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PLANS AND DOCUMENTS
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DEVELOPMENT APPROVAL

Approval no: DEV2024/1571

Date: 4 March 2025



WASTE MANAGEMENT PLAN

**AURA EARLY LEARNING CENTRE
NIRIMBA DRIVE
NIRIMBA QLD 4551**



CLIENT

Nirimba ELC Property One Pty Ltd ATF

Nirimba ELC Property One Trust

January 2025

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Aura Early Learning Centre
Nirimba Drive
Nirimba, Qld 4551

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LIMITATIONS

Mark Rigby & Associates Pty Ltd (MRA Environmental) has prepared this Waste Management Plan for the sole use of Nirimba ELC Property One Pty Ltd ATF Nirimba ELC Property One Trust to support a Development Application for the proposed childcare centre development located at Nirimba Dr, Nirimba Qld 4551.

Specifically, this report supports the Development Application and relates to the waste storage and collection activities for the operational phase of the planned development with reference to the Caloundra South Priority Development Area (PDA) & Sunshine Coast Council's *Planning Scheme Policy for Waste Management Code*. This WMP will be submitted to Economic Development Queensland as a component of the Development Application.

This report is for the sole use of Nirimba ELC Property One Pty Ltd ATF Nirimba ELC Property One Trust and in relation to the Development Application to be submitted to Economic Development Queensland. It may not contain sufficient information for the purposes of other parties, for other uses or at other locations.

We have performed our services for this project in accordance with our current professional standards. No other warranty, expressed or implied, is made as to the professional advice included in this submission.

Opinions and judgements expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal opinions. The report also contains comments and information provided by others. MRA Environmental cannot take responsibility for advice provided by any third party.

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Attachment A: Waste Collection Vehicle Swept Path Analysis

1.0 GLOSSARY OF TERMS

The following terminology is typically used in relation to the waste management plan unless the context of the subject matter otherwise indicates:

Bin carting route – the proposed route to move bins between the storage point and the servicing point.

Bulk bins – bins fitted with lids and side pockets to allow them to be serviced by a front-lift truck.

Clinical or related waste – waste that has the potential to cause disease, including, for example, animal waste, discarded sharps, human tissue waste or laboratory waste.

Commercial waste – means waste, other than green waste, recyclable waste, and interceptor waste or waste discharged to a sewer, produced as a result of the ordinary use or occupation of commercial developments.

Common servicing point – a common area where more than two dwellings/tenancies stand their wheelie bins for servicing.

Drive-on service – where the waste collection vehicle services bulk bins on site, bins are to be positioned for direct access/servicing without the need for manual handling by the waste vehicle driver or other person.

General waste – waste, other than domestic clean-up waste, green waste, recyclable waste, interceptor waste or waste discharged to a sewer, produced as a result of the ordinary use or occupation of domestic or commercial premises.

Hazardous waste - solid waste that is toxic or contains toxic material, for example, light bulbs, fluorescence lights, batteries.

Organic waste - is waste that comes from plants or animal that is biodegradable for example green waste and food waste.

Recycling chute - a duct in which recycling descends from one point to another.

Recyclable waste – for a local government's area, means clean and inoffensive waste that is declared by the local government to be recyclable waste for the area. The following wastes are typically deemed recyclable:

- all household plastics, bottles and containers;
- aluminium and steel cans and aerosols;
- bottles and jars made only of glass;
- clean cardboard, newspaper, loose paper, junk mail, magazines and cartons.

Related waste – means waste that constitutes, or is contaminated with, chemicals, cytotoxic drugs, human body parts, pharmaceutical products or radioactive substances.

Roll-on roll-off bin (Ro-Ro bin) – large steel open top skip bins or enclosed bins. Bins are collected by a hook-lift truck.

Solid waste – any general or recyclable waste, be it commercial or domestic. Solid waste does not include waste discharges to sewer/water or the atmosphere.

Servicing point – the designated area allocated to the temporary storage of waste bins for the period of servicing only. The point may be within or external to a development.

