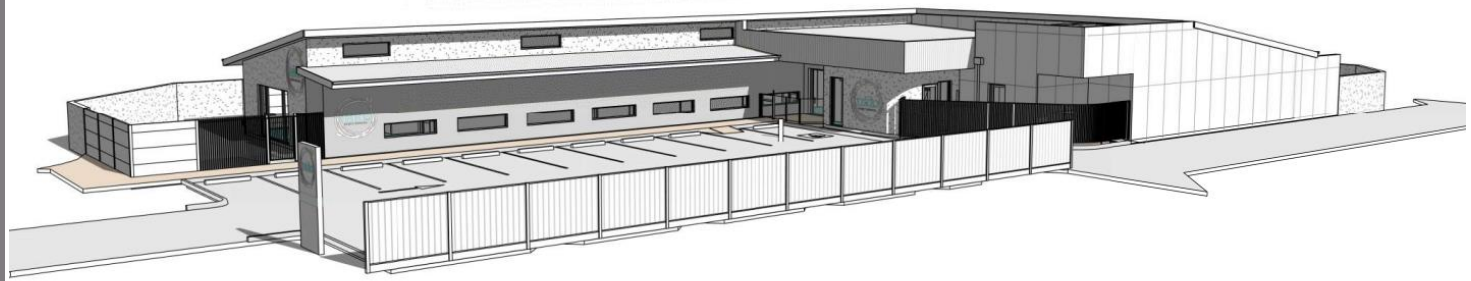
PLANNING REPORT

PROPOSED CHILD CARE PREMISES

CNR FERNDALE AVENUE, ASHBERG LINK & STARLITE BEND, DALYELLUP



PROJECT REF: 2277

DYNAMIC PLANNING AND DEVELOPMENTS

Prepared for
Satterley Property Group
PO Box 1346
WEST PERTH WA 6872

History and Status of this Document

Revision	Date issued	Prepared by	Reviewed by	Revision type
Rev 1	5/12/24	AG	RC	Lodgement

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Author/s Reegan Cake & Aston Gobetti
Name of Document Planning Report
Document Version Rev 1

PLANNING REPORT

Table of Contents

DYNAMIC PLANNING AND DEVELOPMENTS

1.0 Introduction

Dynamic Planning and Developments acts on behalf of Satterley Property Group, the registered proprietor of Lot 9055 Ferndale Avenue (Cnr Ferndale Avenue, Ashberg Link & Starlite Bend), Dalyellup (herein referred to as the 'subject site').

This planning report has been prepared in support of an Application for Planning Approval for a proposed 'Child Care Premises' at the subject site. The planning report contains the following pertinent details of the proposal relevant to the assessment of the proposed application:

- Details of the proposal;
- Detailed assessment of the proposal against the relevant planning provisions applicable under the Shire of Capel Local Planning Scheme No. 8 along with any relevant Local Planning Policies; and
- Detailed justification of any variations sought.

In addition to this planning report, the following documentation has been provided in order to assist the Shire of Capel in making a recommendation on the proposed application:

- Certificate of Title (**Appendix 1**);
- Relevant development plans (**Appendix 2**);
- A Traffic Impact Assessment (**Appendix 3**);
- An Environmental Noise Assessment (**Appendix 4**);
- Completed and signed Shire of Capel Development Application Form, GBRS Form 1 and DAP Form 1.

It will be demonstrated in subsequent sections of this submission that the proposed development is entirely appropriate for approval.

2.0 Site Details

2.1 Legal Description

The subject site is legally described as:

Lot	Plan	Volume	Folio	Street Address
9055	428078	4059	125	No street address

The area of the subject site is 2,024m².

A copy of the Certificate of Title pertinent to the subject site is contained in **Appendix 1**.

2.2 Locational and Land Use Context

2.2.1 Regional and Local Context

The subject site is located within the Shire of Capel municipal area. The site is also in close proximity to a number of local schools including Tuart Forest Primary School (500m), Bunbury Baptist College (1.5km), and Bunbury Cathedral Grammar School (1.6km), suggesting the site is well suited to accommodating a childcare premises.

The subject site is located on the corner of Ferndale Avenue, Ashberg Link & Starlite Bend with the site currently vacant and included in a prior approved subdivision area. North, west and south of the site is existing single residential development with land to the west (to Bussell Highway) also presently being developed for single residential development.

Figures 1 and **2** depict the subject site in its regional and local context, respectively.

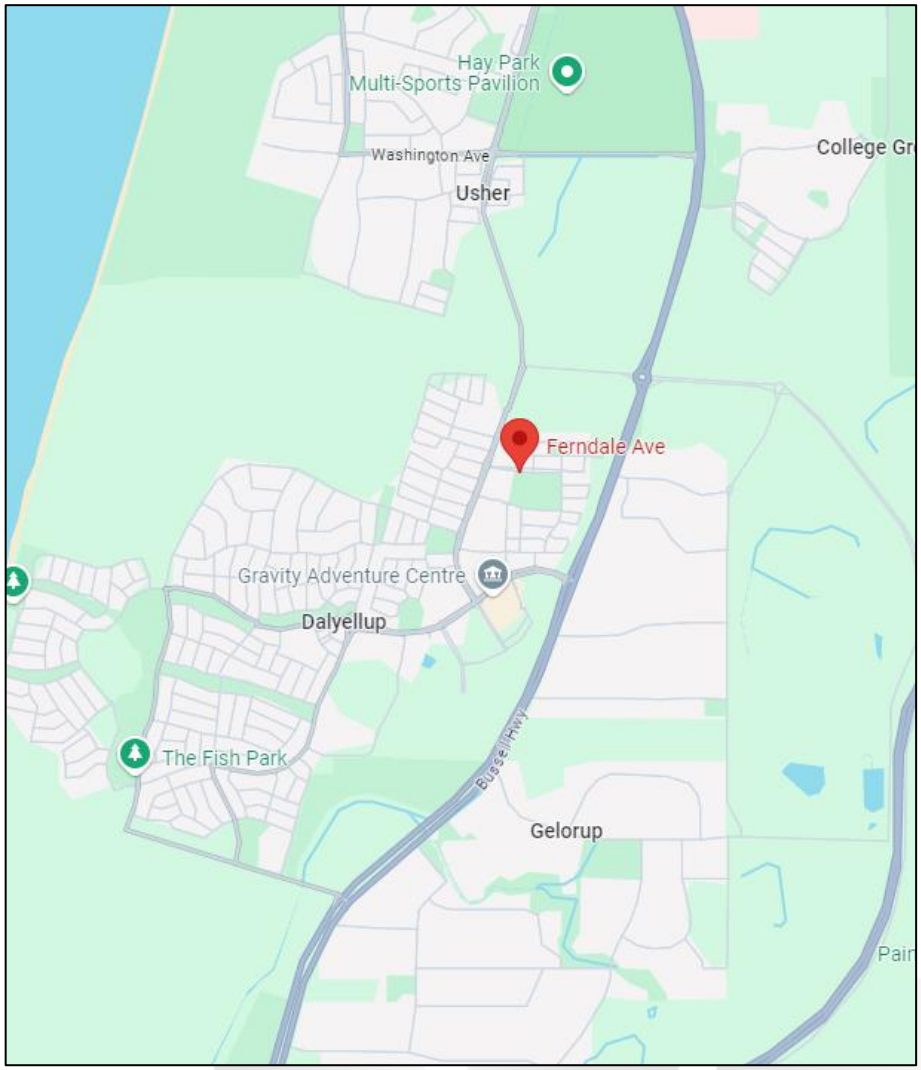


Figure 1 – Regional Context

Figure 2 – Local Context

3.0 Planning Framework

3.1 Greater Bunbury Region Scheme (GBRS)

The subject site is zoned 'Urban' under the provisions of the Greater Bunbury Region Scheme (MRS).

For reasons outlined further in this report, the proposed development is considered to be consistent with the 'Urban' GBRS zoning applicable to the subject site.

3.2 Shire of Capel Local Planning Scheme No. 8 (LPS 8)

3.2.1 Zoning

The subject site is zoned 'Urban Development' under the provisions of LPS 8. The objectives for the 'Urban Development' zone are outlined in Table 2 of LPS 8 and have been summarised below:

- *To provide an intention of future land use and a basis for more detailed structure planning in accordance with the provisions of this Scheme.*
- *To provide for a range of residential densities to encourage a variety of residential accommodation.*
- *To provide for the progressive and planned development of future urban areas for residential purposes and for commercial and other uses normally associated with residential development.*
- *To provide an intermediate transitional zone prior to or following the lifting of an urban deferred zoning within the Greater Bunbury Region Scheme*

Detailed assessment of the proposal against the provisions of LPS 8 and any relevant Local Planning Policies is further covered under section 5.0 of this planning report.

Figure 3 illustrates the subject site in the context of the land use zoning applicable under the provisions of LPS 8.

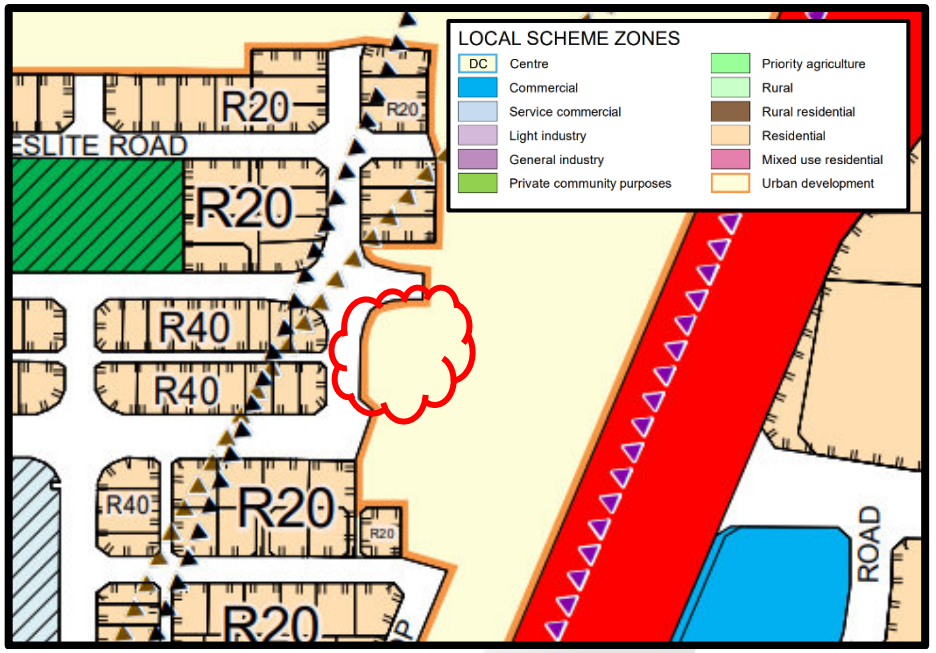


Figure 3 – LPS 8 Zoning Map

3.2.2 Land Use Permissibility

The permissibility of land uses is determined with regard to the Dalyellup East Structure Plan and LPS 8. Under Table 3 – Zoning Table in LPS 8, the 'Urban Development' zone must refer to Clause 18 (6), which states that:

- *If the zoning table does not identify any permissible uses for land in a zone the local government may, in considering an application for development approval for land within the zone, have due regard to any of the following plans that apply to the land –*
  a) a structure plan

The Dalyellup East Structure Plan identifies the site for 'Residential' development.

