Land & Groundwater Consulting Pty Ltd
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Altis Frasers

Waste Management Plan
Manufacturing / Warehouse Facility
(SSD-25725029)

Lot 12, 657-769 Mamre Road
Kemps Creek, NSW

29 February 2024

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1. Introduction

1.1 Background

Land & Groundwater Consulting Pty Ltd (LG) has been commissioned by Altis Frasers JV Pty Ltd (Altis Frasers) to prepare this Waste Management Plan (WMP) in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs), and in support of the proposed construction and operation of a manufacturing and warehouse facility at Lot 12, 657-769 Mamre Road, Kemps Creek, NSW (the site).

The site is currently legally described as Lot 12 approved under State Significant Development (SSD) 25725029 with a total area of approximately 43,682 m^2. The site location and proposed development layout are shown in **Figures 1** and **2**, respectively.

Specifically, this WMP addresses the following SEARs and SSDA Conditions:

Table 1 – Summary of SEARs and SSDA Conditions

SEAR	SSDA Condition	Report Reference
Details of the quantities and classification of all waste streams to be generated on site during construction and operation.	SSDA-25725029 Condition B47 (a) Detail the type and quantity of waste to be generated during construction and operation of the development.	Sections 4.1 and 4.2.
Details of waste storage, handling and disposal during the construction and operation of the development, including plans of waste storage and collection areas.	SSDA-25725029 Condition B47 (b) Describe the handling, storage and disposal of all waste streams generated on site, consistent with the *Protection of the Environment Operations Act 1997, Protection of the Environment Operations (Waste) Regulation 2014* and the *Waste Classification* Guideline (EPA 2014).	Sections 5.3, 6.3, 6.4, 7.1 and 7.2.

SEAR	SSDA Condition	Report Reference
Details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the *NSW Waste and Sustainable Materials Strategy 2041*.	SSDA-25725029 Condition B47 (c) Detail the materials to be reused or recycled, either on or off site.	Sections 5.1, 5.2, 6.1 and 6.2.
	SSDA-25725029 Condition B47 (d) Include the management and mitigation measures included in Appendix 2.	Section 7.3.

1.2 Objectives

The objectives of the WMP are:

- To document the procedures that will be undertaken to manage the wastes generated as part of the development works;
- To provide details of the quantities and classification of waste and wastewater (if any) to be generated onsite;
- To provide details on waste storage, handling and disposal (including the location of waste storage and management facilities); and
- To provide details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the *NSW Waste and Sustainable Materials Strategy 2041*.

2. Project Summary

2.1 Proposed Works

The proposed works for the Development Application comprise the following:

- Minor earthworks involving cut and fill works, site preparation works and the establishment of a building pad;
- Infrastructure comprising civil works and augmentation of utilities servicing;
- Construction, internal fit out and operation of a manufacturing facility and warehouse (27,531 m^2);
- Production capacity up to approximately 48,000 tonnes per annum (tpa) of powder products, resulting in an indicative weekly maximum of 932.0 tonnes and daily maximum of 131.5 tonnes;
- Production capacity up to approximately 25,000 KL per annum of liquid products, resulting in an indicative weekly maximum of 480.7 KL and daily maximum of 68.5 KL;
- Storage of dangerous goods, comprising:
  - Class 2.1 – LPG.
  - Class 3 – Flammable Liquid.
  - Clause 4.1 – Flammable Solids.
  - Clause 5.1 – Oxidising Substances.
  - Clause 6.1 – Sub-risk Toxic Substances.
  - Class 8 – Corrosive Substances.
  - Class 9 – Miscellaneous Substances.
- Hours of operation being on a 24 hours per day, 7 days per week, basis.

2.2 Development Areas

The proposed development areas and GFA are as follows (refer **Figure 2**):

- Total Site Area: 43,682 m^2.
- Total Building Area of 27,531 m^2 including the following:
  - Warehouse: 15,400 m^2.
  - Dock Office and Amenities: 80 m^2.
  - Liquids Manufacturing: 4,005 m^2.
  - Powder Manufacturing: 2,467 m^2.
  - Power Silo Tower: 595 m^2.
  - Receiving and Packaging Store: 1,972 m^2.
  - Compressor Room (2 Storey): 272 m^2.
  - DG Store: 56 m^2.
  - Waste Water Treatment: 43 m^2.
  - Liquid Silo Tower: 110 m^2.
  - Main Office (2 Storey): 2,013 m^2.
  - Manufacturing Office (2 Storey): 518 m^2.
- Awning: 1,718 m^2.
- Total Car Parking: 153 spaces.

2.3 Project Schedule

It is anticipated that construction waste will be stored in allocated areas of the site (refer **Figure 3**) and generated during the following development construction stages:

- Construction of building facility pads, structures and related amenities; and
- Installation of lead-in services including electricity, sewer and potable water.

All operational waste producing activities such as packaging material, servicing of equipment and employee amenities will be located outside the warehouse. Waste containers will comprise colour coded recycling bins, which will be utilised to dispose off any packaging waste. The recycling bins will be located within a designated waste storage area located within the northern corner of the site (refer **Figure 4**), and collected by a regulated waste contractor.

3. Waste Regulatory Framework

3.1 Protection of the Environment Operations Act 1997

Wastes in NSW are classified for disposal or transport into categories. It is the responsibility of those who generate the waste to classify it into groups that pose risks to the environment and human health facilitates their management and appropriate disposal.

All material to be removed from the site (including associated activities such as classification) will be undertaken in strict accordance with the requirements of the POEO Act 1997. Such requirements include:

- Ensuring waste is classified appropriately and in accordance with relevant guidelines;
- Waste materials are disposed of to appropriately licensed facilities; and
- Other materials are removed to facilities lawfully able to accept such materials.

3.2 Waste Avoidance and Resource Recovery Act 2001

The Waste Avoidance and Resource Recovery (WARR) Act 2001 establishes the waste hierarchy to ensure that resource management options are considered against the following priorities:

1. Avoidance – actions to reduce the amount of waste generated and undertaking activities;
2. Resource Recovery – which includes reuse, reprocessing, recycling and energy recovery, consistent with the most efficient use of the recovered resources; and
3. Disposal – an "end-of-pipe" option that must be carefully undertaken to minimise any negative environmental outcomes.

