovated in NSW prior to 1987 are likely to contain asbestos. There are specific laws relating to working with or around asbestos (*Work Health and Safety Regulation 2017*). If the buildings that are to be demolished were built prior to 1987, an asbestos specialist should be engaged to identify if asbestos containing materials (ACM) are present and an appropriate removal process be undertaken. For more information, visit <https://www.safework.nsw.gov.au/hazards-a-z/asbestos>. Asbestos may be found in cement sheet walls and sheet roofing, backing to floor coverings, external cladding, switchboard backings and lagging insulation for water pipes.

Details of removal procedures and risk management will be detailed in an Asbestos Management Plan to the satisfaction of the Certifier. All works should be halted if unidentified materials are suspected. Additional sampling may be required to areas that were not accessible at the time the report was undertaken.

2.1.2 Contaminated Land

Any contaminated soil identified after demolition and excavation has commenced is to be remediated and disposed of to an approved contaminated/remediated soil facility as per the *Contaminated Land Management Act 1997* as required by NSW EPA. If during demolition or excavation and activities lead to the contamination of land, or once a person becomes aware that there is evidence of previous contamination, there is a legal obligation to notify the EPA. Further information on requirements can be found at the following guideline <https://www.epa.nsw.gov.au/Your-environment/Contaminated-land>.

2.1.3 Lead-Contaminated Materials

According to NSW EPA, many uses of lead have been phased out, however there are remaining traces used in lead-acid car batteries, some forms of solder, waterproof flashing for roofs and gutters, and radiation protection. There are specific laws relating to working with or around lead-contaminated materials outlined within the *Work Health and Safety Regulation 2017*. Prior to the commencement of any works, the contractor must test for any lead-contaminated surfaces or materials. Lead test kits are commercially available. If any lead-contaminated materials are identified on site, the contractor must provide works with information about the risks and health effects when working with lead. Materials during demolition with lead contamination must be placed in a controlled area on site and storage must be restricted to that area. Any contaminated PPE as a result of the demolition process must be properly disposed of, laundered/ decontaminated or placed in a sealed container until re-use. Control measures must be reviewed on an on-going basis or when circumstances may affect the health and safety of workers. All lead-contaminated materials must be disposed of at designated sites which accept this waste type. The contractor can contact North Sydney Council or NSW EPA to inquire further about local regulations for disposal and drop-off locations.

2.1.4 Hazardous Materials

Should there be hazardous material identified prior to demolition works a Hazardous Material Survey must be prepared and submitted to North Sydney Council at least one (1) week prior to demolition. A suitably qualified land contamination consultant must be engaged to prepare this survey which must be submitted to Council. The Hazardous materials survey must include, but not limited to, asbestos materials synthetic mineral fibre, roof dust, PCB materials and lead based paint. The report must include at least the following information:

- The location of hazardous materials throughout the site
- A description of the hazardous material
- The form in which the hazardous material is found e.g. AC sheeting, transformers, contaminated soil, roof dust
- An estimation (where possible) of the quantity of each particular hazardous material by volume, number, surface area or weight
- A brief description of the method for removal, handling, on-site storage and transportation of hazardous materials, and where appropriate, reference to relevant legislation, standards and guidelines and
- Identification of the disposal sites to which the hazardous materials will be taken.

2.2 Planning For Demolition and Construction

In order to achieve effective waste reduction during the demolition, excavation and construction phases, there are a number of measures that should be undertaken by the project manager, C&D contractors, and site staff. Any commitment to reducing waste sent to landfill will need to be agreed by all stakeholders and actions coordinated early in the operational works planning phases, in order to achieve best practice diversion rates. These measures are discussed in the following sections.

2.2.1 Material Identification and Recovery

Prior to demolition, it is recommended that the Contractor meet with the Site Managers to identify those materials or items that are to be salvaged or reused during the demolition or construction stages. All other materials should then be categorised based on acceptance criteria for available recyclers. This presents a clear idea of those materials that are to be excluded from being sent offsite for recycling/reprocessing or for disposal to landfill.

Key principles to be followed during demolition, in order of preference and generally in accordance with the waste hierarchy, include:

- Manual deconstruction of the following:
 - Materials that can be reused on site during further demolition and/or construction stages or used offsite
 - Materials of high cost to dispose/treat. This material should not be mixed with other generic building materials, as the entire load will be deemed as contaminated, and therefore the entire load will be charged at the higher rate
 - High risk/dangerous materials (e.g. asbestos) by a licensed contractor or suitably qualified person
 - Items that will attract a high rebate (e.g. copper pipe)
- Segregation of like materials (e.g. timber) and separate storage on site in bins, depending on market availability of recycling agents.
- Materials that cannot be reused or recycled are to be disposed of to landfill.

Volumes will also be dependent upon the method of demolition, and greater recovery rates will be achieved with dismantling of building structures by hand. Therefore, it is recommended that those items of high costs to dispose, high rebate value (e.g. copper pipe), or have special handling requirements (e.g. lead pipe, asbestos and plasterboard) should be deconstructed by hand in the appropriate stages where possible and segregated and disposed of accordingly. The remainder of materials may then be deconstructed either in phases to maximise segregation, or if a recycling disposal point accepts mixed materials and sorts at their processing plant, only then should materials be placed into mixed material bins.

2.2.2 Waste Handling

Waste movement on site should be limited to reduce the risks around safety, efficiency and environmental protection. Strategies to minimise the movement of waste material around the site and to prevent doubling handling should be implemented by the Contractor include:

- Centralised waste disposal area in proximity of the works zone to reduce waste transfer distance. Regularly monitor and relocate where appropriate as works progress
- Optimise waste collections to prevent any overflow and avoid unnecessary re-handling of waste
- Separate waste into various streams at the source to prevent sorting at the disposal area
- Coordinate with construction contractors to plan material deliveries, minimising on-site storage and ensuring continuous access to the waste disposal area
- Where possible, minimise temporary stockpiling to reduce site congestion.

2.2.3 Environmental Protection Measures

The Contractor must consider the environmental risks to waterways associated with waste generated on site. This includes waste and debris from construction and demolition works and litter from material deliveries and worker activity. All waste management must comply with the *Protection of the Environment Operations Act 1997* and NSW EPA's requirements for managing C&D waste to ensure that waste is contained on site. Note, the Contractor should refer to the Construction Environmental Management Plan (CEMP) for further details on prevention methods. High-level prevention methods are included below which apply to drains on or near the site.

- Installation of sediment fences around work zones
- Consider the placement of stockpiles or the waste disposal area
- Provision of small general waste and recycling receptacles around the site to minimise littering
- Monitor the waste disposal area and ensure loose waste is secured/covered
- Continuously monitor the works zone for any loose debris or litter.

2.2.4 Waste Transport

The transportation of waste within and from the site are addressed in the Construction Traffic Management Plan (CTMP) prepared by the traffic engineer which addresses the following:

- Covering of vehicles carrying waste or excavation spoil
- Mobilisation of wheels of any vehicle leaving the site to be cleaned of debris
- Traffic plan and requirements for waste transport details and compliance.

2.2.5 Anticipated Demolition Waste Volumes

North Sydney Council does not currently have C&D waste generation rates available, therefore rates have been adopted from industry standards as an estimate only. The estimated demolition waste volumes are based on 1,153m² footprint to be demolished using the C&D waste generation rate for an office block.

It is essential that the demolition contractor detail the demolition volumes as soon as known quantities of materials can be calculated.

Table 2.1: Indicative Demolition Waste Volumes

Material	Estimated Demolition Waste Quantities (m ³)
Brick	13,167
Concrete	77,666
Timber	646
Metal	519
Plasterboard	957
Residual (General Waste)	1,787

2.2.6 Anticipated Construction Waste Volumes

North Sydney Council does not currently have C&D waste generation rates available, therefore rates have been adopted from industry standards as an estimate only. Colliers have estimated volumes based off the C&D waste generation rate for a residential flat building, with additional allowances to account for the higher density development. An estimation of volumes has been provided below and are indicative only.

As anticipated volumes are currently unknown, it is essential that the construction contractor complete the table in *Appendix B* as soon as known quantities of materials are calculated.

Table 2.2: Indicative Construction Waste Volumes

Material	Estimated Construction Waste Quantities (m ³)
Brick	10.5
Concrete	21
Plasterboard	3.5
Timber	3.5
Metal	3.5
Other Waste	35

2.3 Construction and Demolition Methodologies

The following outlines the general methodology for demolition and construction. This guidance is indicative only and may vary depending on the specific methodologies and procedures adopted by the appointed contractor.

- Sourcing of recycling agents/contractors and transportation – gain an understanding of their site access requirements and bin choices
- Installation of any barrier fencing to protect pedestrian safety, access pathways, and items to be protected/retained
- Identification of best bin storage areas for the number of material streams and collection vehicle access, ensuring unimpeded access for users and waste collection contractors and protection from elements
- Installation of recycling bins where applicable
- Preparation of access points and installation of safety and educational signage at waste storage areas
- Site induction for all staff to include discussion on commitment to reuse and recycling, how to use bins appropriately, and who to contact if there are any issues
- If structures/buildings are built prior to 1987 and where asbestos is identified on site, a licensed asbestos contractor should be engaged to identify and remove asbestos. Any other hazardous materials should also be removed at this stage
- Services and utilities disconnected
- Demolition of existing structures or areas – materials to be segregated into appropriately labelled bins in waste storage area. The method of deconstruction to maximise resource recovery is also listed below:

Demolition / Dismantle and Removal Item	Method
Bricks and concrete	Machine
Fixtures & fittings	Hand
Plasterboard	Hand
Roof timbers, floor & wall framing	Hand / Machine
Roof sheeting / tiling	Hand
Trees and vegetation	Machine
Windows and glass panels to be removed separately	Hand

- Regular checks on bin capacity and scheduling of removal contractors
- Waste Data File maintained and updated daily
- Minimise the amount of landfill generated for the project – this should be the primary focus “waste avoidance”
- Maximise the amount of materials reused or salvaged, sent for reuse or recycling; and
- Minimise the amount of waste sent to landfill.

2.4 Waste Bin Guidelines

The C&D refuse generation rates provide a conservative waste estimate only. Site specific C&D refuse auditing can be conducted once construction has commenced to refine the equipment capacity required. All waste containers/skip bins are to be positioned within the property boundary. Bins outside of the property boundary such as the roadway or nature strip may require a permit application to Council. Storage of skip bins/containers should be placed in a suitable location as to not cause disturbance to normal stormwater flow and fitted with lids or protected from wind to prevent litter. Under no circumstances should hazardous, flammable or explosive materials be disposed of within skip bins.

All bins should be appropriately labelled, clearly visible to and from the property, easily accessible, stored in a well-lit area. Potential bins and stockpile locations are proposed to be located in close proximity to the area of work with unobstructed access to adjoining access roads.

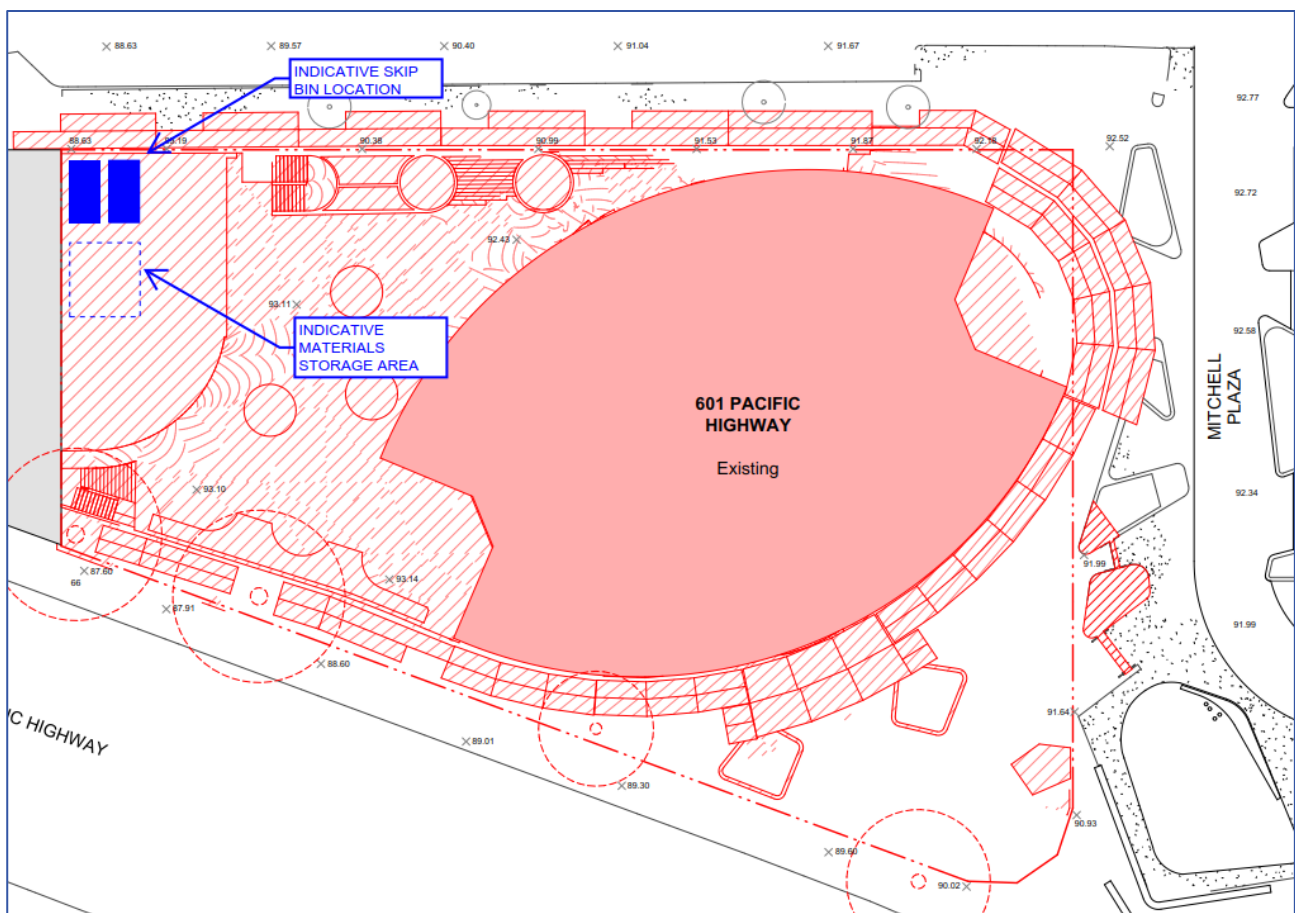


Figure 2.2: Indicative Stockpile Locations

Source: Bates Smart, Project: 601 Pacific Highway, St Leonards, Drawings: Site Plan - Demolition, Dated: 17/03/2026.