Storage point – the area allocated to the permanent storage of waste bins. This is the normal location of the waste bins and excludes the period where the bin is serviced. A storage point may be a common storage point or an individual bin storage point.

Waste – includes anything, other than a resource that is:

- left over, or an unwanted by-product from an industrial, commercial, domestic or other activity; or
- surplus to the industrial, commercial, domestic or other activity generating the waste.

Waste carting distance – the distance required for a person to transport their waste from the nearest point of exit of their dwelling/tenancy to a storage point (or in the case of a multi-level building, to the nearest waste disposal point).

Waste chute – a duct in which waste descends from one point/level to a collection bin.

Waste disposal point – the point where waste is disposed of into the chute, also known as waste hopper. It consists of a fixed frame and hood unit, covered with a hinged or pivoted door.

Waste storage room – the room at the base of the chute used for the storage of waste bins.

Wheelie bin – two wheeled mobile garbage bins, made from high density polyethylene (HDPE). Wheelie bins are collected by a side-lift truck

2.0 INTRODUCTION

2.1 BACKGROUND

MRA Environmental (MRA) has been commissioned by Nirimba ELC Property One Pty Ltd ATF Nirimba ELC Property One Trust to prepare a Waste Management Plan (WMP) for the proposed childcare centre development located on Nirimba Dr, Nirimba Qld 4551.

MRA has previously prepared a WMP for this development (*MRA24-199 Aura Early Learning Centre, Nirimba Dr, Nirimba dated 14th November 2024*) which was lodged as part of the Development Application, submitted to the Economic Development Queensland (EDQ). It is understood that a Request for Further Information (RFI) dated 19 December 2024 has subsequently been issued and indicates a preference for on-site waste collection which has now been accommodated.

Therefore, this updated Waste Management Plan has been prepared to be submitted to Council as part of the Information Request Response and ensures waste storage and collection activities for the operational phase of the development are generally in accordance with Sunshine Coast Council's *Planning Scheme Policy for Waste Management Code*.

2.2 SITE DETAILS

The subject site is within the Caloundra South Priority Development Area (PDA) within the Aura Community and is located on Nirimba Dr, Nirimba QLD. The development will be on one (1) parcel of land with a site area of 3,200m². We understand that the lot creation phase is underway and that it is anticipated that both the lot and local road networks will be established prior to the site becoming operational.

The site is currently surrounded by land that has been cleared for development, and we understand will be generally surrounded in the future by a mixture of residential and commercial developments (Refer to **Figure 1**).

The childcare centre will be designed to accommodate 130 children and comprise of indoor activity rooms, sleep rooms, outdoor play spaces, kitchen, laundry, staff room and car parking.

