Child Care Operational Plan of Management

13 Endeavour Road, Caringbah

Provider: JK Gilchrist Pty Ltd trading as Chapter 1 Early Learning

Submitted to: Sutherland Shire Council
Submitted on behalf of: Aliro Trusco 1 atf Endeavour Shores Estate

Ethos Urban

Prepared by Ethos Urban

16 June 2025 | 2230200

‘Gura Bulga’

Liz Belanjee Cameron

‘Gura Bulga’ – translates to Warm Green Country. Representing New South Wales.

By using the green and blue colours to represent NSW, this painting unites the contrasting landscapes. The use of green symbolises tranquillity and health. The colour cyan, a greenish-blue, sparks feelings of calmness and reminds us of the importance of nature, while various shades of blue hues denote emotions of new beginnings and growth. The use of emerald green in this image speaks of place as a fluid moving topography of rhythmical connection, echoed by densely layered patterning and symbolic shapes which project the hypnotic vibrations of the earth, waterways and skies.

Ethos Urban acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing connection to land, waters and culture.

We acknowledge the Gadigal people, of the Eora Nation, the Traditional Custodians of the land where this document was prepared, and all peoples and nations from lands affected.

We pay our respects to their Elders past, present and emerging.

In supporting the Uluru Statement from the heart, we walk with Aboriginal and Torres Strait Islander people in a movement of the Australian people for a better future.

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1.0 Introduction

This Operational Plan of Management has been prepared by Ethos Urban on behalf of Aliro Trusco 1 atf Endeavour Shores Estate ('Aliro') and Chapter 1 Early Learning in relation to a proposed centre-based childcare facility ('the proposal'). This plan outlines the management procedures of the proposal within the Building 5 Commercial building of the broader mixed-used estate at TripleTwoNine, 13 Endeavour Road, Caringbah.

In preparing this document, consideration was given to the requirements of:

- Australian Children's Education and Car Quality Authority (ACEQA);
- National Quality Framework;
- *Education and Care services National Law Act 2010*;
- Education and Care services National Regulations;
- *Sutherland Shire Local Environmental Plan 2015*;
- Sutherland Shire Development Control Plan 2015; and
- Child Care Planning Guideline: Delivering quality care for NSW.

2.0 Centre Aim

This facility aims to provide a high-quality child care centre managed by a future child care operator. It is located within the TripleTwoNine mixed-use estate, a site that is proposed to contain a mix of light industrial, warehouse and distribution, commercial and café uses that will generate a significant number of jobs and serve the businesses and community of the Sutherland Shire.

The aim of the centre is to cater for growing population and number of families living within the Sutherland Shire LGA, and to support the many workers on the site with a convenient child care offering. The proposed facility aims to be consistent with the National Quality Framework, including the Education and Care Services National law, Education and Care Service National Regulations and the National Quality Standards.

The development program will be centred on the National Quality Framework and The Early Years Learning Framework. The Early Years Learning Framework is a national curriculum for the 0 – 6 year-old age group. Through play based learning and intentional teaching, the educators will be encouraged to explore the learning outcomes specified in the early years learning framework with all their children, planning for them individually and as a group. Parent involvement is a key aspect of the program.

The centre has been designed by Watson Young Architects, with the aim of providing a learning environment that allows for a connection between indoor and outdoor spaces that enables children to engage in safe, stimulating and quality learning.

3.0 Licensing and Approvals

As a licenced the operator Chapter 1 will take out the following insurances:

- Childcare Insurance which covers all aspects of a childcare centre and includes Public Liability Insurance of $20 Million
- Workers Compensation Insurance

4.0 Child Numbers

The proposed centre-based child care facility is proposed to cater up to 68 children. The 0-2-year age group requires additional support facilities including nappy change tables, bottle preparation areas and cot rooms.

Rooms will be set up to provide a homelike environment, allowing children to engage in age-appropriate activities. The number of children allocated to a room has been designed in respect to the Education and Care Services National regulations.

4.1 Breakdown by age group

The childcare centre is expected to cater for a range of children in different age brackets. Based on the design of the centre it is expected that the 68 children will be made up children in the following age groups:

- 0-2 years of age: 18 (26.4%)
- 2-3 years of age: 20 (29.4%)
- 3-5 years of age: 30 (44.2%)

The infants aged between 0 - 2 years will be maintained separate from toddlers and pre-schoolers age groups.

5.0 Hours of Operation

The centre will operation from 6:00am to 8:00pm, Monday to Friday fifty-two (52) weeks a year.

6.0 Staffing

Educators will be employed to ensure the minimum educator-to-child ratios set by the Education and Care Services National Regulations (Part 7.3 Reg.271) are met. The staffing requirements required for the proposed child care facility are set out in **Table 1** below.

Table 1 Educator-to-children ratios

Children's age	Educator to child ratio	Number of children	Number of Educators
0 – 2 years	1 : 4	18	5
2 – 3 years	1 : 5	20	4
3 – 5 years	1 : 10	30	3
Total	**N/A**	**68**	**12**

All educators will maintain qualifications in First Aid, asthma and anaphylaxis, child protection/working with children check and will engage in regular professional development to meet the National Quality Standard quality area four.

All educators must agree to follow the code of conduct that applies under Early Childhood Australia.

The child care centre will also employ 3-5 other staff each day, including the centre director, cook and administrative staff.

A total of up to 17 staff will be present on the staff each day at any given time. At all times, there will be a nominated supervisor/educational leader.

7.0 Outdoor Play

Outdoor play will be undertaken in accordance with the Education and Care Services Regulation (ECSR) as discussed below.

7.1 Outdoor Play Schedule

Schedule

The outdoor play schedule is generally set out below, times may be extended in summer or if weather appropriate:

Mornings: 10:30 – 11:30am

Afternoon: 3:30 – 4:30pm

Activities

Outdoor activities vary from day to day and are dependent upon the weather and the programme. The specific types of activities conducted in each play area include:

- Ball games
- Team play
- Balancing, Climbing, Stepping
- Using variety of gross motor skills development equipment
- Environmental and nature based activities
- Supervised play
- Sand play
- Water based play (not swimming pool)
- Free play

The Outdoor Activities and number of children outdoors at any given time will be monitored in consideration of potential impacts on nearby residents and adjusted accordingly.

Monitoring

The outside play area will be used only during the centre hours of operation, depending on the weather conditions.

All outdoor activities are fully supervised and monitored. Teachers and children are encouraged to participate in quiet play activities.

The specified outdoor play policy and times shall be adhered to. Exceptional circumstances may apply. The centre manager shall ensure that outdoor play activities are conducted in an orderly fashion and that excessive noise from children playing, etc., is avoided wherever possible and practical.

Specific management strategies that can be implemented if the noise in the outdoor play area needs to be reduced includes reducing the number of children in each outdoor area at any given time. The duration of the time the children are spending in the outdoor areas. The type of activities and resources available to the children can be adjusted to quite activities and resources such as books available.

7.2 Regulation 113: Outdoor Space – Natural Environment

Regulation 113 of ECSR states:

“the approved provider of a centre-based service must ensure that the outdoor spaces provided at the education and care service premises which will allow children to explore and experience the natural environment”

The use of natural features such as sand, plants and other natural vegetation will provide the opportunity for children to engage in safe play in a natural environment.

Outcome four of the Early Year Learning Framework encourages the opportunity for children to engage in the natural environment to assist them be a confident and involved learners, with an appreciation of their environment. The future fitout of the outdoor learning environment will incorporate a best practice fit out that ensures that equipment is developmentally appropriate and safe whilst also allowing the children to participate in stimulating and quality learning.

7.3 Regulation 114: Outdoor Space – Shade

The early years are the ultimate time to install a lifelong learning skill for sun protection. Regulation 114 of the Education and Care Services Regulation (ECSR) states that

"the approved provider of a centre-based service must ensure that outdoor spaces provided at the education and care service premises include adequate shaded areas to protect children from overexposure to ultraviolet radiation from the sun".

The outdoor play areas will be partly covered by shade structures. The centre will require staff and children to wear the appropriate sun protecting clothing, apply sunscreen and limit outdoor play time to sun safe times of the day.

8.0 Centre Management, Daily Program and General Timetable

Indoor activities are programmed depending on children's' needs and developmental stages. Typically, the daily routine is as follows:

6am-8:00am: Settling in for early arrivals and Centre Program – Individual Work

8am-10:30am: Program – Individual Work

10:30am – 11am: Morning Tea

11am – 12:30pm: Group Time

12:30pm – 1pm: Lunchtime

1pm - 2:30pm Sleep or Rest/Time

2:30pm – 5pm: Other play and educational activity (eg music, painting dance) or Outdoor Play, and Afternoon Tea

5pm – 8pm: Indoor activities

All Indoor and Outdoor Activities are supervised by the regulated number of trained staff.

After hours events:

The Centre may conduct the following events after hours including weekends;

(a) Parent/Teacher's Information Evening

(b) Teacher Training and meetings

(c) Christmas party and open days

Items (a), (b) are held inside of the centre with doors and windows closed.

9.0 Noise Management

The proposed centre will implement strategies to minimise noise coming from the child care centre, thereby reducing its impact on sensitive receivers on adjoining sites. These strategies include:

- Erection and maintenance of signs to indicate that centre staff and parents must talk at respectful levels in the outdoor play area; and doors must not be slammed. These signs will be places at all entry points to the outdoor play areas as well as in the indoor play area.
- Music will be primarily only played indoors. Music will only be played externally occasionally low volumes to not cause nuisance noise in the external play areas.
- Educators at all times will:
  - Supervise children;
  - Speak to children and other staff at respectful levels when outdoors.
  - Engage children in outdoor play activities to keep their attention focused.
  - Advise parents and advisors to respect the neighbours when picking up and dropping off children.
  - Resolve children's conflicts face to face rather than shouting across the external play areas.

10.0 Laundry

The centre includes a laundry facility. The centre laundry will primarily be used for incidental / day-to-day laundering of soiled clothing and miscellaneous items. The remainder of laundry will be undertaken by offsite contractors.

11.0 Kitchen and Food Preparation

The centre includes an onsite kitchen where the children's meals will be prepared. The kitchen also includes dishwashing facilities. The Centre's kitchen has been designed and constructed, and will be operated, in accordance with the following:

- Food Act 2003
- Food Regulation 2010
- FSANZ Food Standards Code
- AS 4674:2004 Design, Construction, and Fit Out of Food Premises.

The Child Care Centre's Chef will have completed a recognised Food Handling Course and be responsible for:

- Assisting with developing the menu and ordering
- Preparing snacks and food as required
- Receipting deliveries and storing the food/meals safely
- Heating and serving meals
- Delivering meals using trolleys to the children
- Cleaning the kitchen, crockery and utensils
- Displaying the menus

12.0 Staff Room and Meeting Room

The staff room facilities provided are intended for the use of educators while on lunch breaks as well as to provide quiet area for educators to work on documentation such as children's portfolios, program and planning and observations.

The meeting room will be utilised for internal meetings and any consultation with parents and carers.

13.0 Waste Management and Cleanliness

The centre operators will be responsible for their own storage of waste and recycling bins to be placed at various locations including the nappy change rooms, kitchen area and play areas where bins can be placed without risk to children. The centre will have an onsite bin storeroom in which the operators will have access to. Staff will be responsible for delivering general waste, recycling material and where applicable organics, to the bin storeroom. On designated collection days (to be established with the private waste contractor), staff will be responsible for ensuring all bins and bin areas are available for collection and that recycling bins are free of contaminants. The centre operator's cleaning staff will maintain the organisation and cleanliness of the bin storage room and the collection area. Overall waste management procedures will be in accordance with the Operational Waste Management Plan prepared by Waste Audit.

Refer to Annexure E for Waste Management Plan.

14.0 Car Parking

For staff and parents/carers there will be a total of 17 car parking spaces located adjacent to the site.

A minimum of eight (8) parent spaces are to be linemarked and signposted accordingly to ensure they are available when required by parents.

These spaces will be available for parents of the children attending the centre, providing direct access to the centre during business hours for parents. Direct access is provided by a 1.5m wide footpath at the rear of all parking spaces, providing for direct access to the centre without having to cross any parking aisles.

The staff and parents/carers car parking areas will be appropriate sign posted or identified by line marking.

15.0 Traffic Management, Drop Off and Pick Up Procedures

In the morning, parents usually arrive between the hours of 7am-10:00am. Similarly for pick-up, the parents would start arriving from 3:30pm and stagger until 8.00pm.

The trends of arrival and departure times are also based upon our analysis of arrival and departure times across our existing centres.

Upon orientation, all parents will be advised to utilise the designated car parking for drop off and pick up at all times. Internal and external signage will be displayed to identify car parking allocated to Chapter 1, and parents will be reminded throughout the year, on two occasions at a minimum, around the parking procedure.

If the centre is made aware of any parents utilising other parking for drop off and pick up, they will be directly reminded of the drop off and pickup procedures.

The following traffic management, drop off and pick up management measures will be adhered to:

- Provision of internal and external wayfinding signage will be displayed within the estate to promote parking along the frontage of the child care centre and to ensure visitors to the centre head directly to the centre without travelling to different locations within the estate. The same directional wayfinding will be provided to other buildings on the site, ensuring that where possible vehicles are not to travel past the child care centre.
- Parents will be regularly reminding to park within the allocated child care centre parking spaces and not to park anywhere else within the estate, unless permitted to do so.
- Within the induction package for parents, details will be provided for the vehicular access routes to and from the centre which will be limited to the following to avoid mixing visitors with commercial vehicles:
  - From the roundabout intersection of Captain Cook Drive / Ganons Road;
  - Left turn entry / left turn exit movement from the north-western site driveway.
- Traffic calming devices such as road humps will be utilised near the child care centre to reduce vehicle speeds within the circulation roadway which will be designed during the construction certificate stage relevant to the child care centre.
- Repeating internal speed limit signage will also be utilised on the approach to the child care centre car parking area to enforce and reduce vehicle speeds in and around the child care centre parking area.
- Priority is recommended to be given to placements within the child care centre to staff that work within the industrial precinct to reduce traffic within the precinct.

Refer to **Appendix D** for detailed Traffic Management Measures.

16.0 Deliveries and Services Support

Deliveries will occur outside the peak drop-off times (7-9am) and peak pick-up times (4-6pm). Deliveries will occur from the nearest car parking space to the entrance of the child care centre. This space would also be used for any emergency vehicles.

Cleaners will be onsite to clean the child care centre outside of operating hours.

17.0 Access and Security in the Centre

Pedestrian and disabled access to the child care centre will be provided from the lobby via stairs and a lift.

Regulation 99 of the Education and Care Services Regulations, state that children may only leave the centre if they are:

a) Given into the care of:
- *a parent of the child; or*
- *an authorised nominee named in the child's enrolment record; or*
- *a person authorised by a parent or authorised nominee named in the child's enrolment record to collect the child from the centre; or*

b) leaves the premises in accordance with the written authorisation of the child's parent or authorised nominee named in the child's enrolment record.

The centre's safety and security processes will:

a) require all visitors to sign-in and out at a centre reception desk;
b) allow families to have secure, direct access to children but require all other visitors to be accompanied by a staff member when moving about the centre;
c) ensure CCTV is used before staff allow visitors access to the centre;
d) require a sign-in and out register to be used to record the number of children in the centre at all times;
e) ensure educators confirm all children have signed out and left the centre before closing each day; and
f) ensure pathways between rooms are maintained to provide safe access for all between rooms.

The centre has the following security measures in place:

- Surrounding child-proof fences and gates as required inside the centre
- Security cameras and CCTV – external and internal
- Security alarms.
- Swipe card access to all staff and parents to the centre.

18.0 Equipment and Building Maintenance

Maintenance and cleaning at the Centre is initiated and addressed through the following processes:

- Daily inspections using a checklist. Once completed, the checklists are signed, dated and filed;
- Staff noting and documenting any observed issues in the Centre's Maintenance Book;
- Maintenance checklist completed monthly by the Nominated Supervisor;
- Annual inspections to ensure buildings and outdoor spaces are maintained in accordance with the requirements of all relevant standards and codes; and,
- Commercial cleaning will be contracted to clean the centre daily. Cleaning procedures consistent with the requirements of the Education and Care Services National Regulations 2011 and National Quality Standard 2011.

19.0 Emergency Procedures

19.1 Fire Evacuation

Prior to the opening of the centre, a full fire evacuation plan will be implemented by a licenced and accredited fire expert. It will be prepared in accordance with the fire safety strategy which will be approved by the NSW Fire Brigade prior to occupation. The fire evacuation plan will be displayed in the centre in accordance with the expert's advice. Refer to **Appendix C** for a detailed Fire Safety Strategy. In the event of a fire, all staff and children are to gather on the landscaped area outside the second ground floor tenancy of Building 5 Commercial near the café.

19.2 Flood Evacuation

Flood evacuation is to be managed in accordance with the Flood Emergency Response Plan – Child Care Facility prepared by Sparks + Partners dated October 2023 (**Appendix A**). The Flood Emergency Response Plan – Child Care Facility will be displayed in the centre. All staff will be appropriately trained in accordance with this Plan.

In the event of a flood, staff will send a mass text message to children's parents informing them that their children are safe and to remain away from the site until further instructions are provided and the floodwaters have receded.

20.0 Air Quality

The centre is to be managed in accordance with the Operational Air Quality Management Plan – Caringbah Child Care Centre (the AQMP) prepared by SLR dated 3 October 2024 (**Appendix B**). The Operational Air Quality Management Plan – Caringbah Child Care Centre will be displayed in the centre. All staff will be appropriately trained in accordance with this Plan.

The Centre Director shall:

- Ensure the Air Quality Categories (AQC) for East Sydney and Table 3 of the AQMP are displayed in the reception area.

- Nominate a staff member e.g. Room Leader(s), Assistant Director, Director, to regularly review the AQCs throughout the day to identify if air quality is becoming degraded.
- Ensure the centre is signed up for air quality alerts from NSW EPA.
- Log the start and end times of when outdoor play was modified/stopped due to poor air quality.
- Undertake an annual review of this AQMP in consultation with, and sign-off from, an appropriately qualified air quality specialist.

Staff shall modify or cease outdoor play and close doors and windows etc. as per the triggers and actions outlined in Table 3 of the AQMP.

21.0 Family Involvement

The Centre actively encourages family involvement and communication relating to the centre, children, curriculum and activities.

In addition, Chapter 1 Early Learning have an established policy to properly manage any grievances which is available within the centre. Parents also receive a detailed Handbook, which provides an overview on all aspects of our company, philosophy, curriculum and policies.

