

WASTE MANAGEMENT PLAN

Proposed Data Centre

Prepared for:

EMKC3

Level 1

140 Bourke St

Melbourne, Victoria, 3000

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with EMKC3 (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

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1 Introduction

SLR Consulting Australia Pty Ltd (SLR) was engaged by A W Edwards Pty Limited, on behalf of Greenbox Architecture Pty Ltd (the Client) to prepare a Site Waste Minimisation and Management Plan (SWMMP) in support of a Development Application (DA) to Lane Cove Council (Council) for the 'Proposed Data Centre' (the Development) at Lane Cove West, NSW.

Development of the project is currently managed by EMKC³ on whose behalf this waste plan is prepared.

This SWMMP applies to waste generated from the site preparation, construction and operational stages of the Development and was prepared using architectural drawings provided by the Client and attached in Appendix A).

Further details of the Development are provided in Section 4. Waste management for the site preparation and construction stages is described in Section 5. Waste management for the operational stage is described in Section 6. The provisions contained in this SWMMP may be subject to review upon modification of operational procedures.

1.1 Site Identification

The Development is located at 1 Sirius Road, Lane Cove West, NSW 2066 and comprises the property title Lot 1 on DP 1151370 (the site). The site, shown in Figure 1, is in the local government area of Lane Cove.



Source: Adapted from SIX Maps: <https://maps.six.nsw.gov.au/>

Figure 1 Site location

1.2 Objectives

The objectives of this SWMMP are to:

- Identify potential wastes likely to be generated at the site during site preparation, construction works and operation.
- Help implement safe and practical options for waste collection from the Development by Council and/or private waste servicing contractors.
- Encourage waste avoidance through design, ordering and construction.
- Provide advice on how such wastes should be handled, processed and disposed of, re-used or recycled in accordance with Council requirements, relevant Australian Codes and Standards and better practice waste minimisation principles.

1.3 Review of SWMMP

This SWMMP is not a static document. It is a working document that requires review and updating to ensure ongoing suitability for the proposed on-going operations at the site.

This SWMMP will be reviewed and updated:

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

Changes made to the SWMMP, as well as the reasons for the changes made, should be documented by the site operator as part of the review process.

Copies of the original SWMMP, as well as all future versions of the SWMMP, should be retained by the site operator.

2 Better Practice for Waste Management and Recycling

2.1 Waste Management Hierarchy

This SWMMP has been prepared in line with the waste management hierarchy (Figure 2), which summarises the objectives of the Waste Avoidance and Resource Recovery Act 2001.

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

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

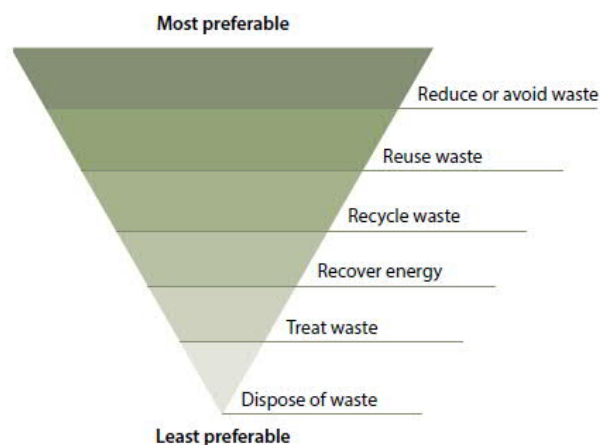


Image from NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21.

Figure 2 Waste management hierarchy

2.2 Benefits of Adopting Better Practice

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

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

3 Waste Legislation and Guidance

Legislation and guidance documents outlined in Table 1 should be referred to during all stages of the Development.

Table 1 Legislation and guidance

Legislation and Guidance	Objectives
DCP and LEP	
Lane Cove Local Environmental Plan (LEP) 2009 ¹	The Lane Cove Local Environmental Plan (LEP) came into force on 19 February 2010 and provides the legal framework of the Lane Cove DCP, including land use and development permitted in a set zone. The LEP also contains provisions to conserve local heritage and protect sensitive land.
Lane Cove City Council's Development Control Plan 2009 (Amendment 2 – 9 December 2011) ²	<p>The Lane Cove Development Control Plan 2009 (DCP) supports provision of the LEP planning controls by providing detailed planning and design guidelines. The DCP has been prepared in accordance with Section 72 of the Environmental Planning and Assessment Act 1979 and Part 3 of the Environmental Planning and Assessment Regulation 2000.</p> <p>This Site Waste Management and Minimisation Plan (SWMMP) specifically addresses Part Q – Waste Management and Minimisation of the DCP and sets out the waste management and servicing requirements for a proposed developed in Council's Local Government Area. The waste management requirements focus on four key features:</p> <ul style="list-style-type: none"> • Avoiding unnecessary resource consumption. • Recovering resources for reuse. • Recovering resources for recycling or reprocessing. • Disposing of residual waste, as a last resort.
Other	
Building Code of Australia (BCA) and relevant Australian Standards	The BCA has the aim of achieving nationally consistent, minimum necessary standards of relevant health and safety, amenity and sustainability objectives efficiently.
Council of Australian Governments National Construction Code 2016	The National Construction Code 2016 sets the minimum requirements for the design, construction and performance of buildings throughout Australia.
NSW EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012	These better practice guidelines present information on waste minimisation and resource recovery as well as information on commonly used waste management provisions. The guidelines also provide benchmarks for assessing waste production rates in Australia.
NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027	Replacing the NSW Waste Avoidance and Resource Recovery Strategy (2014-21), the NSW Waste and Sustainable Materials Strategy 2041 focuses on the transition of NSW to a circular economy. The strategy focuses on minimising what is thrown away, and to use and reuse resources more efficiently, making them as productive as possible. The strategy identifies the need to identify infrastructure needs, the mandating of separation of some organic waste streams, and incentivising biogas generation from waste materials.
NSW EPA Resource Recovery Orders and Resource Recovery Exemptions	<p>The NSW EPA has issued a number of resource recovery orders and resource recovery exemptions under the POEO (Waste) Regulation 2014 for a range of wastes that may be recovered for beneficial re-use. These wastes typically include those from demolition and construction works, as well as operational wastes such as food waste.</p> <ul style="list-style-type: none"> • Resource recovery orders present conditions which generators and processors of waste must meet to supply the waste material for beneficial re-use. • Resource recovery exemptions contain the conditions which consumers must meet to use waste for beneficial re-use.

¹ <https://www.legislation.nsw.gov.au/#/view/EPI/2010/49>

² <http://www.lanecove.nsw.gov.au/Development/DevelopmentControls/Pages/LEPandDCP.aspx>

Legislation and Guidance	Objectives
NSW EPA's Waste Classification Guidelines 2014	The NSW EPA Waste Classification Guidelines assists waste generators to effectively manage, treat and dispose of waste to ensure the environmental and human health risks associated with waste are managed appropriately and in accordance with the POEO Act 1997 and is associated regulations.
POEO (Waste) Regulation 2014	The POEO (Waste) Regulation 2014 contains provisions relating to the waste levy, waste tracking and management requirements for certain waste types, payment schemes for local Councils and consumer packaging recycling.
Protection of the Environment Operations Act (POEO) 1997 and Amendment Act 2011	The POEO Act 1997 and POEO Amendment Act 2011 are administered by the NSW Environment Protection Authority (NSW EPA) to enable the NSW Government to establish instruments for setting environmental standards, goals, protocols and guidelines. They outline the regulatory requirements for lawful disposal of wastes generated during the demolition, construction and operational phases of a development, as well as the system for licencing waste transport and disposal.
Waste Avoidance and Resource Recovery Act 2001	<p>The Waste Avoidance and Resource Recovery Act 2001 aims to promote waste avoidance and resource recovery and repeals the Waste Minimisation and Management Act 1995. Specific objectives of the Waste Avoidance and Resource Recovery Act 2001 include:</p> <ul style="list-style-type: none"> • encouraging efficient use of resources • minimising the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste • ensuring industry and the community share responsibility in reducing/dealing with waste, and • efficiently funding of waste/resource management planning, programs and service delivery. <p>As of 2016, the addition to the Act of Part 5 defines the legislative framework for the 'Return and Earn Container Deposit Scheme' whereby selected beverage containers can be returned to State Government authorities for a monetary refund.</p>
The Work Health and Safety Regulation 2017	The Work Health and Safety Regulation 2017 provide detailed actions and guidance associated with the topics discussed in The Work Health and Safety Act 2011. The primary aim of the regulation is to protect the health and safety of workers and ensure that risks are minimised in work environments. Workplaces are to ensure that they are compliant with the requirements specified in the regulations. The regulations discuss items such as actions that are prohibited or obligated in work environments, the requirements for obtaining licences and registrations, and the roles and responsibilities of staff in workplaces.

4 Development Description

As shown in Figure 1, the majority of the site is currently vacant land. The proposed work for the Development, shown in Figure 3, is anticipated to comprise:

- Site preparation, including clearing, grubbing and earthworks, for installation of services, foundation slabs and so forth.
- Earthworks, including cut and fill, to achieve the required levels for the Development.
- Construction of the Development, consisting of:
 - Generators on the outside of the building
 - Level 1 basement floor consisting of lifts and staircases, two data halls, a fuel store, store rooms, other services and corridors in between
 - Level 2 consisting of lifts and staircases, four data halls, two store rooms, GIS services room, communication services rooms, other services and corridors in between
 - Level 3 consisting of lifts and staircases, four data halls, two store rooms, communication services room, other services and corridors in between
 - Level 4 consisting of lifts and staircases, four data halls, a number of office spaces and meeting rooms, a kitchen, a breakout space, the entry check in, the communal waste storage room, the loading bay, communication services rooms and corridors in between
 - Level 5 consisting of lifts and staircases, four data halls, two store rooms, communication services rooms and corridors in between, and
 - Roof Level 6 consisting of lifts and staircases, two data halls, store rooms, communication services rooms and corridors in between, and
 - Roof Level 7 consisting of lifts and staircases, data halls, store rooms, communication services rooms and corridors in between, and
 - A roof level consisting of lifts, staircases and chillers.