The objectives of the WARR Act 2001 include:

- To encourage the most efficient use of resources;
- To minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste;

- To ensure that industry shares with the community the responsibility for reducing; and
- To ensure the efficient funding of waste and resource management planning, programs and service delivery.

3.3 Protection of the Environment Operations (Waste) Regulation 2014

The Regulation encourages the recovery of resources from waste by issuing both general and specific resource recovery exemptions. Where no general exemption is available for the intended use, a specific exemption may be issued after an application is made to the NSW EPA. Specific exemptions are not publicly available.

The Regulation makes requirements relating to non-licensed waste activities and waste transporting. The proposed works on the site will not require to be licensed. Section 48 of the Regulation requires that wastes are stored in an environmentally safe manner. It also stipulates that vehicles used to transport waste must be covered when loaded.

The Regulation exempts certain waste streams from the full waste tracking and record keeping requirements. Waste tracking is required only for industrial and hazardous wastes.

3.4 Better Practice Guidelines 2012

The NSW EPA (2012) *Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012* promotes efficient waste minimisation and resource recovery for commercial and industrial facilities and is used as a benchmark document when assessing waste production rates within Australia.

Better practice waste management systems in commercial buildings may incorporate any, or all, of the following:

- Garbage services to manage residual wastes (those not collected by a dedicated recycling or organics collection service).
- Recycling services to manage dry recyclable materials. These materials may vary from building to building, but generally cover recyclable materials generated in a typical business, including office paper, cardboard, plastic film, metals and

recyclable containers.

- Organics services to manage garden and food organics, which may include a bin-based collection system or onsite composting.
- Bulky waste services to manage bulky items, such as furniture and fit-out materials.
- Special waste services for items such as toner cartridges, batteries, fluorescent lights, mobile phones and chemicals.

3.5 NSW Waste and Sustainable Materials Strategy 2041

As well as waste reduction and recycling, Stage 1: 2021-2027 of NSW Waste and Sustainable Materials Strategy 2041, focuses on the environmental benefits and economic opportunities in how we manage our waste.

The main "targets" in the Strategy are as follows:

- Target 1: Reduce total waste generated by 10% per person by 2030 (for assessment of proposed measures refer Sections 5.1 and 6.1 of this report).
- Target 2: Have an 80% average recovery rate from all waste streams by 2030 (for assessment of proposed measures refer Sections 5.2 and 6.2 of this report).
- Target 3: Significantly increase the use of recycled content by governments and industry (for assessment of proposed measures refer Sections 5.1 and 6.1 of this report).
- Target 4: Phase out problematic and unnecessary plastics by 2025 (for assessment of proposed measures refer Sections 5.1 and 6.1 of this report).
- Target 5: Halve the amount of organic waste sent to landfill by 2030 (for assessment of proposed measures refer Sections 5.2 and 6.2 of this report).

The Strategy also includes the following recycling targets (as relevant to the proposed works at the site)[1]:

[1] *NSW Waste and Sustainable Materials Strategy 2041*, NSW DPIE, June 2021.

- Plastic litter reduction target of 30% by 2025.
- Introduce a new overall litter reduction target of 60% by 2030.

3.6 Waste Classification Guidelines 2014

Soil materials proposed to be disposed offsite (if any) shall be assessed, classified and managed in accordance with the NSW EPA (2014) *Waste Classification Guidelines, Part 1: Classifying Waste*.

3.7 Mamre Road Precinct Development Control Plan 2021

In accordance with Section 4.5 (Waste Minimisation and Management) of the Mamre Road Precinct Development Control Plan (DCP) 2021, one of the objectives of the DCP is to assist in reducing Penrith's ecological footprint by encouraging the diversion of waste from landfill.

The Mamre Road Precinct DCP has been prepared in accordance with the Waste Avoidance and Resource Recovery Act 2001 and came into effect in November 2021.

4. Estimated Waste

4.1 Construction Waste

The estimated monthly construction waste quantities are summarised in **Table 2**.

Table 2 – Estimated Construction Waste

Type of Waste Generated	Reuse	Recycling	Disposal	Method of on-site reuse, contractor and recycling outlet and /or waste depot to be used
	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	
Excavated materials (soil spoil)	60,350 m^3	0 m^3	0 m^3	N/A (if disposal applies refer S. 3.6 and 7.1)
Green waste	0 m^3	<1 m^3	0 m^3	Recycling Management Centre
Bricks/pavers	0 m^3	<3 m^3 (offcuts)	0 m^3	Recycling Management Centre
Tiles	0 m^3	<1 m^3 (offcuts)	0 m^3	Recycling Management Centre
Concrete	0 m^3	<3 m^3	0 m^3	Recycling Management Centre
Plasterboard	0 m^3	<2 m^3	0 m^3	Recycling Management Centre
Asbestos	0 m^3	0 m^3	0 m^3	N/A
Metal – specify	0 m^3	<2 m^3 (offcuts)	0 m^3	Recycling Management Centre
Timber - specify	0 m^3	<1 m^3 (offcuts)	0 m^3	Recycling Management Centre
Other waste – specify (eg. paints, PVC tubing)	0 m^3	0	<5 m^3 (offcuts)	Waste Management Centre
Packaging (used pallets, pallet wrap)	0 m^3	<3 m^3	0	Recycling Management Centre
Containers (cans, plastic, glass)	0 m^3	<2 m^3	0	Recycling Management Centre
Paper/cardboard	0 m^3	<2 m^3	0	Recycling Management Centre
Total	**60,350 m^3**	**<20 m^3**	**<5 m^3**	

4.2 Operational Waste

The estimated weekly operational waste quantities for years 2024 to 2026 are summarised in **Tables 3** to **5**.