2.3 PURPOSE & SCOPE OF REPORT

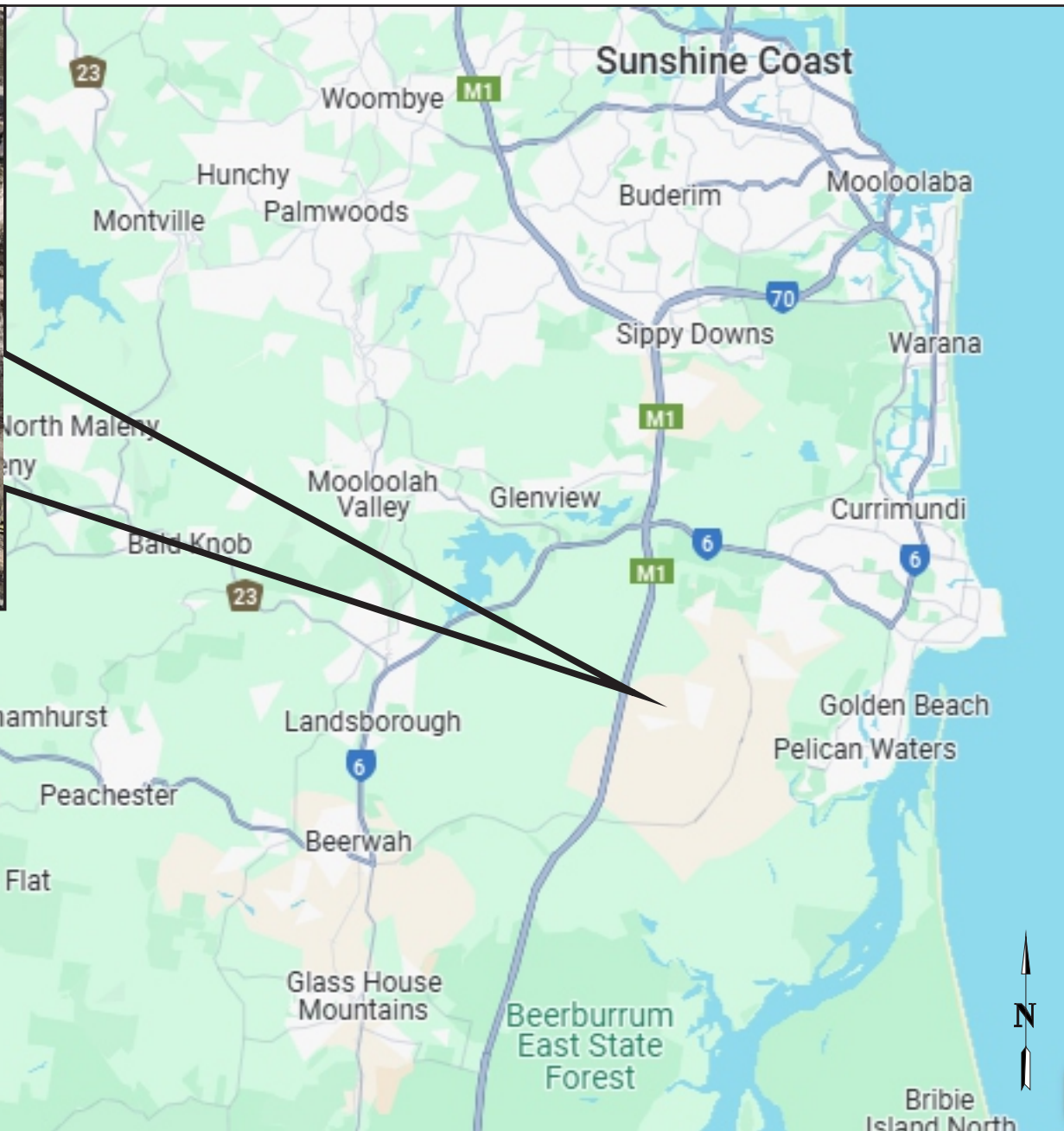
This report represents a Waste Management Plan for the operational phase of the development, which includes:

- Details on the anticipated type and quantity of waste (**Section 3.0**);
- Details of the waste storage room requirements and waste storage bins (**Section 4.0**); and
- Details of the proposed waste collection arrangements (**Section 5.0**).

2.4 WMP OBJECTIVES & STRUCTURE

The structure of this report will be as follows:

- An introduction including the site details, summary, purpose and scope of the report along with the objectives and structure;
- Development figures including the site location and outlining the waste storage and servicing infrastructure and locations;
- Waste quantities including the type of waste, quantities of waste and the proposed development tenancies;
- Proposed waste storage and servicing areas including waste storage infrastructure and locations within the development; and
- Details of the waste collection including servicing frequencies, the waste servicing area and collection vehicle access.



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DESIGNED	RP	SCALE	NTS
DRAWN	RP	LEVEL DATUM	-
CHECKED	AR	SHEET SIZE	A4
APPROVED	AR	CAD FILE	
DATE	JANUARY 2025	ISSUE	FINAL

CLIENT	NIRIMBA ELC PROPERTY ONE PTY LTD ATF NIRIMBA ELC PROPERTY ONE TRUST
PROJECT	WASTE MANAGEMENT PLAN NIRIMBA DRIVE, NIRIMBA
TITLE	SITE LOCATION

JOB NUMBER	MRA24-199
DRAWING	Figure 1
REV	FINAL

3.0 WASTE QUANTITIES

3.1 TYPE OF WASTE

Table 1 below outlines the predicted types of waste that is expected to be generated from the proposed development.