22.0 The Community

The centre location is such that a relationship will be developed with the surrounding community and residents within proximity of the site. When nominated supervisors, educators and coordinators develop links, share information, and work in collaboration with other community organisations they are better able to achieve the best outcomes for children and families using the service.

23.0 Complaints Process

Centre management will maintain a Log of any, and all, complaints received. Any complaints received shall be logged with details of the nature of the complaint, time of the event and contact details of the complainant.

23.1 Recording Complaints

Chapter 1 Early learning will maintain a complaints management process, consistent with or similar to the following:

- Centre management will endeavour to respond to any complaint as quickly as possible and will advised the complainant within 48 hours of what, if any, actions have been undertaken as a result of reviewing the complaint. These actions will be recorded in the Log.
- The Log will be located in the Nominated Superior's office and will be accessible to Council at any time within normal operating hours.
- Centre management will provide Council and the occupants of the building with name(s) and contact details (phone number) of designated person (or persons) responsible for the addressing noise or general operational complaints from other residents and tenants of the building.
- At least one designated responsible person shall be available on site at all times during operational hours. Centre management will provide Council, and other occupants of the building with an Activity Schedule.

Complaints from neighbours are very rare, however, when received they are taken seriously and

resolved in a positive manner. The Chapter 1 Early Learning's internal risk and governance management processes ensure that these issues are brought to the attention of the General Manager and Company Director.

24.0 Review

This Plan of Management has been reviewed by Aliro and Chapter 1 Early Learning. It will also be reviewed every 12 months or as required.

This Plan of Management will be supplied to any prospective child care operator tenant of the site. It is expected that a future child care centre operator would embellish this Plan of Management with the following information and management measures:

- Supervision of children
- Management of children in outdoor play areas
- Indicative daily routine
- Staff arrival times
- Parents/children arrival times
- Insurance details

25.0 Consistency with Planning Principle

This Plan of Management is consistent with the Planning Principle for the use of Plans of Management in the planning process per *Renaldo Plus 3 Pty Limited v Hurstville City Council [2005] NSWLEC 315*, as outlined in **Table 2**.

Table 2 Checklist against Planning Principle in Renaldo Plus 3 Pty Limited v Hurstville City Council [2005] NSWLEC 315

Planning Principle Question	Compliance
1. Do the requirements in the Management Plan relate to the proposed use and complement any conditions of approval?	Yes
2. Do the requirements in the Management Plan require people to act in a manner that would be unlikely or unreasonable in the circumstances of the case?	Yes
3. Can the source of any breaches of the Management Plan be readily identified to allow for any enforcement action?	Yes
4. Do the requirements in the Management Plan require absolute compliance to achieve an acceptable outcome?	Yes
5. Can the people the subject of the Management Plan be reasonably expected to know of its requirements?	Yes
6. Is the Management Plan to be enforced as a condition of consent?	Yes
7. Does the Management Plan contain complaint management procedures?	Yes
8. Is there a procedure for updating and changing the Management Plan, including the advertising of any changes?	Yes

Appendix A – Flood Emergency Response Plan – Child Care Facility

SPARKS +PARTNERS CONSULTING ENGINEERS

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October 2023

FLOOD EMERGENCY RESPONSE PLAN
CHILD CARE FACILITY
13 ENDEAVOUR ROAD, CARINGBAH

Background

Council flood mapping indicates that this property is affected by flooding in the 1% AEP (1 in 100 year ARI) storm event. Modelling of the existing site condition has been completed by WMA Water. Flood flows along Endeavour Road enter the western corner of the site via a driveway and drain over the hardstand and exit another driveway to the north, further along Endeavour Road. Flood Flows along Captain Cook Drive to the south, and do not enter the site.

The relevant flood and building levels are as follows:

- Endeavour Road Boundary 1% AEP Flow Level = RL2.800m Australian Height Datum (AHD);
- Endeavour Road Boundary PMF Flow Level = RL3.100m (AHD);
- Captain Cook Dr Boundary 1% AEP Flow Level = 2.500m (AHD);
- Captain Cook Dr Boundary PMF Flow Level = 3.100m (AHD)
- Endeavour Rd Carpark Level = RL3.000m (AHD);
- Captain Cook Dr Carpark Level = RL3.600m (AHD
- Building Floor Level = RL3.900m (AHD).

The above levels give an indication of how the flood flows will impact this property. Habitable areas are designed to be a minimum of 0.5 m above the 1% AEP Flow Level and staying within the child care facility will provide protection for a wide range of flood events.

Procedure

PREPARATION

1. Site personnel are to be regularly trained in site flood management procedure by on site inductions and regular evacuation drills.

2. A laminated copy of this flood plan should be permanently attached (glued) in prominent locations inside the building.

3. Flood management alert systems are to be regularly tested and maintained. Warning signage is to be regularly reviewed to ensure it is visible and in good condition.

4. This flood management plan should be reviewed every 5 years, particularly with the potential sea level rise due to Climate Change.

WARNINGS

1. Flooding will occur following periods of heavy rainfall within the catchment area.

2. Flood waters will be visible as overland flow in Endeavour Road and Captain Cook Dr and as rising water levels overtopping the channel at the northern end of Endeavour Rd. These events are a visible indication that rising flood waters may enter the site, via the Endeavour Road frontage.

3. Flood gauge signage within the site will indicate the current flood water depth.

4. An automated warning alert system flood sensor at the ring road driveway location will be triggered by rising floodwaters will alert site occupants to the rising floodwaters. Alert system includes strobe lights and sirens.

5. Flood hazards exist within the site and in surrounding roadways. Personnel are not to attempt to evacuate the site during a flood event.

TIMING

1. Peak flood levels will be reached in 30 minutes from the commencement of flooding.

2. Following the alarm or signs of floodwaters, the site flood response procedure is to commence.

RESPONSE PROCEDURE

1. The site manager or other personnel trained in flood response procedures are to assist any personnel to evacuate the carpark areas and relocate into the building.

2. Site personnel are to follow evacuation routes into the buildings and shelter in place until floodwaters recede.

3. A head count of all staff and children is to be undertaken to account for all individuals.

4. A mass text message to children's parents is to be sent informing them that there children are safe and to remain away from the site until further instructions are provided and the floodwaters have receded.

5. Localised low points in the carparking and driveway areas may become inundated during heavy rainfall and traveling through floodwaters on foot, or in a vehicle can be very dangerous as the water may be polluted or obstructions can be hidden under the floodwaters. Do not evacuate the building unless instructed to do so by the SES or the Police.

6. Remember floodwaters are much deeper and flow much faster outside.

7. In the case of a medical emergency ring 000 as normal, but inform about the flooding.

Appendix B – Operational Air Quality Management Plan – Caringbah Child Care Centre

Operational Air Quality Management Plan

Caringbah Child Care Centre

Aliro

13 Endeavour Road, Caringbah, NSW

Prepared by:

SLR Consulting Australia

SLR Project No.: 630.031866.000000

3 October 2024

Revision: 2.0

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
2.0	3 Oct 2024	K Barker	M Pickett	M Pickett
1.1	3 Sep 2024	K Barker	M Pickett	M Pickett
1.0	30 Aug 2024	K Barker	M Pickett	M Pickett

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Aliro (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.

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Acronyms and Abbreviations

AQIA	Air Quality Impact Assessment
AQC	Air Quality Category
AQMP	Air Quality Management Plan
AQMS	Air Quality Monitoring Station
CO	carbon monoxide
DA	Development Application
DP&E	Department of Planning and Environment
EPA	Environment Protection Authority
g	gram
km	kilometre
m	Metre
NO_2	nitrogen dioxide
NOx	oxides of nitrogen
$PM_{2.5}$	particulate matter 2.5 micrometres or less in diameter
PM_{10}	particulate matter 10 micrometres or less in diameter
PoM	Plan of Management
SO_2	sulfur dioxide
Council	Southerland Shire Council
Site	13 Endeavour Road, Caringbah, NSW
µg	micrograms
$\mu g/m^3$	micrograms per cubic metre
VOCs	Volatile Organic Compounds

1.0 Roles and Responsibilities

Centre Director

- Ensuring all staff are aware of the contents of this Air Quality Management Plan (AQMP)
- Ensuring the Air Quality Categories (AQC) for East Sydney and **Table 3** of this AQMP are displayed in the reception area as required by this AQMP
- Nominating a staff member e.g. Room Leader(s), Assistant Director, Director, to regularly review the AQCs throughout the day to identify if air quality is becoming degraded
- Ensuring the centre is signed up for air quality alerts from NSW EPA
- Logging the start and end times of when outdoor play was modified/stopped due to poor air quality.
- Annual review of this AQMP in consultation with, and sign-off from, an appropriately qualified air quality specialist.

All Staff

- Modifying or ceasing outdoor play and closing doors and windows etc. as per the triggers and actions outlined in **Table 3**.

2.0 Introduction

This Air Quality Management Plan (AQMP) has been developed to manage and minimise the potential exposure of staff and children at the child care centre at 13 Endeavour Road, Caringbah, NSW, to poor air quality. This AQMP addresses the relevant requirements of the Development Approvals, and forms part of the Plan of Management for the site operations.

2.1 Background

In September 2023, JBS&G Australia Pty Ltd (JBS&G) prepared an Air Quality Impact Assessment (AQIA) for the child care centre planned as part of the Masterplan for 13 Endeavour Road, Caringbah, NSW (the Site). The AQIA was prepared to inform a Development Application (DA) that was submitted to Sutherland Shire Council ('the Council'), for the child care centre. The modelling of traffic effects was undertaken using the USEPA air pollutant dispersion modelling software CAL3QHC (including CALINE–4).

The purpose of the AQIA was to:

- Characterise and document the environmental conditions at the site and within the surrounding area;
- Assess the air quality issues relevant to the proposed operation of a child care centre at the site; and
- Provide an assessment of the suitability of the site for use as child care centre in relation to air quality, and make recommendations, if required, regarding the development and operation of the child care centre.

Sutherland Shire Council (SSC) reviewed the JBS&G report and issued a Request for Information (RFI). The air quality component of the SSC RFI included a request to provide an Air Quality Management Plan (AQMP); i.e., this AQMP.

The findings of the JBS&G assessment and review by SLR are summarised in **Section 6.0**.

2.2 Objective of the AQMP

The objective of this AQMP is to document the physical and administrative measures that are to be employed by the child care centre to minimise the risk of any exposure of children (and staff) to poor ambient (outdoor) air quality during operation of the Site.

3.0 Site Description

The site is located on land zoned as SP4 Enterprise Zone under the Sutherland Shire Local Environmental Plan (Sutherland Shire, 2015) and bounded by Woolooware Bay to the north-east (zoned as W1- Natural Waterways). Captain Cook Drive is located within 50m of the site, and less than 100m from the proposed child care centre. This close proximity means that vehicle emissions from Captain Cook Drive are a source of air pollutant emissions potentially impacting users of the proposed child care centre.

Captain Cook Drive is classified as a Secondary Road under the NSW Roads Act 1993 (Gazetted Road Number: 2075). The NSW State Roads Act 1986 No. 85 defines a Classified Road as a main road, a secondary road, a state highway, a tourist road, a state work, a freeway or a controlled access road. Captain Cook Drive is a two-way divided carriageway with two lanes in each direction.

The child care centre location is shown in

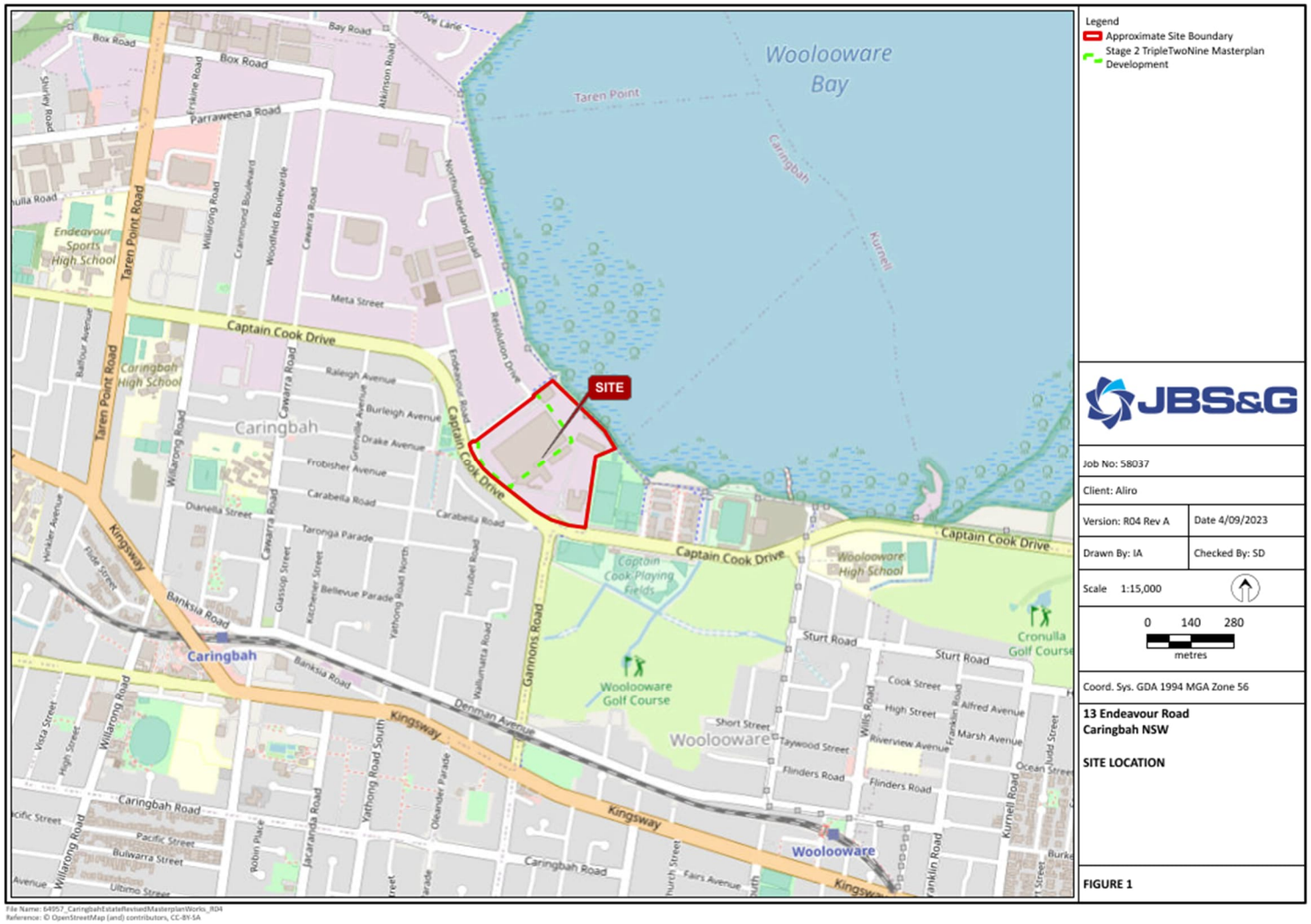
Figure 1.

The current land uses of adjacent properties or properties across adjacent roadways are summarised below.

- North – Woolooware Bay and associated mangroves, and to northwest there are commercial/industrial premises including automotive workshops, welding workshops, packaging and air conditioning companies;
- East – The site is bound to the east by the Solander Playing Fields and Cronulla RSL Youth Soccer Club. Further afield is Dune Walk, across which are residential apartments then Shark/Toyota Park and leagues club;
- South – The site is bound to the south and southwest by Captain Cook Drive, across which are low density residential lands, with playing fields and Woolooware Golf Club to the southeast; and
- West – The site is bound to the west and northwest by Endeavour Road with commercial facilities and Captain Cook Drive beyond. Further afield are some commercial/industrial premises and low-density residential lands.

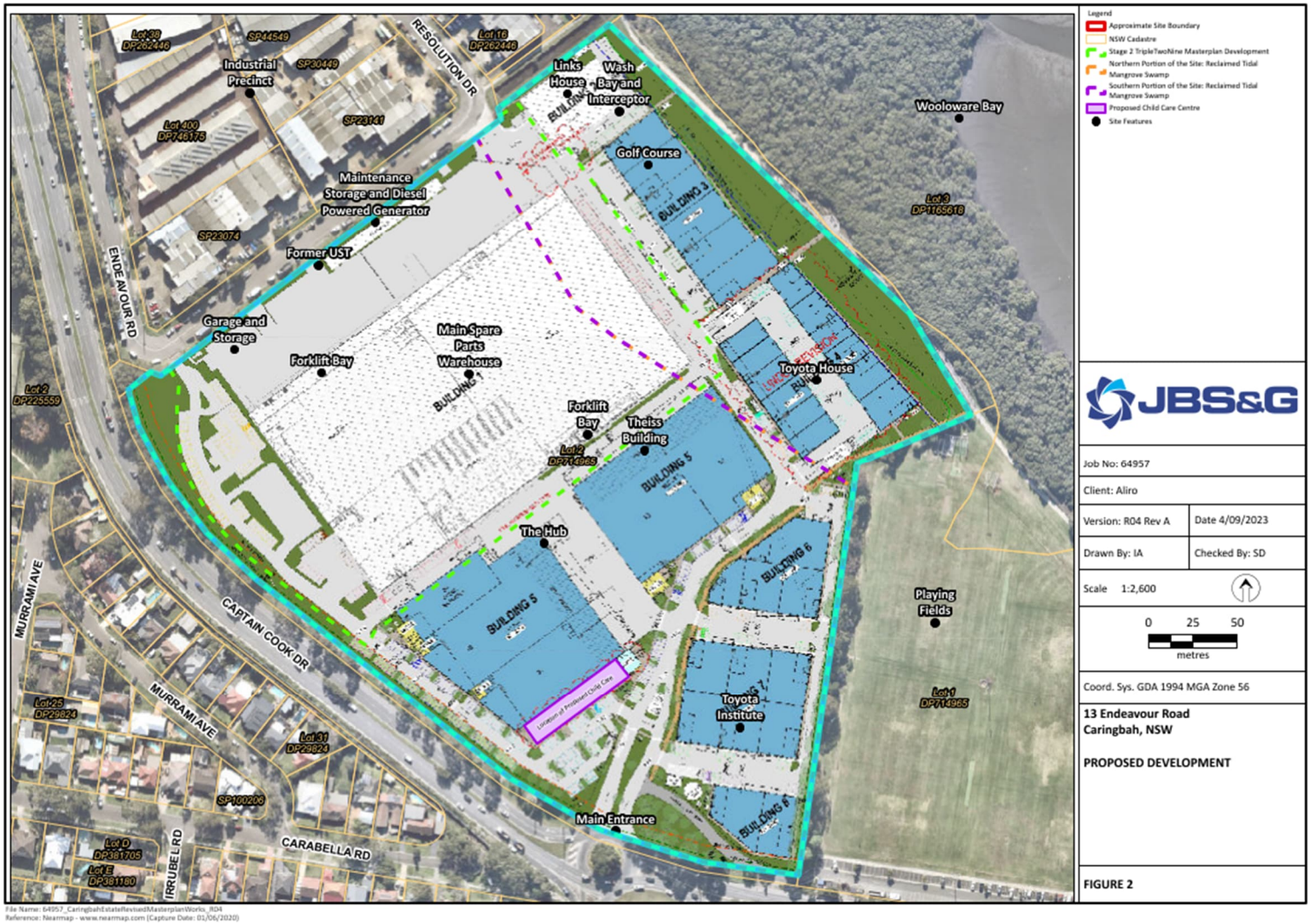
The site is to be redevelopment for mixed land uses (commercial/industrial and community uses) which includes the child care facility at the southern end of Building 5, The child care centre location is shown in **Figure 2**.