3. Operational Refuse Management

This section provides the detailed refuse information and associated calculations in addition to outlining the arrangements for the collection, storage, transfer, and disposal of refuse within the development during the operational phase as deemed to satisfy council's current assessment benchmarks. This includes associated bin quantities, storage capacities, equipment details, collection frequencies and site access details.

3.1 Regulatory & Governance Considerations

This plan has been prepared to align with North Sydney Council refuse requirements of the Development Control Plan (DCP) 2025. As this development is a mixed use (residential and commercial) site, Colliers has referred to North Sydney Council requirements as outlined in the North Sydney DCP Appendix 3, Part B (Section 1 and 3) which outline the controls for all development and controls directly related to residential and non-residential uses.

3.2 Prescribed Refuse Volumes

The refuse generation rates utilised for the calculation of the required refuse storage area are based on City of Sydney's rates, which provide a more conservative estimate on refuse generation than the rates utilised by North Sydney Council's.

A collection frequency of up to three times per week has been established in consultation with North Sydney Council's Waste Operations department, reflecting the scale and operational demand of the high-density development.

Note the refuse calculations include food organics in addition to general waste to reflect the total anticipated general waste volume from the outset of operation. Maximum volume estimates are shown in Table 3.2 for residential use and Table 3.4 for commercial to guide expected quantities if and when food organics separation is implemented during operation.

Table 3.1 outlines the standard refuse generation rates utilised. Note, the food organics rate for commercial uses have been adopted from the *City of Sydney's Guidelines for Waste Management in New Development's (2018)*.

North Sydney Council does not currently provide a residential food organics collection service therefore food organics will not be separated at the initial stage of building occupation. However, to future proof the development in line with NSW EPA's mandated FOGO mandate rollout by 2030, provisions have been made to accommodate future implementation of residential food organics separation, storage and collection.

Colliers note that food organics is a relatively new refuse stream in residential high-rise developments in NSW. The rate outlined below reflects an approximate recoverable volume of food organics within the general waste bin, close to the maximum identified in the *Analysis of NSW Kerbside Red Lid Bin Audit Data Report (2020)*. As a conservative approach to ensure sufficient capacity is provided, food organics has been considered in addition to the general waste and recycling streams. Initial take up and separation of food organics at the

commencement of building occupation is expected to be lower than outlined below. Overtime, the general waste bin quantity may be progressively reduced as food organics bins are introduced and increased commensurately with increased participation in food organics recycling and generation volume increases.

Table 3.1: Refuse Generation Rates

Generation Rate	Applied To	Measure	General Waste	Recycling	Food Organics	Days of Operation
Residential	All Residential Units (BTS and affordable)	L / Unit / Week	120	120	38	N/A
Commercial office	All Commercial Tenancies	L / 100m ² / Day	15	25	5	5
Retail	All Retail Tenancies	L / 100m ² / Day	100	500	100	7

3.2.1 Residential Refuse Volume Calculations

Table 3.2 outlines the maximum estimated residential refuse generation volumes. A residential collection frequency of up to three times per week for each individual stream via Council's waste contractor is proposed.

If and when food organics will be taken up during operation, the following generation volumes will be expected.

Table 3.2: Residential Refuse Calculations

Area Description	Measure	Quantity	General Waste L/Week	Commingle Recycling L/Week	Food Organics L/Week
Residential	Units	538	64,560	64,560	20,444
Total Weekly Volumes (L / Week)			32,280 (Compacted)	64,560	20,444
Volumes per Day (L / Day)			4,611 (Compacted)	9,223	2,921
Volumes per Collection (L / Collection)			13,834 (Compacted)	27,669	8,762
Collection and Equipment Details	Collections per Week		3	3	3
	Storage Capacity		3 Days	3 Days	3 Days
	Equipment Size		1,100L	1,100L	240L
	Equipment Quantity Required		12.58	25.15	36.51
	Equipment Quantity Provided		13	25	37

*Note the compaction ratio for general waste is 2:1 as per North Sydney Council requirements.

3.2.2 Commercial Refuse Volume Calculations

The use types for each tenancy are based on the targeted tenancy mix identified by the client. As a conservative approach, up to a 7-day trading week has been assumed for all commercial uses and a food and beverage waste generation rate has been applied across all retail uses to estimate the maximum potential waste volume. Once specific retail uses are confirmed, calculations may be refined as part of a separate future development consent process. A commercial collection frequency of up to three times per week for each individual stream via a private waste contractor is proposed.

Table 3.3 shows the percentage breakdown of the standard combined recycling stream into its sub-streams which have been adopted from industry standards.

Table 3.3: Recycling composition

Generation Rate	Recycling		
	Commingle Recycling	Paper/Cardboard	Container Deposit Scheme (CDS)
Commercial office	70%	30%	N/A
Retail	30%	50%	20%

Table 3.4 outlines the estimated commercial refuse generation volumes.

Table 3.4: Commercial Refuse Calculations

Area Description	Measure	Quantity	General Waste L/Week	Commingle Recycling L/Week	Paper/Cardboard L/Week	CDS L/Week	Food Organics L/Week
Office	GFA	2,253m ²	2,208	2,366	1,014	N/A	676
Retail	GFA	561m ²	3,927	5,891	9,818	3,927	3,927
Total Weekly Volumes (L / Week)			5,955	8,256	2,166 (Compacted)	3,927	4,603
Volumes per Day (L / Day)			851	1,179	309 (Compacted)	561	658
Volumes per Collection (L / Collection)			2,552	3,538	928 (Compacted)	928	1,973
Collection and Equipment Details	Collections per Week		3	3	3	3	3
	Storage Capacity		3 Days	3 Days	3 Days	3 Days	3 Days
	Equipment Size		1,100L	1,100L	389L Bales	240L	240L
	Equipment Quantity Required		2.32	3.22	2.4	7.01	8.22
	Equipment Quantity Provided		3	4	3 bales (1x pallet space)	8	9

3.3 Equipment Requirements & Specifications

Table 3.5 outlines the total number of bins required for the development based on the volume calculations above.

As actual refuse volumes may vary from assessment benchmarks or over time according to evolving waste streams and operation of the site, bin numbers and sizes may need to be altered to suit the building operation and occupant needs.

Table 3.5: Total Bin Requirements

Domain	Refuse Stream	Bin / Storage – Size or Type	Number Required
Residential	General Waste	1,100L	13 + 1 (1 to remain beneath the chute discharge during servicing)
	Commingled Recycling	1,100L	25
		240L	50 (one bin per residential level)
	Food Organics (future provision)	240L	37
Commercial	General Waste	1,100L	3
	Commingled Recycling	1,100L	4
	Paper/Cardboard Bales	Timber Pallet	1
	CDS	240L	8
	Food Organics	240L	9

Table 3.6 details the proposed additional waste equipment designed into the operational waste management of the development.

Table 3.6: Additional Equipment

Component	Description	Quantity	Capability / Specification
Residential	Individual Apartment Unit bins - Stream Separated Receptacles	1,614 Min.	A minimum of 1 receptacle for each stream is required in each unit.
	Single General Waste Chute	1	Single refuse chute for the disposal for general waste. Disposal points provided on each habitable level. Colliers recommends a 600mm chute diameter.
	Integrated chute compactor	1	For use with general waste only. Will have a capacity to achieve an average compaction ratio of 2:1.
	4-bin 1100L Carousel Bin Rotation System	1	Automates bin rotation beneath the chute discharge for general waste. Reduces the overall level of building management intervention required.
	Bin Tug/Towing Equipment	1	Used for the assisted transfer of bins from the basement to the service point on ground level. Bins may be 'daisy chained' together for the transport of multiple bins per trip.
	Bin lifter	1	Used to assist in decanting waste from the 240L recycling bins into the shared bulk bins.
Commercial	Individual Stream Receptacles	TBD	Receptacles for the immediate disposal of refuse into separate streams. Typically, bins typically up to 60L in volume placed BoH in central bin stations.
	Refuse/Cleaners Trolleys	TBD	Used to assist in the manual transfer of refuse to the bulk bins in the refuse room for final disposal.
	Baler (Mil-tek A102 or equivalent)	1	Used to compact paper/cardboard into bales for collection.
	Used Cooking Oil Storage	1 (shared at level B1)	Required for food and beverage tenancies using fry vat equipment. Portable storage tank stored within the commercial waste area.
	Bin Tug/Towing Equipment	1	Used for the assisted transfer of bins from the storage room to waste collection point. Bins may be 'daisy chained' together for the transport of multiple bins per trip.
	Pallet Jack	1	Used for the assisted transfer of timber pallets from the storage room to waste collection point.

3.4 Refuse Disposal

The tables in this section summarise general recommended disposal arrangements for frequently generated and infrequently generated refuse for each development component. Section 3.4.1 describes the frequently generated refuse streams that are generated in high volumes for any given period and require significant capacity for storage prior to collections. Section 3.4.2 describes the infrequently generated refuse streams that are generated in relatively low volumes, and where minimal provision for storage can be easily managed by collection frequency and ad hoc storage arrangements.

3.4.1 Frequently Generated Refuse

Table 3.7: Disposal of Frequently Generated Waste

Refuse Stream	Disposal Details
WASTE	
General Waste	General waste bins should always be lined with bags and the bags tied before removal. Waste bins should be accompanied by a commingled recycling bin in order to facilitate separation of general waste and recycling. Residential Adequate space for bins to store one day's worth of generated refuse will be provided in each residential apartment. Each day or as required, general waste will be transferred by residents to the chute access hopper on each habitable residential level. The refuse chute will discharge directly into bulk bins stored under the chute discharge point within the residential refuse room at basement 01. Instructions on the use of the chute system and accepted items will be required to be included in the resident apartment manual. Receptacles will be placed in all communal areas where refuse will be generated for collection and storage of at least one day of general waste. Bin quantities for fit out will be determined during the operational phase. A recycle bin will be positioned wherever a general waste bin is positioned to maximise recovery. Building management will assist with disposal of all refuse generated in communal areas. Commercial General waste receptacles/bins will be placed in the BOH areas of each commercial tenancy to store up to one day's worth of generated refuse. These receptacles should be accompanied by a commingled recycling receptacle to facilitate separation of general waste and recycling. Each day or as required, all general waste receptacles/bins will be transferred by staff/cleaners and decanted into the bulk bins located in the commercial refuse room located at basement 01.

Table 3.8: Disposal of Frequently Generated Recoverable Materials

Refuse Stream	Disposal Details
Food organics (future provision)	Food organics can be disposed loosely or bagged using a compostable caddy liner that complies with <i>Australian Standard AS 5810-2010</i> as per NSW EPA requirements. Residential Residents must provide a small storage receptacle (e.g. kitchen caddy) to hold one day's worth of food organics. Each day or as required, food organics waste will be transfer by residents to the shared bins within the food organics bins storage room located at basement 01. The food organics bins will be colour-coded for easy identification and separation of refuse streams. Commercial Food organics receptacles/caddies will be placed at the BOH areas of each commercial tenancy to store up to one day's worth of generated refuse. For tenants with kitchen space, these will be stored within their BOH areas whilst for office spaces these will be stored near any staff food preparation areas
RECYCLING	
Commingled, including • Glass, • Aluminium, • Steel cans, • Tins, • Cardboard, • Semi rigid & rigid plastics.	Recycling bins should always be lined with bags and the bags tied before removal. Residential Adequate space for bins to store one day's worth of commingled recycling will be provided in each residential apartment. Each day or as required, commingled recycling will be transferred by residents to the shared drop off bins within the chute room on each residential level. Building management will be responsible to transferring these bins to the residential refuse room at basement 01 and decant waste into the shared bulk bins via the bin lifter. Large recyclables i.e. cardboard must be cut down or flattened by the residents prior to disposal and must only be disposed of within the shared bulk bins. Building management will be responsible for assisting residents who require support or special assistance. Commercial Commingled recycling receptacles/bins will be placed in the BOH areas of each commercial tenancy to store up to one day's worth of generated commingling recycling. Each day or as required, all commingled recycling receptacles/bins will be transferred by staff/cleaners and decanted into the bulk bins located in the commercial refuse room located at basement 01. Residential Container deposit schemes (CDS) are currently in place in NSW most commonly in the form of (automated) reverse vending machines. Occupants should be encouraged to separate containers that qualify for the schemes from the waste or recycling streams and send back to a return point. Commercial CDS receptacles/bins will be placed in the BOH areas of each commercial tenancy to store up to one day's worth of generated CDS. Each day or as required, all CDS receptacles/bins will be transferred by staff/cleaners and decanted into the bulk bins located in the commercial refuse room located at basement 01.