Table 1: Predicted waste types to be generated

Tenancy Type	Predicted Waste Types
Childcare Centre	General waste and recycling

3.2 WASTE QUANTITIES

Calculations of the anticipated waste quantities have been separated into the general waste and recycling components. As there are no indicative waste and recycling generation rates for a childcare centre use within Sunshine Coast Council's *Planning Scheme Policy for Waste Management Code*, it is not uncommon to utilise waste generation rates provided in other local government planning schemes.

As such, the waste calculations for this report were performed using typical waste generation rates as provided for a childcare centre use in Appendix A of the City of Gold Coast's *SC6.16 City Plan Policy v.11 - Solid Waste Management*.

3.3 PROPOSED CHILDCARE CENTRE

Table 2 displays the general waste quantities and **Table 3** displays the recycling waste quantities that are anticipated from the childcare centre.

Each area within the proposed childcare centre has been reviewed and the floor space used in the waste generation calculations reflect those areas likely to generate waste rather than a blanket use of the total gross floor areas (GFA).

For example, the children will typically not be in the activity rooms and outdoor play areas at the same time. As the activity rooms are where most of the waste will be generated, these areas have been used in the waste calculations.

Table 2: Anticipated general waste quantities

Tenancy Type	Approximate Floor Space (m ²)	Estimated Waste Generation Rate (L/100m ² /day)	Estimated Waste Generation (L/day)	Estimated Waste Generation (m ³ /week)	Estimated Waste Generation (m ³ /day)
Childcare Rooms including Yoga Room	470.6	250	1,176.5	5.88	1.18
Office/Staff Room	40	10	4.0	0.02	0.00
Kitchen	28	80	22.4	0.11	0.02
TOTAL	538.6		1,202.9	6.01	1.20

Table 3: Anticipated recycling quantities

Tenancy Type	Approximate Floor Space (m ²)	Estimated Waste Generation Rate (L/100m ² /day)	Estimated Waste Generation (L/day)	Estimated Waste Generation (m ³ /week)	Estimated Waste Generation (m ³ /day)
Childcare Rooms	470.6	120	564.72	2.82	0.56
Office//Staff Room	40	10	4.0	0.02	0.00
Kitchen	28	40	11.2	0.06	0.01
TOTAL	538.6		579.92	2.90	0.58

3.4 TOTAL WASTE CAPACITY

In summary, the proposed development is estimated to generate approximately **1.20m³/day** of general waste and **0.58m³/day** of recycling waste.

4.0 WASTE & RECYCLING STORAGE

This section outlines the general design criteria for the waste storage point with reference to Sunshine Coast Council's *Planning Scheme Policy for Waste Management Code*, along with a description of the proposed bins to be used.

4.1 WASTE STORAGE POINT

It is proposed that there will be a single waste storage point on ground level provided for the development. In response to the RFI, on-site waste collection via a rear-lift waste truck is now proposed. As rear-lift waste trucks can service both wheelie bins and plastic bulk bins (660L or 1100L bulk bins), an equivalent capacity of plastic bulk bins may be utilised by the childcare centre as an alternative to wheelie bins.

The waste storage point has capacity to house either four (4) x 1,100L bulk bins, consisting of three (3) general waste bulk bins and one (1) recycling bulk bins; OR alternatively housing fourteen (14) wheelie bins, consisting of nine (9) general waste wheelie bins and five (5) recycling wheelie bins. This may be reviewed once the development is operational and the preferred bin type determined at this time.

Please refer to **Figure 2** which shows the location of the waste storage point and capacity for the above number of wheelie bins or bulk bins.

Childcare centre staff or engaged cleaning contractors will place general waste and recycling directly into the respective bins. The ground floor storage point can be accessed via the access door from within the childcare centre and can also be accessed external to the childcare centre.