Figure 1: Location of the Site



Source: JBS&G Australia, Air Quality Impact Assessment, Proposed Child Care Facility, 13 Endeavour Road, Caringbah, NSW. Ref: 64957/154,406 Rev B, September 2023.

Figure 2: Site Layout



Source: JBS&G Australia, Air Quality Impact Assessment, Proposed Child Care Facility, 13 Endeavour Road, Caringbah, NSW. Ref: 64957/154,406 Rev B, September 2023.

4.0 Factors Affecting Air Quality

Potential sources of air emissions in the area are identified to be the emissions due to road traffic on Captain Cook Drive. Also, air quality experienced at the Site will be influenced by other local pollution sources and regional background levels of air pollutants.

A review of the National Pollutant Inventory Emission Estimation Technique Manual (NPI EET) for Combustion Engines (DSEWPC, 2008) identifies the primary pollutants from combustion engines as:

- Carbon monoxide (CO)
- Oxides of nitrogen (NO_x)
- Particulate matter less than 10 µm in aerodynamic diameter (PM_{10})
- Particulate matter less than 2.5 µm in aerodynamic diameter ($PM_{2.5}$)
- Sulfur dioxide (SO_2)
- Volatile Organic Compounds (VOCs) (example: benzene)

Other substances are also emitted in trace amounts as products of incomplete combustion, such as metallic additives which contribute to the particulate content of the exhaust (DSEWPC, 2008).

The rate and composition of air pollutant emissions from vehicles is a function of a number of factors, including the type, size and age of vehicles within the fleet, the type of fuel combusted, number and speed of vehicles and the road gradient.

4.1 Carbon Monoxide

Carbon monoxide (CO) is an odourless, colourless gas formed from the incomplete burning of fuels in motor vehicles. CO bonds to the haemoglobin in the blood and reduces the oxygen carrying capacity of red blood cells, thus decreasing the oxygen supply to the tissues and organs, in particular the heart and the brain.

CO in urban areas results almost entirely from vehicle emissions and its spatial distribution follows that of traffic flow. The highest concentrations are found at the kerbside, with concentrations decreasing rapidly with increasing distance from the road.

4.2 Oxides of Nitrogen

Oxides of nitrogen (NO_X) is a general term used to describe any mixture of nitrogen oxides formed during combustion. In atmospheric chemistry, NO_X generally refers to the total concentration of nitric oxide (NO) and nitrogen dioxide (NO_2).

NO is a colourless and odourless gas that does not significantly affect human health. However, in the presence of oxygen, NO can be oxidised to form NO_2 which can have significant health effects, including damage to the respiratory tract and increased susceptibility to respiratory infections and asthma. Long term exposure to NO_2 can lead to lung disease. NO will be converted to NO_2 in the atmosphere after leaving a car exhaust.

4.3 Suspended Particulate Matter

Airborne contaminants that can be inhaled directly into the lungs can be classified on the basis of their physical properties as gases, vapours or particulate matter. In common usage, the terms “dust” and “particulates” are often used interchangeably. The term “particulate

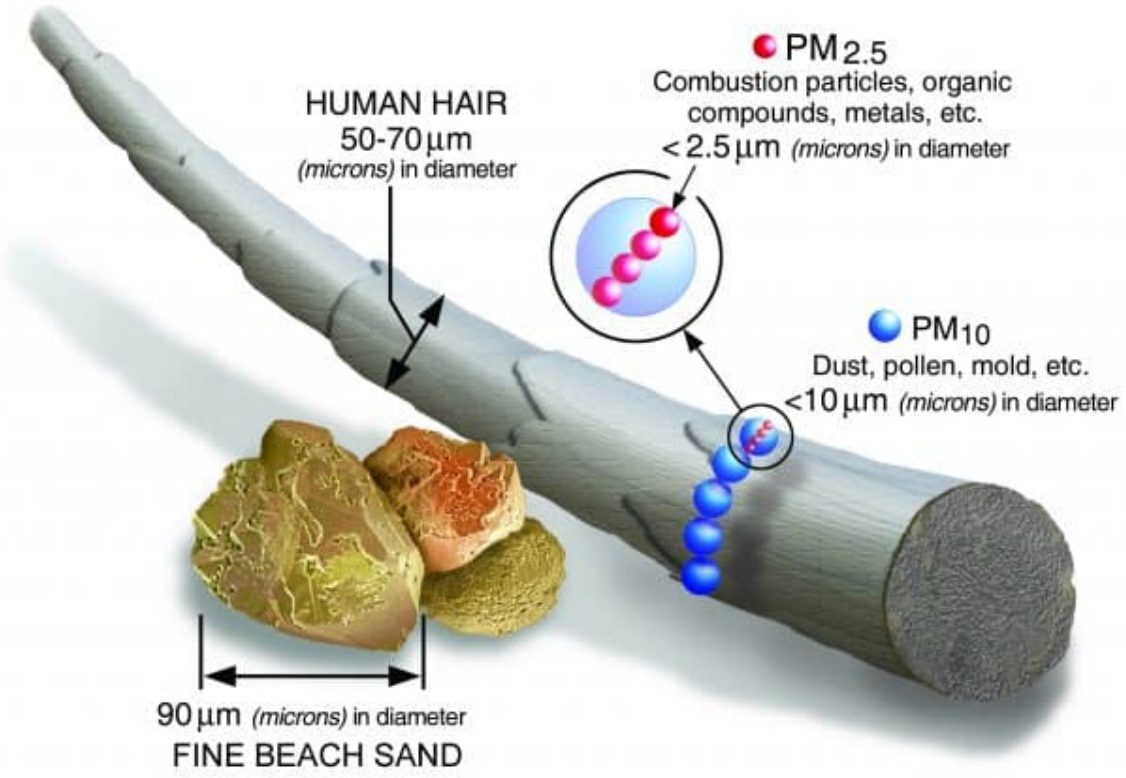
matter" refers to a category of airborne particles and liquid droplets, typically less than 30 microns (µm) in diameter and ranging down to 0.1 µm and is termed total suspended particulate (TSP). Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye. Others are so small they can only be detected using an electron microscope.

Emissions of particulate matter less than 10 µm and 2.5 µm in diameter (referred to as PM_{10} and $PM_{2.5}$ respectively) are considered important pollutants due to their ability to penetrate into the respiratory system. In the case of the $PM_{2.5}$ category, recent health research has shown that this penetration can occur deep into the lungs.

Airborne particles come in many sizes and shapes and can be made up of hundreds of different chemicals. Some are emitted directly from a source, such as construction sites, unpaved roads, fields, chimneys and stacks or bushfires. Most particles form in the atmosphere as a result of complex reactions of chemicals such as sulfur dioxide and nitrogen oxides, which are pollutants emitted from power plants, industries and automobiles.

Potential adverse health impacts associated with exposure to PM_{10} and $PM_{2.5}$ include increased mortality from cardiovascular and respiratory diseases, chronic obstructive pulmonary disease and heart disease, and reduced lung capacity in asthmatic children.

Figure 3: Size Comparisons for PM Particles



SOURCE: https://www.epa.gov/pm-pollution/particulate-matter-pm-basics

4.4 Sulphur Dioxide

Sulphur dioxide (SO2) is a colourless, pungent gas with an irritating smell. When present in sufficiently high concentrations, exposure to SO2 can lead to impacts on the upper airways

in humans (i.e. the noise and throat irritation). SO2 can also mix with water vapour to form sulphuric acid (acid rain) which can damage vegetation, soil quality and corrode materials.

Main sources of SO2 in the air are industries that process materials containing sulphur (i.e. wood pulping, paper manufacturing, metal refining and smelting, textile bleaching, wineries etc.). SO2 is also present in motor vehicle emissions, however since Australian fuels are relatively low in sulphur, high ambient concentrations are not common.

4.5 Volatile Organic Compounds

Volatile Organic Compounds (VOCs) are organic compounds (i.e. contain carbon) that have high vapour pressure at normal room-temperature conditions. Their high vapour pressure leads to evaporation from liquid or solid form and emission release to the atmosphere.

VOCs are emitted by a variety of sources, including motor vehicles, chemical plants, automobile repair services, painting/printing industries, and rubber/plastics industries. VOCs that are often typical of these sources include benzene, cyclohexane, ethylbenzene, toluene and xylenes. Biogenic (natural) sources of VOC emissions are also significant (e.g. vegetation).

Impacts due to emissions of VOCs can be health or nuisance (odour) related. Benzene is a known carcinogen and a key VOC linked with the combustion of motor vehicle fuels.

5.0 Relevant Policy and Guidance

5.1 State Environmental Planning Policy (Transport and Infrastructure) 2021

The Transport and Infrastructure SEPP consolidated multiple repealed policies in 2021, including the State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 and State Environmental Planning Policy (Infrastructure) 2007.

Chapter 2 of the Transport and Infrastructure SEPP refers to guidelines that must be considered where development is proposed on land that is in, or adjacent to, a railway corridor, under clauses 2.98. Additional provisions for development proposed in, or adjacent to, specific roads and railway corridors, are set in clauses 2.100, 2.119 and 2.120. The objective of clause 2.119 is to ensure that new development does not compromise the effective and ongoing operation and function of classified roads, and to reduce the potential for impacts from traffic noise and vehicle emissions on development adjacent to classified roads. The Development near Rail Corridors and Busy Roads – Interim Guideline (NSW DoP 2008) fulfills the purpose of the guidelines referred to by clause 2.98.

Chapter 3 of Transport and Infrastructure SEPP 2021 aims to facilitate the effective delivery of educational establishments and early education and care facilities across the State. Reference is also made to the Child Care Planning Guideline (NSW DPE, 2017) in clauses 3.23 and 3.27. Clause 3.23 outlines that applicable provisions of the guideline must be taken into consideration by consent authorities before determining a development.

Development near Rail Corridors and Busy Roads – Interim Guideline

An aim of the Rail and Road Guideline (NSW DoP 2008) is to assist in reducing the health impacts of adverse air quality from road traffic on sensitive adjacent development and assists in the planning, design and assessment of development adjacent to busy roads. Section 4.4 of the Rail and Road Guideline provides the following guidance on when air quality should be a design consideration and some of the principles that should be considered at the design stage to achieve improved air quality:

When air quality should be a design consideration:

- within 10 m of a congested collector road (traffic speeds of less than 40 km/hr at peak hour) or a road grade > 4% or heavy vehicle percentage flows > 5%
- within 20 m of a freeway or main road (with more than 2,500 vehicles per hour, moderate congestion levels of less than 5% idle time and average speeds of greater than 40 km/hr)
- within 60 m of an area significantly impacted by existing sources of air pollution (road tunnel portals, major intersection / roundabouts, overpasses or adjacent major industrial sources)
- as considered necessary by the approval authority based on consideration of site constraints, and associated air quality issues.

Air quality design considerations:

- Minimising the formation of urban canyons that reduce dispersion. Having buildings of different heights interspersed with open areas, and setting back the upper stories of multi-level buildings helps to avoid urban canyons.
- Incorporating an appropriate separation distance between sensitive uses and the road using broad-scale site planning principles such as building siting and

orientation. The location of living areas, outdoor space and bedrooms and other sensitive uses (such as child care centres) should be as far as practicable from the major source of air pollution.

- Ventilation design and openable windows should be considered in the design of development located adjacent to roadway emission sources. When the use of mechanical ventilation is proposed, the air intakes should be sited as far as practicable from the major source of air pollution.
- Using vegetative screens, barriers or earth mounds where appropriate to assist in maintaining local ambient air amenity. Landscaping has the added benefit of improving aesthetics and minimising visual intrusion from an adjacent roadway.

In relation to the siting of the child care centres, Section 2.4.2 of the Rail and Road Guideline states:

> *"Strategic site selection from perspective of road and rail corridors for schools and child care centres is particularly important as young peoples are generally more sensitive to the effects of noise and adverse air quality than adults.*
>
> *In addition, very young children and babies are more sensitive to these effects than older children. The child care day often extends beyond the typical school day to include both morning and afternoon peak hour traffic, making child care centres particularly vulnerable to adverse noise and air quality effects.*
>
> *Where new schools and child care centres are being considered, the design should ensure that there is sufficient separation from 'busy' roads and rail corridors to avoid adverse noise and air quality impacts."*

The Child Care Planning Guideline: Delivering quality child care for NSW, (NSW DPHI 2021), (the Child Care Planning Guideline)

An aim of the Child Care Guideline is to assist in ensuring air quality is acceptable where child care facilities are proposed close to external sources of air pollution such as major roads and industrial development. For proposed child care facilities close to major roads or industrial developments, Section 3.6 of the Child Care Guideline requests for an air quality assessment report to be prepared by a suitably qualified air quality professional, which evaluates design considerations to minimise air pollution such as:

- creating an appropriate separation distance between the facility and the pollution source. The location of play areas, sleeping areas and outdoor areas should be as far as practicable from the major source of air pollution
- using landscaping to act as a filter for air pollution generated by traffic and industry. Landscaping has the added benefit of improving aesthetics and minimising visual intrusion from an adjacent roadway
- incorporating ventilation design into the design of the facility

6.0 Summary of Air Quality Assessments

The potential for air quality impacts at the Site due to traffic emissions from Captain Cook Drive were assessed by JBS&G using the USEPA air pollutant dispersion modelling software CAL3QHC (including CALINE–4). The CALINE 4 model was developed by the California Department of Transportation to predict air concentrations near roadways of the pollutants CO, NO_2, and suspended particles. The CAL3QHC model estimates total air pollutant concentrations near highways of CO or PM, from moving and idling vehicles.

The pollutants modelled included PM_{10}, $PM_{2.5}$, NO_2, CO, and VOCs. Estimated emission rates from vehicles are required in CALINE-4 for each pollutant under assessment to predict the ground level concentration at the specified receptor locations i.e. the Building 5 area. Vehicle emission factors were taken from the 'Air Emissions Inventory for the Greater Metropolitan Region in New South Wales, 2013 Calendar Year' published by the NSW EPA, which represented emission rates for vehicles travelling along roads. Meteorological data from the Bureau of Meteorology monitoring station at Sydney Airport were used in the modelling.

Background (existing air pollutant) data used in the model was based on maximum site measurements during monitoring conducted by JBS&G, to provide a cumulative air quality impact assessment. Receptor locations associated with the Caringbah 'Building 5', were assessed. SLR's interpretation of the JBS&G model results is:

- Maximum 1-hour NO_2 concentrations at the assessed receptor locations comply with the current Approved Methods assessment criterion.
- Maximum 1-hour CO concentrations at the assessed receptor locations comply with the current Approved Methods assessment criterion.
- Maximum 24-hour PM_{10} concentrations at the assessed receptor locations comply with the current Approved Methods assessment criterion.
- Maximum 24-hour $PM_{2.5}$ concentrations at the assessed receptor locations would exceed with the current Approved Methods assessment criterion.

Previously, SLR had completed a modelling assessment for the nearby, and similar, Woolooware project. Additionally, to check the outcomes of the JBS&G results, SLR completed new sensitivity tests using a Transport for NSW screening calculation tool, with Caringbah project data as input. This (conservative) sensitivity testing with RAQST, using the current Caringbah project plans and traffic estimates, supported the outcomes of the more detailed modelling assessments completed by JBS&G (2023) and SLR (2023).

SLR's RAQST sensitivity tests demonstrated that while NO_2 and PM_{10} due to traffic emissions are not expected to exceed their NSW air quality criteria, relatively high $PM_{2.5}$ concentrations are an issue for the Caringbah site, (and everywhere in the Sydney region and elsewhere). However, the higher $PM_{2.5}$ concentrations are due to exceptional events such as bushfires creating smoke across wide regions. For these reasons SLR concluded the emphasis on environmental assessment and management for the Caringbah project should be on the AQMP for the site.

7.0 Mitigation Measures

This section outlines the physical and administrative controls that are to be established and maintained at the Site to manage air quality related risks.

7.1 Physical Controls

Physical controls to be implemented at the Site are outlined in **Table 1**.

Table 1: Physical Controls

Air Quality Design Considerations		Mitigation Measure
Separation	**Rail and Road Guideline:** Incorporating an appropriate separation distance between sensitive uses and the road/pollution source using broad scale site planning principles such as building siting and orientation. The location of living areas, outdoor space and bedrooms and other sensitive uses (such as child care centres) should be as far as practicable from the major source of air pollution. **Child Care Guideline:** Creating an appropriate separation distance between the facility and the pollution source. The location of play areas, sleeping areas and outdoor areas should be as far as practicable from the major source of air pollution	A reasonable separation distance of approximately 35m exists between the child care centre play area and the denser traffic flows on Captain Cook Drive. Traffic on the roads adjacent the child care centre serving the Caringbah commercial areas, including some truck traffic, is closer to the child care centre, (as close as approximately 7 metres in some cases), but the traffic flows are lighter. At peak traffic times children should be moved indoors to avoid inhalation of emissions, especially from diesel engine powered vehicles.
Ventilation	**Rail and Road Guideline:** Ventilation design and open-able windows should be considered in the design of development located adjacent to roadway emission sources. When the use of mechanical ventilation is proposed, the air intakes should be sited as far as practicable from the major source of air pollution. **Child Care Guideline:** incorporating ventilation design into the design of the facility	All mechanical air intakes will be located as far away as practicable from the roadsides.
Barriers Landscaping	**Rail and Road Guideline:** Using vegetative screens, barriers or earth mounds where appropriate to assist in maintaining local ambient air amenity. Landscaping has the added benefit of improving aesthetics and minimising visual intrusion from an adjacent roadway. **Child Care Guideline**: Using landscaping to act as a filter for air pollution generated by traffic and industry. Landscaping has the added benefit of improving aesthetics and minimising visual intrusion from an adjacent roadway	A solid balustrade will be constructed along the southern balcony of the outdoor play area.