3.4.2 Infrequently Generated Refuse

Table 3.9: Disposal of Infrequently Generated Refuse

Refuse Stream	Disposal Details
Garden Organics refuse/Green Waste	Garden organics refuse, also referred to as green waste, will be produced from landscaped areas or potted plants around this development. Green waste is produced largely on a weather or seasonal dependent basis and based on plant selections. Green waste is usually removed by the designated maintenance contractor. Interim storage is not provided. The engaged contractor will be required to send this material to a composting or resource recovery facility rather than to a landfill. Alternatively, where onsite composting occurs, green waste may be combined with food waste for composting. Output product may be reused in site landscaping where appropriately matured or pasteurised as outlined in <i>AS 4454-2003 Composts, soil conditioners and mulches</i>.
Bulky Goods and Electronic Waste	Residential Bulky waste collections will be coordinated in line with Council's hard waste collection arrangements for residential uses. Bulky goods will be stored within the dedicated residential bulky waste room and moved to the loading or a designated area for removal prior to collection. Small electronic waste (i.e. toner cartridges, batteries, printers) will be stored in the dedicated bulk bin within the residential bulky waste room located at basement 01. Larger items will be placed within the bulky good waste storage area. Building management will coordinate collection arrangements with the waste contractor. When storing bulky goods in a loading area, it is recommended that items are placed on a pallet for efficient loading via a pallet jack or forklift onto the RCV. Commercial Commercial uses will store bulky waste goods within their BOH storage areas and coordinate collections with facilities management as appropriate. Where large volumes of bulky waste unsuitable for bulk bin disposal or where significant volumes are generated such as during tenancy refits, commercial tenancies must coordinate with building management to arrange an appropriate disposal method i.e. via temporary skip bin.
Batteries	Batteries are highly volatile and must be disposed of separately and never in the general waste or commingled recycling bins. A 10L battery storage tube will be provided and located in the residential bulky waste room or alternate easily accessible location (i.e. lobby) for use by residents.
Hazardous Waste (paints, chemicals)	It is expected that the building management assist residents or tenancy operators with disposal of hazardous or liquid waste and any paint or chemicals as required and requested. Hazardous waste must be handled with due care, separated and securely stored for collection by a specialist waste contractor. Please refer to local and NSW government websites for further information.

3.5 Refuse Storage, Access & Rotation Requirements

All refuse will be stored within bins housed within dedicated refuse storage areas. Separate storage areas are provided for residential and non-residential uses. All refuse storage and servicing areas are provided on basement 01.

3.5.1 Residential Refuse Storage Areas

Three separate refuse rooms are provided at basement 01 as follows:

- Residential refuse room incorporating the chute discharge point and bin carousal + compactor system
- Bulky goods waste room
- Future food organics storage room
- Temporary bin holding area adjacent loading bay

All rooms have been designed with adequate circulation space to allow safe access to bins and efficient manoeuvring for servicing. The refuse storage areas are sufficiently sized to accommodate all the residential bins required for the development as outlined in Table 3.5.

Each apartment unit will be responsible for storing up to one days' worth of refuse via receptacles/small bins. Access to the general waste chute will be provided on each habitable residential level. The chute will terminate within the residential refuse room at basement 01 where up to a days' worth of bulk bins will be stored on a bin changeover + compactor carousel system. Adequate clearance is provided around the carousel to allow for easy changeover of bulk bins by facilities management.

Shared commingled recycling drop off bins will be provided adjacent or within the chute room on each residential level. Bulk bins will be provided within the residential refuse room located at basement 01 for the disposal of larger recycling items i.e. cardboard.

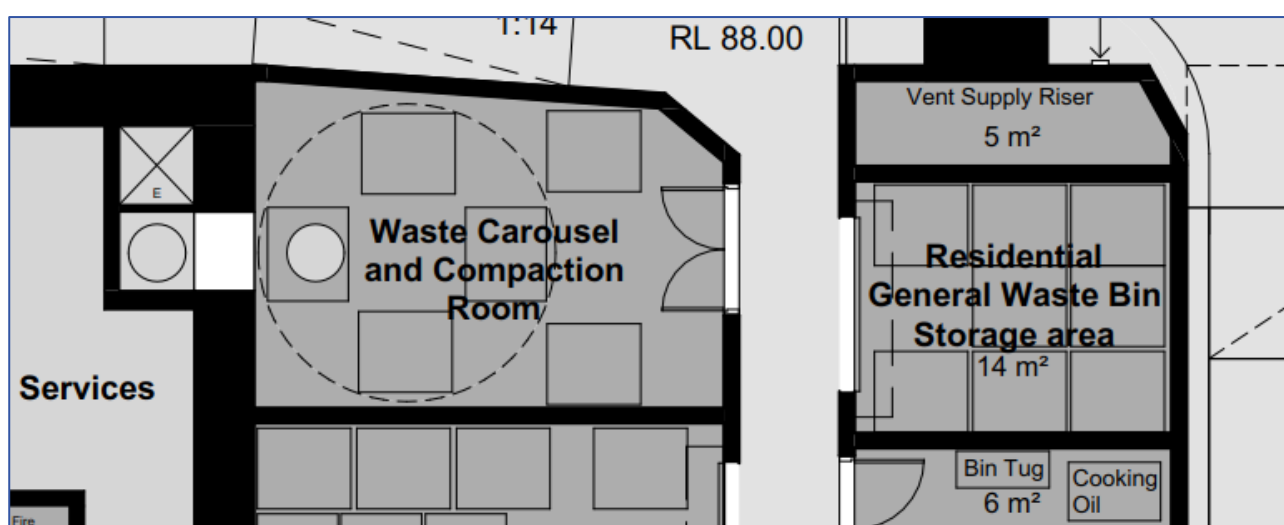


Figure 3.1: Residential Refuse Storage Room (bin changeover and general waste bulk bin storage)

Source: Bates Smart, Project: 601 Pacific Highway, St Leonards, Drawings: General Arrangement Plan Level B01, Dated: 17/03/2026.

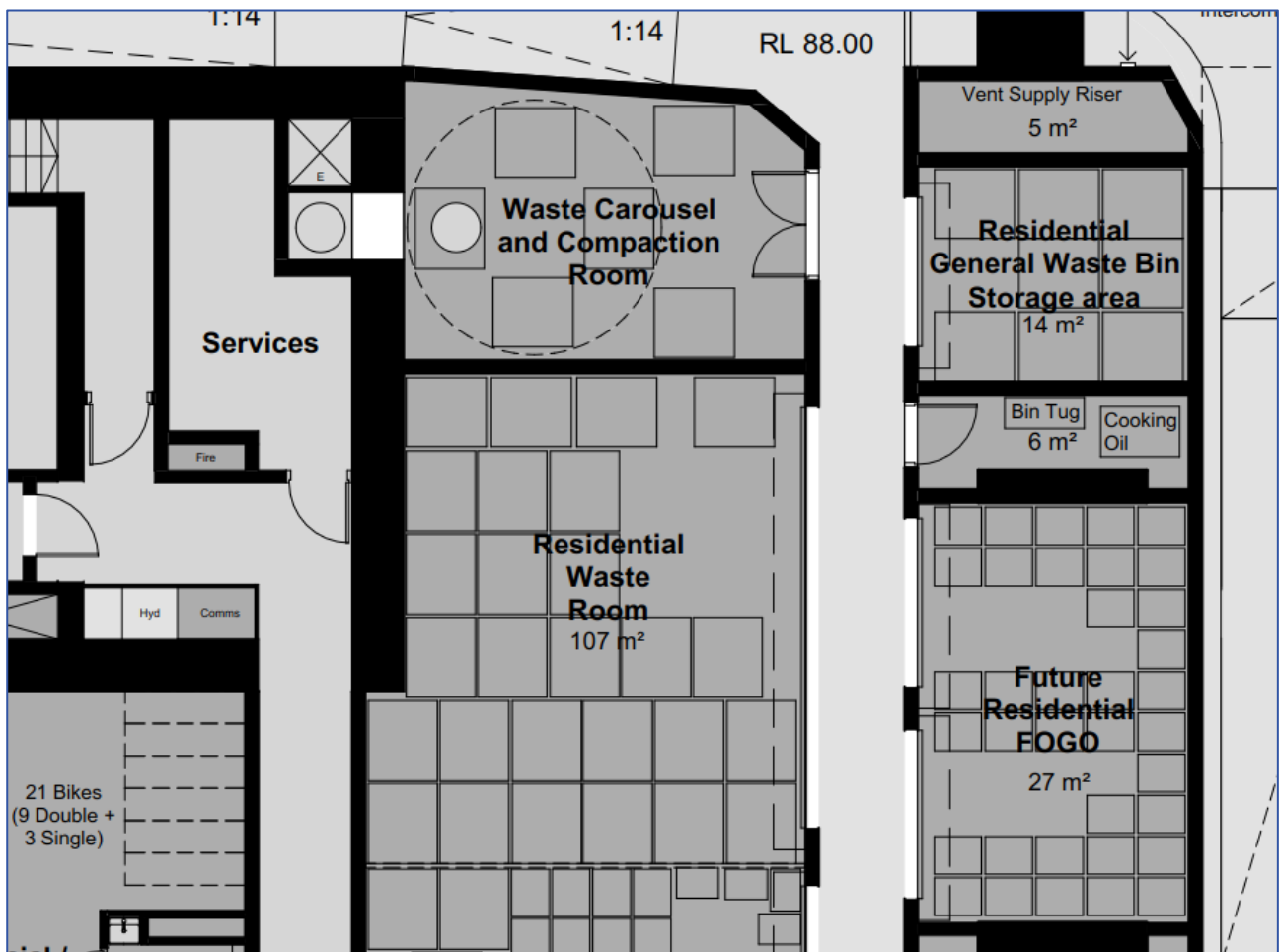


Figure 3.2: Residential Refuse Storage Room (residential waste room)

Source: Bates Smart, Project: 601 Pacific Highway, St Leonards, Drawings: General Arrangement Plan Level B01, Dated: 17/03/2026.

Once Council commences a residential food organics collection service, food organics bins will be provided within a dedicated storage room at basement 01.

A bulky waste room is provided at basement 01 for the disposal of residential bulky waste. Provisions will be included for the separation of smaller e-waste items (i.e. mobile phones, routers etc.) and batteries via bins.

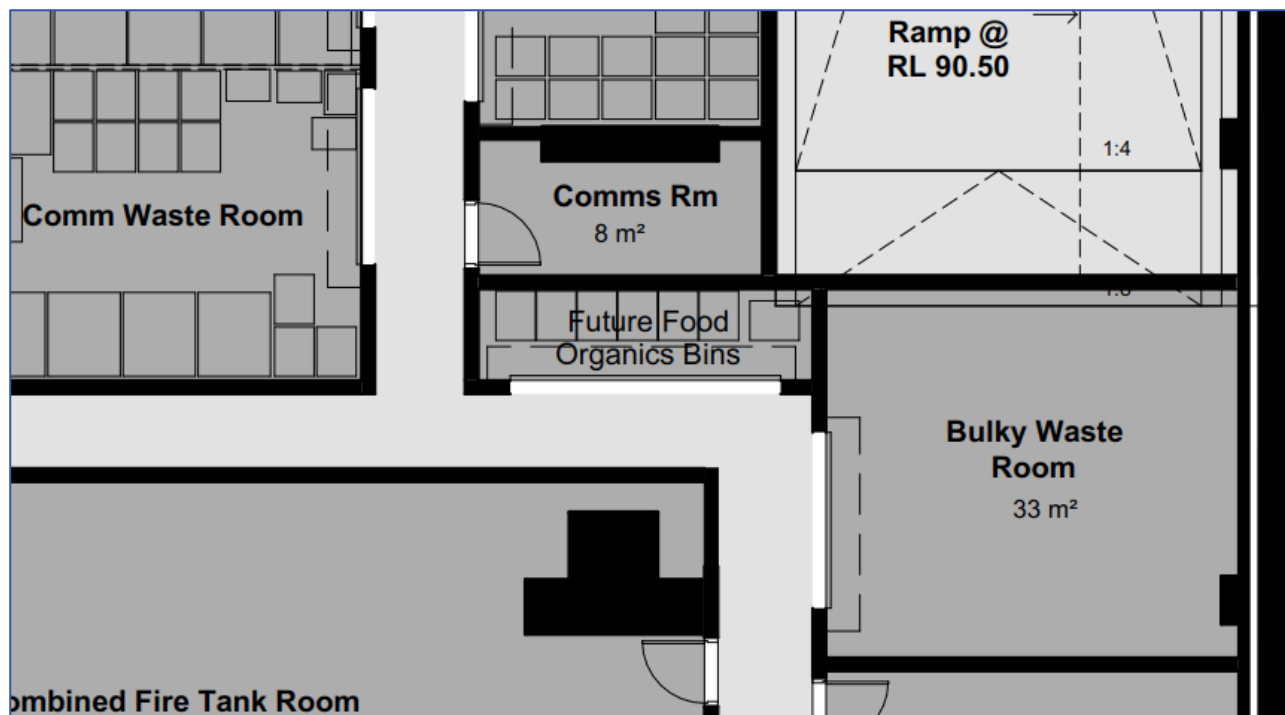


Figure 3.3: Bulky waste storage room

Source: Bates Smart, Project: 601 Pacific Highway, St Leonards, Drawings: General Arrangement Plan Level B01, Dated: 17/03/2026.

3.5.2 Commercial Refuse Storage Areas

Each tenancy will be responsible for storing up to one days' worth of refuse via receptacles/small bins within their respective back of house area. Each day, or after each service period, staff/cleaners will transfer refuse to the commercial refuse room located at basement 01. The room has been designed with sufficient clearance to ensure easy access to bins and facilitate safe and efficient manoeuvring.

A shared bin holding area is provided adjacent the loading dock for the presentation of commercial refuse bins prior to collection.