Table 3 – Estimated Weekly Operational Waste in 2024

Type of Waste Generated	Reuse	Recycling	Disposal	Method of on-site reuse, contractor and recycling outlet and /or waste depot to be used
	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	
Excavated materials	0 m^3	0 m^3	0 m^3	N/A
Green waste	0 m^3	0 m^3	0 m^3	N/A
Bricks/Pavers/Tiles/ Concrete	0 m^3	0 m^3	0 m^3	N/A
Plasterboard	0 m^3	0 m^3	0 m^3	N/A
Asbestos	0 m^3	0 m^3	0 m^3	N/A
Timber	0 m^3	0 m^3	0 m^3	N/A
General waste 1(1)	0 m^3	0 m^3	0 m^3	N/A
General waste 2(2)	0 m^3	0 m^3	0 m^3	N/A
General waste 3(3)	0 m^3	0 m^3	4 m^3	Waste Management Centre
General waste 4(4)	0 m^3	0 m^3	2 m^3	Waste Management Centre
Cardboard	0 m^3	3 m^3	0 m^3	Recycling Management Centre
Empty metal drums (200L)	0 m^3	0 m^3	0 m^3	N/A
Empty IBCs (1000L)	0 m^3	0 m^3	0 m^3	N/A
FG – EOL(5) powder	0 m^3	3 m^3	0 m^3	Recycling Management Centre
FG – EOL(5) liquids	0 m^3	3 m^3	0 m^3	Recycling Management Centre
Trade wastewater	0 m^3	0 m^3	0 m^3	N/A
Total	**0 m^3**	**<9 m^3**	**<6 m^3**	

Notes:
(1) powder from dust collection system packed in bulk bags.
(2) solid waste from wastewater treatment plant.
(3) other waste from production and warehouse (e.g., stretch-wrap, pallets, plastic drums).
(4) other waste from kitchen, offices and amenities
(5) FG (Finished Goods) and EOL (End of Life).

Table 4 – Estimated Weekly Operational Waste in 2025

Type of Waste Generated	Reuse	Recycling	Disposal	Method of on-site reuse, contractor and recycling outlet and /or waste depot to be used
	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	
Excavated materials	0 m^3	0 m^3	0 m^3	N/A
Green waste	0 m^3	0 m^3	0 m^3	N/A
Bricks/Pavers/Tiles/ Concrete	0 m^3	0 m^3	0 m^3	N/A
Plasterboard	0 m^3	0 m^3	0 m^3	N/A
Asbestos	0 m^3	0 m^3	0 m^3	N/A
Timber	0 m^3	0 m^3	0 m^3	N/A
General waste 1(1)	0 m^3	0 m^3	7.7 t = 31 m^3 per week	Waste Management Centre
General waste 2(2)	0 m^3	0 m^3	0.7 t = 3 m^3 per week	Waste Management Centre
General waste 3(3)	0 m^3	0 m^3	1.9 t = 8 m^3 per week	Waste Management Centre
General waste 4(4)	0 m^3	0 m^3	0.4 t = 2 m^3 per week	Waste Management Centre
Cardboard	0 m^3	0.8 t = 10 m^3	0 m^3	Recycling Management Centre
Empty metal drums (200L)	0 m^3	10 drums per week	0 m^3	Recycling Management Centre
Empty IBCs (1000L)	0 m^3	4 IBCs per week	0 m^3	Recycling Management Centre
FG – EOL(5) powder	0 m^3	1.9 t = 8 m^3 per week	0 m^3	Recycling Management Centre
FG – EOL(5) liquids	0 m^3	1.2 t = 5 m^3 per week	0 m^3	Recycling Management Centre
Trade wastewater	0 m^3	0 m^3	19 L = 0.02 m^3 per week	Sewer Discharge (Refer Section 4.2.1)
Total	**0 m^3**	**<3.9 t = <23 m^3 + 10 drums + 4 IBCs**	**<10.7 t = <44 m^3 + <19 L = <0.02 m^3**	

Notes:
(1) powder from dust collection system packed in bulk bags.
(2) solid waste from wastewater treatment plant.
(3) other waste from production and warehouse (e.g., stretch-wrap, pallets, plastic drums).
(4) other waste from kitchen, offices and amenities
(5) FG (Finished Goods) and EOL (End of Life).

Table 5 – Estimated Weekly Operational Waste in 2026

Type of Waste Generated	Reuse	Recycling	Disposal	Method of on-site reuse, contractor and recycling outlet and /or waste depot to be used
	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	
Excavated materials	0 m^3	0 m^3	0 m^3	N/A
Green waste	0 m^3	0 m^3	0 m^3	N/A
Bricks/Pavers/Tiles/ Concrete	0 m^3	0 m^3	0 m^3	N/A
Plasterboard	0 m^3	0 m^3	0 m^3	N/A
Asbestos	0 m^3	0 m^3	0 m^3	N/A
Timber	0 m^3	0 m^3	0 m^3	N/A
General waste 1(1)	0 m^3	0 m^3	9.4 t = 38 m^3 per week	Waste Management Centre
General waste 2(2)	0 m^3	0 m^3	1.3 t = 5 m^3 per week	Waste Management Centre
General waste 3(3)	0 m^3	0 m^3	2.8 t = 11 m^3 per week	Waste Management Centre
General waste 4(4)	0 m^3	0 m^3	0.5 t = 2 m^3 per week	Waste Management Centre
Cardboard	0 m^3	0.9 t = 10 m^3 per week	0 m^3	Recycling Management Centre
Empty metal drums (200L)	0 m^3	19 drums per week	0 m^3	Recycling Management Centre
Empty IBCs (1000L)	0 m^3	8 IBCs per week	0 m^3	Recycling Management Centre
FG – EOL(5) powder	0 m^3	2.8 t = 11 m^3 per week	0 m^3	Recycling Management Centre
FG – EOL(5) liquids	0 m^3	1.9 t = 8 m^3 per week	0 m^3	Recycling Management Centre
Trade wastewater	0 m^3	0 m^3	38 L = 0.04 m^3 per week	Sewer Discharge (Refer Section 4.2.1)
Total	**0 m^3**	**<5.6 t = <29 m^3 + 19 drums + 8 IBCs**	**<14 t = <56 m^3 + <38 L = <0.04 m^3**	

Notes:
(1) powder from dust collection system packed in bulk bags.
(2) solid waste from wastewater treatment plant.
(3) other waste from production and warehouse (e.g., stretch-wrap, pallets, plastic drums).
(4) other waste from kitchen, offices and amenities
(5) FG (Finished Goods) and EOL (End of Life).

4.2.1 Trade Wastewater

Wastewater is to be treated to prescribed standard then discharged to sewer under existing Sydney Water Consent to Discharge Industrial Trade Wastewater (No. 9596).