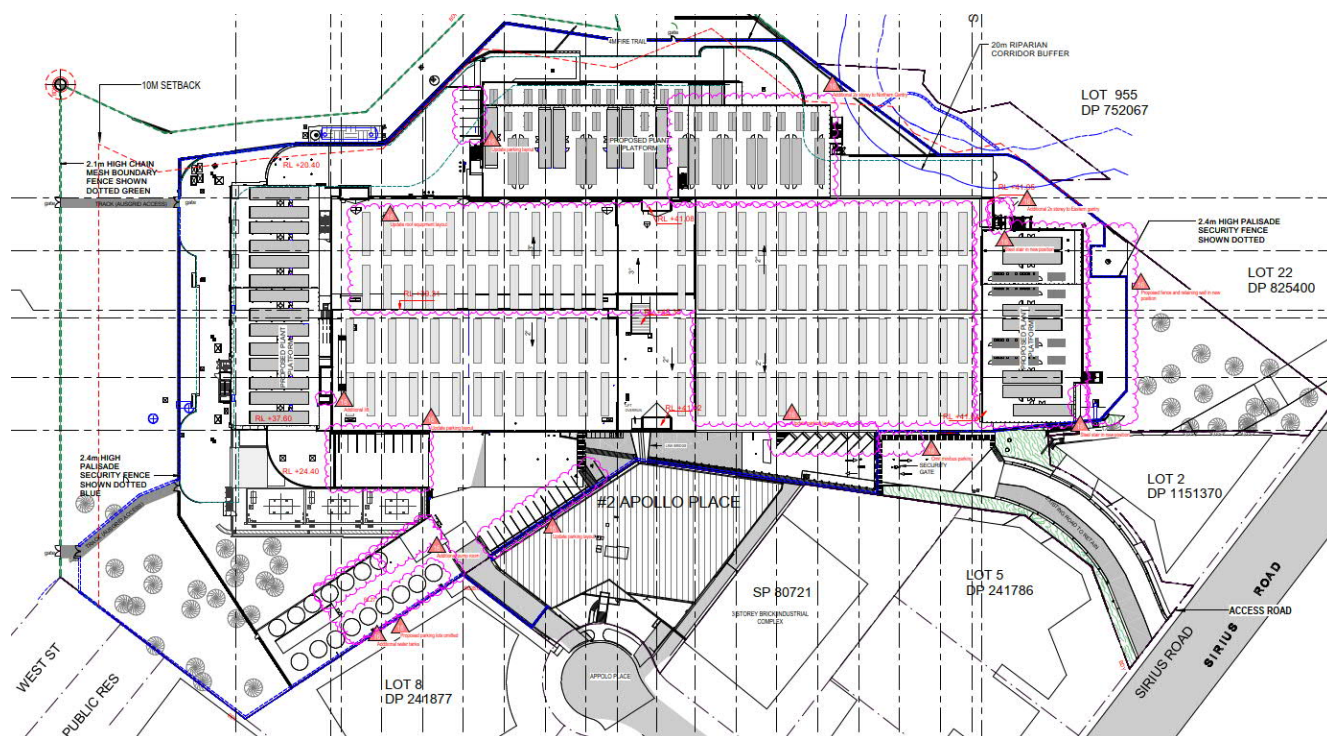


Figure 3 Proposed layout for the Development

5 Site Preparation and Construction Waste and Recycling Management

5.1 Targets for Recycling

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

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

5.2 Waste Streams

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

- Site clearance and excavation wastes
- Construction waste
- Packaging waste
- Work compound waste from on-site employees

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

For further information on how to determine a waste's classification refer to the NSW EPA (2014) Waste Classification Guidelines³. Further information on managing site preparation and construction wastes is available from the NSW EPA website⁴ and the Lane Cove DCP.

Table 2 Potential waste types, classifications and management methods – construction waste

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Site Preparation and Construction		
Green waste	General solid waste (non-putrescible) (garden waste)	Off-site recycling at a site lawfully able to accept it.
'Clean' fill	To be classified subject to the results of testing	Beneficial re-use on-site or off-site, if assessed to be suitable
Contaminated fill	To be classified subject to the results of testing	Off-site treatment or disposal at a site lawfully able to accept it.
Excavated natural material (ENM) or virgin excavated natural material (VENM)	To be classified subject to the results of testing	Beneficial re-use on-site or off-site, if assessed to be suitable

³ Available online from <https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines>

⁴ <http://www.epa.nsw.gov.au/your-environment/waste/industrial-waste/construction-demolition>

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Construction		
Sediment fencing, geotextile materials	General solid waste (non-putrescible)	Reuse at other sites where possible or disposal at a site lawfully able to accept it.
Concrete	General solid waste (non-putrescible)	Off-site recycling for filling, levelling or road base
Bricks and pavers	General solid waste (non-putrescible)	Off-site recycling at a site lawfully able to accept it., Cleaned for reuse, rendered over or crushed for landscaping or driveway use
Gyprock or plasterboard	General solid waste (non-putrescible)	Off-site recycling at a site lawfully able to accept it.or returned to supplier
Sand and/or soil	General solid waste (non-putrescible)	Off-site recycling at a site lawfully able to accept it.
Metals such as fittings, appliances and bulk electrical cabling	General solid waste (non-putrescible)	Off-site recycling at a site lawfully able to accept it.
Timber	General solid waste (non-putrescible)	Off-site recycling at a site lawfully able to accept it. Treated: reused for formwork, bridging, blocking, propping or second hand supplier Untreated: reused for floorboards, fencing, furniture, mulched second hand supplier
Doors, Windows, Fittings	General solid waste (non-putrescible)	Off-site recycling at second hand supplier
Insulation material	General solid waste (non-putrescible)	Off-site disposal at a site lawfully able to accept it.
Glass	General solid waste (non-putrescible)	Off-site recycling at a site lawfully able to accept it, glazing or aggregate for concrete production
Asbestos	Hazardous waste	Removal and off-site disposal by specialist contractors at a site lawfully able to accept it.
Fluorescent light fittings and bulbs	Hazardous waste	Off-site recycling or disposal at a site lawfully able to accept it, contact FluoroCycle for more information ⁵
Paint	Hazardous waste	Off-site recycling at a site lawfully able to accept it, Paintback collection ⁶ or disposal at a site lawfully able to accept it.
Synthetic Rubber or carpet underlay	General solid waste (non-putrescible)	Off-site recycling at a site lawfully able to accept it, reprocessed and used in safety devices and speed humps

⁵ <http://www.fluorocycle.org.au/> or <http://www.environment.gov.au/settlements/waste/lamp-mercury.html>

⁶ <https://www.paintback.com.au/>

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Carpet	General solid waste (non-putrescible)	Off-site recycling or disposal at a site lawfully able to accept it, reused for landscaping, insulation or equestrian uses
Plant Maintenance		
Empty oil and other drums or containers, such as fuel, chemicals, paints, spill clean ups	Hazardous waste: Containers were previously used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid waste (non-putrescible): Containers have been cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies in preparation for recycling or disposal at a site lawfully able to accept it.
Air filters and rags	General solid waste (non-putrescible)	Off-site disposal at a site lawfully able to accept it.
Oil filters	Hazardous waste	Off-site recycling at a site lawfully able to accept it.
Batteries	Hazardous waste	Off-site recycling at a site lawfully able to accept it., Contact the Australian Battery Recycling Initiative ⁷ for more information
Packaging		
Packaging materials, including wood, plastic, including stretch wrap or LLPE, cardboard and metals	General solid waste (non-putrescible)	Off-site recycling at a site lawfully able to accept it.
Wooden or plastic crates and pallets	General solid waste (non-putrescible)	Reused for similar projects, returned to suppliers, or off-site recycling at a site lawfully able to accept it.. Contact Business Recycling for more information ⁸
Work Compound and Associated Offices		
Food Waste	General solid (putrescible) waste	Compost on site. Alternatively dispose at a site lawfully able to accept it with general garbage
Recyclable beverage containers, glass and plastic bottles, aluminium cans, steel cans	General solid waste (non-putrescible)	Co-mingled recycling at a site lawfully able to accept it.or at a local NSW container deposit scheme 'Return and Earn' facility. ⁹
Clean paper and cardboard	General solid waste (non-putrescible)	Paper and cardboard recycling at a site lawfully able to accept it.

⁷ <http://www.batteryrecycling.org.au/home>

⁸ <http://businessrecycling.com.au/search/>

⁹ <http://returnandearn.org.au/>

Waste Types	NSW EPA Waste Classification	Proposed Management Method
General domestic waste generated by workers, such as soiled paper and cardboard, food and polystyrene	General solid waste (non-putrescible) mixed with putrescible waste	Disposal at a site lawfully able to accept it.

5.3 Estimated Site Preparation Waste Quantities

As the site is currently vacant, site preparation waste is expected to be primarily green waste, excavated fill, soil and/or rock. Email communication¹⁰ from the Client provides the cut and fill quantities for the Development. These are shown in Table 3 below.

Table 3 Bulk earthworks quantities

Total Cut (m ³)	Total Fill (m ³)	Balance (m ³)
92,100	32,200	59,900

Care should be taken to minimise site disturbance and limit unnecessary excavation.

All excavated spoil is to be classified by an appropriately experienced environmental consultant and separated into contaminated materials, if any, uncontaminated fill or ENM. Refer to Section 5.7 for management of stockpiles. Uncontaminated fill or ENM should be retained on site and managed appropriately for beneficial re-use for filling earthworks. As a last resort, remaining uncontaminated fill or ENM is to be sent off-site to a licenced facility in accordance with the Protection of the Environment Operations (Waste) Regulation 2014.

For contaminated material management, refer Section 5.8 of this WMP. Excavated sandstone is to be sold for beneficial re-use.

As per the NSW EPA Request for SEARs letter¹¹, waste disposal certificates for all excavated materials are to be kept on site at all times and included as part of a report to the EPA that outlines the excavation and filling work undertaken.

5.4 Estimated Construction Waste Quantities

The Development proposes to comprise of a basement floor, four operational floors and a roof as mentioned in Section 4.

While 'Appendix B: Waste/Recycling Generation Rates' of the Lane Cove DCP provides waste generation rates for construction phase, it requires estimations of the quantities of the construction materials being brought to site. These are not yet available.

In absence of Council supplied construction waste generation rates, SLR has applied the below rates, as shown in Table 4, to estimate the type and quantities of construction wastes likely to be generated:

- 'Office' rates listed in Appendix A of The Hills Development Control Plan (DCP) 2012, applied to the construction of each floor level

¹⁰ Email communication from Dino DiPaolo, email title 'RE: SEPP 33 Report Data Centre Lane Cove', dated 24 January 2020

¹¹ NSW EPA, Request for SEARs, DOC18/917875-4 SSD 9741, dated 12 December 2018

- 'Factory' rates listed in Appendix A of The Hills Development Control Plan (DCP) 2012, applied to the construction of the roof
- 'Carpark' rates based on the 'Office' rates listed above, with the following adjustments, applied to the construction of the platforms of the generators, the vehicle ramps and car parking spaces:
 - Removing timber, bricks and gyprock as these materials are unlikely to be present in significant quantities in a modern carpark structure, and
 - Increasing the rates for concrete, sand, soil, metal and 'other', in proportion, to maintain the total assumed tonnage per 1,000 m² of construction.

Table 4 Construction waste generation rates

Rate Type	Floor Area (m ²)	Waste Material (tonnes)						
		Timber	Concrete	Bricks	Gyprock	Sand or Soil	Metal	Other
Office	1,000	5.1	18.8	8.5	8.6	8.8	2.75	5
Factory	1,000	0.25	2.1	1.65	0.45	4.8	0.6	0.5
Carpark	1,000	--	30.6	--	--	14.3	4.5	8.1

The construction wastes in Table 5 have been estimated using:

- floor areas estimated by SLR from the Architectural drawings attached in Appendix A, and
- waste generation rates as shown in Table 4.