Land use permissibility is further discussed under section 5.0 as part of the detailed assessment against the provisions of the LPS 8.

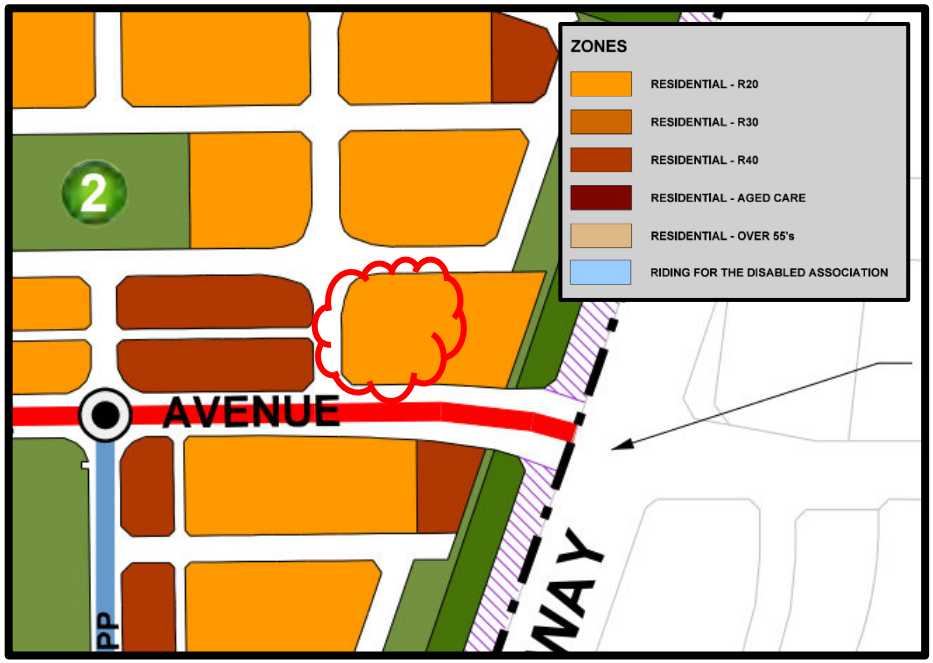


Figure 4 – Dalyellup East Structure Plan Map

3.3 Dalyellup East Structure Plan

The site is located within the Dalyellup East Structure Plan area and is designated for 'Residential' development at a density of R20. This residential zoning determines the land use permissibility for the site in accordance with LPS 8.

Figure 4 depicts the site and its applicable zoning within the Dalyellup East Structure Plan.

4.0 Proposal Details

The proposed development seeks approval for a 'Child Care Premises' at the subject site. The proposal will cater for a maximum of 92 children and 17 staff.

4.1 Development Details

Key aspects of the proposed design are detailed below:

- The 'Child Care Premises' will include 683sqm of built form area and a total of 648sqm of outdoor play area which is positioned away from adjoining residential properties.
- The built form is in keeping with a residential scale in that it is single storey with generous lot boundary setbacks and a limited site coverage of 730sqm or 36%.
- Primary access will be via an internal open air parking area which provides parking for nineteen (19) car bays, inclusive of one (1) accessible bay. An additional provision of eight (8) on-street parking bays, totalling twenty-seven (27) parking bays for the proposed development.
- Considerable landscaping both on the site and within the verge area with eighteen (18) trees proposed on-site and seven (7) proposed on the verge.
- A separate bin store has been provided within the internal car parking area, which will be screened from the street.
- Access to the site will be:
    1. Through a full movement crossover on Starlite Bend which is over an existing established access easement.
    2. Through a left in left out crossover to Ferndale Avenue.

4.2 Operational Details

- The 'Child Care Premises' will operate with a capacity of 92 children with 17 staff working at the facility.
- The 'Child Care Premises' will operate with opening hours of 6:30am to 6:30pm Monday to Friday. On four (4) days per year there will be an open day that occurs on weekends within between 7am and 5pm.
- The nature of the parking at the proposed development is that onsite parking will be primarily used by staff who will arrive at intermittent times with staff on site during pick up and drop off times limited to around 10-12. Additional staff then arrive after these peak periods for the primary education period with some staff then leaving before the peak pick up period in the afternoons.

The proposed development is considered to have appropriately considered the amenity of the adjoining lots whilst also providing a necessary service for local residents to benefit from.

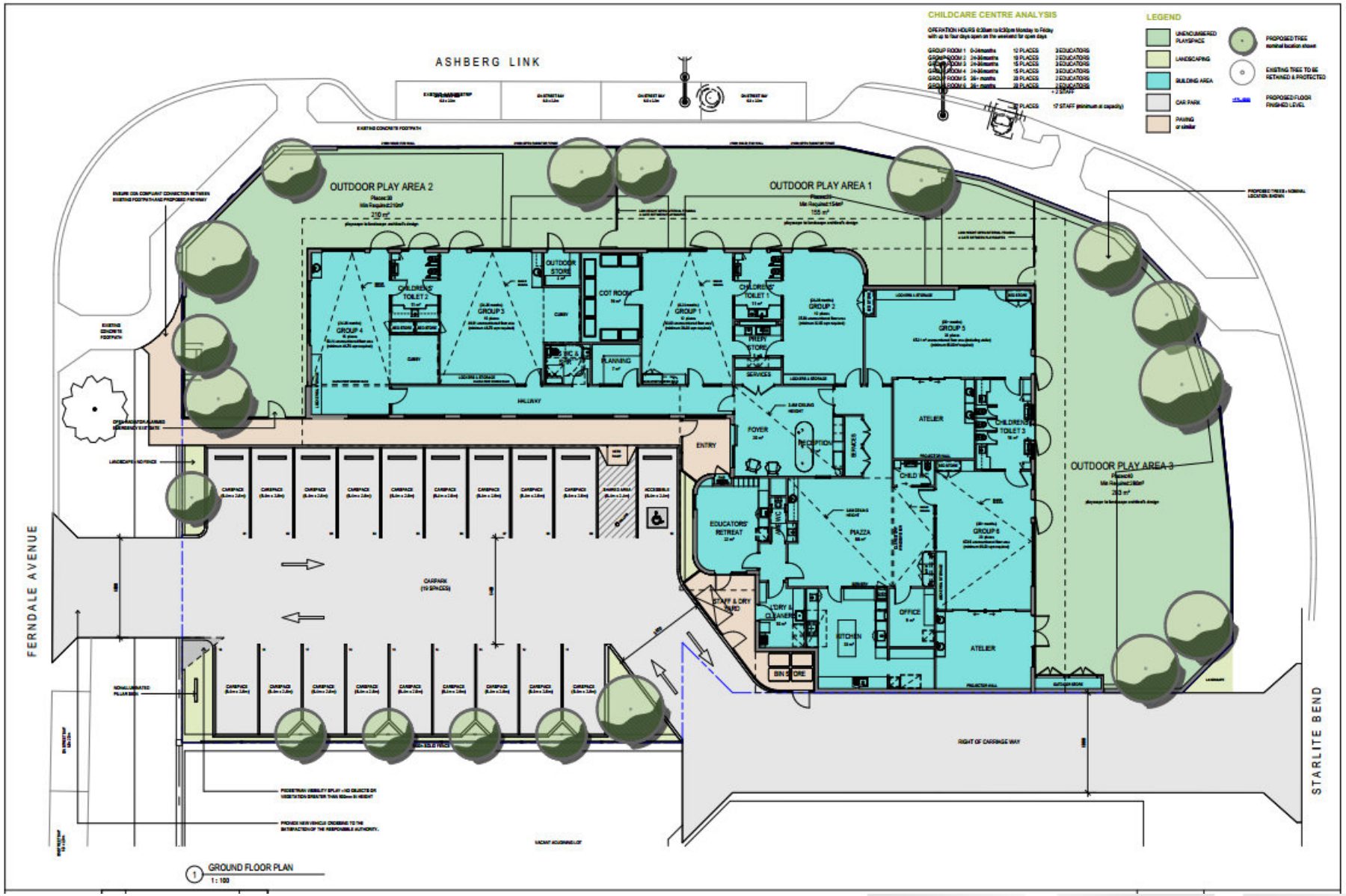


Figure 5 – Site Plan

DYNAMIC PLANNING AND DEVELOPMENTS

5.0 Assessment

The statutory provisions applicable to the subject site require assessment of the proposal to be undertaken against the provisions of the following documents:

- Shire of Capel Local Planning Scheme No. 8 (LPS 8).
- Dalyellup East Structure Plan.
- Local Planning Policy 6.1 – Vehicle Parking (LPP 6.1).
- Local Planning Policy 6.8 – Urban Landscaping (LPP 6.8).
- Planning Bulletin 72/2009 – Child Care Centres.

The below sections will address the relevant land use permissibility and development requirements outlined in the abovementioned statutory planning documents.

5.1 Land Use Permissibility

The proposed development is consistent with a 'Child Care Premises' land use, which is defined in LPS 8 as:

Child Care Premises means a premises where –

(a) an education and care service as defined in the Education and Care Services National Law (Western Australia) Section 5(1), other than a family day care service as defined in that section, is provided; or

(b) a childcare service as defined in the Child Care Services Act 2007 section 4 is provided.