Trade wastewater is expected to be generated from the R&D and laboratory areas located within the main office and the liquid manufacturing area located within the warehouse. These wastewaters will be treated independently as follows:

- Wastewater from R&D and laboratory areas will be drained to a dilution/settlement pit located adjacent to the main office and then discharged to sewer under Sydney Water Consent.
- Wastewater from the liquids manufacturing area will be drained to a collection point within the trade waste room. Wastewater will be collected within this room at PS1 and pumped through an above ground treatment plant, then discharged to sewer under Sydney Water Consent.

The weekly wastewater to be discharged to sewer between 2024 and 2026, from R&D and laboratory areas combined with the liquids manufacturing area is anticipated to be approximately as follows:

- 0 L/week in 2024.
- 19 L/week in 2025.
- 38 L/week in 2026.

5. Construction Waste Reduction Plan

5.1 Waste Reduction Measures

Waste-type-specific reduction measures will be employed during construction stages, with the following specific procedures:

- Applying practical building designs and construction techniques;
- Appropriate sorting and segregation of construction wastes to ensure efficient recycling of wastes;
- Selecting construction materials taking into consideration to their long lifespan and potential for reuse;
- Ordering materials to size and ordering pre-cut and prefabricated materials;
- Reuse of formwork (where possible);
- Planned work staging;
- Reducing packaging waste on-site by returning packaging to suppliers where possible, purchasing in bulk, requesting cardboard or metal drums rather than plastics, requesting metal straps rather than shrink wrap and using returnable packaging such as pallets and reels;
- Careful on-site storage and source separation;
- Subcontractors informed of site waste management procedures; and
- Coordination and sequencing of various trades.

5.2 Beneficial Reuses

The anticipated beneficial reuses of construction waste are summarised as follows:

- All solid waste timber, concrete, tiles and rock that cannot be reused or recycled will be taken to an appropriate facility for treatment to recover further resources or for disposal to landfill in an approved manner;
- All asbestos, hazardous and/or intractable wastes are to be disposed of in accordance with SafeWork Authority and EPA requirements;

- Portable, self-contained toilet and washroom facilities will be provided at the site and will be regularly emptied and serviced by a suitably qualified contractor;
- Provision for the collection of batteries, fluorescent tubes and other recyclable resources will be provided onsite to enable offsite recycling;
- Drink container recycling should be provided onsite or these items sorted offsite for recycling at an appropriately licensed facility;
- All garbage will be disposed of via a council approved system; and
- Opportunities for materials exportation and reuse with other local construction operations will be investigated.

5.3 Waste Storage Locations

Waste storage locations will be accessible and allow sufficient space for storage and servicing requirements. These locations will also be flexible in order to cater for change of use throughout the construction stages.

Where space is restricted (during construction), dedicated stockpile areas are to be delineated on the site, with regular transfers to dedicated skip bins for sorting. The positions of the designated waste holding areas on site will change according to building works and the progression of the development, but must consider visual amenity, OH&S and accessibility in their selection.

All waste placed in stockpile areas/skips for disposal or recycling shall be adequately contained to ensure that the waste does not fall, blow, wash or otherwise escape from the site. Appropriate siting of waste stockpile locations will take into account slope and drainage factors to avoid contamination of stormwater drains during rain events.

Waste/recycling storage locations will be assigned during the construction works and will provide adequate space to accommodate all waste and recycling bins associated with the construction (up to approximately 12 x 2,000 L bins) (refer **Figure 3**). Recycling bins must be accessible to all construction employees and must be clearly sign posted and colour coded to ensure segregation of waste and recycling is effective. Waste containers are to be kept clean and in a good state of repair.

6. Operational Waste Reduction Plan

6.1 Waste Reduction Measures

Waste-type-specific reduction measures will be employed during development operation, with the following specific procedures:

- Provision of take back services to clients to reduce waste further along the supply chain;
- Re-work/re-packaging of products prior to local distribution to reduce waste arising;
- Review of packaging design to reduce waste but maintain 'fit for purpose';
- Investigating leased office equipment and machinery rather than purchase and disposal;
- Establish systems with in-house and with supply chain stakeholders to transport products in re-useable packaging where possible;
- Development of 'buy recycled' purchasing policy;
- Flatten or bale cardboard to reduce number of bin lifts required; and
- Providing recycling collections within each of the offices and tearooms (e.g. plastics, cans and glass).

6.2 Beneficial Reuses

The anticipated beneficial reuses of operational waste are summarised as follows:

- Cardboard, paper, plastic, glass, cans and pallets and containers will be reused/recycled offsite;
- Provision for the collection of batteries, fluorescent tubes and other recyclable resources will be provided on site to enable offsite recycling;
- All waste materials that cannot be reused or recycled will be taken to an appropriate facility for treatment to recover further resources or for disposal to landfill in an approved manner;

- Waste oil (if any) used in equipment maintenance will be recycled or disposed of in an appropriate manner; and
- Opportunities for materials exportation and reuse with other local industrial operations will be investigated. This will have two benefits: minimising energy through reduction of material reprocessing, encouraging material reuse.

6.3 Waste Storage Locations

A designated waste storage area will be provided within the north western corner of the site (refer **Figures 5** and **6**) where the recycling bins, garbage skips, plastic and cardboard compactors will be stored prior to collection. Sufficient clearance will be necessary to enable collection vehicles to access the locations of bin storage. Where possible collection times should not coincide with peak operational delivery schedules however the designated area identified will not interfere with operational truck movements.

The construction of locations for garbage storage are to comply with BCA (Building Code of Australia) requirements and Australian Standards, including CoC requirements for screening and fencing.

The waste/recycling storage areas will be constructed of an adequate size to accommodate all waste and recycling bins and bales associated with the development. Recycling bins must be accessible to all employees and must be clearly sign posted and colour coded to ensure segregation of waste and recycling is effective.

Sufficient space will be provided for the segregation and storage of varying waste types including provision for the collection of fluorescent tubes, smoke detectors, e-wastes and other recyclable resources.

Sufficient space will also be provided for reuse items such as crates and pallets for occupational safety purposes.

Doors/gates to the waste storage locations will be able to be opened from the outside and wide enough to allow for easy passage of waste/recycling containers.

Waste collection areas should allow for manoeuvring of a rear loading vehicle truck of typical sizes between 8.8 m to 9.25 m long x 2.6 m wide truck, and 3.6 m head clearance.

