



GPO Box 1747
Brisbane QLD 4001
t 07 3166 9216
m 0417 607 242
www.qtraffic.com.au

Our Ref: 2025_GRI14

14 January 2025

Economic Development Queensland
GPO Box 2202
Brisbane Queensland 4001

For the Attention of Jennifer Davison, Principal Planner, Development Assessment

Development Application No: DEV2024/1571

Property Location: Nirimba Drive, Nirimba (Lot 8 on SP334576)

Application Description: Material Change of Use for Child Care Centre

Subject: Response to EDQ's Further Issues Letter – Traffic Matters

Dear Jennifer,

We refer to the above application for a child care centre on Lot 8 on SP334576 (DEV2024/1571). This letter has been prepared in response to EDQ's Information Request dated 19 December 2024 issued in respect of the application. It addresses the traffic-related matters therein, which are copied below for ease of reference, with responses provided following.

This letter is supplementary to, and should therefore be read in conjunction with, the Traffic Report prepared by Q Traffic which accompanied the development application.

Reference should be made to the amended plans of the development which are included as **Attachment 1**.

2. Waste Collection

The preferred approach for waste collection is on-site collection using low-noise bulk bins to avoid inefficiencies and amenity impacts associated with placing and collecting up to 14 bins on the kerbside. To support this, updated plans must include turn circles for a Waste Collection Vehicle (WRV) to demonstrate the feasibility of on-site servicing.

If on-site collection cannot be achieved, kerbside collection may be considered as an alternative, specifically around the south-western road's 90-degree bend, where no indented public parking bays are proposed. This option should only be pursued if on-site collection is determined to be unfeasible. It is noted that EDQ does not support the proposed location of the waste collection in the indented on-street parking spaces, as it presents operational challenges and inefficiencies.

To ensure the design aligns with best practice and minimises impacts on surrounding residents and public amenity, on-site collection remains the preferred and recommended approach.

Response

The vehicle tracking diagram included as **Attachment 2** demonstrates on-site manoeuvring by a 10.24m long rear-load refuse collection vehicle.

For safety reasons, it is recommended that refuse collection be scheduled to occur outside the operating hours of the development.

3. Car Park

- a) The proposed reduction in on-site car parking spaces from 46 to 38 is not supported, as it is considered too high of a reduction. The site is a new, purpose-designated, and unconstrained location, and the parking requirements outlined in the Plan of Development are expected to be met as closely as possible as reliance on on-street parking is not acceptable due to the anticipated high demand from residential users.

A reduction of up to 10 percent will be considered, requiring a minimum of 42 spaces to be provided on-site. The proposal must be redesigned to meet this requirement.

Response

As outlined in the Traffic Report which accompanied the development application, Table 2 of the Plan of Development for Aura Western Locality (Precincts 6, 11, 12, and 14 (Parts)), stipulates the following requirements for car parking at child care centre developments:

1 employee space / employee + 1 customer space / 5 children

The proposed development will cater for a maximum of 130 children, with 20 staff members expected. The application of the above car parking rate therefore leads to the following recommended parking provisions:

- 20 staff parking spaces
- 26 visitor parking spaces
- **46 parking spaces total**

This equates to a car parking rate of approximately 1 space per 2.83 children. Based upon our experience working on child care centre developments however, this level of on-site parking provision is considered to be unnecessarily high, and unwarranted.

To determine a suitable alternative level of parking provision for the proposed development, reference was made to a Planning and Environment Court matter in relation to a proposed childcare centre at 65-67 Lady Musgrave Road, Mountain Creek. One of the Joint Expert Reports of Traffic Engineers (JERs) prepared for this matter involved the collection and analysis of childcare centre parking demand data from five existing childcares in the Sunshine Coast region, ranging in capacity from 90 to 147 children.

A summary of the findings of the JER is provided as follows:

- the surveyed childcare centres were operating at about 93% of their approved capacity, on average, on the day of the survey (Tuesday);

- an 85th percentile parking demand (including both staff and visitor parking demands) of one space per 3.42 children in attendance was recorded on the day of the survey (Tuesday); and
- an 85th percentile parking demand (including both staff and visitor parking demands) of one space per 3.74 approved places, was recorded on the day of the survey (Tuesday).

The application of the former (higher) car parking rate to the proposed development, which will cater for 130 children, suggests that a total of 38 car parking spaces should be provided based upon the above precedent. This conservatively assumes 100% attendance at the centre, which is considered to be an extremely unlikely and/or expected to be an infrequent occurrence.

Notwithstanding the above, as shown in the site plan included in **Attachment 1**, the proposal provides a total of 38 car parking spaces to service the development. This is considered to represent an appropriate and supportable performance outcome, based upon precedent set at other similar developments within the Sunshine Coast region.

Importantly, it is understood that two (2) other child care centres have been approved within Aura with a greater car parking relaxation than that proposed under this application. The details of these centres are summarised in the table below.