As noted in Section 2.0 above, the relevant land use permissibility is considered with regard to the Dalyellup East Structure Plan and the 'Residential' zoning as detailed in Table 3 of LPS 8. In accordance with these provisions, the proposed 'Child Care Premises' is a 'Discretionary (A)' land use under the 'Residential' zone meaning that approval is possible pending compliance with the applicable development requirements and also advertising to adjoining properties.

Compliance with the applicable development requirements has been addressed below in Section 5.2. Furthermore, it is considered that the proposed land use is consistent with the 'Residential' zone objectives as:

- The amenity of the surrounding residential population will not be compromised as a result of the proposed development as the 'Child Care Premises' is compatible with the existing residential development.
- The site is in close proximity to a range of local schools which indicates a high level of demand for childcare services.
- The facility will provide an important service to the local residential population and planned urban development by providing care to children whilst parents are working.

In light of the above, the proposed 'Child Care Premises' warrants favourable consideration and support.

5.2 Development Requirements

The relevant development requirements pertaining to the proposed development are outlined in:

- Local Planning Policy 6.1 – Vehicle Parking (LPP 6.1).
- Local Planning Policy 6.8 – Urban Landscaping (LPP 6.8).
- Planning Bulletin 72/2009 – Child Care Centres.

An assessment of the proposed developments compliance with the abovementioned documents has been provided below in following sections.

5.2.1 Local Planning Policy 6.1 – Vehicle Parking (LPP 6.1)

Table 1 below provides an assessment of the proposal against the relevant requirements outlined in LPP 6.1. Where there are variations to the applicable requirements, these have been noted in red.

Local Planning Policy 6.1 – Vehicle Parking	Proposed Development Compliance	
Parking		
Cars – 'Child Care Premises' • 1 bay per 10 children (9.2 bays) • 1 bay per employee (17 bays) Total required car bays = 26.2	19 car bays are provided on site, with 8 verge bays being proposed.	X
Justification • Whilst only 19 bays are provided on site, the additional verge bays will assist in servicing the development as pick up and drop off bays with the intent for this parking to be short term for this particular purpose. These bays will be connected to the development via established pedestrian infrastructure to ensure there is a clear path of travel for parents and children from the on-street bays to the proposed development. Further, through the Traffic Impact Statement prepared to support the development, it has been demonstrated that these bays are entirely safe and appropriate for use in conjunction with the proposed development. • Reliance on street parking is not uncommon for childcare developments and the surrounding area is particularly accustomed to reliance on street parking for visitor parking demands with the surrounding road reserves including a large number of street parking bays. • During peak periods of pick up and drop off there is a staggered staffing arrival with less staff on-site during this period which would enable additional on-site bays to be used for pick up and drop off. Typically, around 12 staff might be on site during these periods which would leave 7 bays available on site for pick up and drop off. The average dwell time for parents dropping off children at similar developments is 6.8 minutes (RTA Guide to Traffic Engineering Developments) meaning that over a two hour pick up and drop off period 1 bay can service up to 17 parents/vehicles which would mean even the on-site bays can accommodate up to 119 children which is more than the facility is designed to accommodate. • It is unlikely that the facility will operate at 100% occupancy which means children and staffing levels are likely to be lower than what will be approved by the proposed application which therefore results in a reduced parking demand at the development.		
Bicycles – 'Child Care Premises' • 1 space per 100 square metres NLA • Total required bicycle spaces = 6.8	No bicycle spaces proposed.	X
Service Vehicles – 'Child Care Premises' • 1 bay for visiting service vehicles	No service bay proposed.	X
Justification • The nature of the childcare premise operations, involving parents transporting children and their belongings, reduces the likelihood of bicycle usage during drop-off and pick-up times and suggesting that bicycle parking isn't going to be required or utilised as part of the development. • The need for a service bay is also not applicable to a development of this nature. Waste collection can occur during off peak periods when the development is not operational suggesting there will be plenty of space available for waste collection. Further, there are not likely to be any deliveries to the development and if they are,		

	they are likely to be limited to vehicles that can fit in and utilise standard car bays which, outside of the pick up and drop off periods (which is when any deliveries will occur) will have a level of availability for deliveries.

Table 1 – LPP 6.1 Assessment

5.2.2 Local Planning Policy 6.8 – Urban Landscaping (LPP 6.8)

Table 2 below provides an assessment of the proposal against the relevant requirements outlined in LPP 6.8. Where there are variations to the applicable requirements, these have been noted in red.

Local Planning Policy 6.8 – Urban Landscaping	Proposed Development Compliance	
Landscaping		
A landscape master plan will be required to be submitted for the Shire's approval as part of the structure planning for major 'green-field' development of urban land. The landscape master plan should be prepared by a suitably qualified person in accordance with the guidance below	A landscaping plan has been provided as part of the development plans being submitted for approval.	✓
A secure water supply must be identified to support the Local Structure Plan for the establishment and ongoing maintenance of landscaped areas	An existing water supply will be available to the site for the purposes of irrigation.	✓
Landscaping consistent with the requirements of the Residential Design Codes Volume 1 and Volume 2.	Development is not residential in nature and has been specifically designed for the child care operation.	✓
All new trees on the site and on the street verge are to be planted and watered (via reticulation or other similar method) for the first two summers by the land owner or developer, to the satisfaction of the Shire of Capel.	All trees proposed as part of the landscaping plan can be planted and maintained for a period of two summers. It is expected this will be a condition of approval.	✓

Table 2 – LPP 6.8 Assessment

5.2.3 Planning Bulletin 72/2009 – Child Care Centres

Table 3 below provides an assessment of the proposal against the relevant requirements outlined in Planning Bulletin 72/2009. Where there are variations to the applicable requirements, these have been noted in red.

Planning Bulletin 72/2009	Proposed Development Compliance	
Location of Childcare Centres		
Distributed strategically to provide the maximum benefit to the community it serves.	There is one other childcare premises within 2km of the site within what is large residential catchment that is in close proximity to a number of schools.	✓
Within easy walking distance or part of appropriate commercial, recreation or community nodes and education facilities.	The facility is within 1km of the Dalyellup District Centre as well as being in close proximity to a number of local schools: • Tuart Forest Primary School (500m) • Bunbury Baptist Collect (1km) • Bunbury Cathedral Grammar School (1.8km)	✓
Located in areas where adjoining uses are compatible with a child care centre (includes considering all permissible uses under the zoning of adjoining properties).	The proposed land use is capable of approval and the development will include appropriate management measures to ensure the amenity impacts on adjoining properties are within allowed levels (noise and traffic).	✓
Serviced by public transport.	The site is in close proximity to bus routes on Parade Road and Bussell Highway	✓
Considered suitable from a traffic engineering/safety point of view.	Traffic Impact Statement has been prepared demonstrating the development is suitable from a traffic engineering perspective.	✓
Of sufficient size and dimension to accommodate the development without affecting the amenity of the area.	The property the subject of the application is 2,024 sqm in area which is sufficient to accommodate the proposed development. Further the single storey nature of the development with compliant R-Code lot boundary setbacks and site coverage suggests the bulk and scale of the development is compatible with the residential environment within which it sits.	✓
Childcare centres will generally not be suitable where: • Soil contamination exceeds levels regarded by DEC and DOH as suitable for standard residential land uses. • Groundwater is to be abstracted for the irrigation of gardens and play area within the childcare centre and groundwater contamination exceeds 10x Australian drinking water criteria. • The service provided by the centre will have a demonstrable, adverse impact on the existing or planned level of childcare centre services enjoyed by the local community. • Access is from a major road or in close proximity to a major intersection where there may be safety concerns.	• The area accommodates residential land uses and as such soil contamination is considered to not be an issue. • Ground water won't be abstracted for irrigation. • There will be no adverse impact on the surrounding childcare centres in the area due to the number of local schools in the area which equates to demand for childcare premises. • Access is not from a major road. • Access is provided from Ferndale Ave and Starlite Bend – local access streets.	✓ ✓ ✓ ✓ ✓

• Access is from a local access street which may impact on the amenity of the area due to traffic and parking. • The current use or any permissible use under the zoning of the adjoining premises produces unacceptable levels of noise, fumes or emissions or poses a potential hazard by reason of activities or materials stored on-site. • Noise produced by road, railways and aircraft are likely to have an adverse impact on the site. • The site is in a heavy industry area or in the buffer area of a heady industry area.	• None of the surrounding land uses will produce unacceptable noise, fumes or emissions or will present a hazard risk as they are primarily residential properties. • The acoustic report demonstrates that there will be no negative acoustic impacts from transport routes on the development. • The site is not located in an industry area, or a buffer area associated with industrial operations.	✓ ✓ ✓
Site Characteristics		
Sites in a residential area should be greater than 1000sqm.	The site is 2,024 sqm in area.	✓
Topography should be generally flat across the site.	The site is generally flat.	✓
Design of Centres		
Visual appearance should reflect the character of the area.	The childcare premises has been designed to be residential in bulk, scale and appearance to match surrounding development.	✓
Parking areas should be located in front of the building.	The proposed parking has been located immediately in front of the building entrance with all verge bays connected to the development by footpaths.	✓
Outdoor play areas should be in a safe location on the site, and away from adjoining noise-sensitive premises.	The outdoor play areas are located away from the adjoining noise sensitive premises as they are located along the road lot boundary sides	✓
Traffic Impacts		
A traffic impact statement/assessment should be prepared to address: • The site characteristics. • The proposal and its expected trip generation. • Parking requirements, including the design of parking areas, and any pick-up and drop-off facilities. • Existing traffic conditions and any future changes expected to the traffic conditions. • Current road safety conditions, including a crash history in the locality. • The expected impact of the proposed development on the existing and future traffic conditions.	Traffic Impact Statement has been prepared by Transcore.	✓
Noise Impacts		
A noise impact assessment is required to address: • Where a childcare centre is located adjacent to a noise-sensitive use, such as houses, retirement villages and nursing homes, the noise generating activities of the childcare centre, such as the outdoor play areas, parking areas and any plant and equipment, are to be located away from the noise sensitive use.	Acoustic Report has been prepared by Lloyd George Acoustics.	✓

• Where, due to design limitations or safety considerations, noise generating activities such as outdoor play areas are located close to noise-sensitive uses, appropriate noise mitigation is to be undertaken. • As there is now a considerable body of research that demonstrates the negative impact of inappropriate noise on child development, the design and construction of buildings may include noise-mitigation measures to reduce impact from external sources and to achieve acceptable indoor noise levels.		