Table 5 Anticipated types and estimated quantities of construction waste

Development Component	Area (m ²)	Waste types and quantities (tonnes)						
		Timber	Concrete	Bricks	Gyprock	Sand or Soil	Metal	Other
Level 1 basement floor	4,020	25	80	35	35	40	15	25
Level 2 floor	7,780	40	150	70	70	70	25	40
Level 3 floor	7,780	40	150	70	70	70	25	40
Level 4 floor	7,620	40	145	65	70	70	25	40
Level 5 floor	7,780	40	150	70	70	70	25	40
Roof level 6	7,780	40	150	70	70	70	25	40
Rood level 7	7,780	40	150	70	70	70	25	40
Roof	10,360	5	25	20	5	50	10	10
All generator platforms	23,920	0	735	0	0	345	110	195
Vehicle ramps, routes and parking	10,080	0	310	0	0	145	50	85
Totals	94,900	270	2045	470	460	1000	335	555

Waste quantities have been rounded up to the nearest 5 t.

Areas have been rounded up to the nearest 10 m².

The Lane Cove DCP requires architectural drawings to show details of the storage areas for demolition and construction waste. This includes the size and location of areas, heavy vehicle access to the areas, excavation areas, storage bins and signage. Council's checklist is provided in Appendix B, which will aid in checking the drawings against Council's requirement.

At the time of preparing this plan, architectural drawings with storage details for demolition and construction waste were not available.

5.5 Waste Avoidance

In accordance with the Lane Cove DCP and better practice waste management, the Building Designer should:

- Select materials with low embodied energy properties that suit the Development, such as:
 - prefabricated components and recycled materials, such as recycled steel and glass-wool insulation
 - concrete with slag and fly ash content
 - fittings and furnishings that incorporate recycled materials and have been certified as sustainable or environmentally friendly by a recognised third party certification scheme.
- Reduce the use of PVC.
- Use paints, floor coverings and adhesives with low volatile organic compound content.
- Choose construction materials with a longer lifespan and/or high potential for re-use.
- Use low formaldehyde wood products, post-consumer reused timber, Forest Stewardship Council-certified timber, wood plastic composite or recycled plastic timber substitute.
- Avoid the use of unsustainable timber imports such as western red cedar, oregon, meranti, luan or merbau.
- Select pre-finished materials.
- Centralise wet areas and minimise piping where possible.
- Design for deconstruction, rather than demolition.

The Building Contractor should:

- Estimate required quantities of materials to reduce over-purchasing and excess materials.
- Arrange delivery of materials on an 'as needed' basis to mitigate material degradation by weathering or moisture damage.
- Reduce packaging waste by:
 - returning packaging to suppliers where possible and practicable
 - purchasing in bulk
 - requesting cardboard or metal drums rather than plastics
 - requesting metal straps rather than shrink wrap
 - using returnable packaging such as pallets and reels.
- Reduce unnecessary excavation and site disturbance.
- Ensure subcontractors are informed of and implement site waste management procedures.

5.6 Re-use, Recycling and Disposal

The Building Contractor should:

- Sort and segregate site preparation and construction wastes to ensure efficient recycling of wastes, as outlined in Section 5.7.1.
- Store wastes on site appropriately to prevent cross-contamination and/or mixing of different waste types, as outlined in Sections 5.7.1.

- Re-use formwork where appropriate.
- Recycle or dispose of waste oil in an appropriate manner.
- Retain roofing material cut-offs for re-use.
- Retain used crates for storage purposes unless damaged.
- Recycle cardboard, glass and metal wastes.
- Return packaging to suppliers where possible.
- Recycle solid waste timber, brick, concrete, asphalt and rock, where such waste cannot be re-used on site, to an appropriately licenced construction and demolition (C&D) waste recycling facility or dispose at an appropriately licenced landfill.
- Dispose of all asbestos and/or hazardous wastes in accordance with SafeWork NSW and NSW EPA requirements.
- Deliver batteries and florescent lights to drop off-site recycling facility.

5.7 Waste Segregation, Storage and Servicing

5.7.1 Waste Segregation and Storage

Waste materials produced from site preparation and construction activities are to be segregated and stored separately on site, with clear signage identifying the purpose of different storage areas. It is anticipated that the site will have available space provided by the Building Contractor for separate storage in separate skip bins and/or appropriately managed stockpiles, of the following waste types:

- Bricks, concrete and scrap metal
- Metal and steel, if any, in a condition suitable for recycling at metal recycling facilities
- Timber
- Glass
- Hardstand rubble
- Excavation spoil, uncontaminated, if present
- Contaminated excavation spoil, if present
- Hazardous waste, if present
- Paper and cardboard
- Recyclable general waste
- Non-recyclable general waste

If there is insufficient space onsite for full segregation of waste types, the Building Contractor is to consult with waste and/or recycling collection facilities to confirm which waste types may be co-mingled prior to removal from the site.

Areas designated for waste storage should:

- allow unimpeded access by site personnel and waste disposal contractors
- not be located on footpaths, public reserves and street gutters without Council approval

- employ adequate environmental management controls, for example, consideration of slope, drainage and proximity relative to waterways, stormwater outlets and vegetation, to prevent off-site migration of waste materials and/or contamination from the waste
- not present hazards to human health or the environment.

5.7.2 Waste Servicing and Record Keeping

The Building Contractor is to:

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

5.8 Contaminated and Hazardous Waste

During the site preparation and construction phases, SLR recommends that a qualified and certified contractor is engaged to remove all contaminated or hazardous materials, for example, asbestos, and dispose of all contaminated or hazardous waste at an appropriately licenced facility.

All asbestos and other hazardous waste must be handled according to appropriate legislation and regulation including the Work Health and Safety Regulation 2011.

5.9 Signage

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

Signs approved by the NSW EPA for labelling of waste materials are available online¹² and should be used where applicable. A selection of signs prepared by NSW EPA is provided in Figure 4.

¹² NSW EPA approved waste materials signage <http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm>



Figure 4 Examples of NSW EPA labels for waste skips/bins

5.10 Site Inductions

Waste management measures and procedures are to be included in the site induction for all personnel working at the site. With respect to waste management, the site induction is to include, at a minimum:

- An outline of this SWMMP
- Legal obligations
- Emergency response procedures on site
- Waste storage locations and separation of waste
- Litter management in transit and on site
- Implications of poor waste management practices
- Correct use of spill kits and
- Responsibility and reporting, including identification of personnel responsible for on-site waste management and individual responsibilities.

5.11 Monitoring and Reporting

Records of quantities of waste re-used, recycled or disposed to landfill are to be maintained by the Building Contractor. Additionally, dockets and receipts verifying recycling and/or disposal in accordance with the SWMMP must be retained and presented to the regulatory authorities such as Council, SafeWork NSW or NSW EPA if requested.

Daily visual inspections of waste storage areas will be undertaken by site personnel to identify and rectify any issues concerning waste management at the site, as well as identifying opportunities to improve waste management at the site. A written record of these inspections, which will include observations made and the results of any remedial actions taken, is to be undertaken and retained by the Building Contractor as part of the construction environmental management documentation.

6 Operational Waste and Recycling Management

6.1 Targets for Resource Recovery

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

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

6.2 Waste Streams and Classifications

Operation of the Development is anticipated to generate the following broad waste streams:

- General waste and commingled recycling
- Food and organic wastes
- Bulk packaging wastes, including polystyrene and cardboard boxes
- E-wastes
- Bulky waste items, such as furniture and
- Plant and general maintenance wastes.

Potential waste types, their associated waste classifications, and management methods are provided in Table 6.

For further information on how to determine a waste's classification, refer to the NSW EPA (2014) Waste Classification Guidelines.¹³

Table 6 Potential waste types, classifications and management methods – operational waste

Waste Types	NSW EPA Classification	Proposed Management Method
Clean office paper	General solid (non-putrescible) waste	Paper recycling at a site lawfully able to accept it.
Cardboard including bulky cardboard boxes	General solid (non-putrescible) waste	Cardboard recycling at a site lawfully able to accept it.
Recyclable beverage containers, glass and plastic bottles, aluminium cans, steel cans	General solid (non-putrescible) waste	NSW container deposit scheme 'Return and Earn', container recycling at a site lawfully able to accept it.
Food waste	General solid (putrescible) waste	Compost on or off-site or dispose to at a site lawfully able to accept it with general garbage
Batteries	Hazardous waste	Off-site recycling, can be taken to the Lane Cove Civic Centre, Lane Cove Woolworths and Lane Cove Coles, alternatively contact the Australian Battery Recycling Initiative for more information

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

Waste Types	NSW EPA Classification	Proposed Management Method
Mobile Phones	Hazardous waste	Off-site recycling, can be taken to a number of locations in the Lane Cove Council area, through the Mobile Muster program. Contact Mobile Muster for more information
Bulky polystyrene	General solid (non-putrescible) waste	Off-site recycling or disposal at a site lawfully able to accept it.
Furniture	General solid (non-putrescible) waste	Off-site reuse or disposal to at a site lawfully able to accept it.
E-waste	Hazardous waste	Off-site recycling at a site lawfully able to accept it.
Printer toners and ink cartridges	Hazardous waste	Off-site recycling, free disposal box or bags and pickup service exists for printer toners and ink cartridges
General garbage, including non-recyclable plastics	General solid (putrescible and non-putrescible) waste	Disposal at a landfill lawfully able to accept it.
Spent smoke detectors ¹⁴	General solid (non-putrescible) waste OR Hazardous waste (some commercial varieties)	Disposal to landfill, or off-site disposal at a site lawfully able to accept it.
Glass, other than containers	General solid (non-putrescible) waste	Off-site recycling at a site lawfully able to accept it.
Light bulbs and fluorescent tubes	Hazardous waste	Off-site recycling or disposal, contact FluoroCycle for more information
Air-conditioning parts and filters	General solid (non-putrescible) waste	Off-site recycling or disposal at a site lawfully able to accept it.
Cleaning chemicals, solvents, area wash downs, empty oil or paint drums, chemical containers	Hazardous waste if containers used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid (non-putrescible) waste if containers cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at licensed facility.
Garden organics - lawn mowing, tree branches, hedge cuttings, leaves	General solid (non-putrescible) waste	Reuse on-site or contractor removal for recycling at a site lawfully able to accept it.

6.3 Waste Management Overview

General and recycling waste generation will primarily occur in the office areas. Waste that will be generated in the data halls and corridor areas includes e-waste and packaging waste. This will be handled either through a separate contract for e-waste collection and recycling or by returning packaging materials to the product suppliers.

The operational waste management for the office and kitchen areas are proposed to comprise:

¹⁴ The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) require that when more than 10 smoke alarms (particularly americium-241 sources) are collected for bulk disposal they must be treated as radioactive waste and the requirements of the National Health and Medical Research Council's Code of practice for the near-surface disposal of radioactive waste in Australia (1992) must be met.

- Four labelled bins to be stored in the waste storage room and labelled for general waste, paper and cardboard recycling and recyclable containers.
- The four bins include one general waste bin of 660 L capacity, two paper and cardboard recycling bins of 240 L capacity, and one 240 L bin for recyclable containers.
- General waste and recycling bins are to be initially collected from office and kitchen areas and transferred daily, by cleaners, to the waste storage room.
- The waste and recycling bins will be collected by a Council or a private waste contractor from the waste storage room, which is accessed through the loading dock.