6.4 Waste Collection and Servicing

Onsite collection is the preferred option with a waste truck able to enter and exit the site in a forward direction. Dedicated loading dock areas should be provided for the waste vehicle to prop while collections occur.

Private contractors using up to a 9.25 m MRV rear loading waste vehicle should enter the site via internal access road and reverse into the waste loading dock. The contractor should retrieve empty and return bins to/from the bin store at the time of collection then exit the site in a forward direction.

Litter spread is to be managed by ensuring garbage and recycling bins are not overloaded, and lids are always closed.

The private collection contractor's agreement should require their pickup of any waste that spills from the bins during collections.

Estimated waste collection frequency and number of bins are summarised as follows:

- **Year 2024**
  - **Collection Frequency:** 1 x Weekly All Waste Streams.
  - **Number of Bins:** 2 x 3,000 L General Waste, 3 x 2,000 L Cardboard Recycling Waste.
- **Year 2025**
  - **Collection Frequency:** 2 x Weekly All Waste Streams and as required.
  - **Number of Bins:** 1 x 15,000 L + 3 x 3,000 L General Waste, 3 x 3,000 L Cardboard Recycling Waste.
  - **Number of Drums:** 10 x 200 L Drums (stored in pallets).
  - **Number of IBCs:** 4 x 1,000 L IBCs (stored in pallets).
- **Year 2026**
  - **Collection Frequency:** 3 x Weekly All Waste Streams and as required.
  - **Number of Bins:** 1 x 15,000 L + 3 x 3,000 L General Waste, 3 x 3,000 L Cardboard Recycling Waste.
  - **Number of Drums:** 19 x 200 L Drums (stored in pallets).
  - **Number of IBCs:** 8 x 1,000 L IBCs (stored in pallets).

7. Waste Classification and Removal

7.1 Waste Classification

All liquid and non-liquid wastes generated during development construction works (if any) shall be classified in accordance with the requirements of NSW EPA (2014) *Waste Classification Guidelines, Part 1: Classifying Waste*.

Samples shall be collected by appropriately trained and experienced personnel from stockpiled or in-situ waste materials by the use of a hand trowel. The hand trowel shall be thoroughly decontaminated using phosphate free detergent and distilled water between each sampling location.

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indications of contamination should be noted on the field documentation.

Collected soil samples shall be immediately transferred to sample containers of appropriate composition (glass jars). Sample labels shall record job number; sample identification number; and date and time of sampling.

Sample containers shall be transferred to a chilled ice box for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form should be completed and forwarded with the samples to the testing laboratory.

Soil samples shall be analysed by both a primary and secondary (independent check) laboratory, both of which shall be NATA accredited for the required analyses. In addition, the laboratories will also be required to meet the environmental consultant's own internal quality assurance requirements.

The analytical data shall be compared against the waste criteria contained in NSW EPA (2014) *Waste Classification Guidelines, Part 1: Classifying Waste* for heavy metals, TRHs, BTEX, PAHs, total pesticides (OCPs and OPPs), PCBs and TCLP in benzo(a)pyrene, lead and nickel. A summary of the criteria is provided in **Table 6**.

Table 6 – Summary of Waste Classification Criteria

Contaminant	General [1]	Restricted [1]	General [2]	Restricted [2]	General [3]	Restricted [3]
	CT1	CT2	SCC1	SCC2	TCLP1	TCLP2
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(µg/L)	(µg/L)
Heavy metals						
Arsenic	100	400	500	2000	5.0	20
Cadmium	20	80	100	400	1.0	4
Lead	100	400	1500	6000	5	20
Mercury	4	16	50	200	0.2	0.8
Nickel	40	160	1050	4200	2	8
BTEX						
Benzene	10	40	18	72	0.5	2
Toluene	288	1152	518	2073	14.4	57.6
Ethylbenzene	600	2400	1080	4320	30	120
Xylenes (total)	1000	4000	1800	7200	50	200
Petroleum Hydrocarbons						
C_6-C_9	N/A	N/A	650	2600	N/A	N/A
C_{10}-C_{36}	N/A	N/A	10000	40000	N/A	N/A
PAHs						
Benzo(a)pyrene	0.8	3.2	10	23	0.04	0.16
PAHs (total)	N/A	N/A	200	800	N/A	N/A
Pesticides (total)	N/A	N/A	250	1000	N/A	N/A
PCBs (total)	N/A	N/A	<50	<50	N/A	N/A

Notes:

1. Contaminant threshold values for classifying waste by chemical assessment without the leaching (TCLP) test (Table 1) – NSW EPA (2014) *Waste Classification Guidelines, Part 1: Classifying Waste*.

2. Specific contaminant concentration (SCC) values for classifying waste by chemical assessment (Table 2) – NSW EPA (2014) *Waste Classification Guidelines, Part 1: Classifying Waste*.

3. Leachable concentration (TCLP) values for classifying waste by chemical assessment (Table 2) – NSW EPA (2014) *Waste Classification Guidelines, Part 1: Classifying Waste*.

7.2 Waste Transporting

All wastes removed from the site shall be transported in accordance with relevant road and transportation regulatory requirements and in accordance with the existing Construction Traffic Management Plan. Where required (depending on the classification of the wastes), appropriately licensed transport contractors shall be used.

The appointed transporters shall be responsible for ensuring they are appropriately licensed to:

- Carry the particular type of waste; and
- Transport the materials to an appropriately licensed facility.

Where the waste is classified as Restricted Waste or Hazardous Waste, the transporter is required to carry (subject to a number of exceptions) appropriately completed waste data forms with each load, and provide a copy to the waste facility to which the waste is taken.

7.3 Waste Receipts

In accordance with Section 8 in Appendix 2 of the Development Consent for SSD 25725029 Altis Frasers is required to ensure that a permanent record of receipts, for the removal of both liquid and solid waste from the Subject Site, be kept and maintained up to date at all times. Such records would be made available to authorised person upon request.

8. Conclusions

Based on the assessment and findings of this WMP the following conclusions are provided:

- It is considered that this WMP provides adequate guidance for waste management during site construction and operational works;
- The details of the quantities and classification of waste to be generated onsite are provided in Sections 4.1 and 4.2 of this WMP;
- The details on waste storage, handling and disposal (including the location of waste storage and management facilities) are provided in Sections 5.3, 6.3, 6.4, 7.1 and 7.2 of this WMP; and
- The details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the *NSW Waste and Sustainable Materials Strategy 2041* are provided in Sections 5.1, 5.2, 6.1 and 6.2 of this WMP.