Table 4 – Planning Bulletin 72/2009 Assessment

6.0 Conclusion

Based on the contents of this planning report, it is clear that the project proposal is appropriate for approval as it delivers a development opportunity for the Shire of Capel, its residents, and the working population. The proposed development will improve the local population's access to service and amenities, in particular a Child Care Premises which will cater for the growing residential population.

As considered in detail within the contents of this planning report, the proposal will deliver a functional built form outcome that aligns with the objectives of the Residential zone and will limit any amenity impacts to adjoining landowners.

As detailed in the assessment, the proposal has demonstrated that it is generally compliant with the relevant development requirements with any variations appropriately justified.

As such, we respectfully request that the Shire of Capel support and approve this proposed development application.

Appendices

APPENDIX 1 - Certificate of Title

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
4059	**125**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 9055 ON DEPOSITED PLAN 428078

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

DALYELLUP BEACH PTY LTD OF LEVEL 3 27-31 TROODE STREET WEST PERTH WA 6005
(AF Q105079) REGISTERED 3/10/2024

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT FOR ELECTRICITY SUPPLY PURPOSES TO ELECTRICITY NETWORKS CORPORATION DEPOSITED PLAN 428078 AS CREATED ON DEPOSITED PLAN 74278
2. EASEMENT BENEFIT CREATED UNDER SECTION 136C T.L.A. FOR RIGHT OF CARRIAGEWAY PURPOSES - SEE DEPOSITED PLAN 428078 AS CREATED ON DEPOSITED PLAN 74278. AS THE PORTION DELINEATED AS 'M' & 'N' ON DEPOSITED PLAN 74278.
3. EASEMENT BURDEN CREATED UNDER SECTION 136C T.L.A. FOR RIGHT OF CARRIAGEWAY PURPOSES - SEE DEPOSITED PLAN 428078 AS CREATED ON DEPOSITED PLAN 74278.
4. EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT FOR DRAINAGE/IRRIGATION/WATER SUPPLY/SEWERAGE PURPOSES TO WATER CORPORATION - SEE DEPOSITED PLAN 428078.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	DP428078
PREVIOUS TITLE:	4056-46
PROPERTY STREET ADDRESS:	NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF CAPEL

NOTE 1: I634876 SECTION 138D TLA APPLIES TO CAVEAT I534985
NOTE 2: I921692 SECTION 138D TLA APPLIES TO CAVEAT I862814

END OF PAGE 1 - CONTINUED OVER

NOTE 3: Q186736 DEPOSITED PLAN 429576 LODGED

APPENDIX 2 - Development Plans

DYNAMIC PLANNING AND DEVELOPMENTS

PROPOSED CHILDCARE CENTRE
CORNER FERNDALE AVE & ASHBERG LINK, DALYELLUP W.A.

DRAWING REGISTER PLANNING

SHEET NUMBER	SHEET NAME	ISSUE	DESCRIPTION	DATE
DA00	COVER SHEET	A	DEVELOPMENT APPLICATION	19/12/24
DA01	SITE PLAN	A	DEVELOPMENT APPLICATION	19/12/24
DA02	FLOOR PLAN	A	DEVELOPMENT APPLICATION	19/12/24
DA03	ROOF PLAN	A	DEVELOPMENT APPLICATION	19/12/24
DA04	ELEVATIONS	A	DEVELOPMENT APPLICATION	19/12/24

GENERAL NOTES

DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT. PREPARATION OF SHOP DRAWINGS OR MANUFACTURING. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALING.

VERIFY LOCATION OF EXISTING SERVICES BEFORE COMMENCEMENT.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OF AUSTRALIA, RELEVANT STATE BUILDING ACT AS AMENDED, STANDARD BUILDING BY-LAWS AND RELEVANT AUSTRALIAN STANDARDS.

ISSUE	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	19/12/24

insite ARCHITECTS
4/120 Upper Heidelberg Road, Ivanhoe VIC 3079
t (03) 9499 8174
www.insitearchitects.com.au

nido EARLY SCHOOL

CLIENT: SATTERLY PROPERTY GROUP PTY LTD

PROJECT: PROPOSED CHILDCARE CENTRE (92 places)

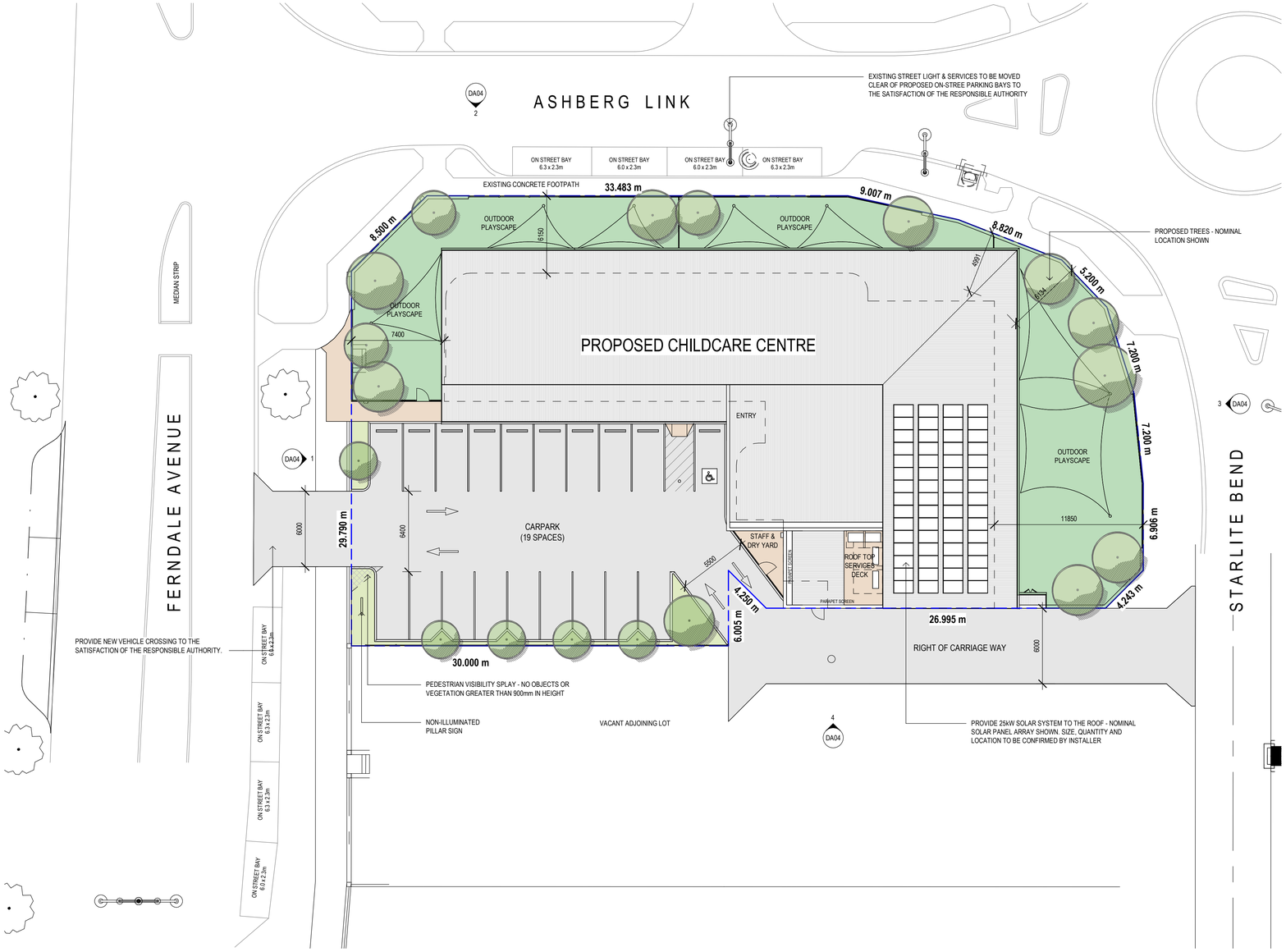
LOCATION: CNR FERNDALE AVE & ASHBERG LINK, DALYELLUP W.A.

DRAWING TITLE: COVER SHEET

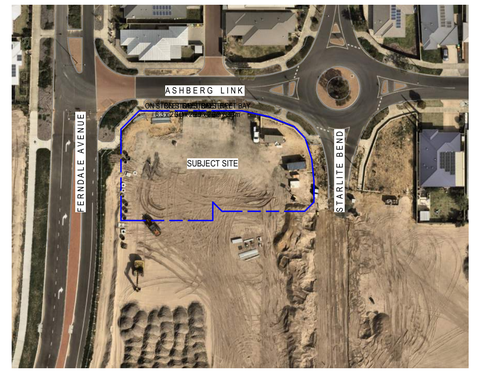
SCALE:
DATE: NOV 2024
DRAWN: CW
PRINTED: 19/12/2024 3:10:30 PM
CHECKED: AH
JOB No.: J0001182

DA00/A

DA ISSUE



1 SITE PLAN
1 : 200



2 SITE CONTEXT
1 : 1000

AREA ANALYSIS

TOTAL SITE AREA 2026m²

SITE COVERAGE 730

BUILDING AREA
GROUND FLOOR 683m² gross leaseable area

ON SITE PARKING -
19 bays provided (including one accessible)

LEGEND

- UNENCUMBERED PLAYSPACE
- LANDSCAPING
- BUILDING AREA
- CAR PARK
- PAVING or similar
- PROPOSED TREE nominal location shown
- EXISTING TREE TO BE RETAINED & PROTECTED
- EXISTING TREE TO BE REMOVED

GENERAL NOTES

DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT. PREPARATION OF SHOP DRAWINGS OR MANUFACTURING. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALING.

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A	DEVELOPMENT APPLICATION	19/12/24

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nido EARLY SCHOOL

CLIENT: SATTERLY PROPERTY GROUP PTY LTD

PROJECT: PROPOSED CHILDCARE CENTRE (92 places)

LOCATION: CNR FERNDALE AVE & ASHBERG LINK, DALYELLUP W.A.