Table 1: Summary of Car Parking Provisions and Relaxations – Child Care Centres within Aura

	Students/Staff	Parking Required	Parking Approved	% Reduction Approved
Precinct 2	132 students 23 staff	50 spaces	41 spaces	18%
Precinct 12	132 students 23 staff	50 spaces	37 spaces	26%
Precinct 11 (current DA)	130 students 20 staff	46 spaces	38 spaces	17%

The above information supports the assertion that the car parking recommendation in the Plan of Development for Aura Western Locality is unnecessarily high.

The proposed level of car parking provision (i.e. 38 spaces to service a centre of 130 children) is considered to represent an appropriate and supportable performance outcome, based upon precedent set at other similar developments within the Sunshine Coast region.

b) The western car parking aisle side does not possess a turn-around area as required by AS2890.1 2.4.2 (c). Amended drawings are required including turnaround areas for aisles with public/visitor car parking spaces.

Response

As shown in the amended site plan included in **Attachment 1**, a turnaround area is now shown at the western end of the car park.

The detail of linemarking / signage etc would be refined at detailed design stage as required.

c) Swept path drawings have not demonstrated that the service vehicle can enter and exit the site in a forward gear. Additional manoeuvring area and revised swept path drawings are to be provided to demonstrate service vehicles can enter and exit the site in a forward gear.

Response

The Sunshine Coast Planning Scheme 2014 recommends that provision be made for a van. In our experience working on a considerable number of childcare centre developments in South East Queensland, such a vehicle (e.g. a small delivery vehicle or a tradesperson vehicle) will typically access the development outside the peak drop-off / pick-up periods, when the visitor parking spaces are largely unoccupied, and could therefore use these parking spaces if necessary.

Notwithstanding the above, the vehicle tracking diagrams included as **Attachment 3** demonstrate a larger service vehicle (a 6.4m long Small Rigid Vehicle (SRV)) entering the site, accessing the service bay, and exiting the site in a forward direction.

Overall, the proposed servicing / refuse collection arrangements are considered to be appropriate given the nature and scale of the development.

d) The proposed parking layout plan also includes a non-standard pedestrian crossing. The angle of the crossing creates additional conflicts between pedestrians and parking vehicles. The pedestrian crossing is required to be re-designed and/or relocated such that it is perpendicular to the manoeuvring aisle per standard design requirements.

Response

As shown in the amended site plan included in **Attachment 1**, the alignment of the pedestrian crossing has been adjusted so it is approximately perpendicular to the parking aisle.

The detail of linemarking / signage etc would be refined at detailed design stage as required.

Conclusion and Recommendation

We trust the above information satisfactorily responds to the traffic items in EDQ's Further Issues Letter.

In my capacity as a Registered Professional Engineer of Queensland, I am satisfied that the proposed development will operate acceptably from a traffic / parking perspective, without any unacceptable impact upon the adjacent road network.

On the basis of the above, it is recommended that the development application be approved from a traffic engineering perspective.

Should you have any queries regarding the above, please do not hesitate to contact the undersigned.

Regards



Richard Quinn
BECivil, MIEAust, RPEQ (08565)
Director – Q Traffic

ATTACHMENT 1

Amended Plans

Aura Early Learning Centre

Nirimba Drive, Nirimba



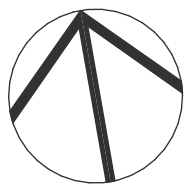
DRAWING LIST - DA		
Drawing No.	Sheet Name	Revision ID
00.01	Titlepage	N
01.02	Site Context Plan	F
03.01	Floor Plan - Ground	O
03.02	Floor Plan - First	O
04.01	Roof Plan	N
09.01	Elevations (Sheet 01)	N
09.02	Elevations (Sheet 02)	N
09.03	Elevations (Sheet 03)	N
09.04	Elevations (Sheet 04)	N
10.01	Sections	M
22.01	Renders (Sheet 1)	H
22.02	Renders (Sheet 2)	H
22.03	Renders (Sheet 3)	D

Site Information	
Local Authority	Sunshine Coast City Council
Site Area	3200m2

Development Information	
Landscaping	184.1m2 (5.75%)
Landscaping (Incl. Outdoor Play)	1196.85m2 (37.4%)
Site Cover	1141.6m2 (35.67%)
GFA	995.9m2
Carparks Required	38
Carparks Provided	38
Bike Parks	4

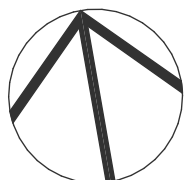
Activity Room Calculations						
Level	Room	Age Group	Area Required	Area Provided	Staff Ratio	No. of Staff
Ground Floor	Classroom 1 (0%)	0-24 mnths	39	39.18	1:4	3
	Classroom 2 (0%)	0-24 mnths	39	39.17	1:4	3
	Classroom 3 (0%)	2-3 yrs	65	65.57	1:5	4
	Classroom 4 (0%)	2-3 yrs	65	65.57	1:5	4
	Classroom 5 (0%)	3-5 yrs	72	72.00	1:11	2
	Classroom 6 (0%)	3-5 yrs	72	72.01	1:11	2
	Classroom 7 (0%)	3-5 yrs	72	71.98	1:11	2
			424	425.48 m²		20

Outdoor Play Calculations			
Zone	Age Group	Area Required	Occupancy
Outdoor Play (9%)		910	130
	2+ yrs	910	130