9. Limitation Statement

This report has been prepared for use by Altis Frasers JV Pty Ltd who commissioned the works in accordance with the project brief only and has been based in part on information obtained from other parties. The advice herein relates only to this project and all information provided should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. Additionally, this report has been based on data documented by other parties in previous reports.

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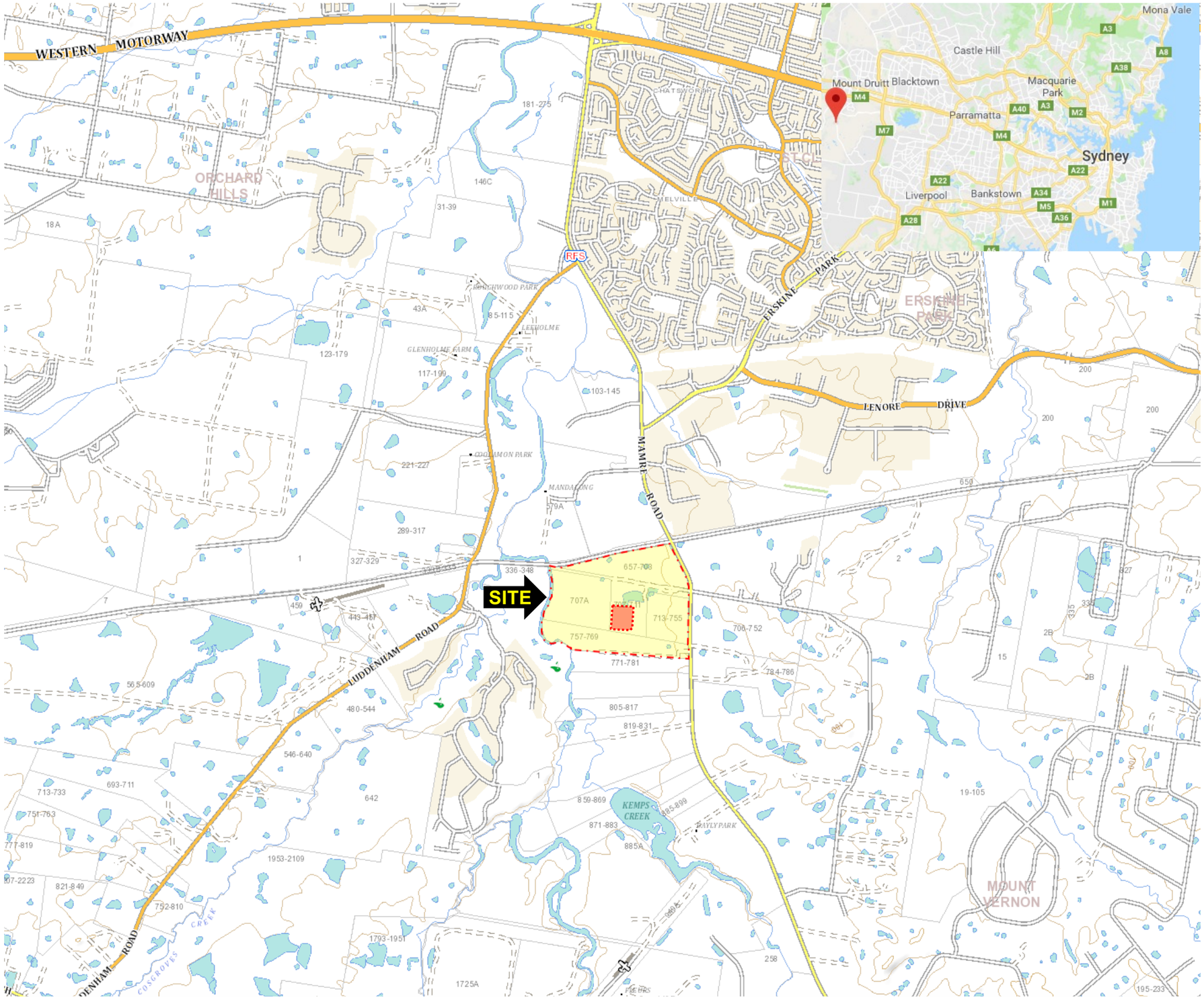
Waste quantities and sources are based on documents made available to LG consult by Altis Frasers JV Pty Ltd.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein.

Figures



SCALE: **DRAWN TO SCALE AS SHOWN**

Not To Scale

NORTH

LEGEND:

SSD Boundary

Site Boundary

Image courtesy of Google & Six Maps

LG CONSULT

REV:	A
DATE:	15/12/2023
DRAWN:	GP
APPROVED:	GP
STATUS:	Final
DWG NO:	