DRAWING TITLE: SITE PLAN

SCALE: As indicated@A1 **DATE:** NOV 2024

DRAWN: CW **PRINTED:** 19/12/2024 3:10:30 PM

CHECKED: AH **JOB No.:** J0001182

APPROX

DA01/A

DA ISSUE

CHILDCARE CENTRE ANALYSIS

OPERATION HOURS 6:30am to 6:30pm Monday to Friday
with up to four days open on the weekend for open days

GROUP ROOM 1	0-24months	12 PLACES	3 EDUCATORS
GROUP ROOM 2	24-36months	10 PLACES	2 EDUCATORS
GROUP ROOM 3	24-36months	15 PLACES	3 EDUCATORS
GROUP ROOM 4	24-36months	15 PLACES	3 EDUCATORS
GROUP ROOM 5	36+ months	20 PLACES	2 EDUCATORS
GROUP ROOM 6	36+ months	20 PLACES	2 EDUCATORS
			+ 2 STAFF
		92 PLACES	17 STAFF (minimum at capacity)

LEGEND

- UNENCUMBERED PLAYSPACE
- LANDSCAPING
- BUILDING AREA
- CAR PARK
- PAVING or similar
- PROPOSED TREE nominal location shown
- EXISTING TREE TO BE RETAINED & PROTECTED
- +FFL 0000 — PROPOSED FLOOR FINISHED LEVEL

ASHBERG LINK

EXISTING STREET LIGHT & SERVICES TO BE MOVED CLEAR OF PROPOSED ON-STREE PARKING BAYS TO THE SATISFACTION OF THE RESPONSIBLE AUTHORITY

ON STREET BAY 6.3 x 2.3m | ON STREET BAY 6.0 x 2.3m | ON STREET BAY 6.0 x 2.3m | ON STREET BAY 6.3 x 2.3m

EXISTING CONCRETE FOOTPATH

NOMINAL SHADE SAILS SHOWN - LOCATIONS TO BE CONFIRMED WITH PLAYSCAPE DESIGN AT DD STAGE

ENSURE DDA COMPLIANT CONNECTION BETWEEN EXISTING FOOTPATH AND PROPOSED PATHWAY

EXISTING CONCRETE FOOTPATH

OPEN RADIATOR ALARMED EMERGENCY EXIT GATE

LANDSCAPE - NO FENCE

FERNDALE AVENUE

2100h SOLID EVO WALL | 2100h OPEN RADIATOR FENCE | 2100h SOLID EVO WALL | 2100h OPEN RADIATOR FENCE

LOW HEIGHT OPEN INTERNAL FENCING & GATE BETWEEN PLAYSCAPES

PROPOSED TREES - NOMINAL LOCATION SHOWN

OUTDOOR PLAY AREA 2
Places:30
Min Required:210m²
210 m²
playscape to landscape architect's design

OUTDOOR PLAY AREA 1
Places:22
Min Required:154m²
155 m²
playscape to landscape architect's design

OUTDOOR PLAY AREA 3
Places:40
Min Required:280m²
283 m²
playscape to landscape architect's design

RAKED CEILING

CHILDRENS' TOILET 2 — 11 m² — BED STORE | BED STORE

(24-36 months) GROUP 4 — 15 places — 50.14 unencumbered floor area (minimum 48.75 sqm required) — CUBBY

(24-36 months) GROUP 3 — 15 places — 49.91 unencumbered floor area (minimum 48.75 sqm required) — CUBBY

OUTDOOR STORE 4 m²

COT ROOM 19 m²

(0-24 months) GROUP 1 — 12 places — 43.00 unencumbered floor area (minimum 39.00 sqm required)

CHILDRENS' TOILET 1 — 11 m²

(24-36 months) GROUP 2 — 10 places — 37.50 unencumbered floor area (minimum 32.50 sqm required)

BED STORE | LOCKERS & STORAGE | BED STORE

(36+ months) GROUP 5 — 20 places — 67.21 m² unencumbered floor area (including atelier) (minimum 68.00m² required)

LOCKERS & STORAGE | CLERESTORY WINDOW OVER

HALLWAY

DDA WC & SHR

PLANNING 7 m²

PREP/ STORE 8 m²

SERVICES

LOCKERS & STORAGE

3.6M CEILING HEIGHT

FOYER 20 m²

RECEPTION 10 m²

SERVICES

ENTRY

KERB RAMP

ATELIER

CHILDRENS' TOILET 3 — 18 m²

PROJECTOR WALL

BED STORE

CHILD WC

FHR

EDUCATORS' RETREAT 22 m²

AMB WC

3.6M CEILING HEIGHT

PIAZZA 55 m²

CLERESTORY WINDOW OVER

(36+ months) GROUP 6 — 20 places — 67.85 unencumbered floor area (minimum 65.00 sqm required)

SERVERY | KIDS OVEN | LIFT | LOCKERS & STORAGE

STAFF & DRY YARD

L'DRY & CLEANERS 10 m²

KITCHEN 33 m²

OFFICE 9 m²

ATELIER

BIN STORE

PROJECTOR WALL

OUTDOOR STORE

LANDSCAPE

CARSPACE (5.4m x 2.6m) 01 02 03 04 05 06 07 08 09

SHARED AREA (5.4m x 2.4m) — BOLLARD

ACCESSIBLE (5.4m x 2.4m) 10

CARPARK (19 SPACES)

6000 | 6400 | 5500

CARSPACE (5.4m x 2.6m) 19 18 17 16 15 14 13 12 11

NON-ILLUMINATED PILLAR SIGN

1800h SOLID FENCE

ON STREET BAY 6.0 x 2.3m

ON STREET BAY 6.3 x 2.3m

PEDESTRIAN VISIBILITY SPLAY - NO OBJECTS OR VEGETATION GREATER THAN 900mm IN HEIGHT

PROVIDE NEW VEHICLE CROSSING TO THE SATISFACTION OF THE RESPONSIBLE AUTHORITY.

VACANT ADJOINING LOT

RIGHT OF CARRIAGE WAY 6000

STARLITE BEND

1 GROUND FLOOR PLAN
1 : 100

GENERAL NOTES

DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT, PREPARATION OF SHOP DRAWINGS OR MANUFACTURING. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALING.

VERIFY LOCATION OF EXISTING SERVICES BEFORE COMMENCEMENT.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OF AUSTRALIA, RELEVANT STATE BUILDING ACT AS AMENDED, STANDARD BUILDING BY-LAWS AND RELEVANT AUSTRALIAN STANDARDS.

ISSUE	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	19/12/24

insite ARCHITECTS
4/120 Upper Heidelberg Road, Ivanhoe VIC 3079
t (03) 9499 8174
www.insitearchitects.com.au

nido EARLY SCHOOL

CLIENT: SATTERLY PROPERTY GROUP PTY LTD

PROJECT: PROPOSED CHILDCARE CENTRE (92 places)

LOCATION: CNR FERNDALE AVE & ASHBERG LINK, DALYELLUP W.A.

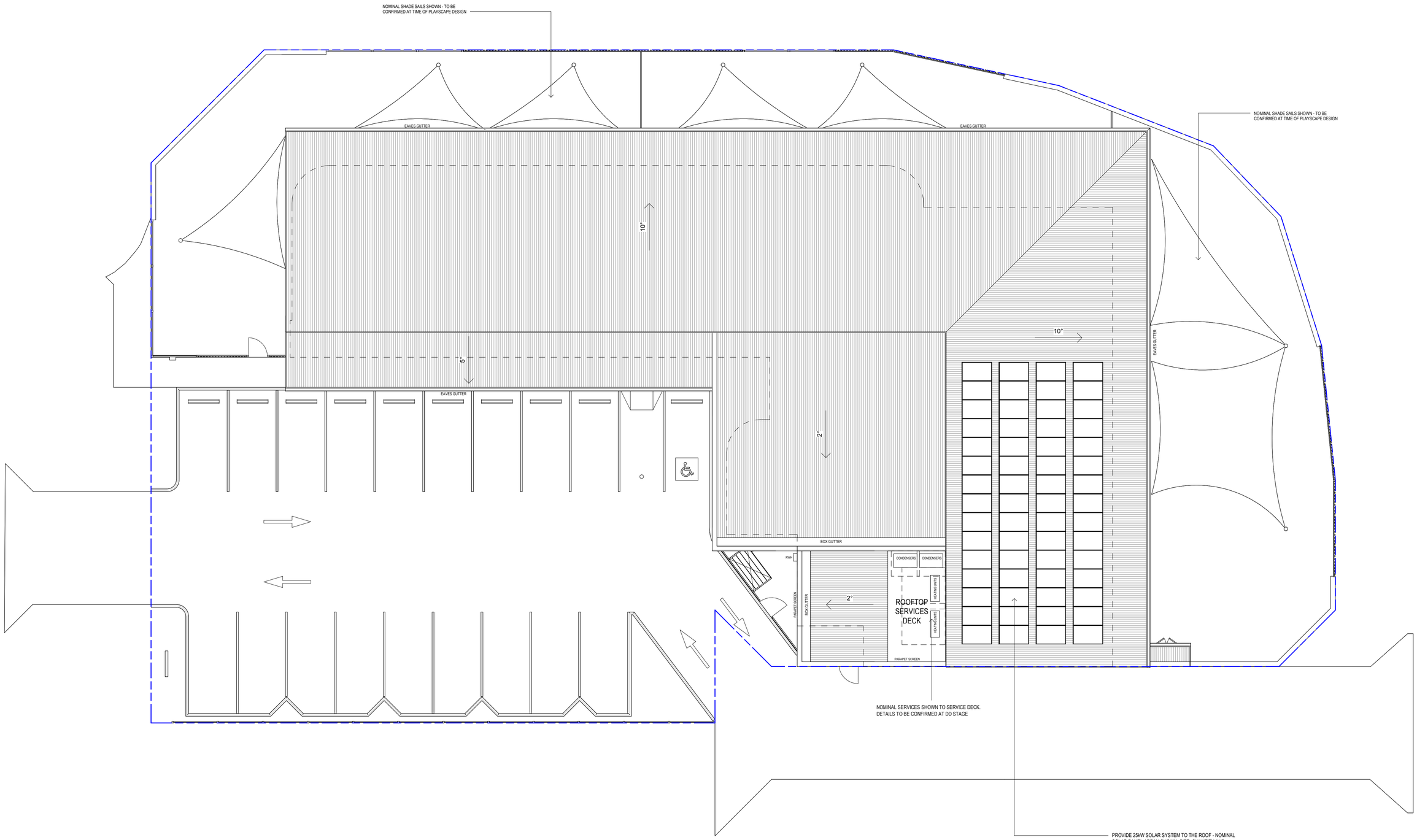
DRAWING TITLE: FLOOR PLAN

SCALE: As indicated@A1 | DATE: NOV 2024
DRAWN: CW | PRINTED: 19/12/2024 3:10:32 PM
CHECKED: AH | JOB No.: J0001182

APPROX

DA02/A

DA ISSUE



1 ROOF PLAN
1 : 100

GENERAL NOTES

DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT. PREPARATION OF SHOP DRAWINGS OR MANUFACTURING. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALING.