Figure 3.4: Commercial Refuse Storage Room

Source: Bates Smart, Project: 601 Pacific Highway, St Leonards, Drawings: General Arrangement Plan Level B01, Dated: 17/03/2026.

3.5.3 Refuse holding areas

Three shared bin holding areas are provided adjacent the loading dock, designated for the presentation of bins and bulky waste prior to collection. The bin holding areas have been designed to accommodate the total number of bins from the highest volume stream to be presented for collection which is the residential recycling stream.

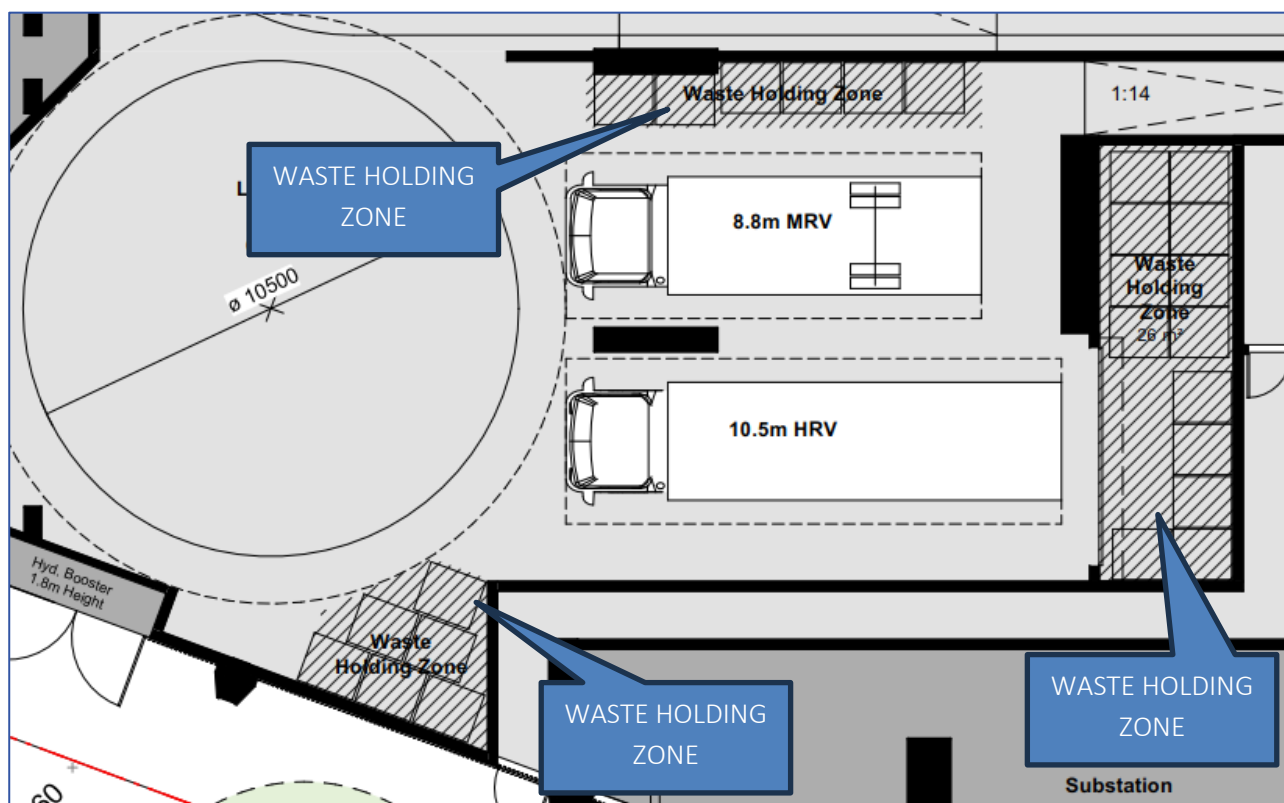


Figure 3.5: Temporary Bin Holding Areas

Source: Bates Smart, Project: 601 Pacific Highway, St Leonards, Drawings: General Arrangement Plan Level B01, Dated: 17/03/2026.

3.5.4 Refuse Storage Area Design Requirements

Table 3.10 outlines the refuse storage area design criteria addressed for each storage area in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area.

Table 3.10: Refuse Storage Area Design Requirements

Positioning Considerations
Positioned in immediate proximity or directly accessible to the designated loading point. A temporary bin holding area can be provided to facilitate storage of refuse prior to collection.
Storage provided is conveniently accessible to residents for disposal or accessed via chutes.
Is in a purpose-built storage room which is designed to be unattractive to vermin and used solely for the storage of refuse leaving the site only.
Not located adjacent to or within any habitable portion of a building or place used in connection with food preparation (including food storage).
Visual Amenity Considerations
Is enclosed on all sides except for the access points to ensure bins are not visible from a public place, neighbouring properties, passing vehicles or pedestrian traffic external to the site.
Is designed to minimise their visual impact on the surrounding areas.
Functional Design Considerations
Is of sufficient size to accommodate the bins with sufficient clearance around the combined bin area.
Doors / shutters wide enough to allow for the easy removal of the largest container to be stored.
Permits unobstructed access for removal of the containers to the service point.
The height of the bin storage area allows for waste bins to be opened and closed.
Does not have any steps or lips where bins are required to be moved.
Adequate artificial lighting.
Be fire rated and ventilated in accordance with the National Construction Code – Building Code of Australia.
Bin Washing and Room Cleaning Considerations
A hose cock provided inside each room for cleaning bins and the enclosures.
The walls, ceilings, floors and equipment are to be designed and constructed of impervious material with a smooth finish to allow for easy cleaning.
Coved at the intersection with the walls with coving integral to the floor.
The floors to be graded to fall to a drainage point.
Drainage points connected to sewer in accordance with trade waste requirements.

3.6 Refuse Transfer

3.6.1 Residential Refuse Transfer

Residents will transfer general waste to the chute access point located on each level as required. Commingled recycling will be disposed of in the respective drop of bins located adjacent or within the chute room. Building management will be responsible for the transfer and decanting of the commingled recycling bins on each level to the bulk bins in basement 01. Bulky goods waste will be transferred via the lifts to the bulky waste room at basement 01. The transfer of bulky goods waste will be coordinated with building management to ensure appropriate protective measures are in place. Residents will transfer waste to the bulky goods waste room at basement 01. Building management will be responsible for assisting residents with the transfer of any large bulky waste items as requested.

Should food organics separation be implemented, residents will transfer food organics waste via the lifts and manually dispose of the waste into the shared bulk bins provided within the future residential food organics room at basement 01.

Building management will also be responsible for transferring shared bulk bins and bulky good waste to the temporary bin holding area prior to collection. A mechanical bin tug may be used to assist in transfer between the respective storage areas to the temporary bin holding area. Minimal transfer is required for collection whereby the waste contractor will collect bins directly from the temporary bin holding area and returning them immediately upon emptying.

3.6.2 Commercial Refuse Transfer

Staff/cleaners from each commercial & retail tenancy will transfer refuse to the commercial refuse room on a daily basis or after each service period via the commercial lift. A cleaner's trolley may be used to assist in transfer where there are multiple bins/receptacles located within the tenancy.

3.6.3 Refuse Transfer Path Design Requirements

Table 3.11 demonstrates the criteria addressed in the design of the refuse transfer path for all uses.

Table 3.11: Refuse Transfer Path Design

Positioning Considerations
The bins to be transferred via hard stand pathway.
Allows bins to be easily manoeuvred.
Does not impede traffic flow.
Does not extend through any habitable parts of a building or food premise.
Does not have any lips, stairs or steps for bins to be manoeuvred easily.

3.7 RCV & Bin Servicing Arrangements

Residential refuse will be collected by Council's waste contractor and commercial waste will be collected by a private waste contractor. The lower ground loading dock has been designed to accommodate up to the largest vehicle expected to enter the site which is Council's rear-loading HRV RCV, with a vehicle length of 10.5m in length and an operational height clearance of 4.5m. The RCV will enter the site in a forward's direction via Atchinson Street, rotate on the turntable and then reverse into the designated HRV bay. Upon servicing the bins, the RCV will drive forward onto the turntable to rotate, then exit the site via Atchinson Street.

While Council generally requires direct access to bins near the property boundary, the proposed on-site collection arrangement has been designed in consultation with North Sydney Council's Waste Operations department during the pre-assessment design phase. The strategy is considered the most suitable for the site, taking into consideration the site gradient and the limited access available via Atchinson Street. The waste holding room is located in a position which minimises vehicle manoeuvring with adequate clearance to provide a safe and efficient collection for the waste contractor. The proposed collection arrangement addresses the intent of Council's requirement while appropriately responding to the site's specific constraints.

Table 3.12 demonstrates the features of each bin servicing area.

Table 3.12: Service Area Design

Service Area Design Requirements
Has sufficient access and clearance for the waste and recycling collection vehicles to service the bins, including no overhead obstructions.
Allows bins to be serviced safely while minimising the impediment to vehicle movements during servicing.
Is clearly separated from car parking bays, footpaths and pedestrian access.
Is devoid of stairs or lips and allows bins to be manoeuvred easily.
Does not block the entry and exit to the property.
Is positioned away from entrances to shops or residential premises.
Best practice for non-residential development includes CCTV or other video monitoring designed to record RCV's collecting bins.

Figure 3.6 illustrates the swept paths for the 10.5m RCV. Further details on vehicle access and on-site manoeuvring can be found in the transport report submitted with the submission.

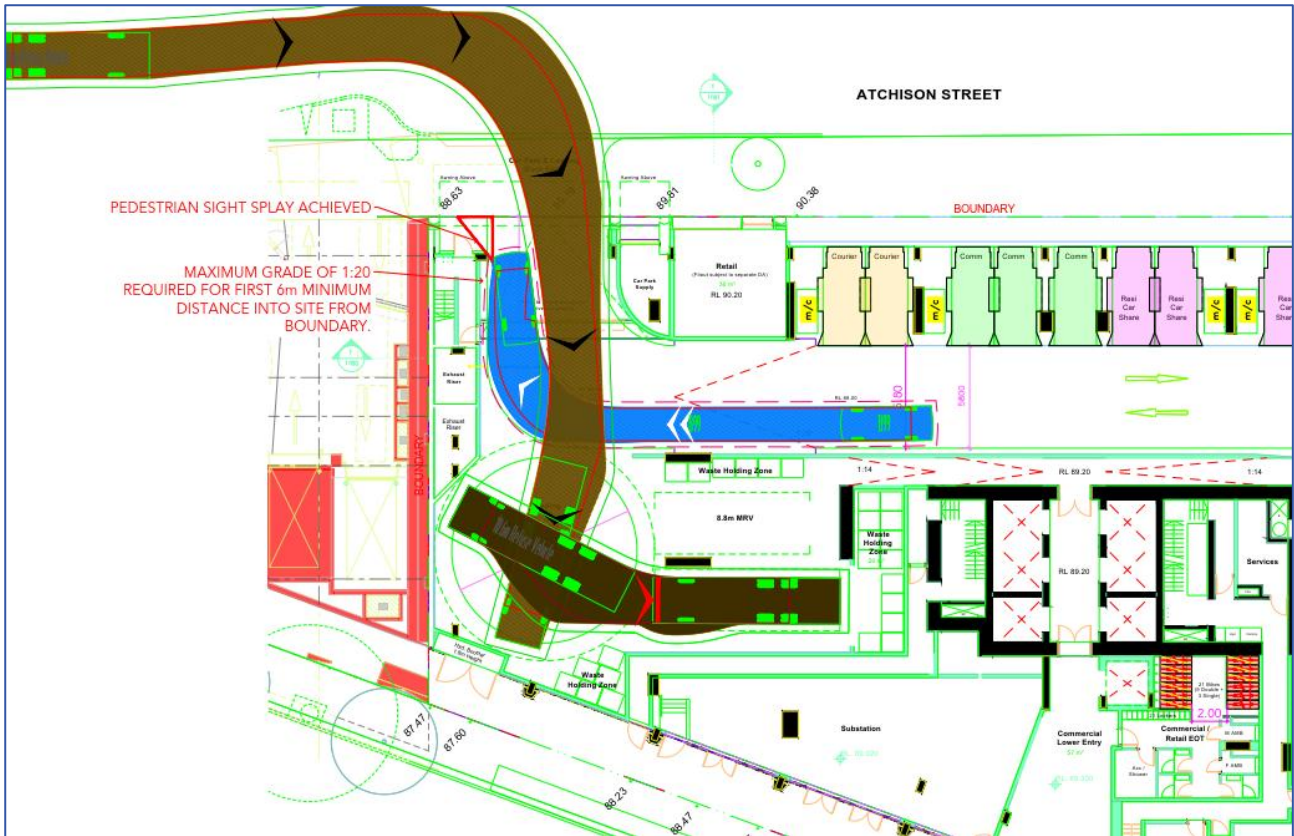


Figure 3.6: RCV Swept Path for 10.5m HRV

Source: Ptc Consultants, Project: 601 Pacific Highway, St Leonards, Drawings: Basement 1 Traffic Assessment B1.3, Dated: 18/03/2026.

4. Recommended operational refuse management

This section does not contain information relevant for the assessment of building design.

This section relates to the outcomes and waste management practices of the development during the operational phase as recommended by Colliers. It is intended for use as a live document by the end user of the development to assist with the ongoing management of the development.

4.1 Anticipated Commercial Refuse Volumes

The volume and composition of commercial refuse will vary based on the final tenancy use schedule. The final retail mix may include a number of non-food (office, allied health) and food and beverage-based retail outlets that will influence refuse generation.

The exact volume of refuse generated by each tenancy will also be influenced by each operator and their preferences. Based on both Colliers experience with operating sites and published third-party audit data, it is anticipated the site will generate less refuse than the generation calculations required for development compliance.