The bins will be serviced on-site which is discussed further in **Section 5.2**.

The waste storage point will be designed and constructed to meet the requirements listed below:

1. Designed to allow the bins to be easily transported to the waste collection vehicle for servicing (no steps or lips on bin carting route);
2. Waste carting distance generally should not exceed 60 metres and in any case be reasonable to ensure ease of use;
3. Located away from the main entrance to the building and screened to minimise the visual impact on the streetscape and surrounding area;
4. Designed with safe access to the disposal area;
5. Of sufficient size to accommodate the required number of bins, allowing for sufficient clearance surrounding each container;
6. Provided adequate storage for recyclable waste that all users can safely and easily access via the provision of suitably located wheelie bins;
7. Constructed hardstand area with a solid concrete base or acceptable equivalent;

8. Roofed and designed to prevent entry to rainwater;
9. Graded to fall to a drainage point that is connected to sewer in accordance with trade waste requirements;
10. Provided with a hose-cock for cleaning;
11. The floor is to be designed and constructed of impervious material with a smooth finish to allow for easy cleaning;
12. Provided with artificial lighting; and
13. Not be located adjacent to or within any habitable room or place used in connection with food preparation.

4.2 PROPOSED WASTE BINS

To ensure that the design of the waste storage point is sufficient, the details of the type & quantity of waste and number of bins provided to accommodate the childcare centre waste generated from this development are outlined in **Table 4**.

Table 4: Details of proposed bins & servicing frequency

Waste Type	Anticipated Waste Quantity (m ³ /week)	Bins Proposed in Area	Collection Frequency
General waste	6.01	3 x 1,100L bulk bins OR 9 x 240L wheelie bins	Two times a week OR Three times a week
Recycling	2.90	1 x 1,100L bulk bin OR 5 x 240L wheelie bins	Three times a week OR Three times a week

4.3 DIMENSIONS OF WASTE CONTAINERS

Table 5 below provides dimensions of the wheelie bins or bulk bins that may be used on-site. The bins will be composed of heavyweight plastic with lightweight plastic lids.

Table 5: Typical wheelie bin dimensions

Bin Type	Volume	Length (mm)	Width/ Diameter (mm)	Height (mm)	Collection Vehicle Type
Bulk Bin	1,100L	1,490	1,100	1,330	Rear Lift Truck
Wheelie Bin	240L	730	550	1,060	Rear Lift Truck

4.4 DRAINAGE AND BIN WASH

Appropriately sized bin wash facilities (including access to a hose-cock) will be provided in the waste storage point, which will be graded to a drainage point that is connected to sewer in accordance with trade waste requirements. It will be the responsibility of the contracted cleaning staff/site management to wash bins and to maintain the cleanliness of the waste storage point.

5.0 DETAILS OF COLLECTION

5.1 FREQUENCY

Waste servicing frequencies for general waste and recycling waste bins for the development have been outlined in **Table 4**. Both general waste and recycling is anticipated to be serviced two or three times a week.

5.2 ON-SITE SERVICING

On-site servicing is proposed for the development. The rear-lift waste collection vehicle is able to enter & exit the site in a forward gear and will be positioned in proximity to the waste storage point for servicing. Please refer to **Attachment A** for the waste collection vehicle swept path analysis prepared by the project traffic consultants.

For safety reasons, it is recommended that waste collection be scheduled to occur outside the operating hours of the development. Where possible, general waste and recycling servicing will be scheduled on alternate days to minimise the number of bins requiring servicing on any one day.

Bins will be removed from and returned to the waste storage point by the engaged waste contractor for servicing. The bin carting distance to/from the waste storage point to the waste collection vehicle is approx. 8 -10m.

We understand that the lot creation phase is underway and that it is anticipated that both the lot and local road networks will be established prior to the site becoming operational. Please refer to the project traffic consultants report for further detail regarding the local road network.