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A	DEVELOPMENT APPLICATION	19/12/24

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nido EARLY SCHOOL

CLIENT: SATTERLY PROPERTY GROUP PTY LTD

PROJECT: PROPOSED CHILDCARE CENTRE (92 places)

LOCATION: CNR FERNDALE AVE & ASHBERG LINK, DALYELLUP W.A.

DRAWING TITLE: ROOF PLAN

SCALE: 1 : 100@A1 **DATE:** NOV 2024

DRAWN: CW **PRINTED:** 19/12/2024 3:10:32 PM

CHECKED: AH **JOB No.:** J0001182

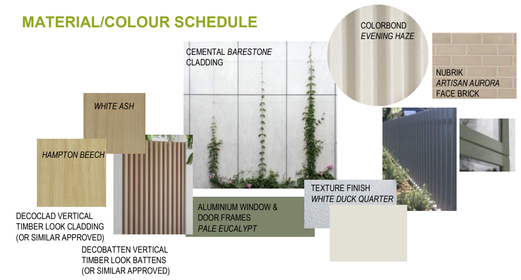
APPROX

DA03/A

DA ISSUE

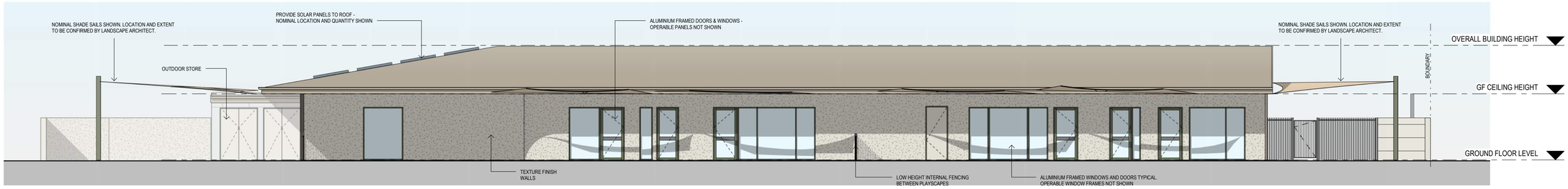
1 SOUTH ELEVATION
1 : 100

MATERIAL/COLOUR SCHEDULE

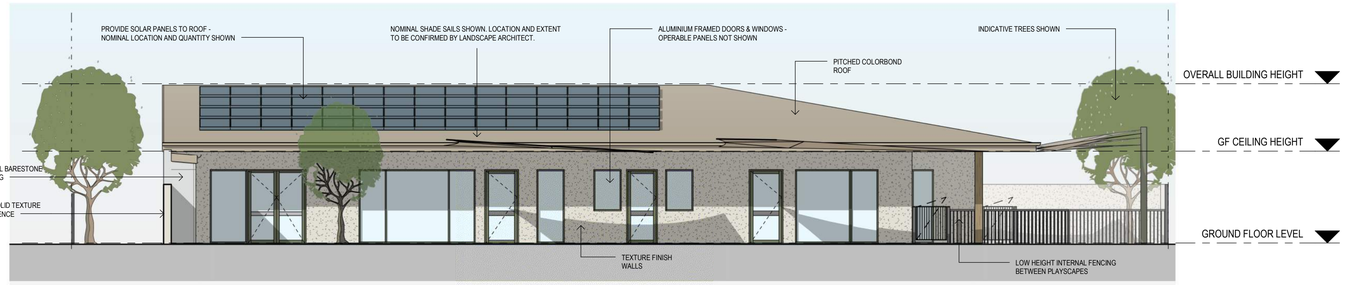


FENCE HEIGHT

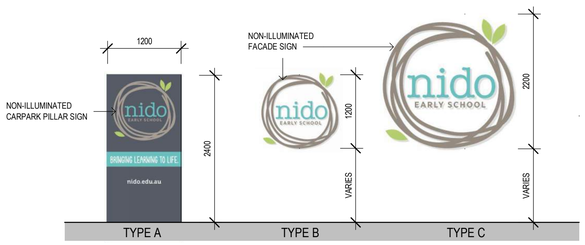
ENSURE ALL PLAYSCAPE FENCING COMPLIES WITH AS1926.1 WITH MINIMUM INTERNAL HEIGHT OF 2.1m AND MINIMUM EXTERNAL HEIGHT OF 1.2m.



2 WEST ELEVATION
1 : 100

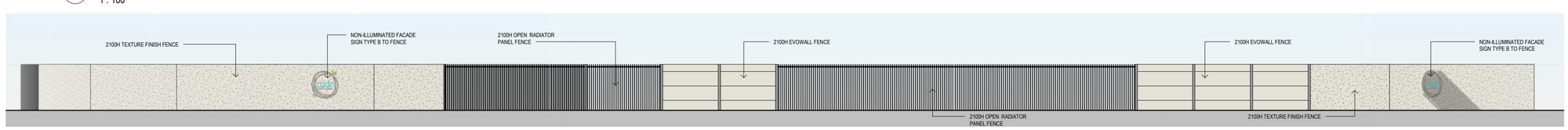


3 NORTH ELEVATION
1 : 100



6 SIGNAGE DETAILS
1 : 50

4 EAST ELEVATION
1 : 100



5 ASHBERG LINK FENCE ELEVATION
1 : 100

GENERAL NOTES

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A	DEVELOPMENT APPLICATION	19/12/24

insite ARCHITECTS
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t (03) 9499 8174
www.insitearchitects.com.au

CLIENT: SATTERLY PROPERTY GROUP PTY LTD

PROJECT: PROPOSED CHILDCARE CENTRE (92 places)

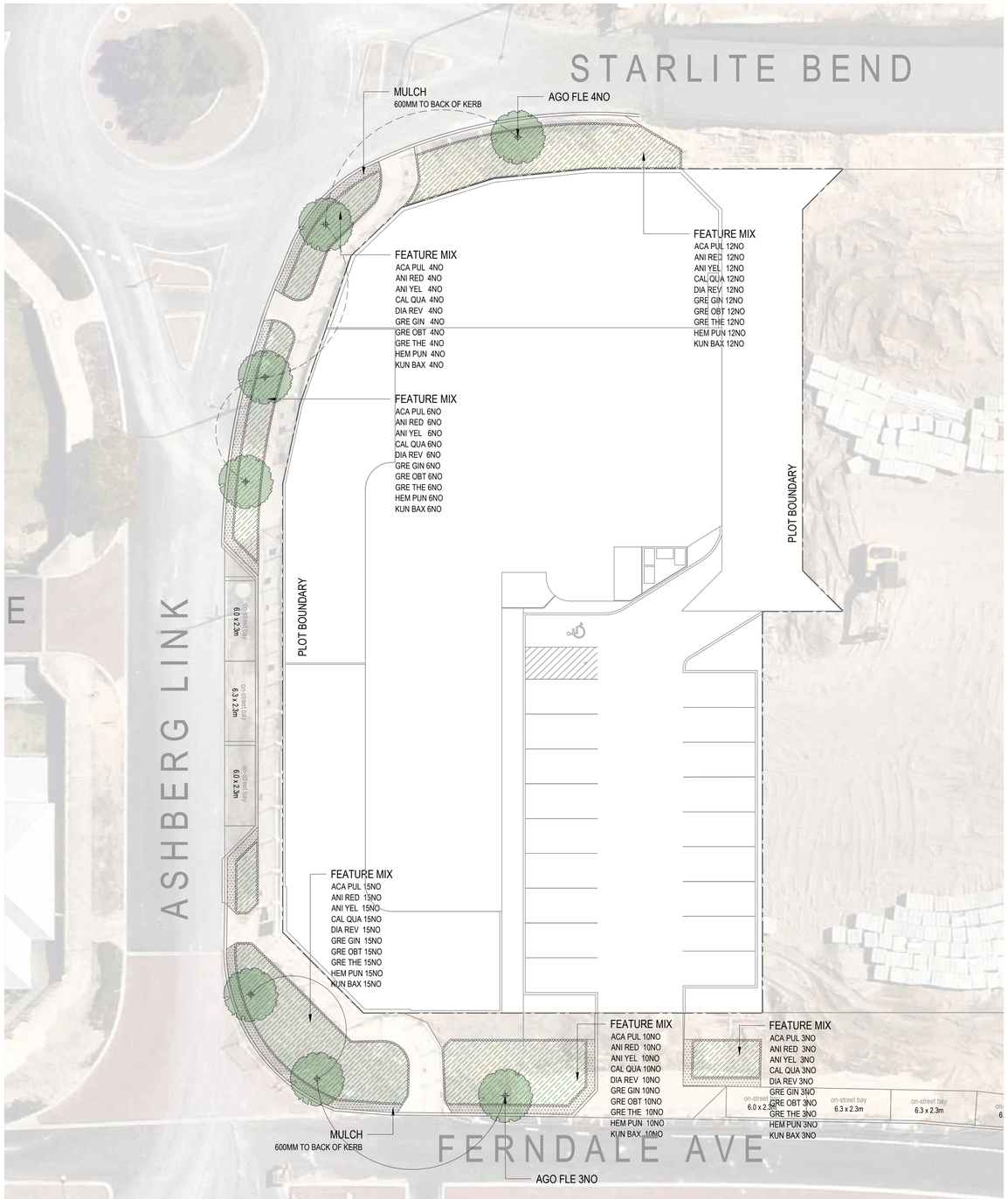
LOCATION: CNR FERNDALE AVE & ASHBERG LINK, DALYELLUP W.A.