4.2 On-Going Management

The tables below relate to a cycle of ongoing implementation, operation, review and amendment of the refuse strategy. These tables are intended to serve as a live document to be completed and updated during the operational phase of the development and therefore intentionally left blank.

Responsibilities will be assigned for all on-going refuse management related activities during the operation of the development. Colliers recommend the appointment of dedicated personnel to champion refuse management and sustainability. The following lists (Table 4.1 to Table 4.3) are designed to help manage and assign responsibilities and monitor the refuse operations. On-going management of the refuse strategy will maintain efficient services, a safe environment and improve on sustainability outcomes.

4.2.1 Implementation Phase

Refuse management tasks during the implementation of the refuse strategy are required prior to and during the early stages of building occupancy. An opportunity to revisit these tasks is provided at set intervals with the review of the refuse strategy.

Table 4.1: Implementation Checklist

Task	Assigned	Remarks
Verify the as-built form of all refuse related areas. This task does not refer to building certification but is typically undertaken by a specialist waste consultant prior to building certification. This provides an opportunity to identify variances in building form versus design and recommend alternate or mitigating refuse management strategies. This task may also be required during significant building refits or renovation.		
Appoint personnel to oversee or undertake refuse management tasks. A building or facilities manager is typically appointed to undertake most operational tasks, engaging contractors for specialist tasks.		
Conduct internal safety review. An internal safety review is required to be undertaken to identify potential hazards in the implementation of the refuse strategy and risk mitigation opportunities. This includes the use of any refuse management equipment installed, as well as refuse transfer paths		
Development of policy and procedures Must be undertaken after safety review and abide by all relevant occupational health and safety legislation, regulations and guidelines to ensure site safety for visitors, staff and contractors. Also includes assessment of any manual handling risks and preparation of a manual handling control plan for waste and bin transfers.		
Engage refuse collection contractors. Either the council's collections contractor or a private contractor must conduct a site visit for the purpose of risk assessing the site prior to conducting services. Contractors must ensure that a full risk assessment of equipment, surfaces and related gradients is complete, and procedural documentation is provided to the appropriate personnel. RCV manoeuvrability testing and the establishment of service frequency and timing is also undertaken at this time.		
Install signage in all refuse disposal and storage points. Signage is required to be installed to educate building occupants on location of disposal and refuse storage points. Additionally, identify the accepted items disposed of in each refuse stream. The installed signage should be colour coded in accordance with AS 4123.7 – 2006 <i>Mobile waste containers</i> . Examples of signage are provided in the appendices.		

Task	Assigned	Remarks
Leasing Body Corporate Agreements All leasing contracts and body corporate agreements should contain clauses pertaining to waste management arrangements and use of any associated equipment.		
Education and Training. Provision of equipment manuals, induction, training, health and safety procedures, risk assessments and personal protective equipment (PPE) to all staff / contractors associated with all waste management activities in order to control hazards. The step is repeated through the operational phase of the development as required due to changes in users or personnel.		
Consider fit out and move-in refuse. Higher volumes of waste are generated during the initial resident move-in or final tenancy fit out. This typically includes large volumes of cardboard. Additional bins or collections may be required. This also applies to high turnover events and refits or renovation.		
Baseline Refuse Auditing A baseline audit for non-residential uses once the development reaches 80% occupancy undertaken by a specialist waste consultant is recommended to identify refuse volumes and stream composition. This information is then used to establish potential recoverable material percentage based on initial waste practices and set recycling rate targets.		
Establish Baseline Targets The baseline audit results should be used to establish baseline landfill reduction and recycling rate targets. Baseline targets should be achievable with a view to continual improvement to enable the celebration of success and promote buy-in by building occupants.		

4.2.2 Occupation / Operational Phase

Refuse management tasks during the occupation or operational phase of the development relate to the day to day and business as usual operational tasks that must be undertaken to execute the refuse strategy.

Table 4.2: Occupation / Operation Checklist

Task	Assigned	Remarks
Facilitate disposal from communal areas, public realm and tenancies. Appointed building manager / caretaker is required to transfer refuse generated in communal areas and the public realm to the refuse storage area for final disposal, this includes litter removal. Best practice operations include having dedicated cleaning staff assigned to handle all waste generated, rather than tenancy staff. This results in maximum recovery of available streams.		
Manage rotations of bins to ensure convenient access. Check bin fill levels and rotate / swap bins as required. Sufficient capacity must be provided for the disposal of all streams at all times including reduced personnel on site (such as weekends or public holidays). Where equal access to a refuse stream is not maintained, other streams may be contaminated leading to lost resources.		
Manage bin transfers to agreed servicing point. Bins are required to be presented to the temporary holding or agreed servicing point prior to the scheduled service time and ensure the area is free from obstruction. Late bin placement or servicing obstruction may lead to missed bin services.		
General cleaning. Regular cleaning and maintenance of all refuse management facilities is important to maintain a safe and hygienic environment for visitors, staff and contractors. General cleaning is required for all refuse holding and transfer areas including: • Refuse bins, rooms and storage areas • Refuse transfer areas including lifts and staircases • Any other refuse management equipment		
Perform spot checks on bin contents and refuse streams. Building management regularly check for correct bin use and stream contamination. Early intervention prevents the development of poor practice and lost resources. Feedback and education is provided to the relevant parties (see below).		
Ongoing education and communication. On-going education is important to ensure people continue to use the facilities as originally intended and to avoid ongoing contamination of recoverable refuse streams. Appointed personnel should be actively involved in education of occupants and encouraging participation in recycling activities. Widespread communication of the achievements of the refuse strategy and areas for improvement encourage participant buy-in.		

4.2.3 Review and Amendment Phase

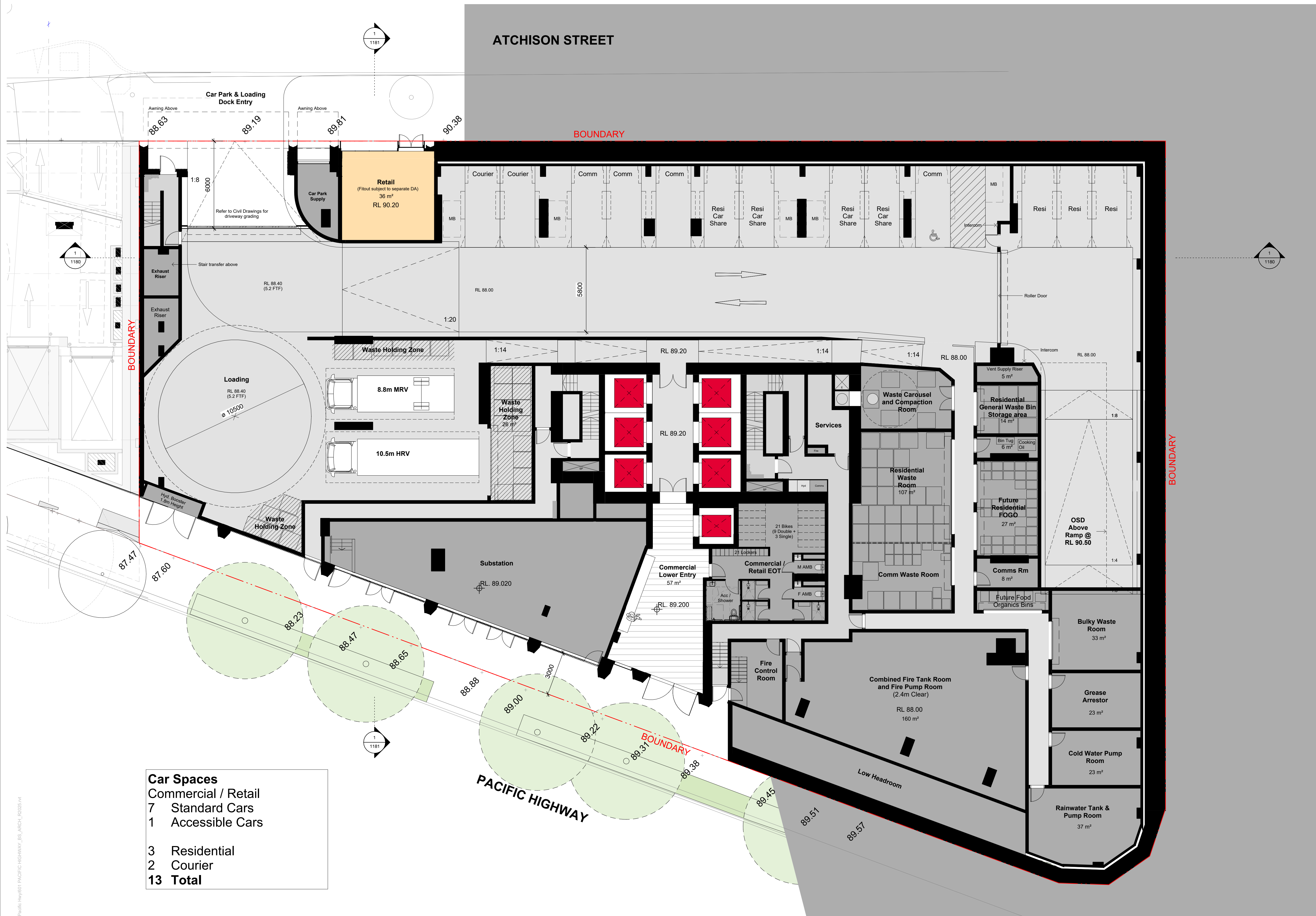
The review and amendment refuse management tasks relate to tasks undertaken on a routine (e.g. quarterly, bi-annually or annually) or ad hoc basis. At the completion of the review and amendment phase, the cycle restarts with the implementation of the amended refuse strategy.

Table 4.3: Review and Amendment Checklist

Task	Assigned	Remarks
Coordination of specialised cleaning contractors as required. Typical specialised cleaning services may include cleaning internal areas of compaction equipment (if selected); this reduces risk of blockage, odour and risk of fire.		
Maintenance and servicing of refuse management equipment as per schedule. Frequency depends on equipment, building operation and manufacturer specification. Routine maintenance reduces downtime and detrimental impact of unscheduled equipment breakdown.		
Coordination of specialised equipment contractors as required. May extend to ad hoc services requiring specialist equipment such as bulky / hard waste removal.		
Internal safety review. Routine safety reviews are required to identify changes to the site, work practices or legislation that may impact existing policies and procedures. Reviews should include visual inspection of equipment and user PPE. Any policy or procedure updates arising from a safety review must be immediately communicated.		
Audit operational refuse volumes and composition. As similarly undertaken at the beginning of occupancy a review by a specialist waste consultant is recommended to identify refuse volumes and stream composition. This information is then used to establish potential recoverable material percentage and identify opportunities for improvement in refuse strategy. Alternatively, an internal audit may be undertaken by visual inspection during on-site waste management handling activities. For example, cleaners may observe contents of waste receptacles when decanting caddies in larger bins and recording results, this method is less accurate than a comprehensive audit, however, give immediate indicative results and may be undertaken on an ongoing basis.		
Review bin quantities and refuse management equipment. Reviewing bin quantities and equipment is required ensure operational sustainability of refuse volumes and equipment remains fit for purpose. Consideration should be given where alternate equipment may provide improved outcomes. This review may form part of the external audit process (above) as recommendations made.		

Task	Assigned	Remarks
Review service frequency and methodology on 6 monthly intervals with collecting contractor. The service frequency and service methodology should be reviewed once development is fully occupied and on rolling 6 monthly basis to ensure the optimum cost efficiency in services provided and explore options for additional services. Any potential changes to the bin numbers or bin sizes should be made in liaison with the appointed contractor to confirm cost or contract implications.		
Review of recycling rate target to target continual improvement. Once benchmarked performance has been assessed against the existing targeted recycling rate a new target can be established that strives for continual improvement. Any changes in targeted recycling rates and the achievements of the refuse strategy should be widely communicated to all uses.		
Update and amend OWMP based on review outcomes. On completion of the refuse strategy review the OWMP should be updated to reflect refuse strategy amendments and to enable implantation of refuse strategy.		

Appendix A Relevant Development Plans



BOUNDARY

BOUNDARY

BOUNDARY

Car Spaces
41 Standard Cars
8 Adaptable Cars
49 Total

9 Motorbike Spaces
53 Storage Cages

Transformative thinking
for the future city.

Bates Smart Architects Pty Ltd
ABN 68 094 740 986

NSW Nominated Responsible Architects
Kellie Payne 6454, Philip Vivian 6696, Guy Lake 7119, Matt Allen 8498.