7.2 Administrative Controls

The key administrative control that will be used to manage air quality related risks at the Site is the avoidance of outdoor play during periods of adverse background air quality. It is noted the air quality assessments showed predicted exceedances of ambient air quality criteria at the Site were mainly driven by high background levels. When regional background air quality is good, the traffic emissions will have less potential to cause air quality impacts.

7.2.1 Monitoring of Regional Background Air Quality

Monitoring of regional background air quality will be performed by review of real-time monitoring data available from the NSW Department of Planning and Environment (DP&E) website:

https://www.airquality.nsw.gov.au/air-quality-in-my-area/concentration-data/daily-air-quality-data

A screenshot of the current live data page is provided in **Figure 4**. The AQMP will use the Air Quality Categories (AQCs) reported for the Sydney East Region to identify conditions unsuitable for outdoor play, as highlighted by the red box. The AQCs are colour indicators used to summarise air quality measurements. In New South Wales, five colour indicators are used to classify air quality as either 'Good', 'Fair', 'Poor', 'Very Poor' or 'Extremely Poor'. The colour code is determined by comparing the hourly measurement for each parameter against a series of cut-off values for each pollutant.

The NSW EPA provides general health recommendations based on the AQCs via an ‘activity guide’ to assist the public in taking steps to limit their exposure to air pollution. For example, if the AQC at the nearest station is ‘Very Poor’ (red), the health advice in the activity guide is designed to provide information on how this might affect a person’s health and the recommended actions to take. The guidance for sensitive groups (which include people with heart or lung conditions including asthma, people over the age of 65, infants and children) is shown in **Table 2**.

It is noted that the NSW Government is in the process of developing a dedicated air quality website and a release of the of the new website is available and is currently running parallel with the old website. Screenshots of the new Sydney East Region AQC webpage are shown in **Figure 5** (https://www.airquality.nsw.gov.au/east-sydney) and include a map-based display, however the format of the data presentation may change as the new website is developed. Either website may be used for the purposes of this AQMP.

The selected AQC website is to be displayed on a screen at the reception area in view of staff and visitors at all times when the centre is operating and checked regularly to identify if the regional air quality is deteriorating, and action is required to be taken.

The centre will also subscribe to the Air Quality Alert system to receive a daily SMS or email update for air quality ratings and forecasts (https://www.dpie.nsw.gov.au/air-quality/subscribe-to-air-quality-updates).

Figure 4: Screenshot of the DPE Live Data Page

Wednesday
28 August 2024
Previous | Next | Select

GOOD | FAIR | POOR | VERY POOR | EXTREMELY POOR

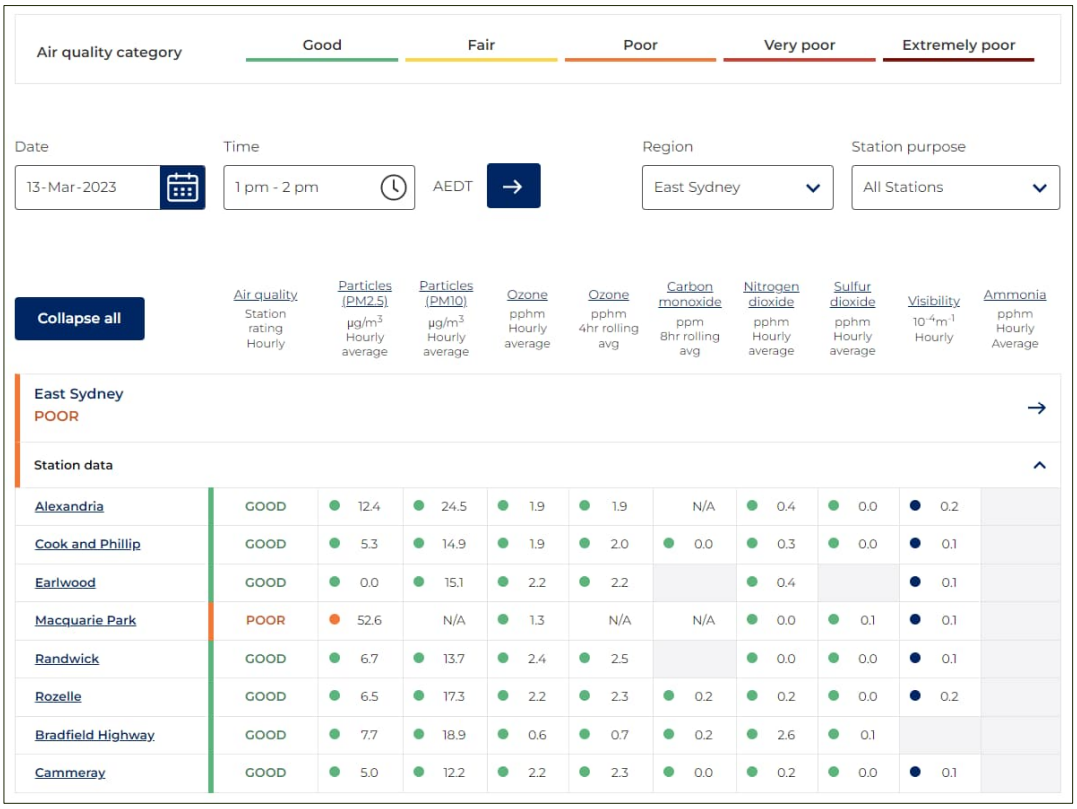
Pollutants		Ozone O3	Ozone O3	Nitrogen dioxide NO2	Visibility NEPH	Carbon monoxide CO	Sulfur dioxide SO2	Particles PM10	Particles PM2.5
Averaging Periods		max 1-hour average	max rolling 4-hour average	max 1-hour average	max 1-hour average	max rolling 8-hour average	max 1-hour average	24-hour average	24-hour average
Units		pphm	pphm	pphm	$10^{-4}m^{-1}$	ppm	pphm	$\mu g/m^3$	$\mu g/m^3$
Sydney East	Alexandria	3.1	3.0	2.3	0.13	0.1		15.2	3.1
	Cook And Phillip	2.7	2.6	3.5	0.13	0.0		13.4	5.3
	Earlwood	3.2	3.1	2.1	0.12			18.3	3.7
	Lidcombe	3.3	3.2	1.7	0.12	0.2	0.0	16.6	4.5
	Macquarie Park	3.4	3.4	1.8	0.10	0.0	0.0	13.4	2.6
	Randwick	3.3	3.2		0.14		0.1	18.0	3.2
	Rozelle	3.4	3.3	1.0	0.09	0.2	0.1	15.9	3.2
Sydney North-west	Parramatta North	3.1	3.0	2.4	0.13	0.1	0.0	17.4	4.6
	Penrith	3.4	3.2	0.7	0.09	0	0.1	14.4	3.0
	Prospect	3.4	3.3	1.2	0.10	0.0	0.1	17.6	3.8
	Richmond	3.4	3.3	0.3	0.09		0.0	13.6	2.9
	Rouse Hill	3.3	3.2	1.0	0.10	0.0	0.1	15.9	3.1
	St Marys	3.4	3.3	1.6	0.09			16.9	2.8
Sydney South-west	Bargo	3.3	3.3	0.5	0.16		0.1	25.4	3.9
	Bringelly	3.3	3.2	0.4	0.20		0.2	17.5	1.6
	Camden	3.4	3.3	0.9	0.10	0.1		15.3	1.3
	Campbelltown West	3.2	3.2	3.3	0.17	0.2	0.1	18.6	3.2
	Liverpool	3.2	3.1	0.9	0.12	0	0.2	24.5	3.4
	Oakdale	3.4	3.5	0.0	0.10				
Illawarra	Wollongong	3.3	3.3	0.4	0.12	0.4	0.0	17.9	2.2
	Kembla Grange	3.6	3.5	0.7	0.39			75.6	6.3
	Albion Park South	3.4	3.3	0.7	0.10		0.3	16.7	3.1
Lower Hunter	Newcastle	3.5	3.4	2.2	0.13	0.3	0.5	21.7	3.9
	Beresfield	3.4	3.3	1.7	0.19		0.7	23.0	4.4
	Wallsend	3.7	3.6	1.7	0.17		0.7	19.4	4.8
Central Coast	Wyong	3.3	3.2	1.9	0.13	0.1	0.1	18.1	2.9
Lake Macquarie	Morisset	3.5	3.5	0.7	0.08	0.1	0.2	9.2	3.3
Central Tablelands	Bathurst	3.1	3.0					11.2	4.8
	Orange	3.3	3.2		0.49				
Mid-north Coast	Coffs Harbour	3.9	3.8	2.4	0.65	0.3		16.7	11.1
	Port Macquarie	3.1	3.0	1.5	0.55	0	0.1		
Northern Tablelands	Armidale				0.52			14.2	8.1
North-west Slopes	Gunnedah	3.3	3.0	1.9				19.7	8.6
	Narrabri							14.4	8.9
	Tamworth	3.5	3.3	1.3				20.0	7.4
Southern Tablelands	Goulburn	3.3	3.2	0.1	0.15			6.8	1.9
South-west Slopes	Albury	3.3	3.2	0.2				15.6	5.3
	Wagga Wagga North	3.4	3.3	0.1				17.0	4.2
Muswellbrook	Muswellbrook			1.8			0.2	36.6	5.8
Singleton	Singleton			1.1			0.4	31.6	5.4
Merriwa	Merriwa	3.3	3.2	0.1	0.15	0.1	0.0	12.0	3.2

Gaps indicate that an instrument was not online for that period OR an average could not be calculated as there were not enough valid hourly data values OR that a pollutant is not measured at the site. Data from monitoring sites is collected, stored and shown in reports using Australian Eastern Standard time (AEST). Normally data for any hour should be available approximately 30 minutes later. During daylight saving, please be aware that the actual local time equals the displayed time plus 1 hour

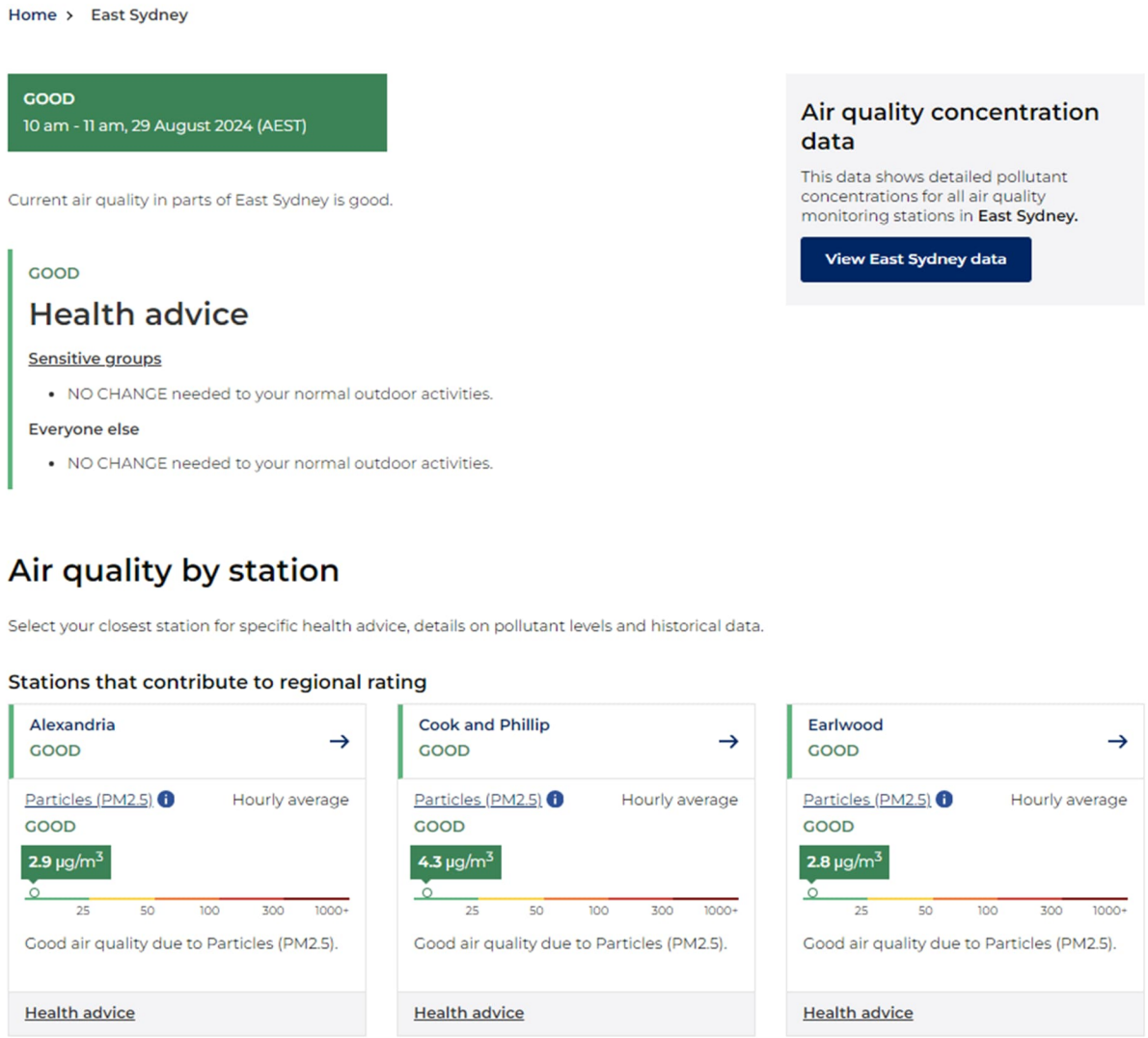
Table 2: NSW EPA General Advice – Air Quality Categories

AQC Rating	EPA's General Advice for Groups Sensitive to Air Pollution
Good	• No change needed to your normal outdoor activities.
Fair	• REDUCE outdoor physical activity if you develop symptoms such as cough or shortness of breath. • Consider closing windows and doors until outdoor air quality is better. • Follow the treatment plan recommended by your doctor. • If you are concerned about symptoms call the 24-hour HealthDirect helpline on 1800 022 222 or see your doctor. • In a health emergency, call triple zero (000) for an ambulance.
Poor	• AVOID outdoor physical activity if you develop symptoms such as cough or shortness of breath. • When indoors, close windows and doors until outdoor air quality is better. • Follow the treatment plan recommended by your doctor. • If you are concerned about symptoms call the 24-hour HealthDirect helpline on 1800 022 222 or see your doctor. • In a health emergency, call triple zero (000) for an ambulance.
Very Poor	• STAY INDOORS as much as possible with windows and doors closed until outdoor air quality is better. • If you feel that the air in your home is uncomfortable, consider going to a place with cleaner air (such as an air-conditioned building like a library or shopping centre) if it is safe to do so. • Actively monitor symptoms and follow the treatment plan recommended by your doctor. • If you are concerned about symptoms call the 24-hour HealthDirect helpline on 1800 022 222 or see your doctor. • In a health emergency, call triple zero (000) for an ambulance.
Extremely Poor	• STAY INDOORS with windows and doors closed until outdoor air quality is better and reduce indoor activity. • If you feel that the air in your home is uncomfortable, consider going to a place with cleaner air (such as an air-conditioned building like a library or shopping centre) if it is safe to do so. • Actively monitor symptoms and follow the treatment plan recommended by your doctor. • If you are concerned about symptoms call the 24-hour HealthDirect helpline on 1800 022 222 or see your doctor. • In a health emergency, call triple zero (000) for an ambulance.

Figure 5: Screenshots of the NSW Government AQC Live Data Pages



	Air quality Station rating Hourly	Particles (PM2.5) µg/m³ Hourly average	Particles (PM10) µg/m³ Hourly average	Ozone pphm Hourly average	Ozone pphm 4hr rolling avg	Carbon monoxide ppm 8hr rolling avg	Nitrogen dioxide pphm Hourly average	Sulfur dioxide pphm Hourly average	Visibility $10^{-4}m^{-1}$ Hourly	Ammonia pphm Hourly Average
Alexandria	GOOD	12.4	24.5	1.9	1.9	N/A	0.4	0.0	0.2	
Cook and Phillip	GOOD	5.3	14.9	1.9	2.0	0.0	0.3	0.0	0.1	
Earlwood	GOOD	0.0	15.1	2.2	2.2		0.4		0.1	
Macquarie Park	POOR	52.6	N/A	1.3	N/A	N/A	0.0	0.1	0.1	
Randwick	GOOD	6.7	13.7	2.4	2.5		0.0	0.0	0.1	
Rozelle	GOOD	6.5	17.3	2.2	2.3	0.2	0.2	0.0	0.2	
Bradfield Highway	GOOD	7.7	18.9	0.6	0.7	0.2	2.6	0.1		
Cammeray	GOOD	5.0	12.2	2.2	2.3	0.0	0.2	0.0	0.1	



Home > East Sydney

GOOD
10 am - 11 am, 29 August 2024 (AEST)

Current air quality in parts of East Sydney is good.

Air quality concentration data

This data shows detailed pollutant concentrations for all air quality monitoring stations in **East Sydney.**

View East Sydney data

GOOD

Health advice

Sensitive groups

- NO CHANGE needed to your normal outdoor activities.

Everyone else

- NO CHANGE needed to your normal outdoor activities.

Air quality by station

Select your closest station for specific health advice, details on pollutant levels and historical data.

Stations that contribute to regional rating

Alexandria
GOOD

Particles (PM2.5) Hourly average
GOOD
2.9 µg/m³
25 50 100 300 1000+
Good air quality due to Particles (PM2.5).