DRAWING TITLE: ELEVATIONS

SCALE: As indicated@A1 **DATE:** NOV 2024
DRAWN: PR / CW **PRINTED:** 19/12/2024 3:10:35 PM
CHECKED: AH **JOB No.:** J0001182

DA04/A

DA ISSUE



0 1 2 3 4 5 10M 20M 1:100@A1

LEGEND

- MIXED PLANTING
- MULCH
- TREE PROPOSED

PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	POT (MM)	DENSITY /M2	QTY
TREES					
AGO FLE	Agonis flexuosa	Western Australian Peppermint	45ltr	As Shown	7
				TOTAL	**7**
FEATURE MIX					
ACA PUL	Acacia pulchella	Prickly Moses	Tube	2	50
ANI RED	Anigozanthos 'Red Gem'	Red Kangaroo Paw	Tube	2	50
ANI YEL	Anigozanthos 'Yellow Gem'	Yellow Kangaroo Paw	Tube	2	50
CAL QUA	Calothamnus quadrifidus	Common Netbush	Tube	2	50
DIA REV	Dianella revoluta	Black-anther Flax-lily	Tube	2	50
GRE GIN	Grevillea Gin Gin Gem	Gin Gin Gem	140	2	50
GRE OBT	Grevillea obtusifolia	Gin Gin Gem	Tube	2	50
GRE THE	Grevillea thelemanniana	Spider-net Grevillea	Tube	2	50
HEM PUN	Hemiandra pungens	Snakebush	Tube	2	50
KUN BAX	Kunzea baxteri	Crimson Kunzea	Tube	2	50
				TOTAL	**500**
				GRAND TOTAL	**507**

GENERAL NOTES:

NOT ISSUED FOR CONSTRUCTION PURPOSES

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH OTHER CONSULTANT DRAWINGS AND SPECIFICATIONS

ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT PRIOR PROCEEDING WITH THE WORK.

PLANTING NOTES:

ALL PLANT BEDS WILL BE FINISHED WITH MINIMUM 75MM ORGANIC MULCH AS PER AS4454 COMPOSTS, SOIL CONDITIONERS AND MULCHES.

SOIL IMPORTED TO SITE TO FILL PLANT BEDS WILL COMPLY WITH AS4419-2003 SOILS FOR LANDSCAPING AND GARDEN USE

RETAINED TREES WILL BE PROTECTED IN ACCORDANCE WITH AS4970 PROTECTION OF TREES ON DEVELOPMENT SITES.

PLANTS SPECIES AND SIZES SUBJECT TO AVAILABILITY

DAN RIMES DESIGN

Wearthy

PROJECT
NIDO EARLY SCHOOL

ADDRESS
CNR FERNDALE AV & ASHBERG LINK
DALYELLUP, WA

DAN RIMES DESIGN
0401 505 785
HELLO@DANRIMESDESIGN.COM

DRAWING TITLE
DETAILED LANDSCAPE PLAN (EXTERNALS)

REV.	ISSUE TITLE	DATE
00	CLIENT DRAFT	16|12|2024
01	FOR APPROVAL	17|12|2024

1:200 | A1

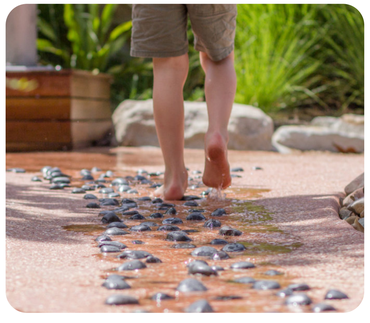
DEVELOPMENT APPLICATION

418-NDA
MA-001

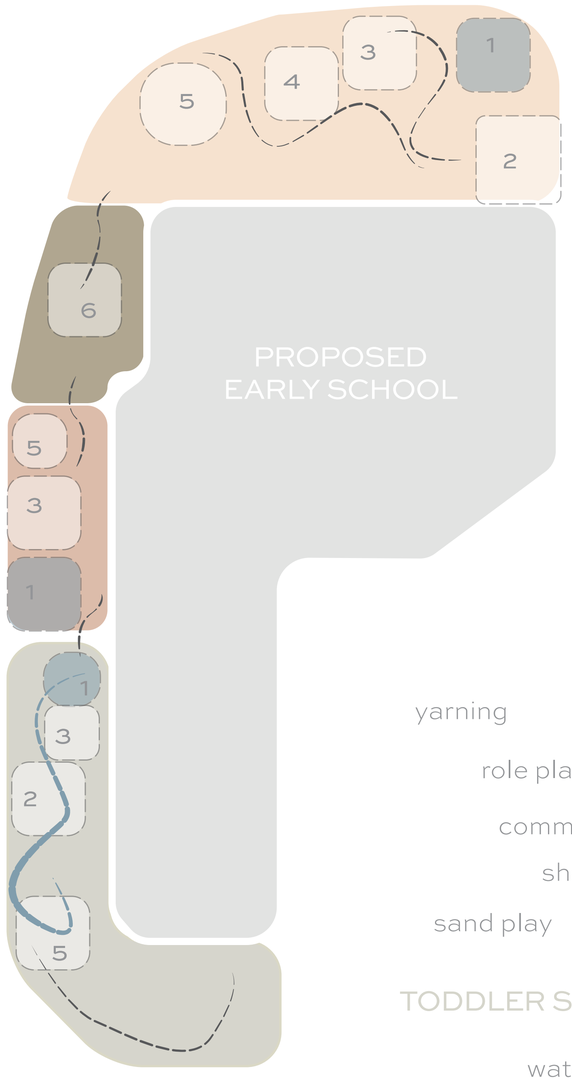
6

3

1



KINDER SPACE



SUSTAINABILITY
GARDEN

growing herbs

NURSERY
SPACE

light & pattern

open space

fast play

circulation path

water creek

textural & sensory

balance & vestibular

native plants

yarning

role play

community

shade cloth

sand play

TODDLER SPACE

water play

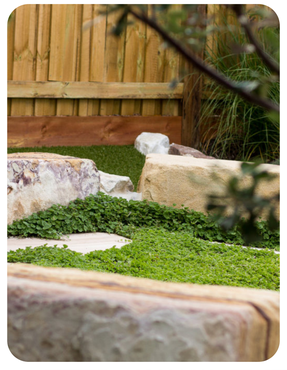
natural elements

shade trees

1

4

3



1

DAN RIMES
DESIGN

Wearthy

PROJECT
NIDO EARLY SCHOOL

ADDRESS
CNR FERNDALE AV &
ASHBERG LINK
DALYELLUP, WA

DAN RIMES DESIGN
0401 505 785
HELLO@DANRIMESDESIGN.COM

DRAWING TITLE
PLAYSCAPE
INDICATIVE

REV.	ISSUE TITLE	DATE
00	FOR APPROVAL	17|12|2024

1:200 | A1

DEVELOPMENT APPLICATION

418-NDA
MA-110

APPENDIX 3 - Traffic Impact Statement

Engineering a better future for over 20 years!

Proposed Childcare Centre

Cnr Ferndale Ave & Ashberg Lk, Dalyellup

Transport Impact Statement

PREPARED FOR:
Satterley Property Group

December 2024

Document history and status

Author	Revision	Approved by	Date approved	Revision type
Behnam Bordbar	r01	V Baltic	19/12/2024	Final

File name: t24.307.bb.r01.docx

Author: Behnam Bordbar

Project manager: Behnam Bordbar

Client: Satterly Property Group

Project: Child Care Centre, Dalyellup

Document revision: r01

Project number: t24.307

TABLE OF CONTENTS

REPORT FIGURES

REPORT TABLES

1 Introduction

This Transport Impact Statement (TIS) has been prepared by Transcore on behalf of Satterly Property Group Pty. Ltd. with regard to a proposed childcare centre to be located at the north east corner of Ferndale Avenue/Ashberg Link intersection, Dalyellup in the Shire of Capel.

The subject site is currently vacant. The site is bounded by Ferndale Avenue to the south, Ashberg Link to the west, Starlite Bend to the north and a proposed easement to the east as shown in **Figure 1**. Tuart Forest Primary School is located approximately 400m due west of the site along Ferndale Avenue.

Figure 1: Location of the subject site

The property is located within the Dalyellup East Structure Plan Area which is shown in **Figure 2.**

The Transport Impact Assessment Guidelines (WAPC, Vol 4 – Individual Developments, August 2016) state: *"A Transport Impact Statement is required for those developments that would be likely to generate moderate volumes of traffic*[1] *and*

[1] *Between 10 and 100 vehicular trips per hour*

therefore would have a moderate overall impact on the surrounding land uses and transport networks".