FLOOR PLAN LEGEND

- Steel Studs - 92mm typical
- BAL-1 Balustrade type
- CHS Circular Hollow Section
- FE Fire Extinguisher
- FW Floor Waste
- HR Handrail
- LBO Line of Building Over
- LRO Line of Roof Over
- LSO Line of Slab Over
- MRS-1 Metal Roof Sheetting
- TIL-1 Tiles
- RB Roof Beam
- TOW Top Of Wall
- USAB Universal Accessible Bathroom
- WH Window Hood
- WS WheelStop - (concrete) to comply with AS.2890.1



ATTACHMENT 2

Vehicle Tracking Diagram – Refuse Collection Vehicle



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

2025_GRI14

SK.03

A

project no.

drawing no.

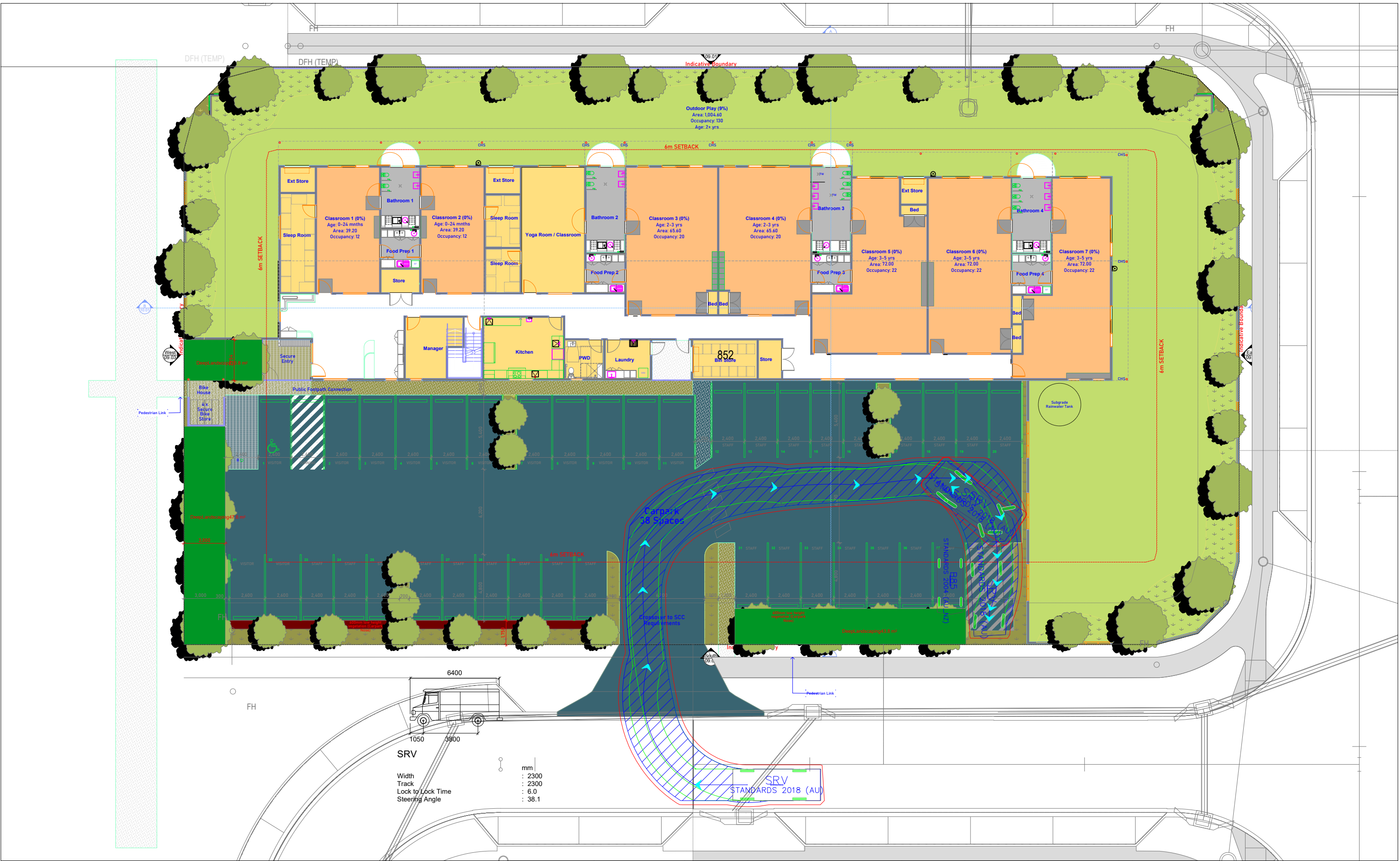
rev



The base drawing is provided to Q Traffic by others. This drawing is draft for discussion purposes only

ATTACHMENT 3

Vehicle Tracking Diagram – Small Rigid Vehicle



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: 14/01/2025

2025_GRI14

project no.

SK.01A

drawing no.

E

rev





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: 14/01/2025

2025_GRI14

SK.01A

E

project no.

drawing no.

rev



The base drawing is provided to Q Traffic by others. This drawing is draft for discussion purposes only