Health advice

Cook and Phillip
GOOD

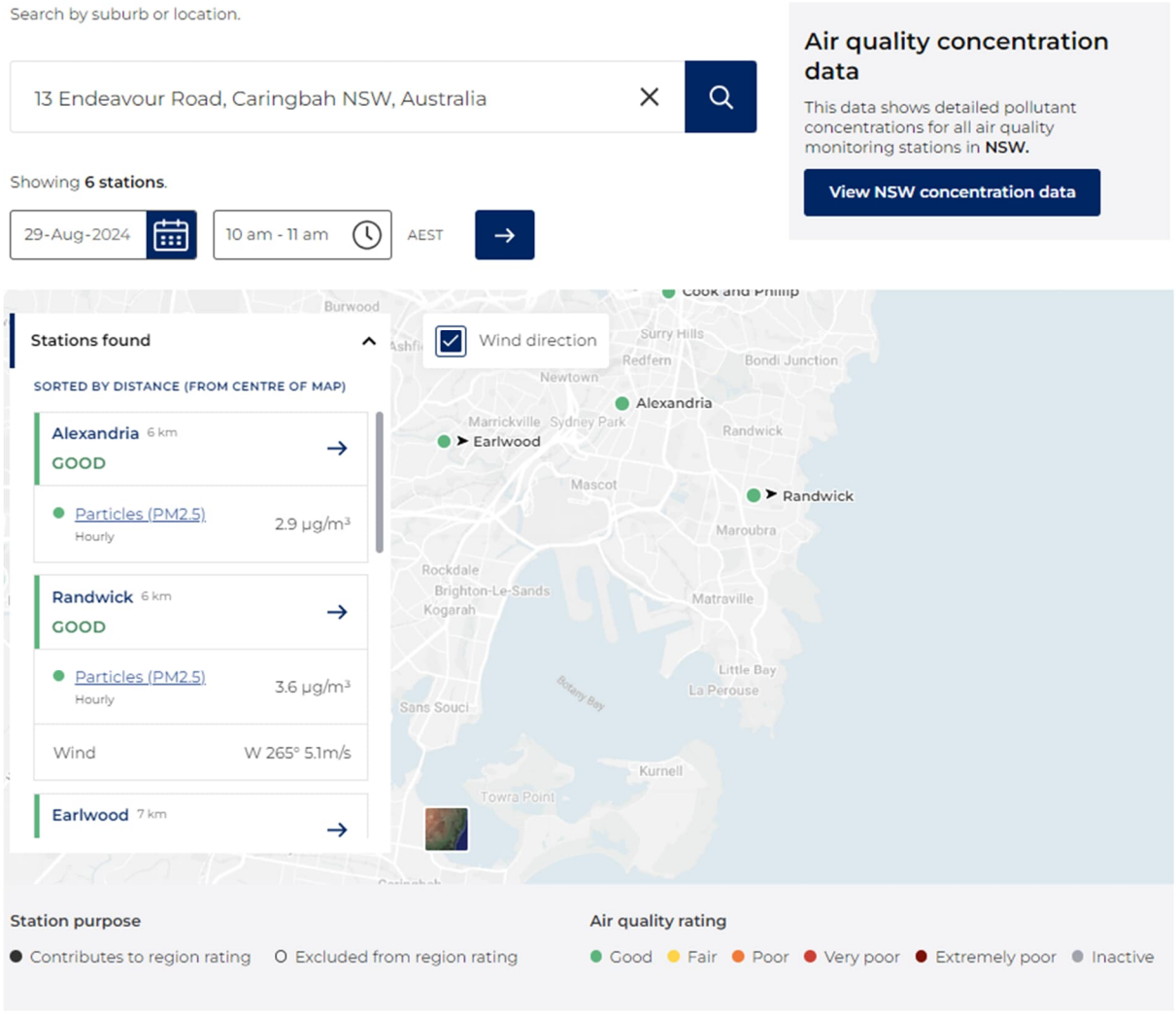
Particles (PM2.5) Hourly average
GOOD
4.3 µg/m³
25 50 100 300 1000+
Good air quality due to Particles (PM2.5).

Health advice

Earlwood
GOOD

Particles (PM2.5) Hourly average
GOOD
2.8 µg/m³
25 50 100 300 1000+
Good air quality due to Particles (PM2.5).

Health advice



7.2.2 Trigger Levels and Actions

The trigger levels and actions to be taken to minimise the exposure of children at the centre to poor air quality are outlined in **Table 3**. The following is noted:

- The AQC rating triggers apply to all pollutants (not just $PM_{2.5}$)
- Earlwood AQMS and Randwick AQMS, currently the nearest stations to the Site, are to be used to determine the background air quality

A copy of **Table 3** must be displayed adjacent to the screen displaying the AQC website data at all times, as a quick reference for staff. The size should be prominent as a visual reminder, and at least A3 in size.

Table 3: DPE Air Quality Categories and Site Actions

AQC Rating	AQMP Response
Good	• Follow normal procedures.
Fair	• Limit play to the outdoor area during the peak traffic periods i.e. between the hours of 7am - 9am and 4pm - 7pm.
Poor	• Do not permit outdoor play. • Close windows and doors and operate appropriate mechanical ventilation system (eg air conditioners, air filters). • Record start/end times of event and actions taken in a daily logbook.
Very Poor Extremely Poor	• Do not permit outdoor play. • Close windows and doors and operate appropriate mechanical ventilation system (eg air conditioners, air filters). • Record start/end times of event and actions taken in a daily logbook. • Inform parents of air quality and actions taken. • Observe children for signs of distress associated with breathing difficulty, especially those known to suffer from asthma or other respiratory conditions. • Follow centre procedures for children who feel unwell.

7.2.3 Impact on Operations

A review of air pollutant data reported by the Randwick AQMS for the year ending 31 December 2023 showed that the air quality was classified as 'Good' for more than 99% of the time as determined by analysis of results for each of the pollutants. A summary of the data analysis is provided in **Table 4**. As shown in the table:

- The recorded SO_2 and NO_2 concentrations aligned with the 'Good' AQC 100% of the time (where data is available).
- The ozone concentrations aligned with the '*Good*' AQC 99.7% of the time (where data is available), with 22 hours categorised as '*Fair*' and no hours categorised as *'Poor'*, '*Very Poor*' or '*Extremely Poor*'.
- The PM_{10} concentrations aligned with the '*Good*' AQC 99.2% of the time (where data is available), with 59 hours categorised as *'Fair'*, 5 hour categorised as '*Poor*', 3 hour categorised as '*Very Poor*', and no hours categorised as *'Extremely Poor*'.
- The $PM_{2.5}$ concentrations aligned with the '*Good*' AQC 99.2% of the time (where data is available), with 47 hours categorised as '*Fair'*, 15 hour categorised as '*Poor*', 4 hour categorised as '*Very Poor*', and 2 hour categorised as '*Extremely Poor*'.

Table 4: Randwick AQMS Air Quality Categories for 2023

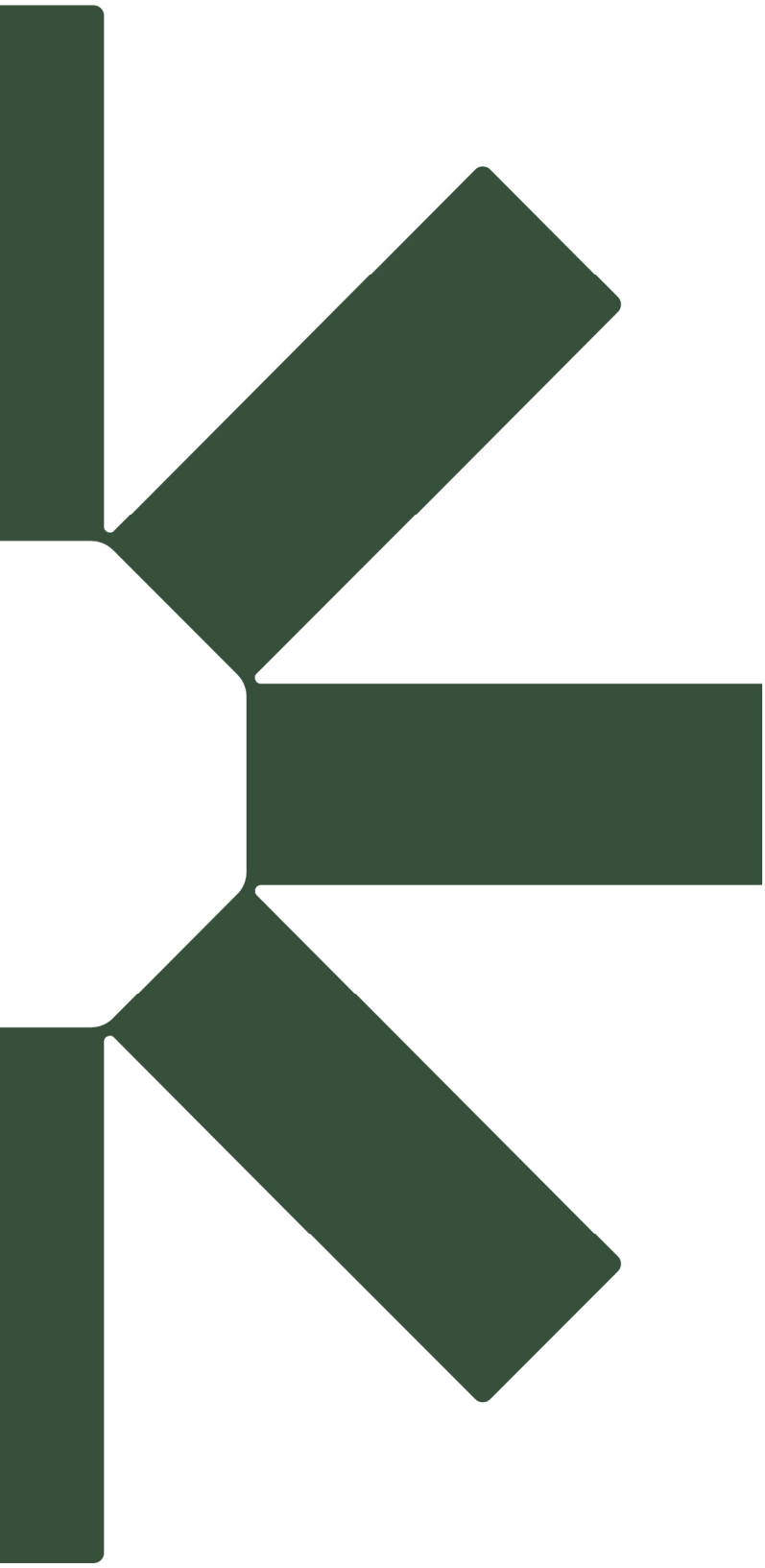
Air Quality Category	SO_2	NO_2	Ozone	PM_{10}	$PM_{2.5}$
Hours Per Year Recording Each AQC					
Good	7935	8061	8493	8489	8460
Fair	0	0	22	59	47
Poor	0	0	0	5	15
Very Poor	0	0	0	3	4
Extremely Poor	0	0	0	0	2
Total hours of data	7935	8061	8515	8556	8528
Missing Hours	825	699	8760	245	204
Percentage of Time Recording Each AQC					
Good	100%	100%	99.7%	99.2%	99.2%
Fair	0%	0%	0.3%	0.7%	0.6%
Poor	0%	0%	0%	0%	0.18%
Very Poor	0%	0%	0%	0%	0%
Extremely Poor	0%	0%	0%	0%	0%
Total % of Recorded Hours	100%	100%	100%	100%	100%
% of Total time	91%	92%	97%	98%	98%

8.0 Review and Improvement

This AQMP will be reviewed on an annual basis by the Centre Director and improved if/as required. This review process will include:

- A review of the frequency that outdoor play activities need to be modified due to poor air quality.
- The most common times of day that outdoor play activities need to be modified due to poor air quality.
- Whether the periods of poor air quality when outdoor play activities need to be modified were due to extreme events, such as bushfires or dust storms, or were related to general degraded air quality, such as during poor dispersion conditions.
- Perform a review of the year's hourly AQC ratings against the records of when outdoor play was modified, to confirm that action was taken as required by this AQMP.

Continuous improvement will be achieved by optimising the centre schedule to time outdoor play when air quality is consistently good.



Making Sustainability Happen

Appendix C – Fire Safety Strategy

FIRE SAFETY STRATEGY

Project:	Triple Two Nine Caringbah Estate	**Ref No.:**	F202041_Childcare_FSS_02
Address:	13 Endeavour Rd, Caringbah NSW 2229	**Date:**	16 June 2025
		Issue:	Childcare

To: Andrew Whiteman, Aliro Group

RE: Fire Safety Strategy – Issue Specific for Childcare Facility

1. INTRODUCTION

1.1 OVERVIEW

CORE Engineering Group has been engaged by Aliro Group to prepare a Fire Safety Strategy for the proposed new multi-building warehouse estate at 13 Endeavour Rd, Caringbah NSW 2229. Specifically this report relates only to the proposed childcare facility in Building 5 (Block 1).

1.2 SCOPE

The purpose of this report is to document the proposed fire safety strategy for the building, including guidance on the likely fire engineering trial design which has been established based on review of the BCA report, inspection of the existing building, and CORE Engineering Group's previous experience. This document is intended to be a guidance document for the design team to inform detailed design documentation and shall be further developed as necessary through ongoing consultation.

The specific details included are:

- The proposed Performance Solutions to address identified non-compliances, if applicable.
- The proposed fire engineering requirements.

1.3 SOURCES OF INFORMATION

- BCA report (Ref: 230188, Rev r0) by BM+G, dated 13/06/2025 for the childcare facility.
- Architectural plans by Watson & Young for the childcare facility:
  - 21366-005, Rev G, 'Estate Masterplan' dated 12 June 2025.
  - 21366-505, Rev D, 'Building 5C Commercial Ground Floor', dated 13 June 2025.
  - 21366-506, Rev C, 'Building 5C Childcare First Floor', dated 13 June 2025.
- Estate Fire Safety Strategy by CORE Engineering Group dated 10 December 2024.

1.4 LIMITATIONS AND ASSUMPTIONS

- This document represents the opinions of CORE Engineering Group based on the information known at the time of preparation of this document. Opinions, findings, and recommendations detailed in this document are based on our understanding and interpretation of current statutory and regulatory obligations and standards and should not be construed as legal opinions.
- This report does not constitute a fire engineering report (FER) that addresses the Performance Requirements of the BCA. Any recommendations herein are subject to detailed fire engineering analysis, and the relevant approval process.
- This document has been prepared as a guidance document only, and any parties relying on this should be cognisant that the recommendations are preliminary and subject to detailed analysis and authority approvals.

2. PROPOSED WORKS

2.1 SITE CONTEXT

The site is approximately 124,000 m² accessed by Endeavour Road to the north -west and Captain Cook Drive to the south-west as shown in Figure 2-1. The site is also bounded by a riparian corridor to the north-east, and Solander Fields to the east.

Building 1 is an existing warehouse facility accommodating multiple tenants and shall be retained and is the largest building shown in Figure 2-1 below. Building 2 is also existing, and the remainder of the site is proposed to be redeveloped as depicted below in Figure 2-2.

Figure 2-1: Existing Site

2.2 SITE DESCRIPTION

The proposed scheme for the estate is shown in Figure 2-2. With buildings 1 and 2 being existing, the scope of the new works relates to buildings 3 to 8.

- Building 3 – a row of multiple warehouse tenancies.
- Building 4 – a multi-level industrial building (2 warehouse levels, each with mezzanine offices, for a 'rise in storeys' of 4).
- **Building 5 Block 1** (A,B & C) – three warehouse tenancies, with an adjacent commercial portion accommodating an **early childcare facility** and a café.
- Building 5 Block 2 (D & E) – two adjacent warehouse tenancies.
- Building 6 – two warehouse tenancies.
- Building 7 – a group of warehouse tenancies.
- Building 8 – two adjacent warehouse tenancies.

All tenancies are proposed to be served by dedicated ancillary office facilities.

Figure 2-2: Site Layout including existing and proposed Fire Brigade Infrastructure

2.3 PROPOSED CHILDCARE FACILITY

The proposed childcare facility is located on Level 1, above the commercial tenancy(ies) on ground level of Building 5 (Block 1), highlighted in green in Figure 2-3. The childcare facility is approximately 1,200 m^2 including around 570 m^2 of outdoor space (Figure 2-5).

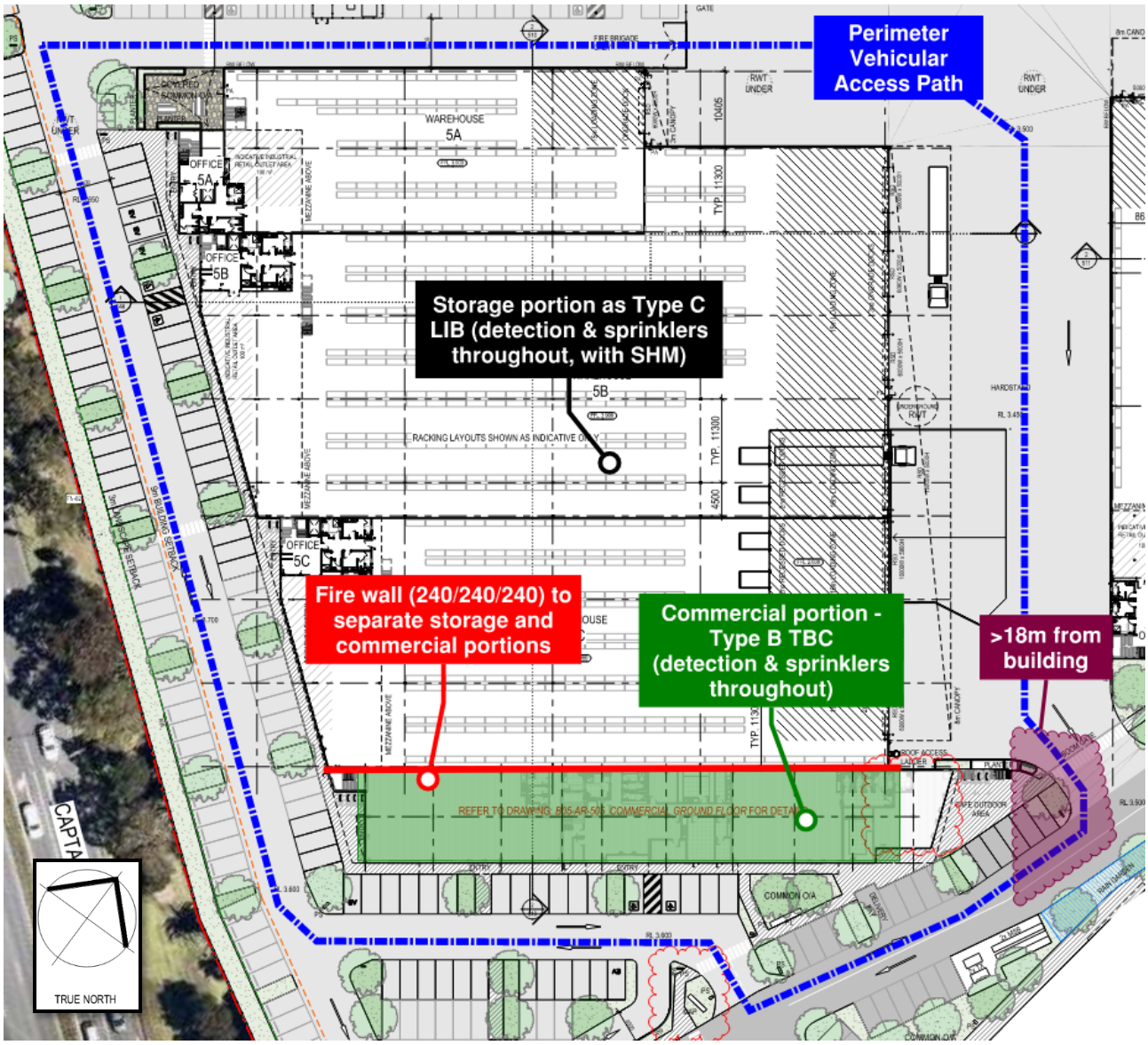


Figure 2-3: Building 5 (Block 1) – design characteristics & strategy

The floor areas for the building is shown in Figure 2-4. The ridge heights of the various buildings differs, and is summarised in the building-specific summaries provided in Section 2.4.