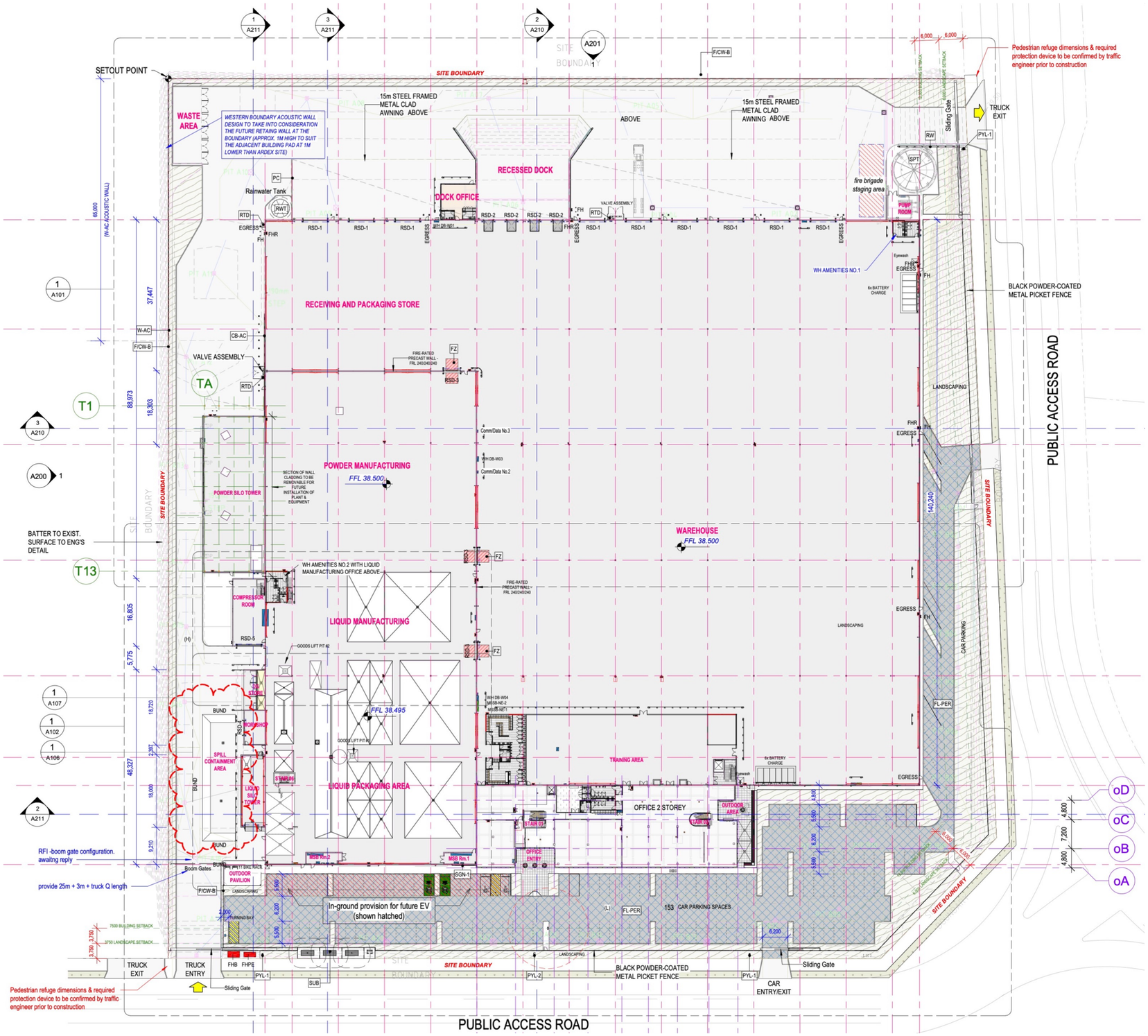
CLIENT: **Frasers & Altis**

PROJECT: **Lot 12, 657–769 Mamre Road Kemps Creek, NSW**

PROJECT NUMBER: LG2341.01

TITLE: **Site Location Plan**

FIGURE: **1** A4



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NORTH

LEGEND:

Image courtesy of HLA Architects

REV:	**A**
DATE:	**15/12/2023**
DRAWN:	**GP**
APPROVED:	**GP**
STATUS:	**Final**
DWG NO:	

CLIENT: **Frasers & Altis**

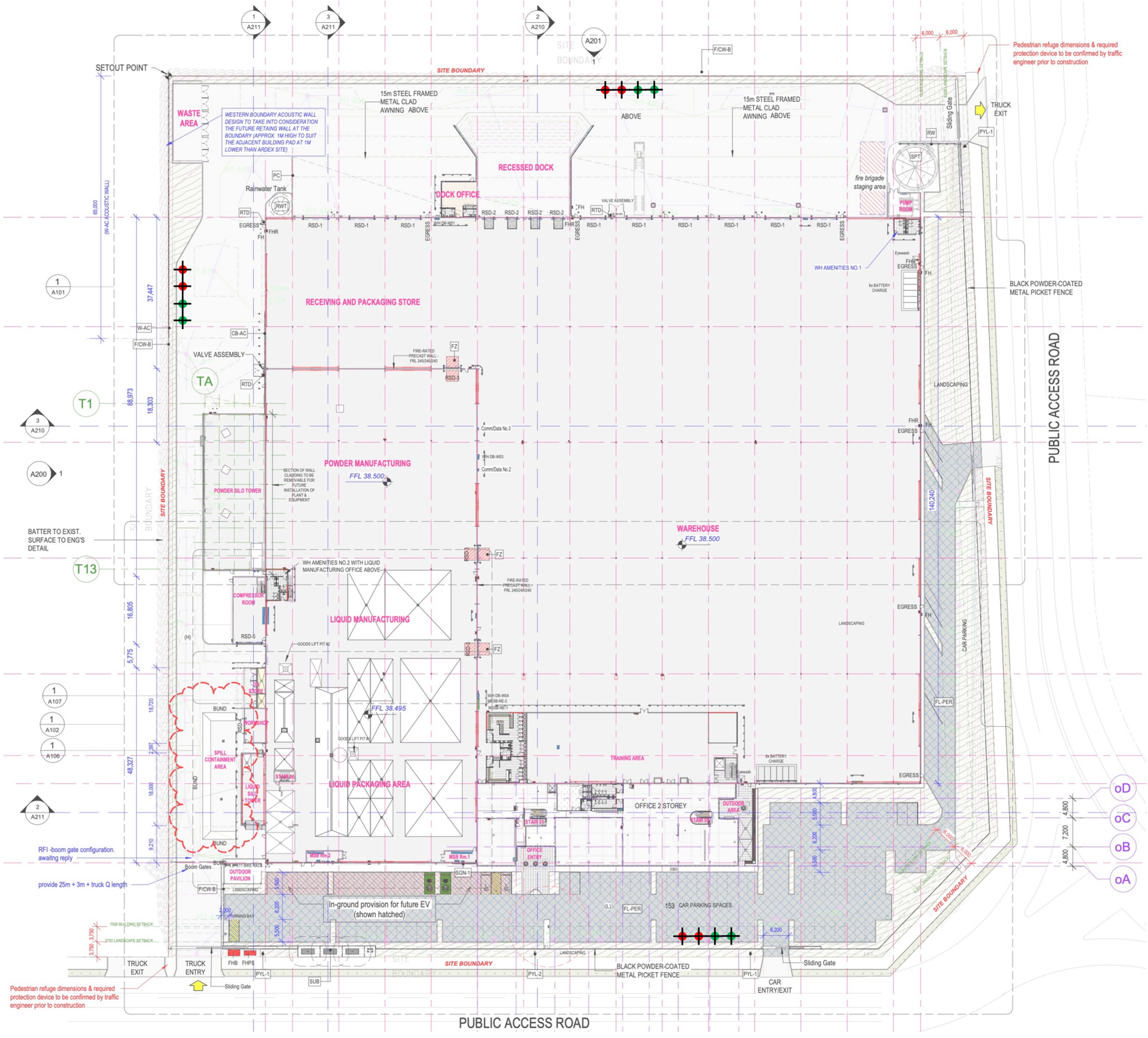
PROJECT: **Lot 12, 657–769 Mamre Road Kemps Creek, NSW**