6.4 Waste Servicing

SLR anticipates that waste servicing of the Development would be provided by a private waste contractor. If a private waste contractor is engaged, a valid waste and recycling collection contract is required to demonstrate disposal at a waste facility lawfully able to accept it. Written evidence of the valid contract is to be kept on site.

6.5 Estimated Operational Waste Quantities

For the purposes of this assessment, SLR has adopted the general waste and recycling rate for 'office' as presented in Council's Appendix B - Waste/Recycling Generation Rates for Ongoing Operation, specifically:

- Office: 10 L of waste and 10 L of recycling per 100 m² of floor area per day.

The generation rates for 'Office' will be used for all rooms with similar operational use to office spaces. These are all located on Level 4 and include offices, meeting rooms and breakout spaces. The combined area excludes the allocated space for waste storage.

The estimated quantities of operational waste generated by the offices areas in the Development are shown in Table 7. Operational waste generation from the data halls and corridor areas have not been included as these primarily constitute e-waste and packaging waste, which are handled separately and are discussed in Section 6.5.1.

Quantities shown in Table 7 are based on:

- Floor areas provided from communication with the Client¹⁵
- Council's waste and recyclable material generation rate listed above
- A week comprising seven days of operation, and
- General recycling consisting of approximately 60% paper and cardboard, and 40% recyclable containers¹⁶.

Table 7 Estimated quantities of operational waste and recycling

Location	Area (m ²)	(L / day)			(L / week)		
		Waste	Paper and Cardboard Recycling	Recyclable Containers	Waste	Paper and Cardboard Recycling	Recyclable Containers
Total Office Area	1,054	105	63	29	737	442	206

¹⁵ Email communication from Dino DiPaolo, email title "RE: 630.12671 Updated Area RFIs", dated 28 January 2020.

¹⁶ <https://www.epa.nsw.gov.au/-/media/EPA/Corporate%20Site/resources/warrlocal/140442-audits-2011.ashx>

6.5.1 Additional operational waste

In addition to the estimated quantities of waste and recycling listed in Table 7, the Development is anticipated to produce:

- Minimal quantities of green landscaping waste
- Significant quantities of electronic waste or e-waste, and
- Cardboard packaging waste from electronic products for the data halls

Green garden organic landscaping waste will be taken by a landscaping contractor who will dispose of it at a garden organics processing facility such as Kimbriki.

The Development is likely to generate significant quantities of e-waste, which could exceed 240 L per week, such as computer parts, keyboards, and cabling. For this reason, a waste collection and recycling contract should be established to collect all e-waste for recycling and ensure it is not landfilled.

Packaging waste for electronic products will be returned to the supplier.

6.6 Waste Storage

The Lane Cove DCP requires architectural drawings to show details of the waste storage areas. This includes a waste storage room of suitable size, a collection point for the emptying of bins, the route of access to the collection point for cleaners, and the route that collection vehicles will take to access the collection point. Council's checklist is provided in Appendix B to aid in checking the drawings against Council requirement. Further details on waste storage room specifications are shown in the sections below.

6.6.1 Waste storage room location and access

In accordance with the Lane Cove DCP, SafeWork NSW Work Health and Safety measures and better practice waste management, waste storage areas are to:

- Be constructed in accordance with the requirements of the National Construction Code 2016 (NCC) and ensuring impervious floors and ceilings, and fire safety and resistant provisions
- Have smoke detectors be installed in accordance with Australian Standards and connected to the fire prevention system of the building
- Located in areas that are in close proximity to servicing vehicle entrance and are easy to maintain
- Located in areas that are convenient, safe and functional to users and servicing collection staff alike
- Located so that servicing vehicles can enter and exit the premises in a forward direction with minimal reversing
- Have access paths for wheeling bins between storage and collection that are level and free from steps
- Have access ramps of a suitable gradient, so that access for the purpose of the storage and collection of waste and recycling bins, can occur in accordance with SafeWork NSW Work Health and Safety requirements.
- Located to minimise negative noise and odour impacts
- Located in areas that are not visible from the street or public domain
- Located in areas that are not adjoining onsite employee recreation areas

- Have access driveways for the purpose of the collection of waste which must have suitable strength to support collection vehicles
- Be integrated with the use, form and arrangement of the Development, and
- Be designed so that litter and contamination of the stormwater drainage system is avoided.

While the Lane Cove DCP does not provide a specific gradient requirement for access roads to be used by commercial waste collection vehicles, a specification is included in Council meeting minutes provided for the Pre-DA Lodgement meeting held on the 26 of November 2018. This is included as part of the SEARs attachments¹⁷. Council notes that access roads that are to be used by commercial or industrial vehicles for the collection of garbage and recycling are to have a maximum longitudinal gradient of 1:7 - 1:8. This applies to distances up for 100 m.

In addition to a central waste storage area where waste and recycling is collected by a private waste servicing contractor, the Lane Cove DCP states that a waste and recycling cupboard must also be provided in every kitchen area in the Development. The cupboard must be designed for the storage of at least a single day of waste and to include separate waste and recyclable bins.

Council's drawing checklist (Appendix B) states that the waste storage room path access collection vehicles must be highlighted in the architectural drawings, along with other additional details such as the final collection point. The level 4 floor plan, drawing number ATSYD2_SSD_DRG_ARC_0103, issue 23, dated 15 August 2022 (Figure 5) shows the location of the waste storage room. The collection point for waste will be in the loading dock.

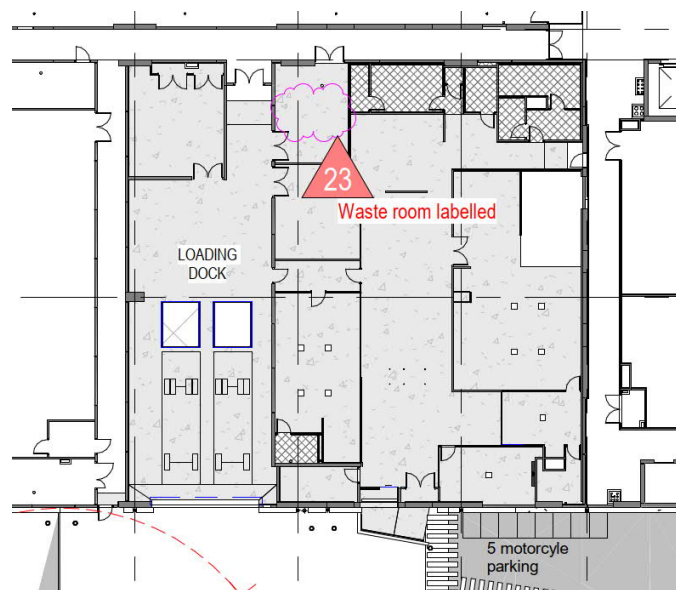


Figure 5 Waste storage room location

¹⁷ NSW EPA, State Significant Development – Planning Secretary's Environmental Assessment Requirements, SSD 9741, dated 21 December 2018

6.6.2 Waste storage room size

The Lane Cove DCP requires the waste and recycling storage area to be adequate enough to hold the amount of operational waste and recycling generated between collections. Furthermore, the building must have provision to separate waste and recyclable material.

In the absence of readily available Council data for dimensions of bins of capacity 660 L and 1,100 L, SLR has adopted bin dimensions from the City of Sydney 'Guidelines for Waste Management in New Developments'¹⁸.

Estimates of the number of bins required for weekly storage of operational waste and recycling generated by the office occupancy are shown in Table 8 and are based on:

- Estimated quantities of operational waste and recycling as shown in Table 7
- Waste being stored in 660 L bins for servicing by a waste collection contractor
- Recycling being stored in 240 L bins for servicing by a waste collection contractor
- Bin dimensions for 240 L from the Lane Cove DCP and for 660 L bins from the City of Sydney 'Guidelines for Waste Management in New Development'.

To allow for easy and safe movement of bins into and out of the bin storage area, the bin area should provide a floor area of at least 200% of the total minimum bin area. This provision has been applied to the recommended storage area shown in Table 8 below. This can also act as a contingency in the event of spikes in waste generation.

Table 8 Minimum number of bins required for weekly operational waste storage areas

Location	Bins required			Collection Frequency per Week			Recommended Storage Area (m ²)
	Garbage	Recycling Paper and Cardboard	Recyclable Containers	Garbage	Recycling Paper and Cardboard	Recyclable Containers	
Waste storage room	1 x 660 L	2 x 240 L	1 x 240 L	2	2	1	5

Review of the Level 4 floor plan¹⁹, attached in Appendix A, indicates that there is approximately 32 m² allocated to the waste storage room, which is sufficient to store the estimated quantities of operational waste and recycling, as shown in Table 7, in between collections and also provide enough additional storage space for storage of an additional e-waste collection bin.

6.6.3 Waste storage room features

The Lane Cove DCP and good practice waste management require the waste storage room to have the following features:

- The design of the waste storage room is to compliment the design of the Development. The materials and finishes inside the room are to be of similar style and quality to the rest of the Development
- The floor must be smooth and durable
- The room is to be bounded by durable walls or fences that extend to the height of any bins kept within

¹⁸

https://www.cityofsydney.nsw.gov.au/_data/assets/pdf_file/0009/307269/WasteManagementGuidelines_240818_AccessibleForms.pdf

¹⁹ Greenbox Architecture Pty Ltd, drawing ATSYD2_SSD_DRG_ARC_0103, issue 23, dated 15 August 2022

- The room is to have a durable door, designed to open both inwards and outwards. A sign is to be placed on the door indicating that it must be closed when not in use. The door is to be large enough to allow for each entry of waste and recycling bins
- To room is to be suitably enclosed and maintained to avoid polluted wastewater runoff from entering the stormwater system, and
- All waste and recycling bins are to have securely fitted lids to avoid any overflow of waste.

6.6.4 Waste storage room maintenance

The waste storage room should be maintained as per the below requirements in accordance with the Lane Cove DCP and better practice waste management:

- The waste storage room is to be regularly maintained. The floor is to be graded so that any water used for cleaning is directed to a sewer authority approved drainage connection located on site
- The waste storage room is to be cleaned with hot and cold water provided through a centralised mixing valve. The hose is to be located in an easily accessible area with no obstruction by waste containers, and
- Waste and recycling bins are to be cleaned in an area draining to a sewer authority approved drainage connection.

6.7 Waste Avoidance, Re-use and Recycling

6.7.1 Waste avoidance

Waste avoidance measures include:

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

6.7.2 Re-use

Establish systems with in-house and supply chain stakeholders to transport products in re-useable packaging where possible.

6.7.3 Recycling

Recycling opportunities include:

- Providing separate receptacles for general waste, recycling and paper and cardboard throughout public areas, as well as in staff areas, to encourage source-separation of waste streams
- Separating, by a reasonable distance, the storage areas for recyclables from the general waste storage areas to avoid cross contamination
- Paper recycling trays provided in staff areas for scrap paper collection and recycling
- Printer toners and ink cartridges collected in allocated bins for appropriate contractor recycling, and
- Development of 'buy recycled' purchasing policy.

6.8 Bulky or Hazardous Waste Management

Sufficient space will be provided in the Development for the storage of large and/or bulky items and hazardous wastes that cannot be disposed of in the general waste or recyclable streams. This would include broken pallets, furniture, shelving, monitors, batteries, fluorescent tubes and smoke detectors.