BUILDING 5 BLOCK 1

WAREHOUSE	5A	1,071 m²
WAREHOUSE	5B	3,048 m²
WAREHOUSE	5C	2,164 m²
OFFICE	5A	333 m²
OFFICE	5B	431 m²
OFFICE	5C	403 m²
TOTAL AREA		7,450 m²

BUILDING 5 COMMERCIAL

CAFE	112 m²
CHILDCARE	641 m²
CHILDCARE OUTDOOR	578 m²
COMMERCIAL	552 m²
TOTAL AREA	1,883 m²

Figure 2-4: Floor area schedule

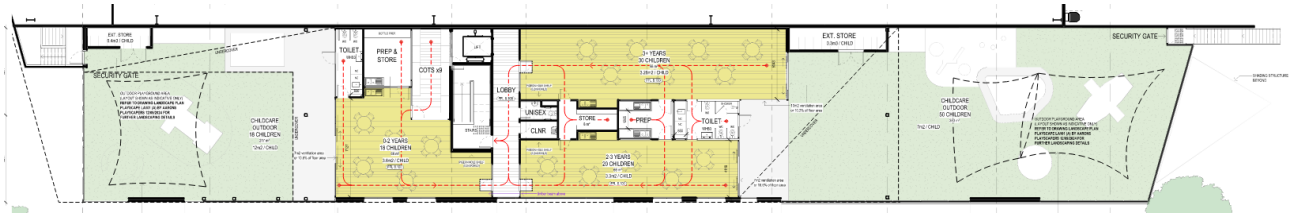


Figure 2-5: Childcare floor plan (Level 1)

2.4 BUILDING BCA CHARACTERISTICS

The following BCA characteristics are assumed for the relevant buildings.

Table 2-1: Building BCA Characteristics – Building 5 Block 1 (A, B &C)

CHARACTERISTIC	BUILDING 5 BLOCK 1 (COMMERCIAL / CHILDCARE PORTION)
Classification	Class 5 (office), Class 6 (café), Class 9b (early childcare)
Rise in Storeys	Two (2) – commercial/childcare portion
Type of Construction	Type B – commercial/childcare portion
Effective height	4.2 m
Total building floor area	1,883 m² commercial/childcare portion

3. PROPOSED PERFORMANCE SOLUTIONS

3.1 SUMMARY

No Performance Solutions specific to the childcare are proposed at this stage, as DtS compliance appears readily achievable. Proposed Performance Solutions specific to the warehouse portion of the building are presented in Estate Fire Safety Strategy by CORE Engineering Group dated 10 December 2024.

4. PROPOSED FIRE ENGINEERING TRIAL DESIGN REQUIREMENTS

The below summarises the proposed fire engineering requirements to satisfy the Performance Requirements of the BCA.

4.1 STRUCTURE AND COMPARTMENTATION

4.1.1 Type of Construction and Compartmentation

This building is comprised of two uses, being storage and commercial/childcare. A 240/240/240 fire wall shall be provided to separate these two uses.

- The building shall be considered a large-isolated building, with Type C construction for the storage portion and Type B construction for the commercial portion.
- Within the commercial portion, whilst the floor is not required to achieve an FRL for Type B construction, the early childcare centre must be fire-separated from the remainder of the office space below under Provision C3D6.
- 120/120/120 FRL fire wall between the childcare and commercial on ground floor.
- 120/120/120 FRL fire stair cores (centre and west) as per Provision D2D4.
    - It should be noted that the eastern stair is proposed to be non-fire-isolated as it provides direct access to open space, which may be deemed DtS-compliant under Provision D2D4 subject to the certifier's interpretation. However if a Performance Solution is required it would be reliant on providing drencher protection to the openings on ground level (at a minimum).

4.1.2 Combustibility of External Wall

As the building is of Type B construction, components of the external wall are to be non-combustible or as otherwise acceptable under DtS Provisions C2D10 and C2D14.

4.2 EGRESS

4.2.1 Travel Distance – Childcare

Travel distances within office areas are generally seen to be provided in accordance with the DtS limits of 20 m to a point of choice, 40 m to the nearest exit and 60 m between alternative exits.

4.3 FIRE FIGHTING EQUIPMENT

4.3.1 Fire Hydrants

The existing hydrant system is to be upgraded to serve the proposed site, in accordance with BCA Provision E1D2 and AS2419.1:2021.

- As far as possible, the hydrant system should consist of external hydrant points.
- The system must incorporate a ring main around the estate, and each large-isolated building with isolation valves that are external to the buildings and numbered with the corresponding numbers indicated on the block plan at the booster assembly.
- All hose connections in the system are to be fitted in accordance with FRNSW Technical information sheet – FRNSW compatible hose connections (available at firesafety.fire.nsw.gov.au). These couplings should be tested as part of the system when the commissioning tests are undertaken.
- The existing hydrant booster assembly is proposed to be retained at the entrance along Endeavour Road, being within sight of the main site entry.

Note: external hydrants are not required to be provided with radiant heat shields, per the concessions provided within AS2419.1:2021 for sprinklered buildings.

4.3.2 Fire Hose Reels

Fire hose reels shall be provided throughout the building in accordance with Provision E1D3 of the BCA and AS2441:2005.

4.3.3 Fire Sprinkler System

The existing fire sprinkler system shall be extended to serve Building 5, in accordance with the relevant regulatory requirements, being Provision E1D4 of the BCA and AS2118.1:2017. The childcare centre shall be provided with fast-response sprinklers, in accordance with NCC Specification 17.

4.3.4 Portable Fire Extinguishers

Portable fire extinguishers are to be provided throughout the building in accordance with Provision E1D14 of the NCC and selected, located, and distributed in accordance with AS2444:2001.

4.3.5 Control and Indicating Equipment

The building shall be provided with a FIP in accordance with NCC Specification 20 and AS1670.1:2018.

4.4 SMOKE HAZARD MANAGEMENT

4.4.1 Smoke Detection System

A smoke detection and alarm system shall be provided throughout Building 5 Block 1 in accordance with NCC Specification 20, due to the presence of the early childcare centre within the commercial portion.

4.4.2 Building Occupant Warning System

A building occupant warning system should be provided throughout all parts of each building. The system should be in accordance with the prescriptive requirements of Specification 17 and Clause 7 of Specification 20 of the NCC 2022 and AS1670.1:2018.

4.4.3 System Monitoring

Automatic signalling equipment should be provided that sends notification to fire brigade on alarm.

4.5 VISIBILITY IN AN EMERGENCY, EXIT SIGNS AND WARNING SYSTEMS

Emergency lighting is to be provided throughout the building in accordance with DtS Provisions E4D2 and E4D4 of the NCC 2022 and AS2293.1:2018.

Exit signage is to be provided throughout the building in accordance with the DtS Provisions E4D5, E4D6, E4D8 of the NCC 2022 and AS2293.1:2018.

4.6 BUILDING AND CONSTRUCTION MANAGEMENT PROCEDURES

The ongoing management of the building is as important in maintaining a high level of life safety as the provisions recommended during the design phase of the building.

4.6.1 Maintenance of Fire Safety Equipment

The fire safety systems should be tested and maintained in accordance with Australian Standard AS1851 or other relevant testing regulatory.

4.6.2 Emergency Plan

An emergency management plan should be developed for the site during the construction phase, in accordance with AS3745:2010. Where required, CORE Engineering Group can assist with the development of this document in conjunction with the Emergency Planning Committee, which should involve the childcare operator.

5. CONCLUSION

The fire safety strategy presented herein is considered capable of meeting the Performance Requirements of the BCA, subject to validation and verification of any assumptions made through detailed fire engineering analysis.

Through ongoing design development, the strategy proposed herein shall be amended and adapted based on consultation with the design team to develop the scope for the Fire Engineering Brief, and ultimately for the Fire Engineering Report for Construction.

PREPARED BY

Dean Watt
BEng (Chem) (Hons)
MEng (Fire Safety)

REVIEWED BY

Graham Morris
MEng (Structural and Fire Safety)
MIEAust CPEng NER (Fire Safety)
Registered Certifier – Fire Safety (3200)

Appendix D – Traffic Report

M^CLAREN TRAFFIC ENGINEERING

Address: Shop 7, 720 Old Princes Highway Sutherland NSW 2232
Postal: P.O Box 66 Sutherland NSW 1499

Telephone: (02) 9521 7199
Web: www.mclarentraffic.com.au
Email: admin@mclarentraffic.com.au

Division of RAMTRANS Australia ABN: 45067491678 RPEQ: 19457

Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

13 June 2025 Reference: 250500.02DA

Aliro
Level 38
Gateway
1 Macquarie Place
Sydney NSW 2000
Attention: Andrew Whiteman

LETTER OF ADVICE FOR
MIXED USE DEVELOPMENT
AT 13 ENDEAVOUR ROAD, CARINGBAH

Dear Andrew,

Reference is made to your request to provide a Letter of Advice in relation to the proposed child care centre which forms part of DA23/0721 and as such should be read in conjunction with the Masterplan Traffic& Parking Impact Assessment Report and Childcare Plan of Management. This letter of advice relates to an outline of the car parking requirements for the child care centre, servicing and loading, car park design, with all other assessment of the child care centre already carried out under DA23/0721 as part of the Masterplan Traffic and Parking Impact Assessment Report.

The proposed plans for the child care centre are reproduced in **Annexure A** for reference.

1 PARKING ASSESSMENT

1.1 Council Parking Policy

To determine the Council provision of car parking for the site, reference will be made to *Sutherland Shire Council's Development Control Plan 2015 – Chapter 36 – Roads, Vehicular Access, Traffic, Parking and Bicycles* which outlines the following requirements:

Child Care Centre

1 space per 4 children

A summary of the Council car parking requirements is provided in **Table 1** below.

TABLE 1: COUNCIL CAR PARKING POLICY

Land Use	Scale	Rate	Car Parking Required	Car Parking Provided
Child Care Centre	68 children	1 space per 4 children	17	17

As shown above the Council requires the provision of 17 spaces for the child care centre, with 17 spaces provided. The car parking spaces are located directly along the frontage of the building, providing for the safest form of access, with the transport of children from car parking spaces not having to cross any car park aisles.

1.2 Accessible Car Parking

Sutherland Shire Council does not outline car parking rates for people with disabilities applicable to child care centre developments. As such, reference is made to *Section D4D6* of the *Building Code of Australia* (BCA) as part of the *National Construction Code 2022* (NCC) which categorises a child care centre as a Class 9b building and therefore requires the provision of car parking for people with disabilities at a rate of:

Class 9b	*1 accessible space for every 50 carparking spaces or part thereof.*

In accordance with the BCA requirements, one (**1**) car parking space for people with disabilities is to be provided. The proposed car parking layout details the provision of two (**2**) car parking space designed in accordance with *AS2890.6:2022*, exceeding the BCA requirements.

1.3 Bicycle Parking Requirements

Reference is made to *Sutherland Shire Council's Development Control Plan 2015 – Chapter 36 – Vehicular Access, Traffic, Parking and Bicycles* which state "*Bicycle parking spaces must be provided at the rate of 1 space per 10 car parking spaces for the first 200 car spaces, then 1 space per 20 parking spaces thereafter*".

Based upon the above, the proposal would require the provision of two (2) bicycle spaces. The proposal provides four (4) bicycle spaces, exceeding this requirement, located adjacent to Tenant 1 of Building 5.

1.4 Servicing & Loading

The child care centre would require service facilities of a van, typically for food deliveries. It is expected that all deliveries will be undertaken within the proposed car parking area outside peak drop off / pick up times, under a plan of management if necessary. A van (standard B99 design vehicle) or similar can be accommodated within the car parking area, utilising vacant visitor spaces. This is common practice for child care centres and will not noticeably affect operation of the site. It is reiterated that deliveries and other arrivals of similar nature are low in frequency and can be easily managed.

The site will be serviced by a private waste contractor from the vacant visitor spaces outside the peak child care centre pick-up and drop-off periods. It is expected that the design vehicle will be similar to a 6.4m length Small Rigid Vehicle.

1.5 Vehicle Access & Parking / Loading

Whilst the car parking layout has already been assessment as part of the Masterplan Traffic & Parking Impact Assessment Report, an outline of the parking for the child care centre has the assessed again and complies with AS2890.1:2004 with the following characteristics:

- Child Care Centre parking, providing 2.6m wide spaces by 5.4m long spaces (applies to both staff and visitor spaces);
- EV car parking space with dimensions of 2.4m in width by 5.4m in length (for use by staff);
- Disabled car parking spaces with minimum dimensions of 2.6m in width by 5.4m in length, with associated shared space with minimum dimensions of 2.4m in width.

Whilst the plans have been assessed to comply with the relevant standards, it is usual and expected that a design certificate be required at the Construction Certificate stage to account for any changes following the development application.

In addition to the above, safety is important when considering the design of parking for child care centres. The following has been considered / recommended to be provided as part of the design of the child care centre car parking layout:

- Provision of a 1.5m wide footpath at the rear of all parking spaces, providing for direct access to the centre without having to cross any parking aisles.
- Provision of internal and external wayfinding signage will be displayed within the estate to promote parking along the frontage of the child care centre and to ensure visitors to the centre head directly to the centre without travelling to different locations within the estate. The same

directional wayfinding will be provided to other buildings on the site, ensuring that where possible vehicles are not to travel past the child care centre.

- Parents will be regularly reminding to park within the allocated child care centre parking spaces and not to park anywhere else within the estate, unless permitted to do so;

- Allocation of a minimum of eight (8) parent spaces to be linemarked and signposted accordingly to ensure they are available when required by parents.

- Within the induction package for parents, details will be provided for the vehicular access routes to and from the centre which will be limited to the following to avoid mixing visitors with commercial vehicles:

    - From the roundabout intersection of Captain Cook Drive / Ganons Road;

    - Left turn entry / left turn exit movement from the north-western site driveway.

- Traffic calming devices such as road humps will be utilised near the child care centre to reduce vehicle speeds within the circulation roadway which will be designed during the construction certificate stage relevant to the child care centre;

- Repeating internal speed limit signage will also be utilised on the approach to the child care centre car parking area to enforce and reduce vehicle speeds in and around the child care centre parking area.

- Priority is recommended to be given to placements within the child care centre to staff that work within the industrial precinct to reduce traffic within the precinct.

2 CONCLUSION

The subject Mixed Use Development at 13 Endeavour Road, Caringbah (as depicted in **Annexure A**) has been assessed in regards to its traffic and parking impacts. The following outcomes of this letter in conjunction with the Masterplan Traffic & Parking Impact Assessment are relevant to note:

a) The proposal requires the provision of **17** car parking spaces based upon the Council's DCP requirements. The plans indicate the provision of **17** car parking spaces, complying with Council's requirements.

b) The car parking layout for the centre was assessed as part of this letter and the Masterplan Traffic & Parking Impact Assessment which complies with the relevant standards, namely AS2890.1:2004.

c) The traffic generation associated with the proposal is in the order of **54** vehicle trips in the AM peak hour period and 48 vehicle trips during the PM peak hour periods. This impact of the development has already been assessed as part of the Masterplan Traffic and Parking Impact Assessment Report.

d) The site will be serviced by a private waste contractor from the vacant visitor spaces outside the peak child care centre pick-up and drop-off periods. It is expected that the design vehicle will be similar to a 6.4m length Small Rigid Vehicle.

Please contact the undersigned on 9521 7199 should you require further information or assistance.