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A	17/03/2026	SSDA Issue
P5	02/03/2026	For Information
P4	14/11/2025	For Information
P3	31/10/2025	For Information
P2	16/10/2025	For Information
P1	08/10/2025	For Information

Project Title
601 Pacific Hwy
First Nations Country
Cammeraygal Country
Project Address
601 Pacific Hwy, St Leonards,
NSW

Project No.
S12758

Drawing Title
DA03 - General Arrangements
General Arrangement Plan Level B3

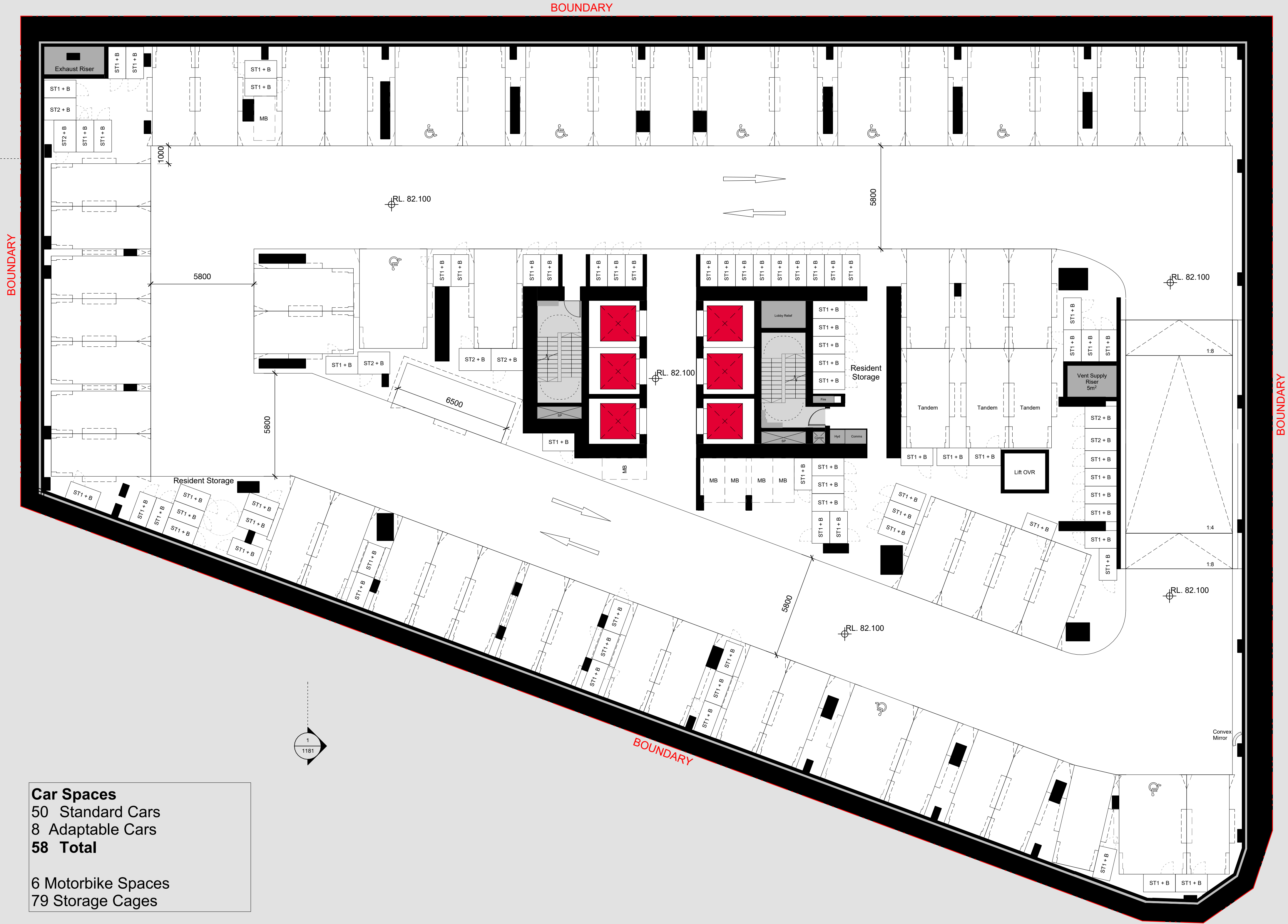
Phase
SSDA

Status
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Drawing no.
10B3

Scale
1 : 125 @ A1

Revision
A



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Rev Date Description

A 17/03/2026 SSSA Issue
P2 02/03/2026 For Information
P1 14/11/2025 For Information

Project Title
601 Pacific Hwy
First Nations Country
Cammeraygal Country
Project Address
601 Pacific Hwy, St Leonards,
NSW

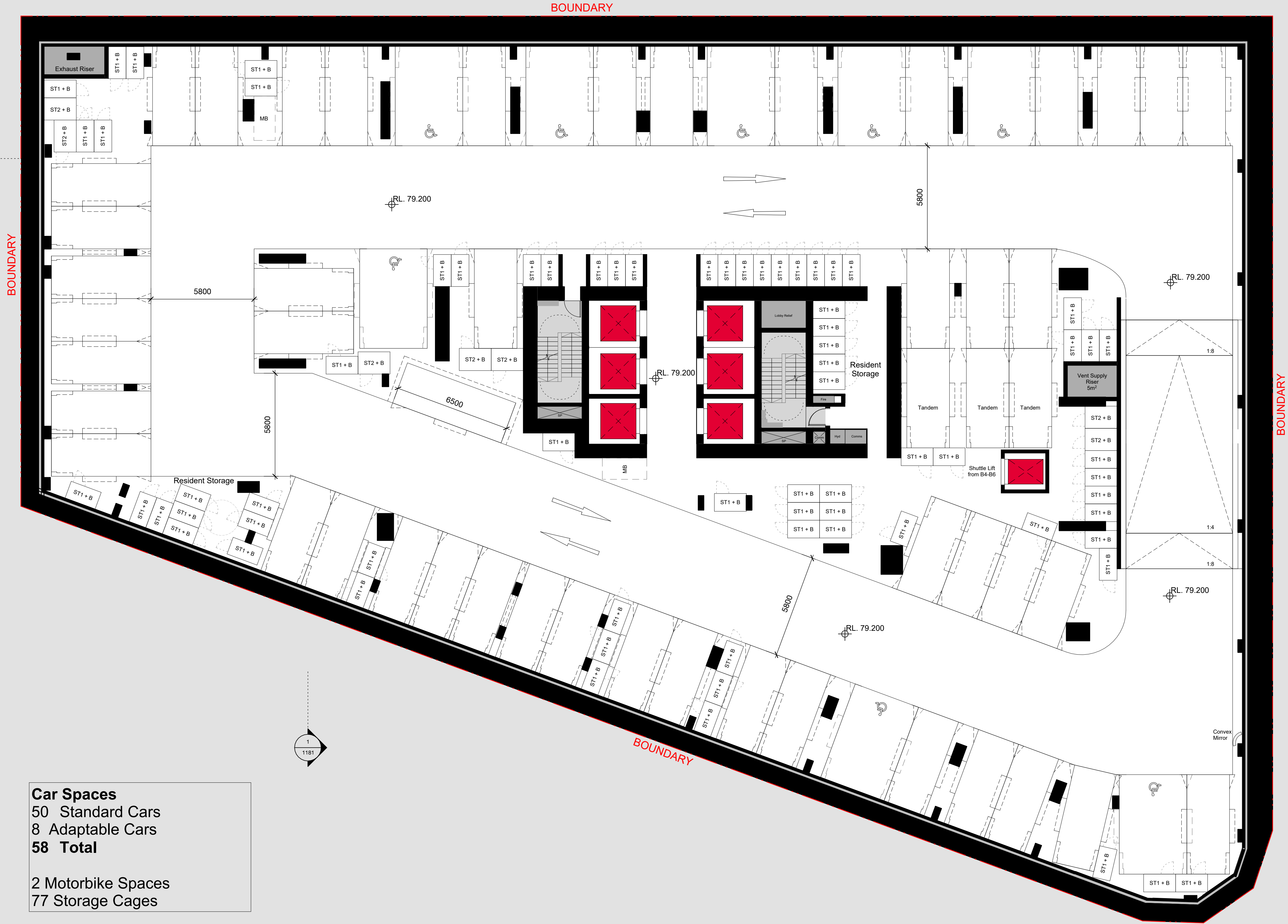
Project No.
S12758

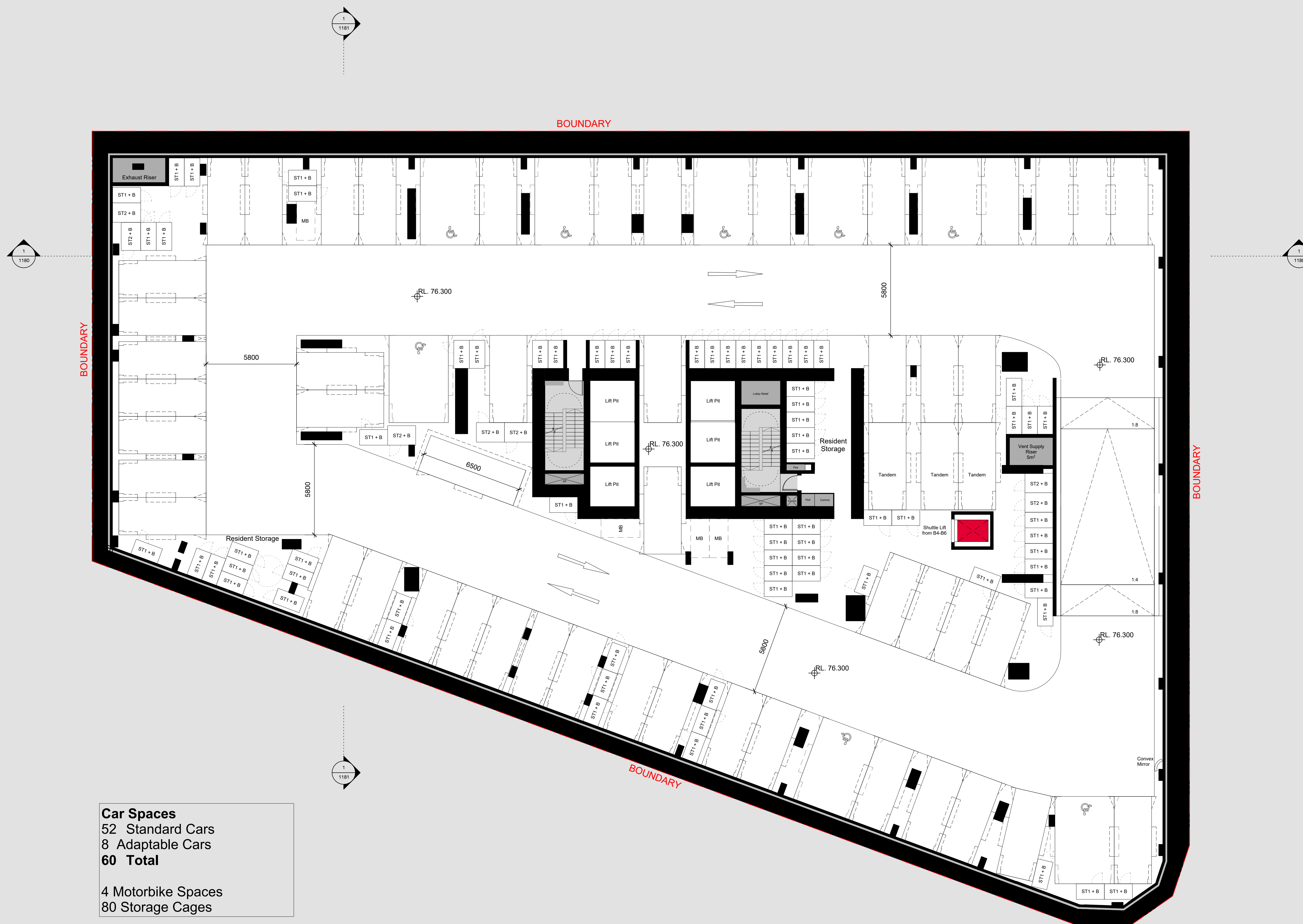
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DA03 - General Arrangements
General Arrangement Plan Level B4

Phase
SSDA
Status
For Approval

Drawing no.
10B4

Scale
1 : 125 @ A1
Revision
A





Car Spaces
52 Standard Cars
8 Adaptable Cars
60 Total

4 Motorbike Spaces
80 Storage Cages

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P3	31/10/2025	For Information
P2	16/10/2025	For Information
P1	08/10/2025	For Information

Project Title
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First Nations Country
Cammeraygal Country
Project Address
601 Pacific Hwy, St Leonards,
NSW

Project No.
S12758

Drawing Title
DA03 - General Arrangements
General Arrangement Plan Level B6

Phase
SSDA

Status
For Approval

Drawing no.
10B6

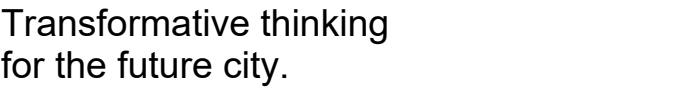
Scale
1 : 125 @ A1

Revision
A



Car Spaces
54 Standard Cars (incl 3 Small Spaces)
8 Adaptable Cars
62 Total

4 Motorbike Spaces
83 Storage Cages



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P3	02/03/2026	For Information
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P1	31/10/2025	For Information

Project Title
601 Pacific Hwy
First Nations Country
Cammeraygal Country
Project Address
601 Pacific Hwy, St Leonards,
NSW