Building management may consider organising a separate casual collection service for as required, to remove bulky waste items, or engaging a contractor to collect and transport these items for reuse, recycling or disposal.

6.9 Signage

Appropriate signage is to be installed to clearly identify waste management procedures and provisions to staff and visitors. Key signage considerations are:

- Clear and correct labelling on all waste and recycling bins, indicating the correct types of waste that can be placed into a given bin. Refer to Figure 6 for examples.
- Signposts and/or directions to location of waste storage areas
- Clear signage in all waste storage areas to instruct users how to correctly source separate waste and recycling
- Maintaining a consistent style colour scheme and system for signs throughout the Development, and
- Emergency contact information for reporting issues associate with waste or recycling management.

Coloured and labelled bin lids are necessary for identifying bins. All signage should conform to the relevant Australian Standard and, for bins, use labels provided by the NSW EPA²⁰.



Figure 6 Example of bin labels for operational waste

6.10 Communication Strategies

Waste management initiatives and management measures should be clearly communicated to the Development's managers, tenants and cleaners. Benefits of providing this communication include:

- Improved satisfaction with services

²⁰ NSW EPA waste signs/posters <http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm>

- Increased ability and willingness to participate in recycling
- Improved amenity and safety
- Improved knowledge and awareness through standardisation of services
- Increased awareness or achievement of environmental goals and targets
- Reduced contamination of recyclables stream which may incur a collection contractor penalty fee
- Increased recovery of recyclables and/organics material, if implemented, and
- Greater contribution to state-wide targets for waste reduction and resource recovery.

To realise the above benefits, the following communication strategies should be considered by the Building Managers:

- Use consistent signage and colour coding throughout the Development
- Ensure all tenants are informed of correct waste separation and management procedures
- Provide directional signage to show locations and routes to waste storage areas
- Clearly label general and comingled waste bins to ensure no cross contamination and to identify the types of waste that may be disposed of in each bin, and
- Educate all employees and site contractors, ensuring compliance with this SWMMP.

6.11 Monitoring and Reporting

Monitoring is recommended to ensure waste and recycling is being managed effectively for the Development.

Monitoring of bins and bin storage areas should be conducted, at minimum:

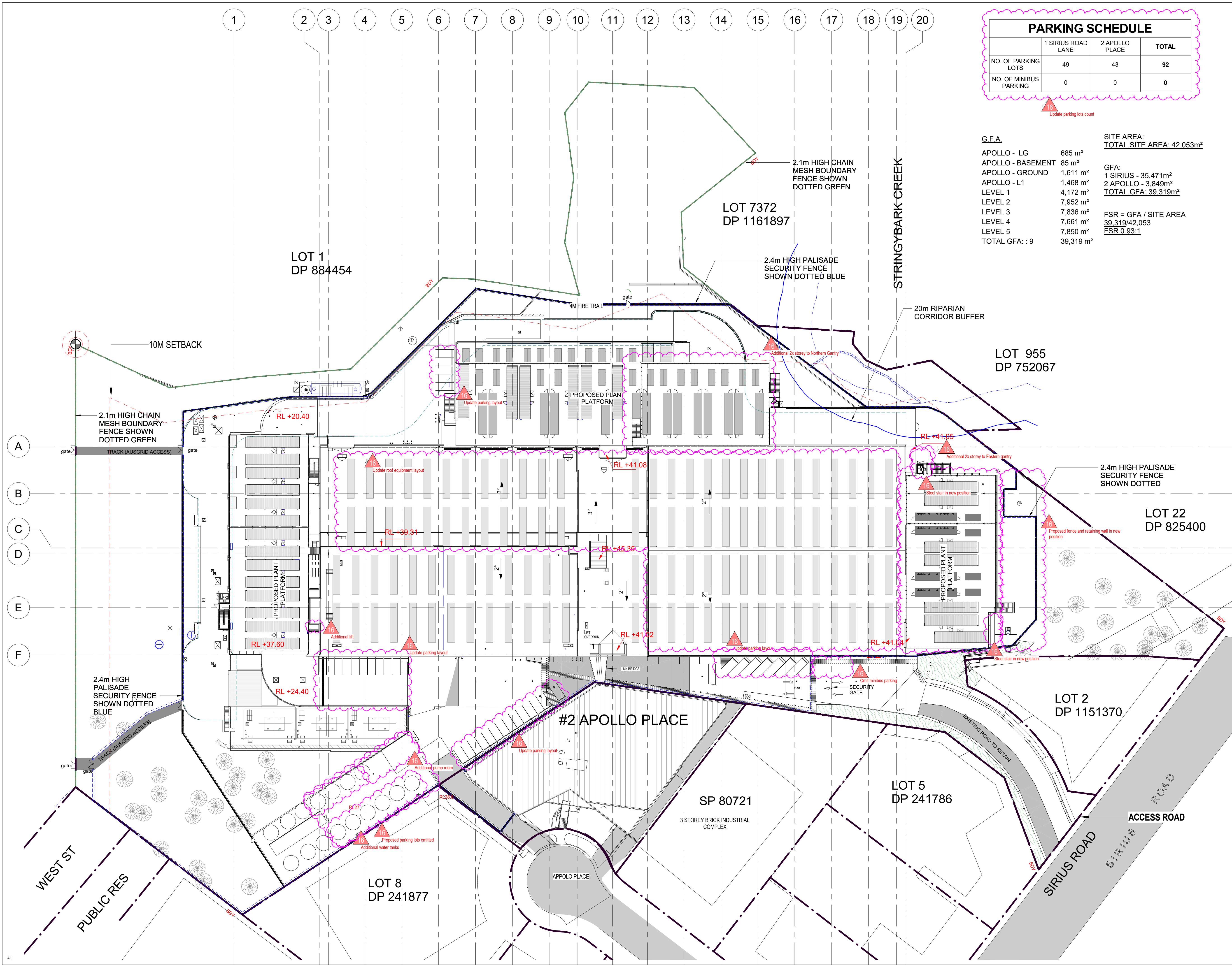
- Every week, in the first two months of operation and
- Every six months, thereafter.

Any deficiencies identified in the waste management system, including unexpected waste quantities or new waste streams, are to be rectified by the Development's management as soon as practicable.

Quantities of waste and recycling, including dockets and/or receipts associated with disposal of waste and recycling, should be recorded by the Development's management to assist reviews of waste and recycling management. Records of waste disposal, including written evidence of a valid contract with a licenced waste contractor, should also be available if required by regulatory authorities, for example, Lane Cove Council, NSW EPA and SafeWork NSW.

APPENDIX A

Architectural Drawings



PARKING SCHEDULE			
	1 SIRIUS ROAD LANE	2 APOLLO PLACE	TOTAL
NO. OF PARKING LOTS	49	43	92
NO. OF MINIBUS PARKING	0	0	0

G.F.A.		SITE AREA:
APOLLO - LG	685 m ²	TOTAL SITE AREA: 42,053m ²
APOLLO - BASEMENT	85 m ²	
APOLLO - GROUND	1,611 m ²	GFA:
APOLLO - L1	1,468 m ²	1 SIRIUS - 35,471m ²
LEVEL 1	4,172 m ²	2 APOLLO - 3,849m ²
LEVEL 2	7,952 m ²	TOTAL GFA: 39,319m ²
LEVEL 3	7,836 m ²	
LEVEL 4	7,661 m ²	FSR = GFA / SITE AREA
LEVEL 5	7,850 m ²	39,319/42,053
TOTAL GFA: : 9	39,319 m ²	FSR 0.93:1

Issue	Date	Description
01	12.12.18	ISSUE FOR APPROVAL
02	13.12.18	ISSUE FOR APPROVAL
03	14.12.18	ISSUE FOR SSD SUBMISSION
04	24.06.19	FOR REVIEW
05	28.06.19	ISSUED FOR RESUBMISSION
06	07.08.19	REVISED SSD
07	16.08.19	REVISED SSD SUBMISSION
08	17.01.20	FOR REVIEW
09	23.01.20	S4.55 SUBMISSION
10	14.08.20	PRELIMINARY
11	25.08.20	PRELIMINARY
12	01.09.20	FOR INFORMATION
13	11.09.20	S4.55 SUBMISSION
14	24.09.20	FOR INFORMATION
15	28.09.20	FOR INFORMATION
16	05.09.22	S4.55 SUBMISSION

Sc. 1:500 0 5 10 15 25m

Project Manager

Services Design

Greenbox

+61 2 8069 8930
LEVEL 25
25 BLIGH ST
SYDNEY NSW 2000 AUSTRALIA
GREENBOX ARCHITECTURE PTY LTD
ABN: 79 139 779 098
ISO 9001 CERTIFIED QUALITY SYSTEM

- Use written dimensions only
- Do not scale from drawing
- Contractors shall confirm all dimensions on-site prior to commencing any work or producing any shop drawings.
- All materials to be used in accordance with the manufacturer's specifications and instructions and shall comply with the relevant Australian Standards
- Copyright of this drawing and design remain the property of Greenbox Architecture Pty Ltd
- Nominated Architect - Gerard Page; NSW reg No.7247, NZ reg No.3715, Vic reg No.17664, SA reg No.3061, QLD reg No.4538, WA reg No.2489