Yours faithfully,

McLaren Traffic Engineering
Matthew McCarthy
Associate Traffic Engineer
Bachelor of Civil Engineering
Masters of Engineering Science
Accredited Level 3 Road Safety Auditor
RMS Accredited Traffic Management Plan Designer

ANNEXURE A: PLANS

LEVEL 1

BUILDING 4

NOTES

ALL NEW CROSSOVERS IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS

ALL DISABLED PARKING SPACES IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2890
(5.4m x 2.4m)

SITE STORMWATER DRAINAGE IN ACCORDANCE WITH LOCAL AUTHORITY & COUNCIL REQUIREMENTS

ALL RELATIVE LEVELS ARE SHOWN TO A.H.D. (Australian Height Datum) LEVELS SHOWN ARE INDICATIVE ONLY AND SUBJECT TO FURTHER CIVIL DETAIL DESIGN. THESE MIGHT VARY +/- 1000 mm

EXTENT OF RETAINING WALLS SHOWN AS INDICATIVE ONLY SUBJECT TO CIVIL REVIEW

GROSS LETTABLE AREA (GLA) IS THE TOTAL FLOOR AREA OF A BUILDING, MEASURED FROM THE OUTSIDE OF EXTERNAL WALLS OR THE CENTRE OF PARTY WALLS AND INCLUDES ALL ROOFED AREAS

5% OF CARPARKING SPACES PROVIDED TO BE DEDICATED AS CAR SHARING BAYS
5% OF CARPARKING SPACES PROVIDED TO BE DEDICATED AS ELECTRICAL VEHICLE BAYS

PARKING PROVISION

PARKING ALLOCATION SHOWN AS INDICATIVE ONLY

		CARS	BICYCLES
Building 1A		52	-
Building 1B		81	-
Building 1C		10	-
Building 1D		35	-
Building 1E		12	-
Building 2		12	-
Building 3		24	12
Building 4		121	64
Building 5	Block 1	48	12
Building 5	Block 2	13	8
Building 5	Childcare	17	4
Building 5	Commercial	19	8
Building 6		38	8
Building 7		61	12
Building 8		16	4
TOTAL		559	132
MOTORBIKES			20

DEVELOPMENT ANALYSIS

USE		GFA (EXCL LOADING ZONE)
BUILDING 3		
WAREHOUSE	3A	649 m²
WAREHOUSE	3B	676 m²
WAREHOUSE	3C	677 m²
WAREHOUSE	3D	677 m²
WAREHOUSE	3E	698 m²
WAREHOUSE	3F	763 m²
OFFICE	3A	126 m²
OFFICE	3B	127 m²
OFFICE	3C	127 m²
OFFICE	3D	127 m²
OFFICE	3E	127 m²
OFFICE	3F	126 m²
TOTAL AREA		4,900 m²
BUILDING 4		
WAREHOUSE	GROUND LEVEL	4,249 m²
WAREHOUSE	LEVEL 1	2,972 m²
OFFICE MEZZANINE	GROUND LEVEL	884 m²
OFFICE MEZZANINE	LEVEL 1	937 m²
TOTAL AREA		9,042 m²
BUILDING 5 BLOCK 1		
WAREHOUSE	5A	1,071 m²
WAREHOUSE	5B	3,048 m²
WAREHOUSE	5C	2,164 m²
OFFICE	5A	333 m²
OFFICE	5B	431 m²
OFFICE	5C	403 m²
TOTAL AREA		7,450 m²
BUILDING 5 BLOCK 2		
WAREHOUSE	5D	2,732 m²
WAREHOUSE	5E	2,023 m²
OFFICE	5D	424 m²
OFFICE	5E	391 m²
TOTAL AREA		5,570 m²
BUILDING 5 COMMERCIAL		
CAFE		112 m²
CHILDCARE		641 m²
CHILDCARE OUTDOOR		578 m²
COMMERCIAL		552 m²
TOTAL AREA		1,883 m²
BUILDING 6		
WAREHOUSE	6A	892 m²
WAREHOUSE	6B	1,688 m²
OFFICE	6A	154 m²
OFFICE	6B	181 m²
ESTATE MANAGER OFFICE		27 m²
TOTAL AREA		2,942 m²
BUILDING 7		
WAREHOUSE	7A	698 m²
WAREHOUSE	7B	647 m²
WAREHOUSE	7C	644 m²
WAREHOUSE	7D	696 m²
WAREHOUSE	7E	647 m²
WAREHOUSE	7F	644 m²
OFFICE	7A	117 m²
OFFICE	7B	118 m²
OFFICE	7C	117 m²
OFFICE	7D	110 m²
OFFICE	7E	118 m²
OFFICE	7F	117 m²
TOTAL AREA		4,673 m²
BUILDING 8		
WAREHOUSE	8A	1,076 m²
OFFICE	8A	190 m²
TOTAL AREA		1,266 m²
GRAND TOTAL GFA		37,726 m²

SITE COVERAGE	
TOTAL SITE AREA	123,898 m²
BUILDING 3 - 8 FOOTPRINT	31,901 m²
BUILDING 1 & 2 FOOTPRINT APPROX.	27,878 m²
SITE COVERAGE APPROX.	48.25%
LANDSCAPING	13.90%

LEGEND

- ESTATE BOUNDARY
- FORESHORE LINE BOUNDARY
- TRANSMISSION EASEMENT
- LANDSCAPE SETBACK
- BUILDING SETBACK
- COUNCIL LAND DEDICATION
- 2.5 m BICYCLE & PEDESTRIAN SHARED PATH
- PEDESTRIAN CONCRETE FOOTPATH
- MAINTENANCE ACCESS TRACK & PEDESTRIAN PATH
- BIORETENTION BASIN / RAIN GARDEN
- EXISTING TREE PROTECTION ZONE
- PROPOSED TREE
- ADITIONAL TREES RETAINED
- PYLON SIGN
- RW RETAINING WALL
- OA OUTDOOR AREA
- RWT RAIN WATER TANK
- W WASTE AREA
- MSB MAIN SWITCH BOARD
- PL PARCEL LOCKERS
- BG BOOM GATE
- RPC RAISED PEDESTRAIN CROSSING
- DP DELIVERY PARKING BAY
- SP SHARED PARKING BAY (5%)
- EV ELECTRICAL VEHICLE BAY (5%)
- EMO ESTATE MANAGER OFFICE

No.	DATE:	REVISION:	BY:	CHK:
P23	07.05.2025	FOR INFORMATION	AS	AS
P24	29.05.2025	FOR INFORMATION	AS	JF
P25	05.06.2025	FOR REVISION	AS	JF
P26	06.06.2025	ISSUE FOR APPROVAL	AS	JF
G	12.06.2025	COUNCIL CONDITIONS RESPONSE	AS	JF

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PROJECT:
CARINGBAH MASTERPLAN
13 ENDEAVOUR ROAD, CARINGBAH NSW 2229

TITLE:
ESTATE MASTERPLAN

TRUE NORTH

CLIENT: Aliro

DATE: SEPTEMBER, 2023
DRAWN BY: AS
SCALE: 1:1000 @ A1
SCALE: 1:2000 @ A3

JOB NO: 21366
DRAWING NO: 005
REVISION: G

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NOTES

ALL NEW CROSSOVERS IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS

ALL DISABLED PARKING SPACES IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2890
(5.4m x 2.4m)

SITE STORMWATER DRAINAGE IN ACCORDANCE WITH LOCAL AUTHORITY & COUNCIL REQUIREMENTS

FOOTPATHS MUST BE PROVIDED IN ACCORDANCE WITH THE PRINCIPLES OUTLINED IN THE AUSTRALIAN MODEL CODE FOR RESIDENTIAL DEVELOPMENT (AMCORD) FOR PEDESTRIAN FACILITIES (MIN 1.2M PEDESTRIAN FOOTPATHS; 2.5M SHARED PATHS)

ALL RELATIVE LEVELS ARE SHOWN TO A.H.D. (Australian Height Datum) LEVELS SHOWN ARE INDICATIVE ONLY AND SUBJECT TO FURTHER CIVIL DETAIL DESIGN. THESE MIGHT VARY +/- 500 mm

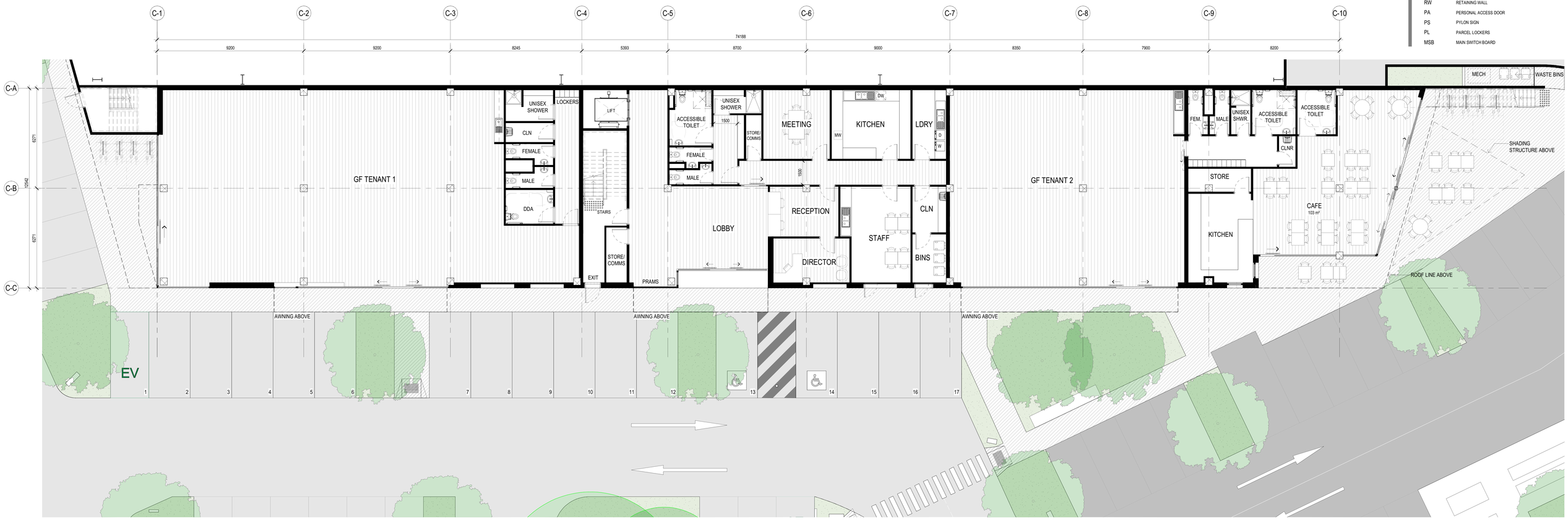
GROSS LETTABLE AREA (GLA) IS THE TOTAL FLOOR AREA OF A BUILDING, MEASURED FROM THE OUTSIDE OF EXTERNAL WALLS OR THE CENTRE OF PARTY WALLS AND INCLUDES ALL ROOFED AREAS

GROSS FLOOR AREA (GFA) IS THE TOTAL FLOOR AREA OF A BUILDING, MEASURED FROM THE INSIDE OF EXTERNAL WALLS OR THE CENTRE OF PARTY WALLS AND INCLUDES ALL ROOFED AREAS

LEGEND

- INDICATES EXTENT OF HEAVY DUTY HARDSTAND TO CIVIL ENGINEERS DETAILS
- INDICATES EXTENT OF LIGHT DUTY PAVEMENT TO CIVIL ENGINEERS DETAILS
- CONCRETE PAVING
- PERMEABLE SURFACE /HARD LANDSCAPING
- AREA OF GRASS / LANDSCAPING, REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR LANDSCAPE LAYOUT AND DETAILS
- SITE BOUNDARY
- BUILDING SETBACK
- LANDSCAPE SETBACK
- ELECTRICAL EASEMENT
- PARKING BAYS PROVIDED FOR CHILDCARE
- PARKING BAYS ALLOCATED TO OTHER ESTATE TENANCIES
- PROPOSED TREES
- EXISTING TREE PROTECTION ZONE
- EXISTING STRUCTURAL ROOT ZONE
- RAIN WATER GARDEN

FN-01	1800mm HIGH BLACK PAINTED METAL PICKET (DIPLOMAT / PALISADE STYLE) FENCING
FN-02	2100mm HIGH OUTDOOR AREA FEATURE SCREEN
RWT	RAIN WATER TANK
O/A	OUTDOOR AREA
RW	RETAINING WALL
PA	PERSONAL ACCESS DOOR
PS	PYLON SIGN
PL	PARCEL LOCKERS
MSB	MAIN SWITCH BOARD



COMMERCIAL GROUND FLOOR
SCALE: 1 : 100

No.	DATE:	REVISION:	BY:	CHK:
P7	25.09.2023	ISSUE FOR APPROVAL	IK	SC
A	28.09.2023	FOR LODGEMENT	AS	JF
B	04.10.2024	FOR LODGEMENT	AS	JF
C	17.10.2024	FOR LODGEMENT	ST	JF
D	13.06.2025	COUNCIL CONDITIONS RESPONSE	PR	JF

All areas indicated are indicative for design and planning purposes only and should not be used for any contractual reasons without verification by a licensed surveyor or further design development being completed.

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PROJECT:
CARINGBAH MASTERPLAN
13 ENDEAVOUR ROAD, CARINGBAH NSW 2229

TITLE:
BUILDING 5C
COMMERCIAL GROUND FLOOR

TRUE NORTH

CLIENT: Aliro

DATE: FEBRUARY, 2024
DRAWN BY: IK
SCALE: 1:100 @ B1
SCALE:

JOB NO: 21366
DRAWING NO: 505
REVISION: D

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NOTES

ALL NEW CROSSOVERS IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS

ALL DISABLED PARKING SPACES IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2890
(5.4m x 2.4m)

SITE STORMWATER DRAINAGE IN ACCORDANCE WITH LOCAL AUTHORITY & COUNCIL REQUIREMENTS

FOOTPATHS MUST BE PROVIDED IN ACCORDANCE WITH THE PRINCIPLES OUTLINED IN THE AUSTRALIAN MODEL CODE FOR RESIDENTIAL DEVELOPMENT (AMCORD) FOR PEDESTRIAN FACILITIES (MIN 1.2M PEDESTRIAN FOOTPATHS; 2.5M SHARED PATHS)

ALL RELATIVE LEVELS ARE SHOWN TO A.H.D. (Australian Height Datum) LEVELS SHOWN ARE INDICATIVE ONLY AND SUBJECT TO FURTHER CIVIL DETAIL DESIGN. THESE MIGHT VARY +/- 500 mm

GROSS LETTABLE AREA (GLA) IS THE TOTAL FLOOR AREA OF A BUILDING, MEASURED FROM THE OUTSIDE OF EXTERNAL WALLS OR THE CENTRE OF PARTY WALLS AND INCLUDES ALL ROOFED AREAS

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LEGEND

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- INDICATES EXTENT OF LIGHT DUTY PAVEMENT TO CIVIL ENGINEERS DETAILS
- CONCRETE PAVING
- PERMEABLE SURFACE /HARD LANDSCAPING
- AREA OF GRASS / LANDSCAPING, REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR LANDSCAPE LAYOUT AND DETAILS
- SITE BOUNDARY
- BUILDING SETBACK
- LANDSCAPE SETBACK
- ELECTRICAL EASEMENT
- PARKING BAYS PROVIDED FOR BUILDING 5
- PARKING BAYS ALLOCATED TO OTHER ESTATE TENANCIES
- PROPOSED TREES
- EXISTING TREE PROTECTION ZONE
- EXISTING STRUCTURAL ROOT ZONE
- RAIN WATER GARDEN

FN-01	1800mm HIGH BLACK PAINTED METAL PICKET (DIPLOMAT / PALISADE STYLE) FENCING
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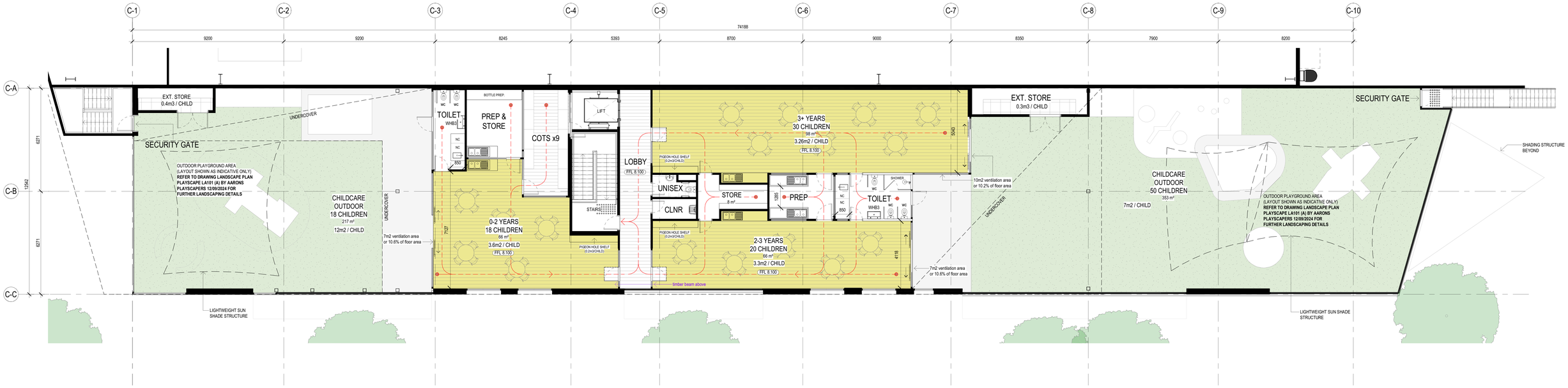
O/A	OUTDOOR AREA
RW	RETAINING WALL
PA	PERSONAL ACCESS DOOR
PS	PYLON SIGN
PL	PARCEL LOCKERS
MSB	MAIN SWITCH BOARD
	TRAVEL PATH



COMMERCIAL FIRST FLOOR
SCALE: 1 : 100

No.	DATE:	REVISION:	BY:	CHK:
P6	06.09.2023	90% DA ISSUE	IK	SC
P7	25.09.2023	ISSUE FOR APPROVAL	IK	SC
A	28.09.2023	FOR LODGEMENT	AS	JF
B	17.10.2024	FOR LODGEMENT	ST	JF
C	13.06.2025	COUNCIL CONDITIONS RESPONSE	PR	JF

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PROJECT:
CARINGBAH MASTERPLAN
13 ENDEAVOUR ROAD, CARINGBAH NSW 2229

TITLE:
BUILDING 5C
CHILDCARE FIRST FLOOR

TRUE NORTH

CLIENT: Aliro

DATE: FEBRUARY, 2024
DRAWN BY: IK
SCALE: 1:100 @ B1
SCALE:

JOB NO: 21366
DRAWING NO: 506
REVISION: C

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Appendix E – Operational Waste Management Report

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Level 21, 133 Castlereagh Street
Sydney, NSW 2000
Telephone 02 9199 4521
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Chapter 1 Early Learning Childcare Centre 13 Endeavour Road, Caringbah NSW 2229

Operational Waste Management Plan

June 2025

Table of Contents

1 Introduction

This Operational Waste Management Plan (OpWMP) has been prepared by Waste Audit & Consultancy Services (Aust) Pty Ltd ('Waste Audit') on behalf of Aliro Group for the proposed development at 13 Endeavour Road, Caringbah, NSW to provide guidance on expected operational general waste and recycling volumes; storage area requirements; bins and equipment and site/ contractor handling and collection practices.

Specifically, this plan is a stand-alone management plan which addresses the proposed Childcare facility to be operated by Chapter 1 Early Learning.

The OWMP provides descriptions of the following:

- Expected general waste, recycling and organic waste volumes, based on both Southerland Shire Council, Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities, 2012 NSW EPA and the City of Sydney Policy for Waste Minimisation in new developments standard generation rates for non-residential and operational data from other developments; future usage and floor area, and an expected occupancy rate of 100%
- Bin, equipment, and storage area sizing and construction requirements
- Collection vehicle specifications and servicing frequencies
- On-site handling and management practices
- Contractor collection and loading processes
- Ongoing management, monitoring, and reporting systems

2 Project Overview

The overall site features a frontage to Captain Cook Drive to the south, Endeavour Road and the Taren Point/ Caringbah industrial precinct to the west, Solander Fields to the east and Woolooware Bay (including shared pathway and mangrove forest further beyond to the north. An aerial view of the development site and surrounds is shown below;

Fig 1: Aerial view of the development

3 Reference Documents & Standards

The following documents have been consulted in preparing this OWMP:

- Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities NSW EPA
- Waste Collection for new Multi-Dwelling Housing and Residential Flat Buildings - Sutherland Shire Environmental Specification 2020
- City of Sydney Guidelines for Waste Minimisation in New Developments 2018

4 Operational Waste & Recycling Streams

4.1 Resource Streams

Each of these streams will require different operational management practices depending on the type of tenancy. Recommended systems are detailed in Section 5 of this report.