The on-site servicing point will reflect the following requirements:

1. Sufficient access and clearance for the waste and recycling collection vehicles to service the bins, including adequate unobstructed overhead space for the swinging arm action of the waste collection vehicle;
2. Clear of speed control devices or similar provisions which inhibit direct access to the bins for servicing;
3. Bin-carting route must allow bins to be easily manoeuvred and be devoid of steps or steep rises; and
4. Bins to be removed from and returned to the waste storage point by the engaged waste contractor.

5.3 COLLECTION VEHICLE ACCESS

Table 6 details the dimensions of the Rear Lift truck waste collection vehicles that will be used to service the development.

Table 6: Typical rear lift truck dimensions

Parameter	Rear Lift Waste Truck
Length overall (m)	10.24
Width overall (m)	2.5
Operational height (m)	3.7
Travel height (m)	3.6
Min Turning Circle (m)	R9.5 (kerb-kerb)

*Note that the waste collection vehicle clearance height (working height) is to be calculated according to the following formula as a minimum:

$$\boxed{\text{SUITABLE CLEARANCE}} = \boxed{\text{VEHICLE OPERATING DIMENSION}} + \boxed{100\text{mm}} + \boxed{\text{CLEARANCE FOR SERVICES}} + \boxed{\text{CALCULATION FOR ROADWAY GRADIENT}}$$

6.0 SUMMARY

Details of this Waste Management Plan are summarised below:

- The subject site is within the Caloundra South Priority Development Area (PDA) within the Aura Community and is located on Nirimba Dr, Nirimba QLD. The development will be on one (1) parcel of land with a site area of 3,200m². We understand that the lot creation phase is underway and that it is anticipated that both the lot and local road networks will be established prior to the site becoming operational;
- The childcare centre will be designed to accommodate 130 children and comprise of indoor activity rooms, sleep rooms, outdoor play spaces, kitchen, laundry, staff room and car parking;
- The development is estimated to generate approximately **1.20/day** of general waste and **0.58m³/day** of recycling waste;
- It is proposed that there will be a single waste storage point on ground level provided for the development. In response to the RFI, on-site waste collection via a rear-lift waste truck is now proposed. As rear-lift waste trucks can service both wheelie bins and plastic bulk bins (660L or 1100L bulk bins), an equivalent capacity of plastic bulk bins may be utilised by the childcare centre as an alternative to wheelie bins;
- The waste storage point has capacity to house either four (4) x 1,100L bulk bins, consisting of three (3) general waste bulk bins and one (1) recycling bulk bins; OR alternatively housing fourteen (14) wheelie bins, consisting of nine (9) general waste wheelie bins and five (5) recycling wheelie bins. This may be reviewed once the development is operational and the preferred bin type determined at this time;
- Childcare centre staff or engaged cleaning contractors will place general waste and recycling directly into the respective bins. The ground floor storage point can be accessed via the access door from within the childcare centre and can also be accessed external to the childcare centre;
- On-site servicing is proposed for the development. The rear-lift waste collection vehicle is able to enter & exit the site in a forward gear and will be positioned in proximity to the waste storage point for servicing. Please refer to **Attachment A** for the waste collection vehicle swept path analysis prepared by the project traffic consultants; and
- Appropriately sized bin wash facilities (including access to a hose-cock) will be provided in the waste storage point, which will be graded to a drainage point that is connected to sewer in accordance with trade waste requirements. It will be the responsibility of the contracted cleaning staff/site management to wash bins and to maintain the cleanliness of the waste storage point.

ATTACHMENT A

Waste Collection Vehicle Swept Path Analysis
prepared by the project Traffic Consultant



I, Richard Quinn (RPEQ 08565), certify that the swept paths have been carried out in accordance with AS2890.1 and/or AS2890.2

Richard Quinn

LEGEND

- Vehicle Wheelpath
- Body of Vehicle
- 300mm Clearance Envelope from Body of Vehicle

drawing title

ELC, Lot 852 Aura Estate, Caloundra South
Vehicle Tracking Analyses

drawn: RQ

Scale: 1:250 @ A3

date: 11/01/2025

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A

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