Client

Project
ATSYD2
1 SIRIUS ROAD LANE COVE WEST

Drawn By
SF, JM

Scale
1 : 500 @ A1

Checked By
DK

Approved By
AO

Date
05.09.22

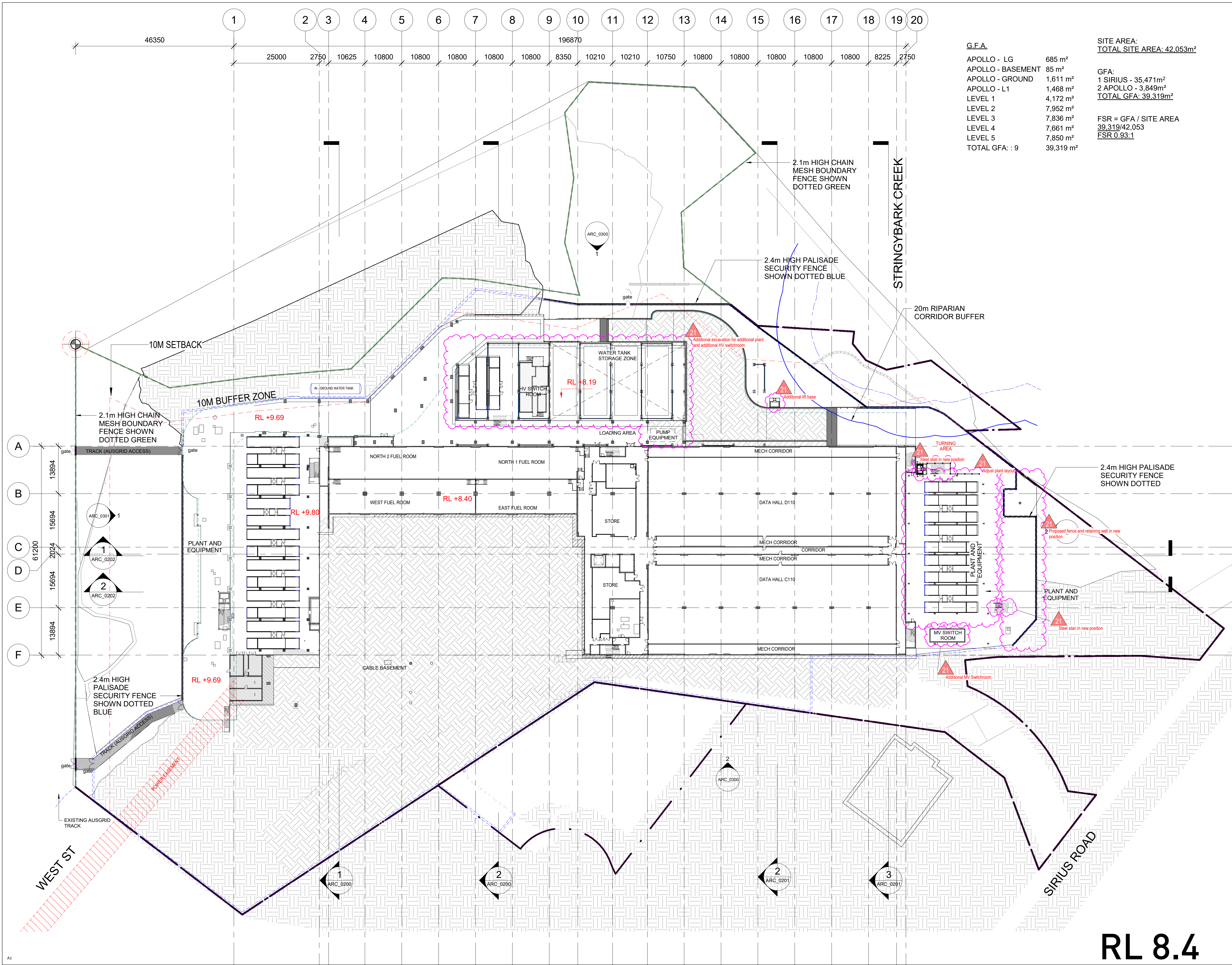
Job Number
180095

Project Status
S4.55 - MOD-3

Drawing Title
MASTER PLAN

Drawing Number
ATSYD2_SSD_DRG_ARC_0050

Issue
16



G.F.A.

APOLLO - LG	685 m ²
APOLLO - BASEMENT	85 m ²
APOLLO - GROUND	1,611 m ²
APOLLO - L1	1,468 m ²
LEVEL 1	4,172 m ²
LEVEL 2	7,952 m ²
LEVEL 3	7,836 m ²
LEVEL 4	7,661 m ²
LEVEL 5	7,850 m ²
TOTAL GFA: : 9	39,319 m ²

SITE AREA:
TOTAL SITE AREA: 42,053m²

GFA:
1 SIRIUS - 35,471m²
2 APOLLO - 3,849m²
TOTAL GFA: 39,319m²

FSR = GFA / SITE AREA
39,319/42,053
FSR 0.93:1

Issue	Date	Description
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02	13.12.18	ISSUE FOR APPROVAL
03	14.12.18	ISSUE FOR SSD SUBMISSION
04	24.06.19	FOR REVIEW
05	28.06.19	ISSUED FOR RESUBMISSION
06	07.08.19	REVISED SSD
07	16.08.19	REVISED SSD SUBMISSION
08	21.08.19	REVISED SSD SUBMISSION
09	03.12.19	LOW VOLTAGE GENERATORS
10	10.01.20	S4.55 SUBMISSION REVIEW
11	15.01.20	FOR REVIEW
12	17.01.20	FOR REVIEW
13	23.01.20	S4.55 SUBMISSION
14	23.01.20	S4.55 SUBMISSION
15	24.01.20	REFERENCE TRIANGLE REMOVED
16	14.08.20	PRELIMINARY
17	25.08.20	PRELIMINARY
18	11.09.20	S4.55 SUBMISSION
19	24.09.20	FOR INFORMATION
20	28.09.20	FOR INFORMATION
21	05.09.22	S4.55 SUBMISSION

Sc. 1:500 0 5 10 15 25m

Project Manager

Services Design

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ABN: 79 139 779 098

ISO 9001 CERTIFIED QUALITY SYSTEM

- Use written dimensions only
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Client

Project
ATSYD2
1 SIRIUS ROAD LANE COVE WEST

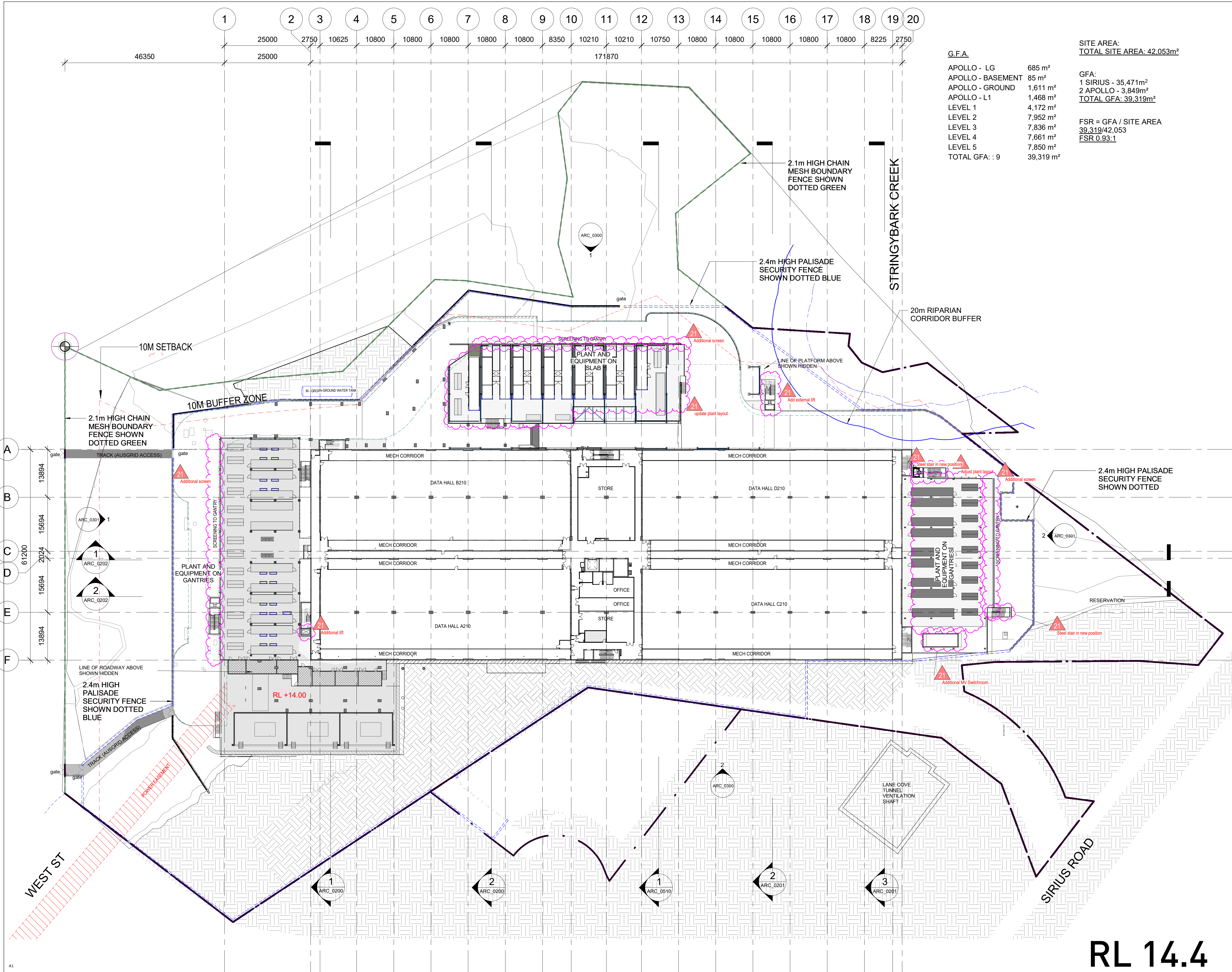
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SF_JM	1 : 500 @ A1
Checked By	Approved By
DK	AO

Date	Job Number
05.09.22	180095

Project Status
S4.55 - MOD-3

Drawing Title
LEVEL 1 FLOOR PLAN _ RL 8.4

Drawing Number	Issue
ATSYD2_SSD_DRG_ARC_0100	21



G.F.A		
APOLLO - LG	685 m ²	
APOLLO - BASEMENT	85 m ²	
APOLLO - GROUND	1,611 m ²	
APOLLO - L1	1,468 m ²	
LEVEL 1	4,172 m ²	
LEVEL 2	7,952 m ²	
LEVEL 3	7,836 m ²	
LEVEL 4	7,661 m ²	
LEVEL 5	7,850 m ²	
TOTAL GFA: : 9	39,319 m ²	

SITE AREA:
TOTAL SITE AREA: 42.053m²

GFA:
1 SIRIUS - 35,471m²
2 APOLLO - 3,849m²
TOTAL GFA: 39.319m²

FSR = GFA / SITE AREA
39.319/42.053
FSR 0.93:1

Issue	Date	Description
01	12.12.18	ISSUE FOR APPROVAL
02	13.12.18	ISSUE FOR APPROVAL
03	14.12.18	ISSUE FOR SSD SUBMISSION
04	24.06.19	FOR REVIEW
05	28.06.19	ISSUED FOR RESUBMISSION
06	07.08.19	REVISED SSD
07	16.08.19	REVISED SSD SUBMISSION
08	21.08.19	REVISED SSD SUBMISSION
09	03.12.19	LOW VOLTAGE GENERATORS
10	10.01.20	S4.55 SUBMISSION REVIEW
11	15.01.20	FOR REVIEW
12	17.01.20	FOR REVIEW
13	23.01.20	S4.55 SUBMISSION
14	23.01.20	S4.55 SUBMISSION
15	24.01.20	REFERENCE TRIANGLE REMOVED
16	25.08.20	PRELIMINARY
17	27.08.20	FOR INFORMATION
18	11.09.20	S4.55 SUBMISSION
19	24.09.20	FOR INFORMATION
20	28.09.20	FOR INFORMATION
21	05.09.22	S4.55 SUBMISSION

Sc. 1:500 0 5 10 15 25m

Project Manager

Services Design

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GREENBOX ARCHITECTURE PTY LTD
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- Nominated Architect - Gerard Page; NSW reg No.7247, NZ reg No.3715, Vic reg No.17664, SA reg No.3061, QLD reg No.4538, WA reg No.2489