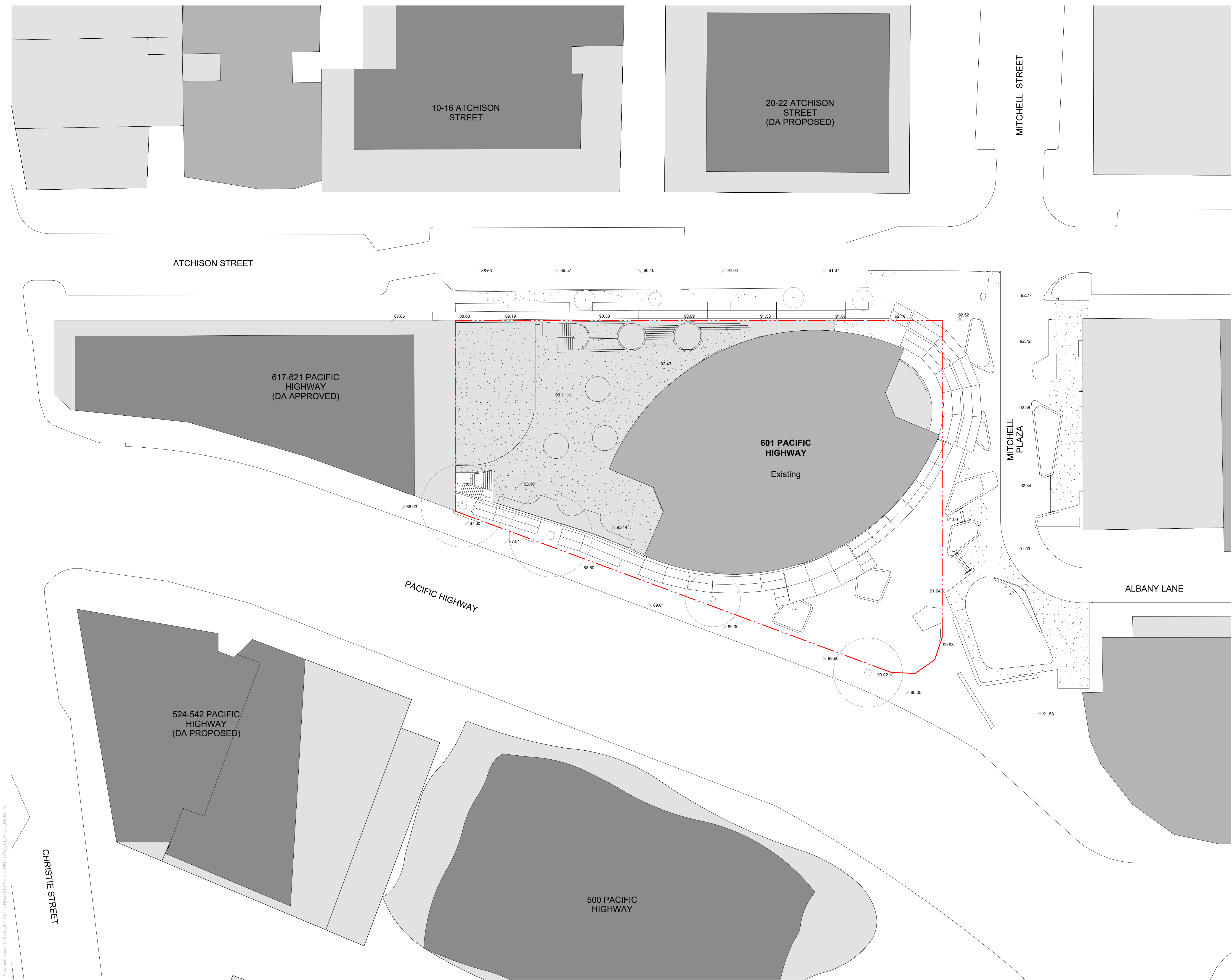
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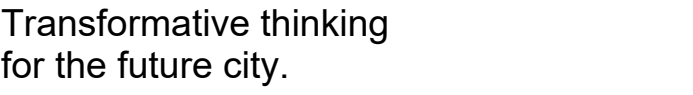
Drawing Title
DA01 - Site Plans
Site Plan - Existing Conditions

Phase
SSDA
Status
For Approval

Scale
1 : 250 @ A1

Drawing no. 0950 Revision A





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DEMOLITION PLAN - LEGEND

-
-  Structure to be demolished
 Site Boundary
 Trees to be Retained
 Trees to be Removed

Current Revision Description

Data Issue Record		
Current Revision released by		
Rev	Date	Description

A	17/03/2026	SSDA Issue
P3	02/03/2026	For Information
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P1	31/10/2025	For Information

Project Title
601 Pacific Hwy
First Nations Country
Cammeraygal Country
Project Address
601 Pacific Hwy, St Leonards,
NSW

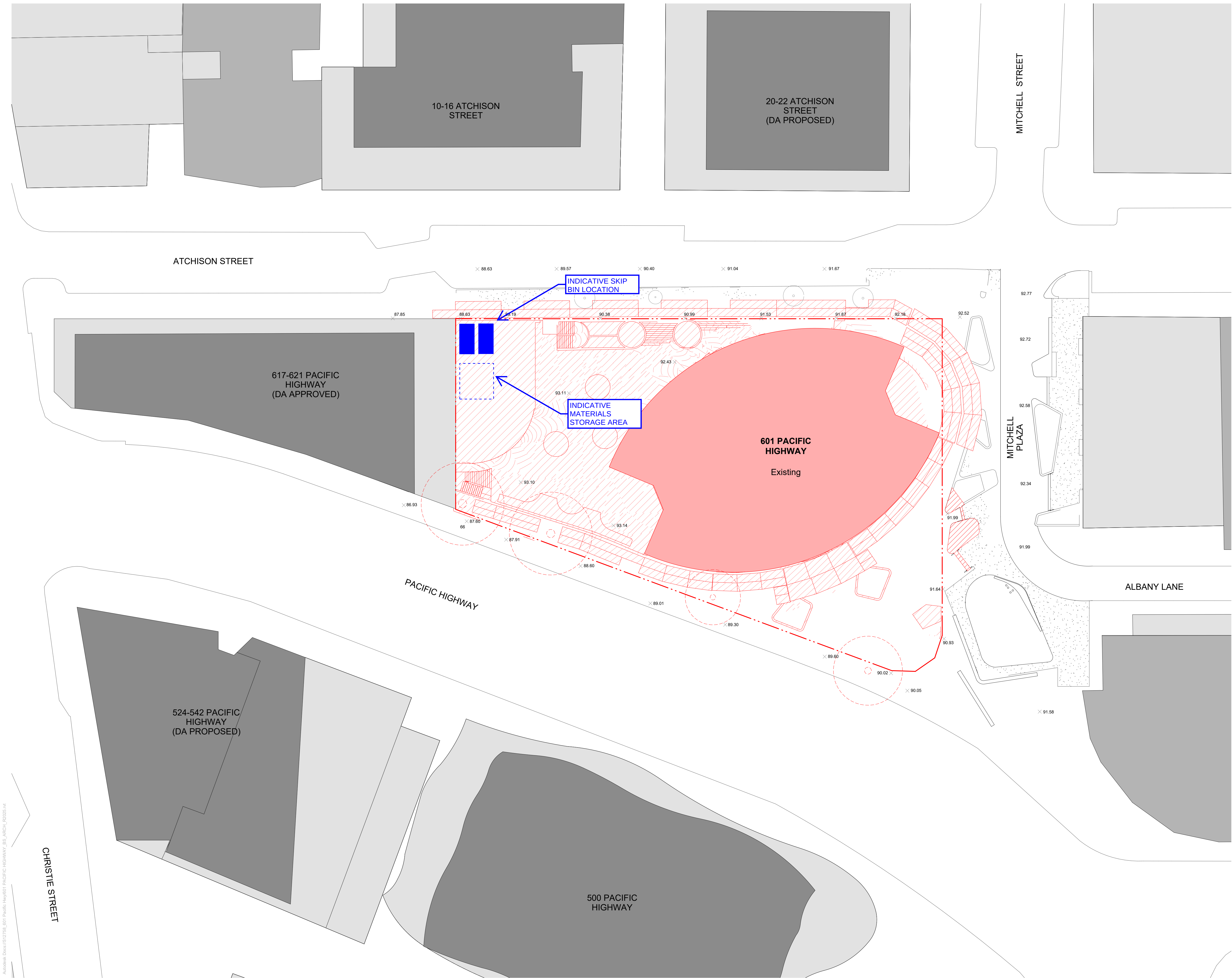
Project No. S12758

Drawing Title
DA01 - Site Plans
Site Plan - Demolition

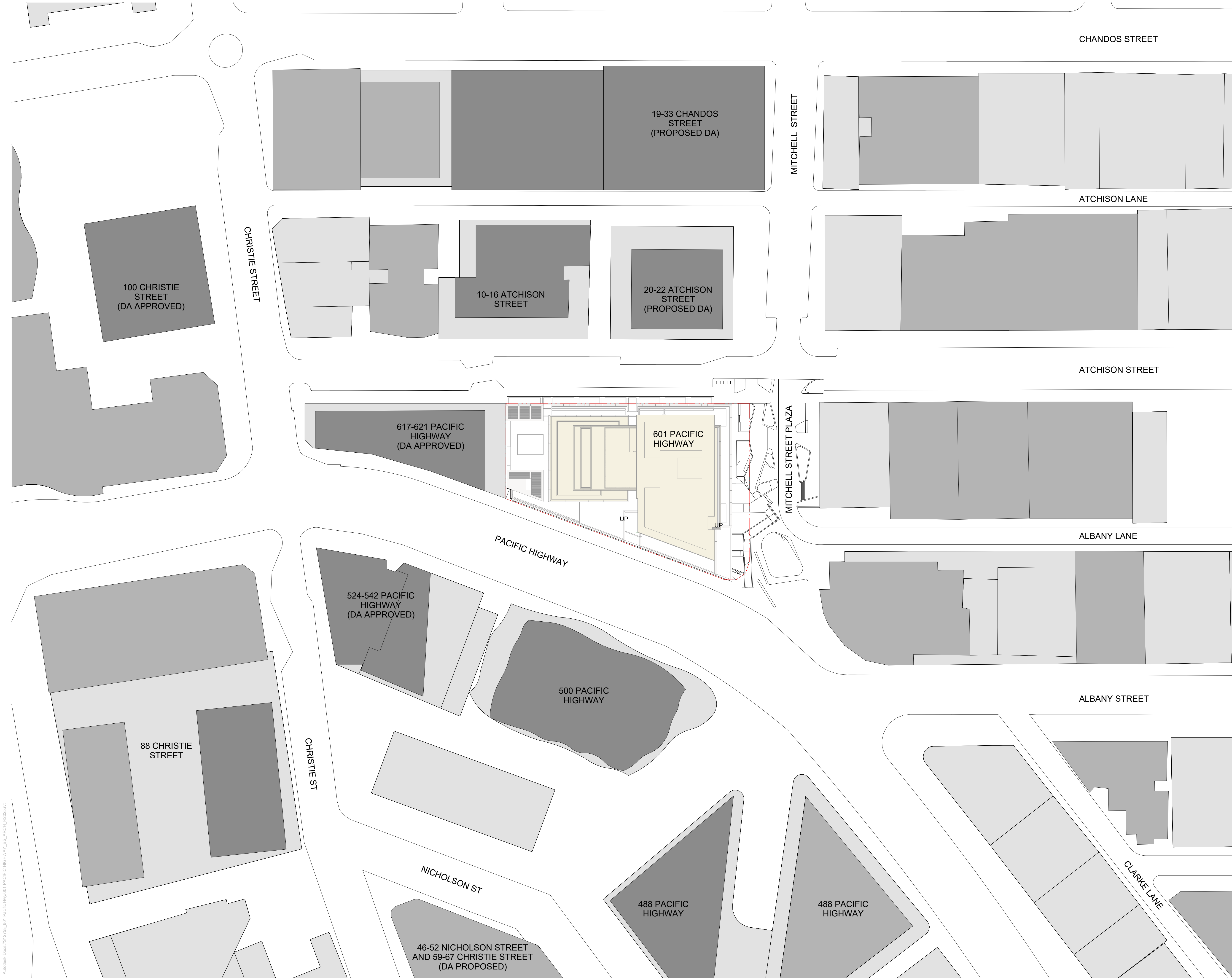
Phase
SSDA
Status
For Approval

Scale
1 : 250 @ A1

Drawing no. 0951 Revision A



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P1	31/10/2025	For Information

Project Title
601 Pacific Hwy
First Nations Country
Cammeraygal Country
Project Address
601 Pacific Hwy, St Leonards,
NSW

Project No.
S12758

Drawing Title
DA01 - Site Plans
Site Plan - Site Plan

Phase
SSDA
Status
For Approval

Drawing no.
0952

Scale
1 : 500 @ A1
Revision
A



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P3	31/10/2025	For Information
P2	16/10/2025	For Information
P1	08/10/2025	For Information

Project Title
601 Pacific Hwy
First Nations Country
Cammeraygal Country
Project Address
601 Pacific Hwy, St Leonards,
NSW

Project No.
S12758

Drawing Title
DA03 - General Arrangements
General Arrangement Plan Level 01

Phase
SSDA

Status
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Drawing no.
1001

Scale
1 : 125 @ A1

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P3	02/03/2026	For Information
P2	14/11/2025	For Information
P1	31/10/2025	For Information

Project Title
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First Nations Country
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Project Address
601 Pacific Hwy, St Leonards,
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Project No.
S12758

Drawing Title
DA03 - General Arrangements
General Arrangement Plan Level 34-48

Phase
SSDA
Status
For Approval
Drawing no.
1034
Scale
1 : 125 @ A1
Revision
A

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Rev Date Description

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P6	04/03/2026	For Information
P5	02/03/2026	For Information
P4	14/11/2025	For Information
P3	31/10/2025	For Information
P2	16/10/2025	For Information
P1	08/10/2025	For Information

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Project Address
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Project No.
S12758