Generation rates have been derived from Sutherland Shire Environmental Specification 2020 and the *City of Sydney's Guidelines for Waste Minimisation in New Developments 2018* and have been used to calculate the volumes of materials that will be produced from the development's operations:

Table 1: Materials Generation Factors

Tenancy Type	Stream	Generation Factor/Area Requirement
Play Areas	General Waste	7 litres/100 m^2/day
	Recycling	7 litres/100 m^2/day
	Organics	2 litres/100 m^2/day
Staff - Office, Meeting, Kitchen and Training Rooms	General Waste	8 litres/100 m^2/day
	Recycling	6 litres/100 m^2/day

Each of the above streams may require different operational management practices depending on the type of area. These are summarised in Section 5.

In addition, other recycling systems such as liquid waste; e-waste; batteries; mobile phones etc. may be required on an ad-hoc basis. Systems for these streams will be available upon request from site management.

4.2 Volumes, Bins & Collection Frequencies

Tables 2 and 3 show combined bin numbers, sizes, and collection frequencies, based on 5 days per week operation for all areas. Bin sizes are in litres.

Tenancy areas have been calculated using GFA in line with the breakdown for indoor play, outdoor play, general teaching GFA, staff work, event and study spaces.

GFA has been adjusted to remove non-generating area components such as cot rooms, bookshelves, displays, service areas, storerooms, corridors and stairwells.

Table 2: Weekly Materials Generation

Tenancy	GFA m^2	Litres/Week Total		
		General	Recycling	Organics
Indoor play area	238	7	7	2
Outdoor play areas	567	7	7	2
Office, Meeting & Amenities	30	8	8	2

*Only active waste generating GFA has been used in determining volumes.

**Standard commercial waste generation rates as detailed in City of Sydney's *Guidelines for Waste Minimisation in New Developments 2018*

Table 3: Bin Numbers, Area Requirements, & Collection Frequencies

	Litres/Week	Bin Size	No.	Collections/ Week	Capacity/ Week	Bin Footprint m^2
General Waste	294	240	2	2	480	1.0
General Recycling	291	240	2	2	480	1.0
Organics	84	240	1	1	240	0.5
Total	668		5		1,200	2.5
Storage Area – Waste Room						9.5 m^2

Bin sizes will be 240 moveable bins with castors.

Appendix D provides details of all bins proposed to be used for storage of the development's operational general waste and recycling.

4.3 Storage Areas: General Requirements

Based on the predicted volumes and bin sizes, and proposed collection frequencies, the development's storage area sizing will be adequate for ongoing operational waste management requirements.

The respective storage area will have the following features:

- Located at the western side of the building near, where the collections will take place
- The waste area should provide separate containers for the separation of general waste, recyclables and where applicable organics
- Clear, colour-coded signage for the three (3) different waste streams
- The waste and recycling storage area is to be provided with an adequate supply of water for cleaning purposes with a hose cock
- The design shall, as much as possible restrict the entry of trespassers, vermin or other animals into the area
- Waste and recycling areas are to be provided with artificial light controlled by switches located both outside and inside the storage area

- Any compactors or mechanical devices, if permitted for the mechanical handling and storage of waste and recycling, are fitted with safety operating and cut-off systems
- Any facet of the waste and recycling management system that is visible from outside the building is to be in keeping with the dominant design of the remainder of the development
- Sufficient space must be allocated within the bin area to allow for access to all required bins by staff and waste collectors, as well as manoeuvring of bins within the bay and for the removal and return of bins by the waste collector

4.4 Bin Transfer & Collection

Building staff and cleaning staff will be responsible for bringing general waste, recycling material and where applicable organics, to the waste store at the end of each day (shown in Appendices A & B).

On designated collection days cleaning staff will be responsible for ensuring all bins are available for collection from the storage area by the collection vehicle operators.

All bin movements will be performed outside of standard building 'operational hours' to avoid traffic congestion. Collection vehicles for general waste, recycling and organics will access the vehicle entry point, off Captain Cook Drive.

The site will be serviced by the private waste contractor from the vacant visitor spaces outside the peak child care centre pick-up and drop-off periods. It is expected that the vehicle will be similar to a 6.4m in length Smal Rigid Vehicle.

This travel path is free from gradients, or level changes.

Collection vehicles for general waste, recycling and organics are shown in Appendix C.

4.5 Collection Vehicle Details

Table 4 shows a range of standard vehicle sizes.

Table 4: Industry Standard Vehicle Sizes

Trucks	Height	Width	Length
Medium Rigid Vehicle (MRV)	4.5m	2.5m	8.8m – 9.5m
Small Rigid Vehicle (SRV)	2.8m	2.5m	6.4m – 8.5m

The Rear-lift SRV collection vehicles shown in Appendix C have the following key specifications:

- 10 m^3 to 18 m^3 capacity chamber
- 660 Litre, 1.1 m^3 to 3.0 m^3 bin lifting capacity
- Ability to lift all bin sizes up to 3,000 litres
- 2.8 m operating height

An SRV will be sufficient for the development's ongoing general waste and recycling collections.

5 Management Systems & Internal Bins

Table 5 shows proposed management practices for the development's communal operational general waste, recycling and organics streams. The building will be equipped with internal bins clearly differentiated through appropriate signage and colour coding to reflect the materials contained, with each stream located in a designated storage area, with large and clear signage to assist in easy identification by users.

- Use separate garbage containers in the nappy change (must be covered bin), bathrooms, kitchen and play areas.
- Ensure indoor garbage containers are waterproof and have a tightly fitting lid.
- Line indoor garbage containers with appropriate bin liners.
- Empty daily at a minimum unless required more frequently and insert new liners.
- Clean indoor garbage containers weekly.

Table 5: Management, Storage, & Collection Systems

Area	Material Streams	Management, Storage, & Collection Systems
Internal Areas	General Waste, Recycling and Organics	Cleaners and staff will be responsible for moving all waste and recyclables from the internal bins and general communal areas to the correct general waste or recycling bins in the bin storage area. The private waste contractor will collect these materials on an agreed schedule. Collection vehicles for general waste, recycling and organics will access the vehicle entry point, off Captain Cook Drive. All collections are advised to be performed outside standard building operational hours to avoid congestion in this area.

We recommend providing the common and administrative areas with 3 stream bin hubs for:

- Commingled Recycling
- General Waste (primarily nappy bins)
- Organics

Bins should be situated in areas which effectively service a group of workstations and offices, with no bins under desks; this improves cleaning staff efficiencies by reducing the number of bins that require collection and reduces the number of bin liners required.

Examples of bins that are commonly used in office or communal settings are shown below. Differently coloured bin liners (general waste-black; paper-clear; commingled-blue) are recommended to assist cleaning staff to distinguish the different streams and enable them to identify contamination, prior to final disposal in the bins in the storage area.

Nappy Disposal

- Disposable nappies must be disposed of immediately.
- They are to be placed in the covered bin, besides the nappy change table.
- The bin then needs to be transported to the external waste bin, inaccessible to children.
- The nappy change bin needs to be emptied after a series of nappy changes or after an individual nappy change that is a bowel movement.
- All Nappies are to be placed in plastic bags that are tied or otherwise sealed appropriately.

For areas with bins kept within housings or pull-out drawers in kitchens and central areas, care must be taken to ensure these systems are well designed and provided with clear signage to foster proper separation. An example of best practice drawer design is shown below which provides for two streams (commingled recycling and general waste).

Practice, Cleanliness and Hygiene

- All boxes should be broken down prior to placing in bins.
- All decomposable rubbish should be tied or sealed bags.
- Keep outdoor garbage area clean.
- Do not place rubbish outside unless it will fit into the bin.
- Clean outdoor garbage container if there has been a spill.
- Monitor external waste bin and area for signs of pests and rodents and odours.

6 Waste Contractor Standards

To achieve and maintain best practice, the site's private waste contractor will be required to comply with the following service requirements:

- Reliable and efficient servicing, and meeting all agreed schedules
- Suitably sized collection vehicles to be able to access the building's waste area
- Maintaining accurate tracking systems for all materials collected
- Working with the site to achieve continuous improvements in recovery rates
- Providing detailed monthly and annual reports on diversion and financial outcomes
- Maintaining current details of all processing facilities used

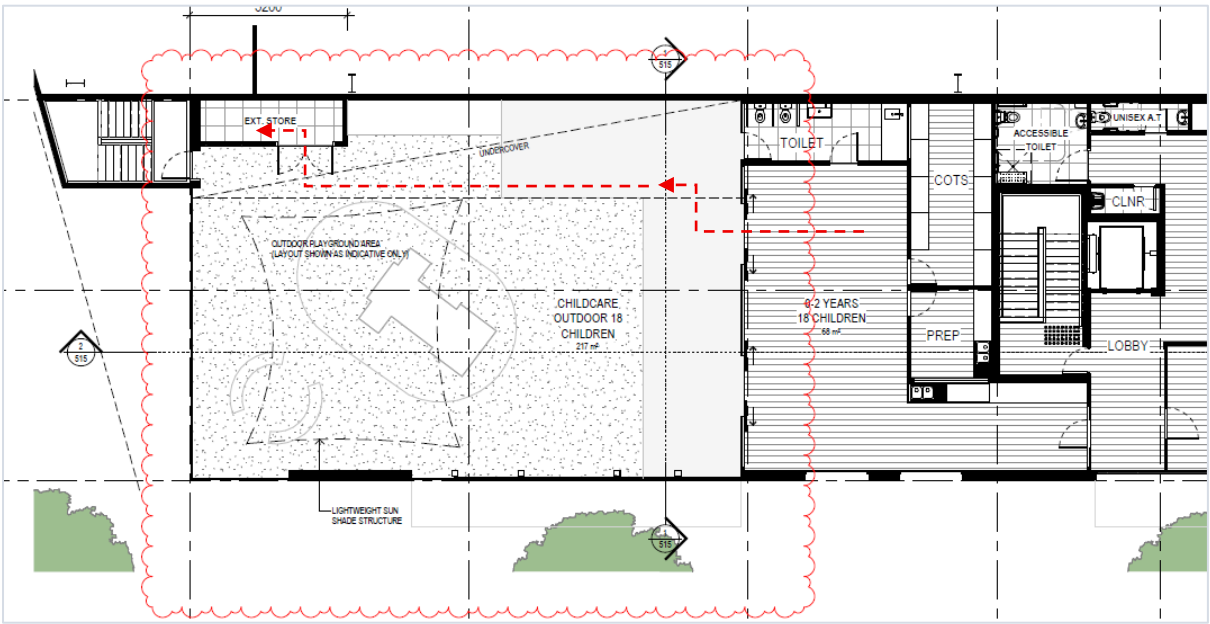
7 Tenant & Stakeholder Education

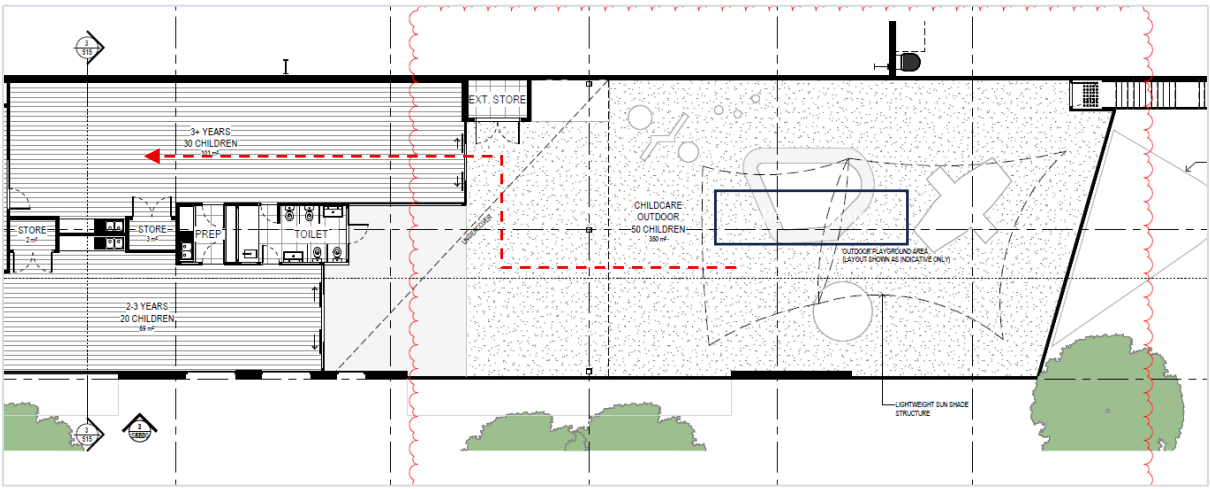
For the new systems to be successful, an education program will be required for the facilities staff and users.

All occupants will receive instructions on correct waste disposal procedures on moving into the building, both tenants and cleaning staff will be trained in maintaining correct segregation of materials.

Appendix A: General Waste & Recycling Storage & Movement

Waste Management Direction – First Floor

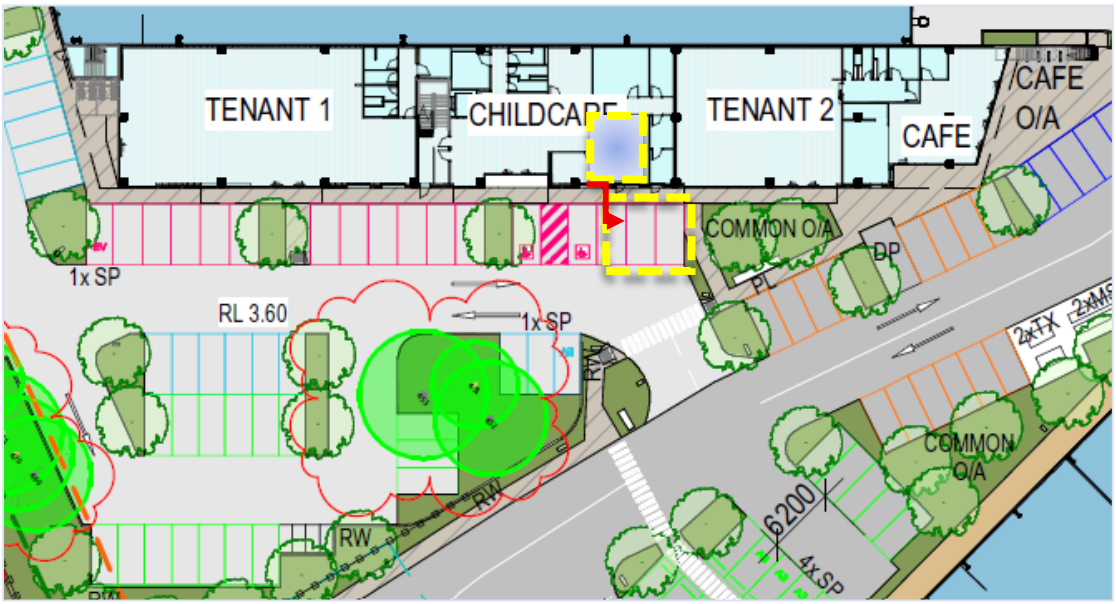




Appendix B: Collection Pathways

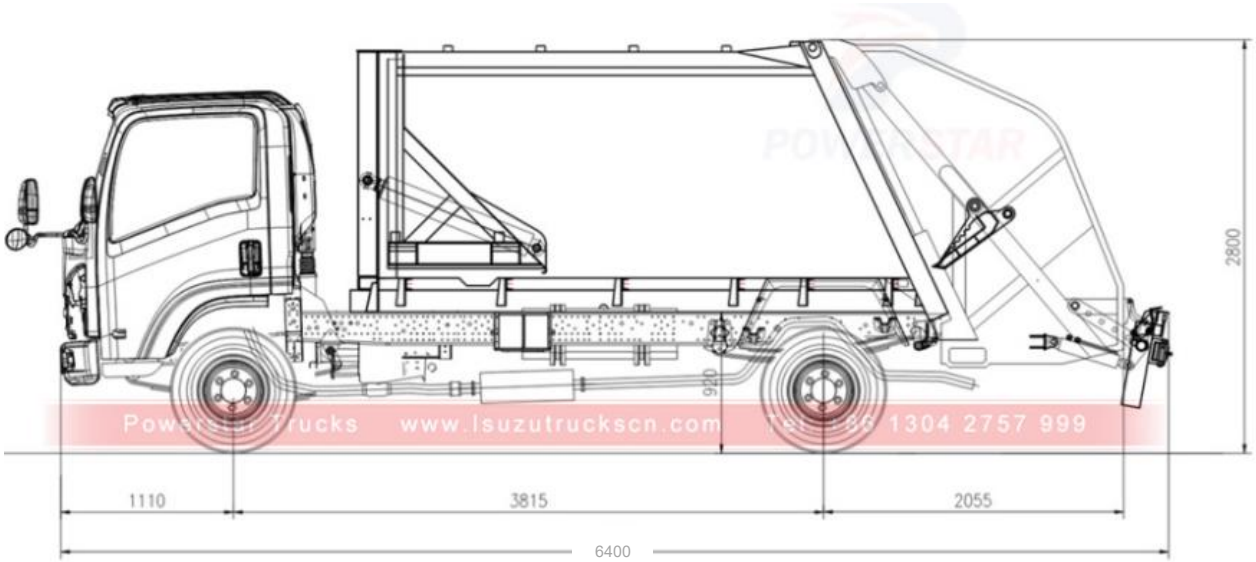
Waste Management – Internal Collection Area

The site will be serviced by the private waste contractor from the vacant visitor spaces outside the peak child care centre pick-up and drop-off periods. It is expected that the vehicle will be similar to a 6.4m in length Smal Rigid Vehicle.



Appendix C: Collection Vehicle Specifications

SRV - Rear Lift Collection Vehicle



Appendix D: Bin Specifications

Typical Nappy Bin

Appendix E: Storage Area Signage

The photographs below show examples of good practice in this regard:

The signage examples below are for illustration purposes only. Actual signage should include suitable site-specific branding.