Client

Project
ATSYD2
1 SIRIUS ROAD LANE COVE WEST

Drawn By
SF_JM

Scale
1 : 500 @ A1

Checked By
DK

Approved By
AO

Date
05.09.22

Job Number
180095

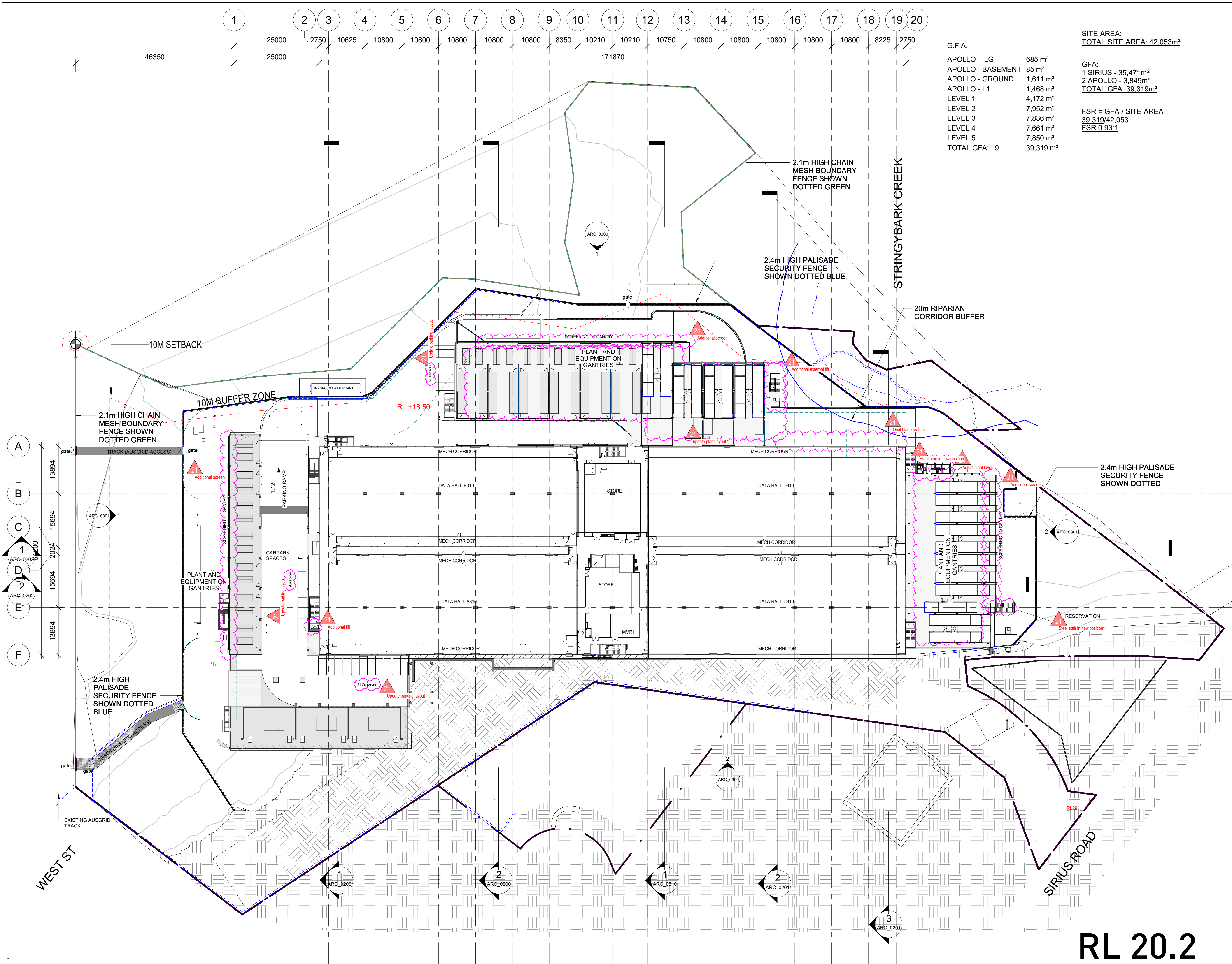
Project Status
S4.55 - MOD-3

Drawing Title
LEVEL 2 FLOOR PLAN _RL14.4

Drawing Number
ATSYD2_SSD_DRG_ARC_0101

Issue
21

RL 14.4



G.F.A.	
APOLLO - LG	685 m ²
APOLLO - BASEMENT	85 m ²
APOLLO - GROUND	1,611 m ²
APOLLO - L1	1,468 m ²
LEVEL 1	4,172 m ²
LEVEL 2	7,952 m ²
LEVEL 3	7,836 m ²
LEVEL 4	7,661 m ²
LEVEL 5	7,850 m ²
TOTAL GFA : 9	39,319 m ²

SITE AREA:
TOTAL SITE AREA: 42,053m²

GFA:
1 SIRIUS - 35,471m²
2 APOLLO - 3,849m²
TOTAL GFA: 39,319m²

FSR = GFA / SITE AREA
39,319/42,053
FSR 0.93:1

Issue	Date	Description
01	12.12.18	ISSUE FOR APPROVAL
02	13.12.18	ISSUE FOR APPROVAL
03	14.12.18	ISSUE FOR SSD SUBMISSION
04	24.06.19	FOR REVIEW
05	28.06.19	ISSUED FOR RESUBMISSION
06	07.08.19	REVISED SSD
07	16.08.19	REVISED SSD SUBMISSION
08	21.08.19	REVISED SSD SUBMISSION
09	03.12.19	LOW VOLTAGE GENERATORS
10	10.01.20	S4.55 SUBMISSION REVIEW
11	15.01.20	FOR REVIEW
12	17.01.20	FOR REVIEW
13	23.01.20	S4.55 SUBMISSION
14	23.01.20	S4.55 SUBMISSION
15	24.01.20	REFERENCE TRIANGLE REMOVED
16	14.08.20	PRELIMINARY
17	25.08.20	PRELIMINARY
18	11.09.20	S4.55 SUBMISSION
19	24.09.20	FOR INFORMATION
20	28.09.20	FOR INFORMATION
21	05.09.22	S4.55 SUBMISSION

Sc. 1:500 0 5 10 15 25m

Project Manager

Services Design

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GREENBOX ARCHITECTURE PTY LTD
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Client

Project
ATSYD2
1 SIRIUS ROAD LANE COVE WEST

Drawn By
SF_JM

Scale
1 : 500 @ A1

Checked By
DK

Approved By
AO

Date
05.09.22

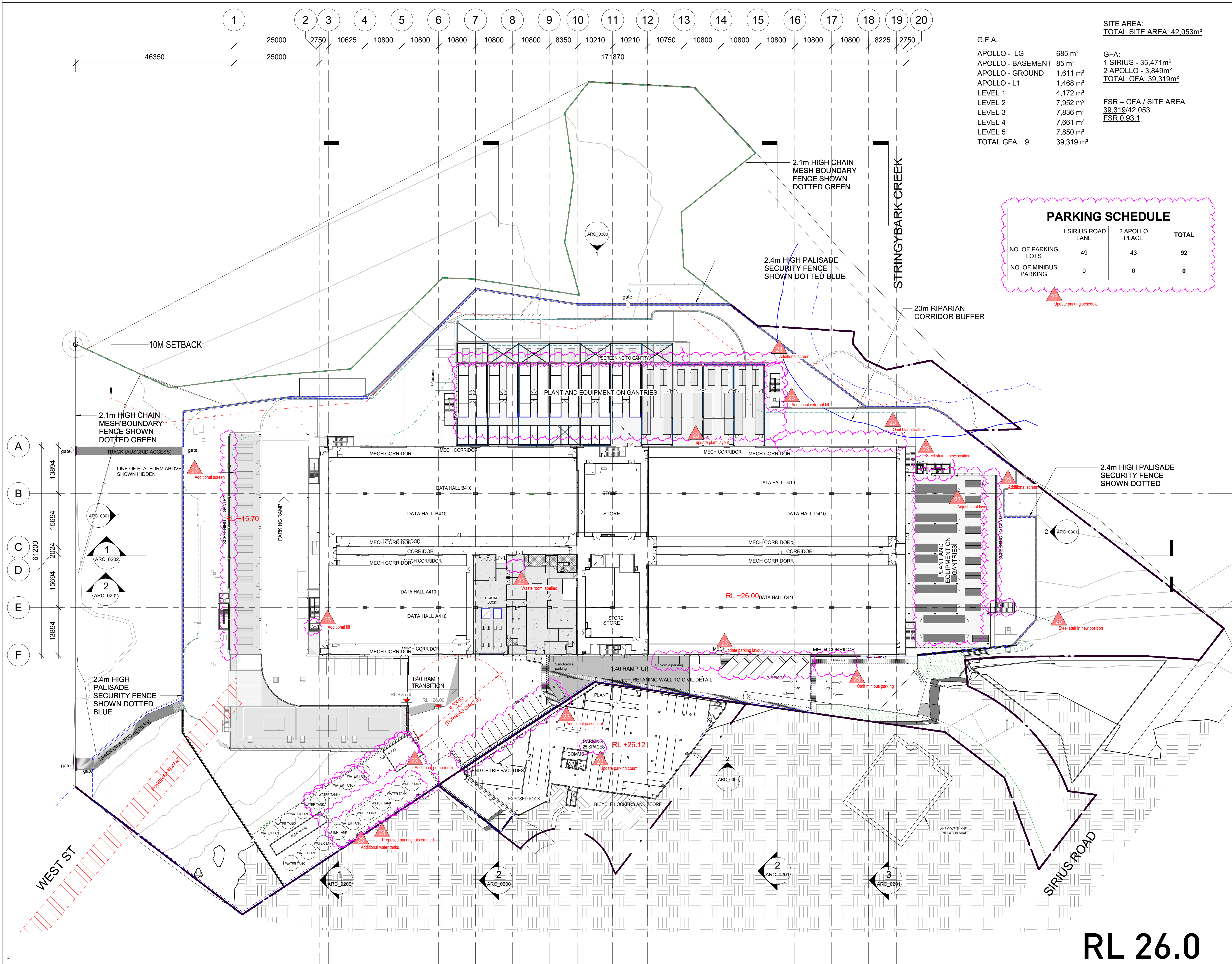
Job Number
180095

Project Status
S4.55 - MOD-3

Drawing Title
LEVEL 3 FLOOR PLAN _RL20.2

Drawing Number
ATSYD2_SSD_DRG_ARC_0102

Issue
21



G.F.A.