Drawing Title
DA03 - General Arrangements
General Arrangement Plan Level 49

Phase
SSDA
Status
For Approval

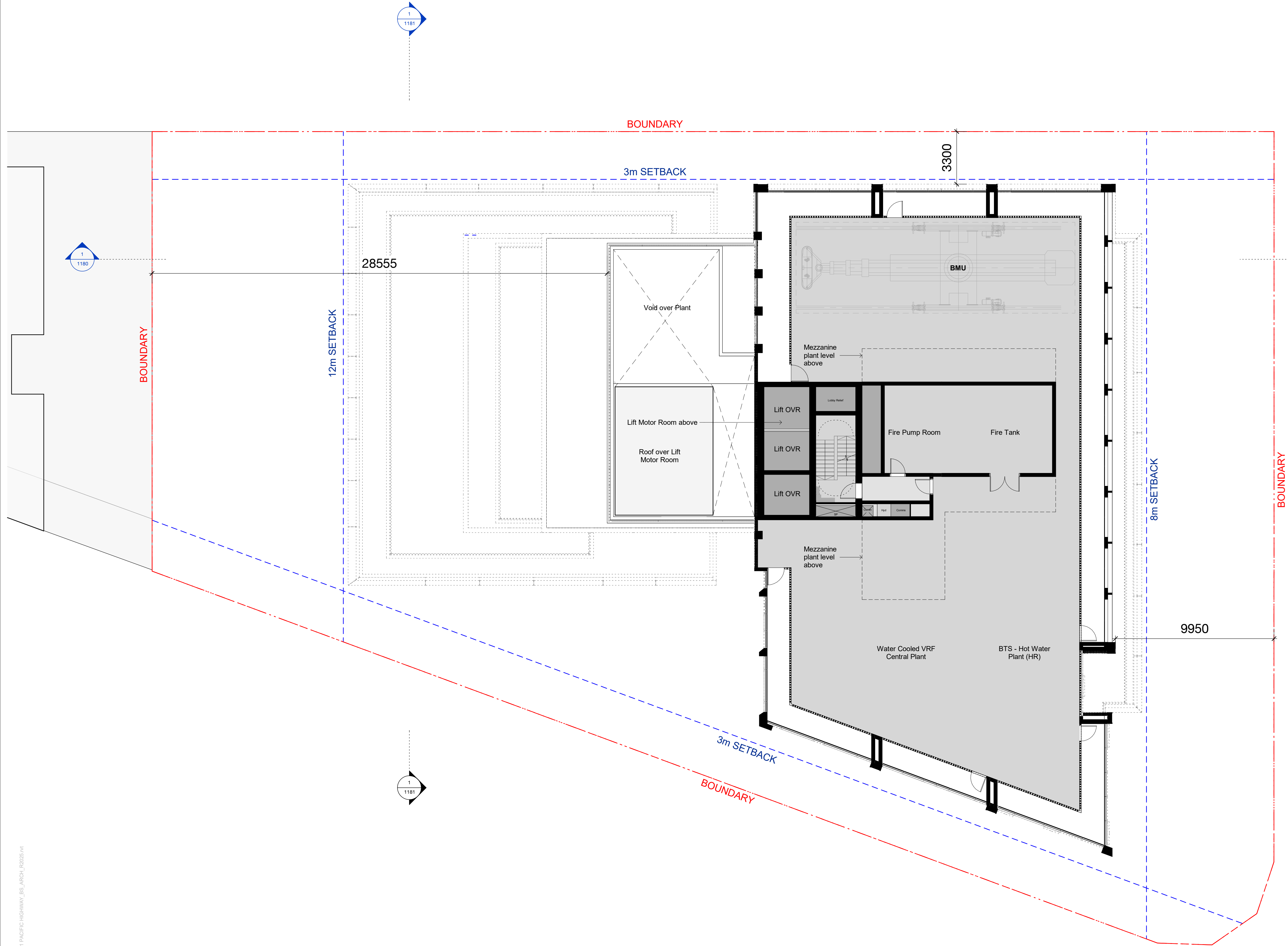
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Scale
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Revision
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Appendix B C&D Waste Estimation Template for Contractor

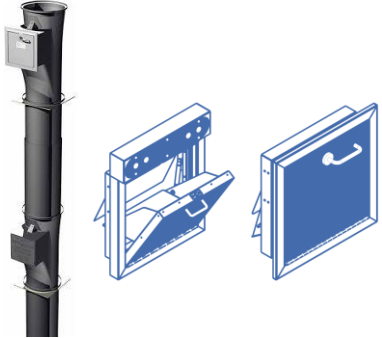
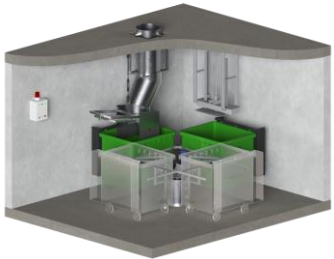
Waste and/or Recyclable Materials			Destination		
			Reuse and Recycling		Disposal
Possible Materials Generated	Estimated volume (m³) or Area (m²) or weight (t) (Contractor to confirm)		On-site (How will materials be reused and/or recycled on-site?)	Off-site (Specify the contractor and recycling facility)	Specify the contractor and/or landfill site/transfer station
	Demolition	Construction			
Excavation Material					
Timber (specify)					
Concrete					
Bricks					
Tiles					
Metal (specify)					
Glass					
Plasterboard					
Fixtures and Fittings					
Floor Coverings					
Packaging					
Garden Organics					
Recoverable containers (CDS)					
Paper/Cardboard					
Residual Waste					
Hazardous Waste (specify)					
Other(s) specify					
How and where will materials be stored on-site for reuse and recycling? e.g. in skip bins located near entry.					
How will site operations be managed to ensure minimal waste creation and maximum reuse and recycling? e.g. staff training, feedback from waste management service provider, on-going checks by site managers, separate area set aside for sorted wastes, clear signage for waste areas etc.					
How will this plan be evaluated, and who is responsible for the evaluation? e.g. feedback from staff collected by the site manager.					

Appendix C RCV Swept Paths

Appendix D Systems & Specifications

The table below provides contextual examples of the equipment types considered in this WMP and is not intended to provide a specific list of required equipment.

Bin / Equipment Types	Waste Streams	Examples	Information
Residential unit bins	General waste and recycling		Various options and sizes. Built and standalone bin available. Examples: https://www.bunnings.com.au
Caddy bins	Food organics (future provision)		Example: https://www.sourceseparationsystems.com.au-/product/food-scraps-caddy
Tenancy and Communal area bins	General waste, recycling, food waste, paper / cardboard		Various options and sizes available. To be supplied depending on preference and space available. Examples: https://www.sourceseparation-systems.com.au-/product/multisort https://methodrecycling.com/au/
Refuse / Cleaners Trolleys (Optional)	All Streams		Assisted manual transfer of refuse Examples: https://rubbermaidcommercial.com.au/products/waste-management/mega-brute https://www.materialshandling.com.au/products/deluxe-compact-cleaning-carts
240L bins	Food organics (future provision)		Dimensions approx. 740 x 580 x 1080mm (L x W x H) (dimensions may depend on contractor) Examples: http://www.justwheeliebins.com.au , http://wheeliebinsonline.com.au

Bin / Equipment Types	Waste Streams	Examples	Information
660L bin	E-Waste		Dimensions approx. 780 x 1260 x 1330mm (L x W x H) (dimensions depend on contractor) Examples: http://www.justwheeliebins.com.au, https://www.australianwastemanagement.com.au
1100L bins	General waste, recycling, paper / cardboard		Dimensions approx. 1070 x 1240 x 1330mm (L x W x H) (dimensions depend on contractor) Examples: http://www.justwheeliebins.com.au, https://www.australianwastemanagement.com.au
Chute System	General waste		Refuse disposal in multi-storey buildings through refuse chutes options include: single chute for waste only, or single chute with diverter system or dual chute for disposal of waste and recycling Examples: https://www.wastech.com.au/products/chutes https://www.elephantsfoot.com.au/products/chutes
Carousel changeover with ceiling mounted compaction system	General waste		Automated bin rotation (carousel) to manage bin fill level and prevent overflow under chutes. Ceiling mounted chutes to compact waste to a 2:1 ratio. Example: https://www.elephantsfoot.com.au/products/compactors/carousel-linear https://wastech.com.au
Battery Recycling Tube	Batteries		Battery recycling tubes for separation of batteries. Example: https://www.sourceseparationsystems.com.au/product/battery-recycling-tube

Bin / Equipment Types	Waste Streams	Examples	Information
Bin tugs	-		Assisted transfer of refuse Examples: http://ev.spacepac.com.au/categories/tugger , https://www.spacepac.com.au/product/wheelie-bin-aluminum-steel-trailers
Portable Cooking Oil Storage	Used Cooking Oil		Cooking oil recycling Example: https://www.cookers.com.au Cooking oil delivery, used oil collection and provision of required equipment
Organics Household Composting (Optional for residents prior to roll out of Council's food organics collection system)	Food waste / organics		Organics / food waste separation, composting and digesting; household-type and commercial grade equipment available. Examples Ecoguardians Soilfood https://www.ecoguardians.com.au/soilfood-soilfood Urban Composter https://www.urbancomposter.com.au

Appendix E Refuse Signage

Refuse Signage

Waste signage guideline are provided by the NSW EPA: <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/business-government-recycling/standard-recycling-signs>

General Signage (NSW EPA):



Colour coding as per AS 4123.7-2006

Mixed (Commingled) Recycling	PMS 108
General waste (landfill)	PMS 032C
Organics	PMS 15-0343
Paper and cardboard recycling	PMS Process Blue C
Soft Plastics	PMS 1655
Used Cooking Oil	Grey

Various signage including refuse area, safety and facility signage should be arranged through certified signage providers. Example signs can be found at <http://www.signblitz.com.au>, <https://www.wayout.com.au> or <https://www.smartsign.com>.

Example Refuse Room Signage



Example Facility Signage



Example Safety Signage



Appendix F Terms & Abbreviations

In this WMP, a term or abbreviation has the following meaning unless indicated otherwise:

TERM	ABBREVIATION	DEFINITION
Equipment		
Bin (Refuse Bin)		A plastic or steel container for disposal and temporary storage of waste or recycling items. Various types and sizes exist for different items and purposes. Examples include residential unit bins, bulk bins, MGB, steely bins and specialised for medical waste or cigarette butts.
Bin Storage Area		An enclosed area designated for storing on-site refuse bins or a refuse compactor within the property.
Bulk Bin		A galvanized or steel bin receptacle that is greater than 360L in capacity generally ranging from 1.00m ³ to 4.50m ³ used for the storage of refuse that is used for on-site refuse collection.
Bulk Mobile Garbage Bin	Bulk MGB	A plastic (polypropylene) receptacle that is greater than 360L in capacity generally ranging from 660L to 1100L used for the storage of refuse.
Collection Point		An identified position where refuse bins are stored for collection and emptying. The collection point can also be the bin storage area.
Compactor		A receptacle that provides for the mechanical compaction and temporary storage of refuse. It allows to reduce bin numbers and collection frequency.
Composter		A container or machine used for composting specific food scraps and/or organic materials.
Food Waste Recycling System		Defined as a vacuum or pump-based system for shredding, macerating or pulping of food waste. The food waste is transferred through pressure (service) pipes to sealed liquid storage tanks.
Green Waste		All vegetated organic material such as small branches, leaves and grass clippings, tree and shrub pruning, plants and flowers.
Liquid Waste		Non-hazardous liquid waste generated by commercial premises should be connected to sewer or collected for treatment and disposal by a liquid waste contractor (including grease trap waste).
Mobile Garbage Bin	MGB	A plastic (polypropylene) bin or bins used for the temporary storage of refuse that is up to 360L in capacity and may be used in kerbside refuse collection or on-site collection.
Putrescible Waste		Putrescible waste is the component of the waste stream liable to become putrid and usually breaks down in a landfill to create landfill gases and leachate. Typically applies to food, animal and organic products.
Recycling		Recycling contains all material suitable for re-manufacture or re-use, e.g. glass bottles and jars; plastics such as PET, HDPE and PVC; aluminium aerosol and steel cans and lids; milk and juice cartons; soft drink, milk and shampoo containers; paper, cardboard, junk mail, newspapers and magazines.
Refuse		Refuse is material generated and discarded from residential and commercial buildings including general waste, recyclables, green waste and bulky items.
Refuse Storage Room		An area identified for storing on-site MGBs or Bulk Bins within the property.
Refuse Trolley		A cart on wheels that can be used to collect smaller quantities of refuse from different areas or rooms of a building or site, and wheel the collected refuse to a (bulk) bin storage area where it is disposed. Refuse trolleys are commonly used in hotels or offices.
Regulated Waste		Regulated waste is waste prescribed under legislation as regulated waste.
Transfer (Manual Transfer)		Manual transfer means physical transfer of refuse material and associated bulk bins or trolleys without assistance.
Waste		Waste is referred to as refuse material with the exclusion of recycling, green waste, hazardous waste, special waste, liquid waste and restricted solid waste.

TERM	ABBREVIATION	DEFINITION
Waste (General Waste)		General waste is generally referred to as material free of any actual or apparent contamination such as pathological / infectious, radioactive materials and / or hazardous chemical. Reporting use is for material considered to be free of food waste.
Wheelie Bin		A MGB of up to 360L, usually with 2 wheels for easy transfer. A common type is a 240L wheelie bin used for kerbside collection in many residential areas.
Measures		
Cubic Metre	m3	Volume in cubic metre(s) related to refuse management equipment.
Ground Floor Area	GFA	The GFA of all storeys of a building is measured from the outside of the external walls or the centre of a common wall. It is commonly measured in square metres.
Kilogram	kg	Kilogram(s) related to refuse weight.
Litre	L	Litre(s) related to refuse volumes.
Square Metre	m2	Square metre(s) related to refuse areas.
Ton	T	Ton(s) related to refuse weight.
Collection Vehicles		
Body Truck		A conventional heavy vehicle with a covered loading area. It is generally not specifically designed for emptying the content of bins into the truck during refuse collections, but can be used to carry entire (full) bins for servicing by bin swap-over.
Refuse Collection Vehicle	RCV	A vehicle specifically designed for collecting and emptying refuse bins and refuse compactors.
Rear-End-Loading Refuse Collection Vehicle	REL RCV	A truck specially designed to collect municipal solid waste and recycling, typically 240L wheelie bins to 1100L bulk bins, from rear loading mechanism and haul the collected waste to a solid waste treatment facility.
Tank Truck		An RCV that is specifically designed to collect liquid wastes such as waste cooking oil and food waste pulp. The waste is typically pumped from a waste storage tank into the truck via a hose. Liquid waste management equipment is often provided by the contractor who collects the waste and operates the truck.