PROJECT NUMBER: LG2341.01

TITLE: **Proposed Development Layout**

FIGURE: **2**

A4



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LEGEND:

- 2000 L Mobile Garbage Bin (MGB) for General Garbage
- 2000 L MGB for Recycling

Image courtesy of HLA Architects

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DATE:	**15/12/2023**
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APPROVED:	**GP**
STATUS:	**Final**
DWG NO:	

CLIENT: **Frasers & Altis**

PROJECT: **Lot 12, 657–769 Mamre Road Kemps Creek, NSW**

PROJECT NUMBER: LG2341.01

TITLE: **Construction Waste Bin Plan**

FIGURE: **3** A4

SCALE: **DRAWN TO SCALE AS SHOWN**

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NORTH

LEGEND:

- 2000 L MGB for General Garbage
- 2000 L MGB for Recycling

Image courtesy of HLA Architects

REV:	**A**
DATE:	**19/12/2022**
DRAWN:	**GP**
APPROVED:	**GP**
STATUS:	**Final**
DWG NO:	

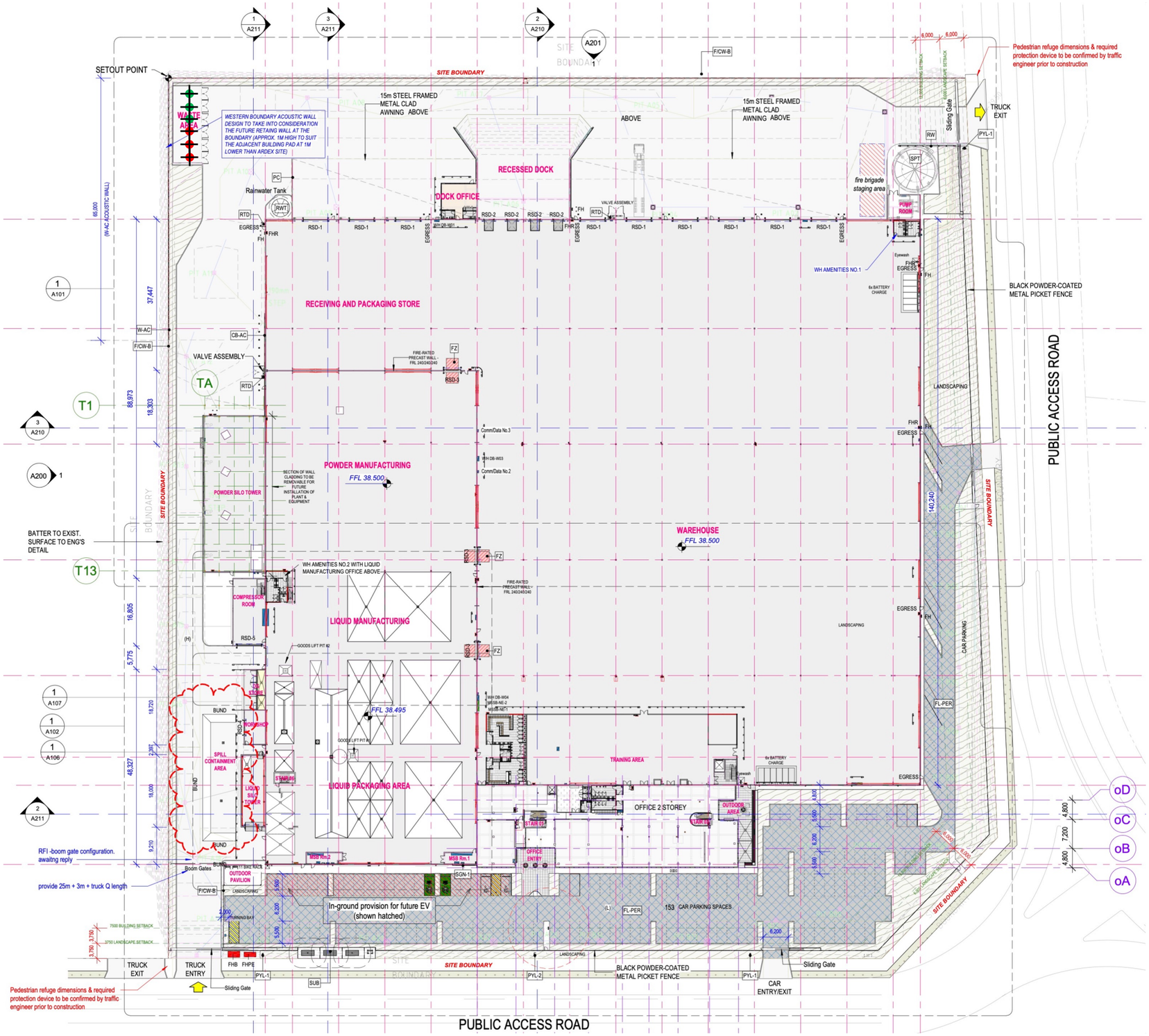
CLIENT: **Frasers & Altis**

PROJECT: **Lot 12, 657–769 Mamre Road Kemps Creek, NSW**

PROJECT NUMBER: LG2341.01

TITLE: **Operational Waste Bin Plan in 2024**

FIGURE: **4** A4



SCALE: **DRAWN TO SCALE AS SHOWN**

Not To Scale

NORTH

LEGEND:

- 3000 L MGB for General Garbage
- 3000 L MGB for Recycling

REV:	**A**
DATE:	**19/12/2022**
DRAWN:	**GP**
APPROVED:	**GP**
STATUS:	**Final**
DWG NO:	

CLIENT: **Frasers & Altis**

PROJECT: **Lot 12, 657–769 Mamre Road Kemps Creek, NSW**

PROJECT NUMBER: LG2341.01

TITLE: **Operational Waste Bin Plan in 2025 and 2026**

FIGURE: **5** A4