APOLLO - LG	685 m ²
APOLLO - BASEMENT	85 m ²
APOLLO - GROUND	1,611 m ²
APOLLO - L1	1,468 m ²
LEVEL 1	4,172 m ²
LEVEL 2	7,952 m ²
LEVEL 3	7,836 m ²
LEVEL 4	7,661 m ²
LEVEL 5	7,850 m ²
TOTAL GFA : 9	39,319 m ²

SITE AREA:
TOTAL SITE AREA: 42,053m²

GFA:
1 SIRIUS - 35,471m²
2 APOLLO - 3,849m²
TOTAL GFA: 39,319m²

FSR = GFA / SITE AREA
39,319/42,053
FSR 0.93:1

PARKING SCHEDULE

	1 SIRIUS ROAD LANE	2 APOLLO PLACE	TOTAL
NO. OF PARKING LOTS	49	43	92
NO. OF MINIBUS PARKING	0	0	0

Issue	Date	Description
01	12.12.18	ISSUE FOR APPROVAL
02	13.12.18	ISSUE FOR APPROVAL
03	14.12.18	ISSUE FOR SSD SUBMISSION
04	24.06.19	FOR REVIEW
05	28.06.19	ISSUED FOR RESUBMISSION
06	07.08.19	REVISED SSD
07	16.08.19	REVISED SSD SUBMISSION
08	21.08.19	REVISED SSD SUBMISSION
09	03.12.19	LOW VOLTAGE GENERATORS
10	10.01.20	S4.55 SUBMISSION REVIEW
11	15.01.20	FOR REVIEW
12	17.01.20	FOR REVIEW
13	23.01.20	S4.55 SUBMISSION
14	23.01.20	S4.55 SUBMISSION
15	24.01.20	REFERENCE TRIANGLE REMOVED
16	02.07.20	ADDED BICYCLE PARKING
17	14.08.20	PRELIMINARY
18	25.08.20	PRELIMINARY
19	01.09.20	FOR INFORMATION
20	11.09.20	S4.55 SUBMISSION
21	24.09.20	FOR INFORMATION
22	28.09.20	FOR INFORMATION
23	05.09.22	S4.55 SUBMISSION

Sc. 1:500 0 5 10 15 25m

Project Manager

Services Design

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ABN: 79 139 779 098

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Client

Project
ATSYD2
1 SIRIUS ROAD LANE COVE WEST

Drawn By
SF_JM

Scale
1:500 @ A1

Checked By
DK

Approved By
AO

Date
05.09.22

Job Number
180095

Project Status
S4.55 - MOD-3

Drawing Title
LEVEL 4 FLOOR PLAN _RL 26.0

Drawing Number
ATSYD2_SSD_DRG_ARC_0103

Issue
23

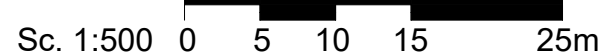


SITE AREA:
TOTAL SITE AREA: 42.053m²

GFA:
1 SIRIUS - 35,471m²
2 APOLLO - 3,849m²
TOTAL GFA: 39.319m²

FSR = GFA / SITE AREA
39.319/42,053
FSR 0.93:1

Issue	Date	Description
01	12 12 18	ISSUE FOR APPROVAL
02	13 12 18	ISSUE FOR APPROVAL
03	14 12 18	ISSUE FOR SSD SUBMISSION
04	24 06 19	FOR REVIEW
05	28 06 19	ISSUED FOR RESUBMISSION
06	07 08 19	REVISED SSD
07	16 08 19	REISSUED SSD SUBMISSION
08	21 08 19	REVISED SSD SUBMISSION
09	03 12 19	LOW VOLTAGE GENERATORS
10	10 01 20	\$4.55 SUBMISSION REVIEW
11	15 01 20	FOR REVIEW
12	17 01 20	FOR REVIEW
13	23 01 20	\$4.55 SUBMISSION
14	23 01 20	\$4.55 SUBMISSION
15	24 01 20	REFERENCE TRIANGLE REMOVED
16	25 08 20	PRELIMINARY
17	01 09 20	FOR INFORMATION
18	11 09 20	\$4.55 SUBMISSION
19	24 09 20	FOR INFORMATION
20	28 09 20	FOR INFORMATION
21	05 09 22	\$4.55 SUBMISSION



Project Manager

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25 BLIGH ST
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Client

Project
ATSYD2
 1 SIRIUS ROAD LANE COVE WEST

Drawn By
SF .IM

Checked By
DK

Date
05.09.22

Project Status

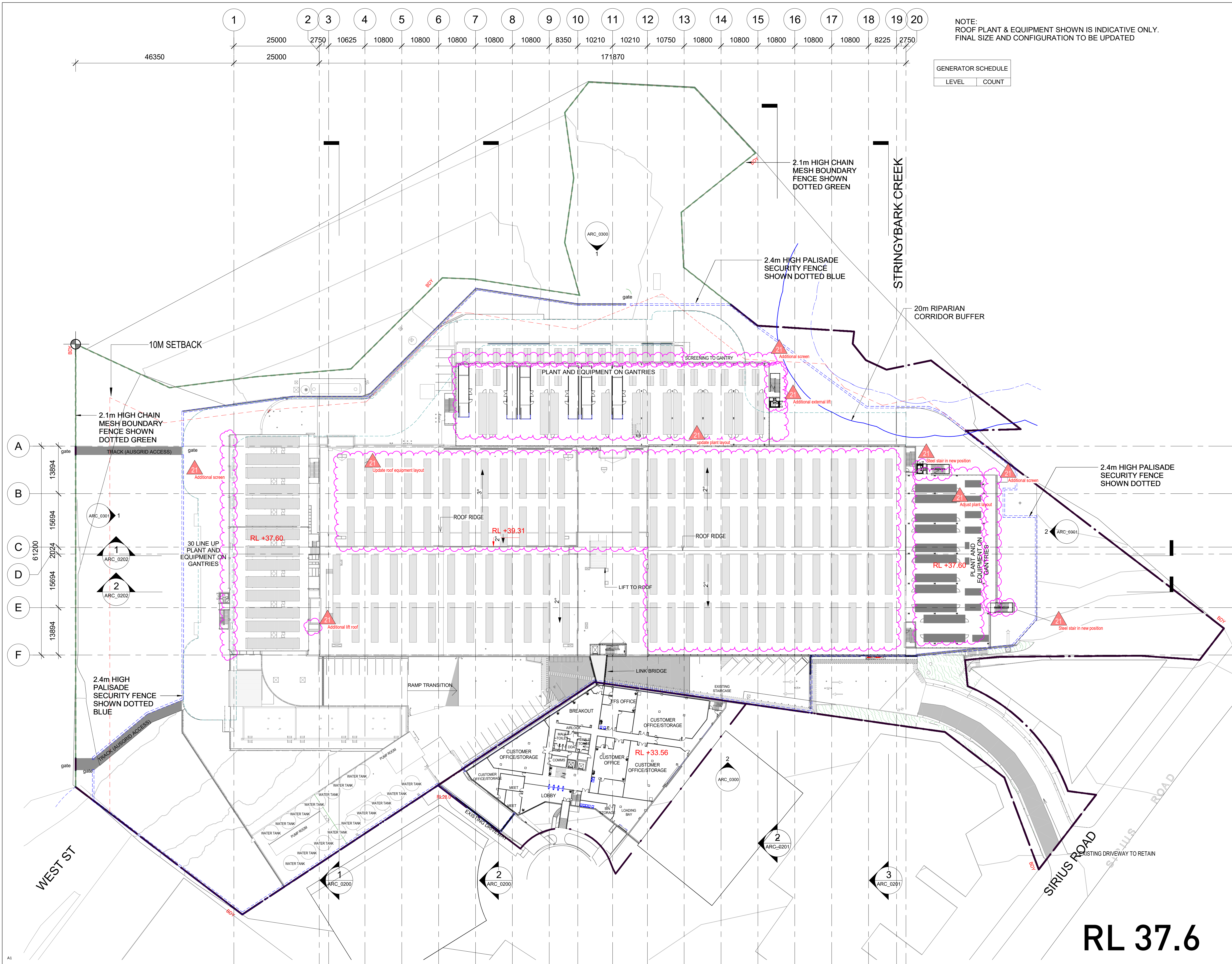
S4.55 - MOD-3

Drawing Title
LEVEL 5 FLOOR PLAN RL31.8

Drawing Number

ATSYD2 SSD DRG ARC 0104

21



NOTE:
ROOF PLANT & EQUIPMENT SHOWN IS INDICATIVE ONLY.
FINAL SIZE AND CONFIGURATION TO BE UPDATED

GENERATOR SCHEDULE	
LEVEL	COUNT

Issue	Date	Description
01	12.12.18	ISSUE FOR APPROVAL
02	13.12.18	ISSUE FOR APPROVAL
03	14.12.18	ISSUE FOR SSD SUBMISSION
04	24.06.19	FOR REVIEW
05	28.06.19	ISSUED FOR RESUBMISSION
06	07.08.19	REVISED SSD
07	16.08.19	REVISED SSD SUBMISSION
08	21.08.19	REVISED SSD SUBMISSION
09	03.12.19	LOW VOLTAGE GENERATORS
10	10.01.20	S4.55 SUBMISSION REVIEW
11	15.01.20	FOR REVIEW
12	17.01.20	FOR REVIEW
13	23.01.20	S4.55 SUBMISSION
14	24.01.20	REFERENCE TRIANGLE REMOVED
15	14.08.20	PRELIMINARY
16	25.08.20	PRELIMINARY
17	01.09.20	FOR INFORMATION
18	11.09.20	S4.55 SUBMISSION
19	24.09.20	FOR INFORMATION
20	28.09.20	FOR INFORMATION
21	05.09.22	S4.55 SUBMISSION

Sc. 1:500 0 5 10 15 25m

Project Manager

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LEVEL 25
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GREENBOX ARCHITECTURE PTY LTD
ABN: 79 139 779 098

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Client

Project
ATSYD2
1 SIRIUS ROAD LANE COVE WEST

Drawn By
SF_JM

Scale
1:500 @ A1

Checked By
DK

Approved By
AO

Date
05.09.22

Job Number
180095

Project Status
S4.55 - MOD-3

Drawing Title
LEVEL 6 / ROOF PLAN

Drawing Number
ATSYD2_SSD_DRG_ARC_0105

Issue
21

APPENDIX B

Council's Appendix A – Plans and Drawings (All Developments)

Plans and Drawings (All Developments)

- The following checklists are designed to help ensure SWMMPs are accompanied by sufficient information to allow assessment of the application.
- Drawings are to be submitted to scale, clearly indicating the location of and provisions for the storage and collection of waste and recyclables during:
 - Demolition
 - construction
 - ongoing operation.

Demolition

Refer to Section 3.1 of Part Q of the DCP for specific objectives and measures.

Do the site plans detail/indicate:

	Tick Yes
Size and location(s) of waste storage area(s)	
Access for waste collection vehicles	
Areas to be excavated	
Types and numbers of storage bins likely to be required	
Signage required to facilitate correct use of storage facilities	

Construction

Refer to Section 3.2 of Part Q of the DCP for specific objectives and measures.

Do the site plans detail/indicate:

	Tick Yes
Size and location(s) of waste storage area(s)	
Access for waste collection vehicles	
Areas to be excavated	
Types and numbers of storage bins likely to be required	
Signage required to facilitate correct use of storage facilities	

Ongoing Operation

Refer to Section 4 of Part Q of the DCP for specific objectives and measures.

Do the site plans detail/indicate:

	Tick Yes
Space	
Size and location(s) of waste storage areas including <ul style="list-style-type: none"> ■ Main garbage and recycling storage rooms ■ Garbage and recycling interim storage rooms with chute access point in each floor ■ Individual waste & recycling cupboards in each dwelling ■ Bulky waste storage room 	
Space provided for access to and the maneuvering of bins/equipment	
Any additional facilities	
Access	
Access route(s) to deposit waste in storage room/area	
Access route(s) to collect waste from storage room/area	
Bin carting grade	
Location of final collection point including <ul style="list-style-type: none"> ■ Path of travel ■ Provision of off-street collection 	
Clearance, geometric design and strength of internal access driveways and roads	
Direction of traffic flow for internal access driveways and roads	
Amenity	
Aesthetic design of waste storage areas	
Signage – type and location	
Construction details of storage rooms/areas (including floor, walls, doors, ceiling design, sewer connection, lighting, ventilation, security, wash down provisions etc)	

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