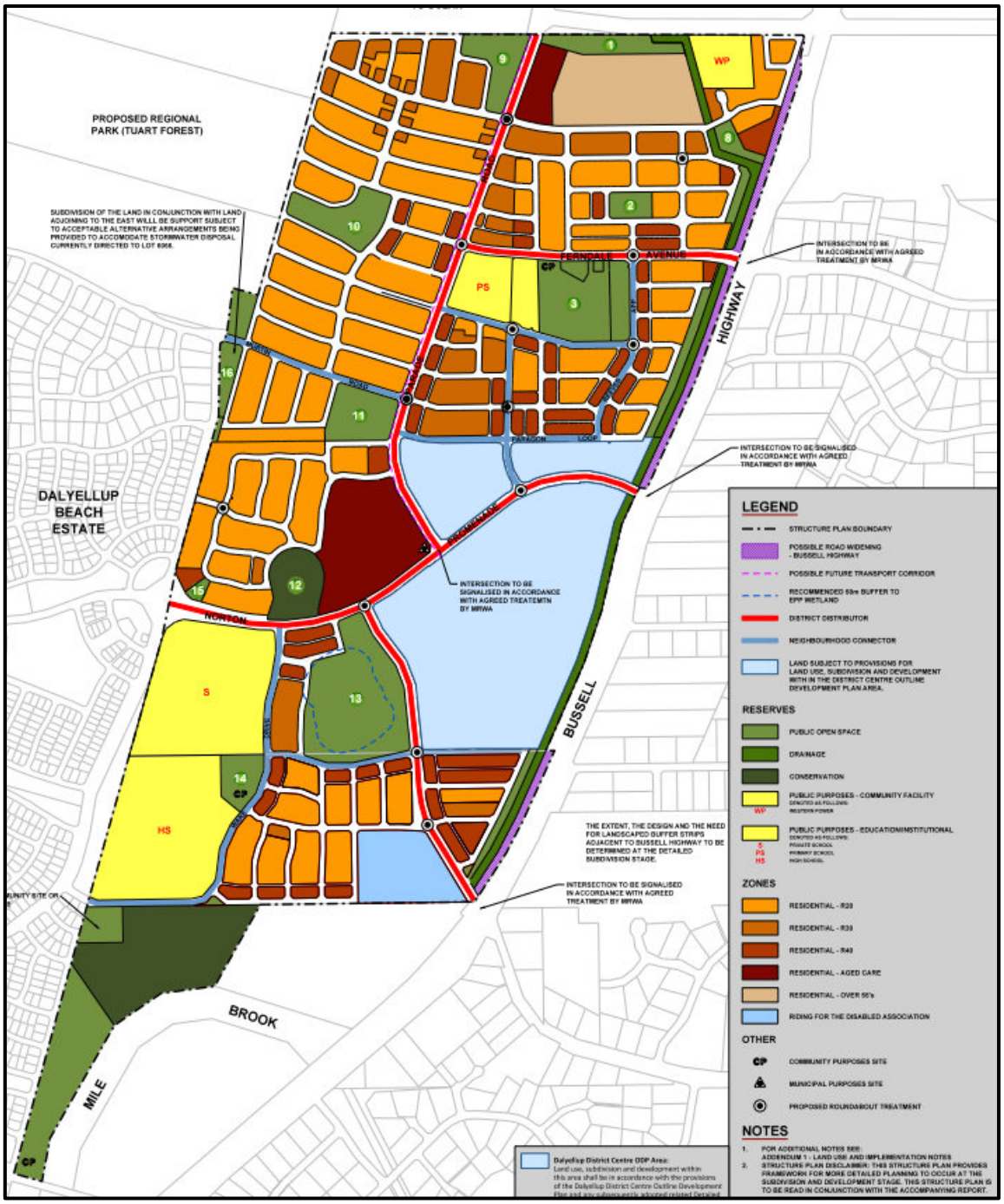


Figure 2: Dalyellup East Structure Plan Area (Amendment No. 29, 2021)

Section 6 of Transcore's report provides details of the estimated trip generation for the proposed development.

Accordingly, as the total peak hour vehicular trips are estimated to be less than 100 trips, a Transport Impact Statement is deemed appropriate for this development.

Key issues that will be addressed in this report include the traffic generation and distribution of the proposed development, access and egress movement patterns and parking demand and supply.

2 Development Proposal

The Development Application (DA) for the subject site proposes the development of a childcare centre with an associated car park and on-street parking in the suburb of Dalyellup within the Shire of Capel. This childcare centre is proposed to accommodate up to 92 children and 16 staff members.

According to the development plan provided in **Appendix A**, a total of 19 on-site parking bays, including one ACROD bay, are proposed to address the parking demand of the proposed childcare centre. The on-site supply is arranged in a right-angle manner along the eastern side of the building. In addition, there is an existing on-street public car parking supply of 12 bays on Ferndale Avenue within close walking distance to the site plus four (4) additional on-street parallel parking bays proposed along the western boundary of the site on Ashberg Link and four (4) on-street parallel bays along the southern boundary of the site on Ferndale Avenue.

A bin storage area is provided at the at the north-eastern corner of the proposed on-site car park. Waste collection and deliveries will be accommodated within the site via entry from Starlite Bend and the easement (right-of-carriageway) and exit via Ferndale Avenue. It is proposed that servicing will be conducted outside the operating hours of the childcare centre.

Proposed vehicular access to the proposed development consists of a left-in/left-out only crossover to the north side of Ferndale Avenue and a full movements crossover located at the southern end of the easement (right-of-carriageway) along the eastern boundary of the site. Pedestrian access is proposed via the existing footpaths located on the east side of Ashberg Link and the north side of Ferndale Avenue.

3 Vehicle Access and Parking

3.1 Access

As part of the development proposal, one (1) partial movements (left-in/left-out only) crossover is proposed along the Ferndale Avenue frontage, east of Ashberg Link and a full movements crossover from the easement (right-of-carriageway) via Starlite Bend along the eastern boundary of the site as illustrated in **Figure 3**.

Figure 3: Proposed Site Crossover Arrangements

3.2 Parking Demand and Supply

Based upon the Shire of Capel's *Local Planning Policy 6.1 LPP 6.1: Vehicle Parking*, the car parking standards for the site is as follows:

- 1 space for each staff member; plus,
- 1 bay per 10 children.

The proposed childcare centre is proposed to accommodate up to 92 children and 16 staff members. Accordingly, the theoretical required car parking supply for the proposed child care centre is 26 bays.

The proposed development provides a total of 19 on-site bays (inclusive of one ACROD bay) plus eight (8) on-street parallel bays to be provided along the Ashberg Link and Ferndale Avenue resulting in a total of 27 bays. It is acknowledged that the proposed four (4) on-street bays along Ferndale Avenue will need to be design in accordance with relevant standard during the detailed design stage of the project. The proposed on-street bays along Ashberg Link are compliant.

It should be noted that there is an additional established on-street supply of 12 bays on Ferndale Avenue within close walking distance to the site. The parking supply and demand of the proposed childcare centre are further discussed in the following section of the report.

3.3 Estimated Actual Parking Demand Based on Trip Generation

Transcore has undertaken a parking analysis based on the anticipated peak hour traffic generation of the proposed childcare centre, to estimate the actual peak parking demand of the centre.

Section 6.1 of this report details the anticipated peak hour traffic generation of the proposed childcare centre. It is established that the calculated weekday roadway a.m. peak hour trip generation of the proposed childcare centre is 46 vehicles in and 34 vehicles out of the car park with the weekday roadway p.m. peak hour estimated to generate fewer trips.

This represents a potential 46 vehicles using the childcare centre car park during the critical peak hour.

The NSW *"Guide to Traffic Generating Developments"* section on childcare centres provides commentary on childcare centre mode share, parking utilisation and parking length of stay. It should be noted that the commentary provided in the NSW guide is based on surveys of actual parking activity undertaken in New South Wales. The NSW guide indicates the highest parking demand of 0.23 cars per child (which represents a parking requirement of 21 bays for the proposed childcare centre) and the average recorded length of stay for all surveyed childcare centres of 6.8 minutes.

Conservatively assuming that the maximum length of stay for pick-up/drop-off parking for the proposed childcare centre is 7 to 8 minutes, it is calculated that each pick-up/drop-off parking bay can accommodate a turnover of up to 7 vehicles per hour.

It is therefore recommended that six (6) bays on-site be allocated to pick-up/drop-off activities supplemented by the four (4) bays on Ashberg Link totalling ten (10) bays which can accommodate up to 70 movements during the peak hour which is more than the anticipated peak design demand during the weekday a.m. peak hour.

The proposed parking bays on Ferndale Avenue can function as overflow parking. The on-street parking on Ashberg Link can be signed and line marked as 15-minute maximum during peak demand periods of 7:00 a.m. to 9:00 a.m. and 3:00 to 6:00 p.m. Monday-Friday in order to encourage appropriate utilisation and turnover of these bays.

3.3.1 Childcare Centre Staff Bays

It is proposed that CCC operations will be managed by 16 staff. Based upon the staffing information provided by the proposed operator, the number of staff will fluctuate throughout the typical weekday in accordance with the children's attendance rate but is indicatively envisaged to occur as outlined in **Table 1**.

Table 1: Staff Schedule

Time	Staff Rostered
6:30AM – 7:00AM	4
7:00AM – 8:00AM	7
8:00AM – 9:00AM	10
9:00AM – 10:00AM	14
10:00AM – 3:00PM	16
3:00PM – 4:00PM	11
4:00PM – 5:00PM	7
5:00PM – 6:30PM	6

As can be seen, although there will be a total of up to 16 staff, a maximum of 10 staff members are required during the peak drop-off period (7:00AM – 9:00AM) in the morning and a maximum of 11 staff members are required during the peak pick-up period in the afternoon (3:00PM – 5:00PM). The staff will be at full capacity at the site only between 10:00AM – 3:00PM. During this time period, they can utilise the visitor bays for parking which will be underutilised during this period.

Accordingly, the estimated actual maximum demand for staff parking bays during the peak pick-up/ drop-off period of the centre is 11 bays. Therefore, the overall estimated actual parking demand of the proposed childcare centre during the peak drop off/pick up period is 17 bays (11 staff bays plus 6 visitor bays).

The proposed development provides a total of 27 bays inclusive of eight (8) on-street short-term parking bays which satisfies and exceeds the estimated actual parking demand for the proposed childcare centre.

Moreover, it also should be noted that:

- Some patrons of the childcare centre are likely to come from the local residential catchment and as such parents may walk their children to/from the childcare centre reducing the demand for on-site parking;
- Some of the staff of the childcare centre are expected to use ride share or be dropped off or walk to the centre; and,
- An additional established on-street car parking supply is in place along Ferndale Avenue in close walking distance to the site.

For the reasons outlined above, it is considered that sufficient parking has been proposed on and off site to address the actual parking demand of the proposed childcare centre.

4 Provision for Service Vehicles

A bin storage area is located along the eastern edge of the building adjacent to the crossover to the easement (right-of-carriageway) as shown in the site plan in **Appendix A**.

Waste collection and deliveries will take place within the site with a private contractor engaged to collect waste using a maximum size 8.8m service vehicle. Waste collection vehicles will enter via the crossover to the right-of-carriageway via Starlite Bend at the north end of the site and then exit via the partial movements crossover to Ferndale Avenue with all vehicles entering and exiting the site in forward gear.

It is proposed that service and delivery activities will be conducted outside of the operating hours of the proposed childcare centre. It is expected that the childcare centre will generate a relatively low volume of additional service vehicle traffic primarily associated with the deliveries for the childcare centre. It is recommended that smaller vehicles such as vans should be used for deliveries.

A swept path analysis is undertaken for an 8.8m service vehicle and included in **Appendix B** which indicates that these movements can enter and exit the site in a safe, efficient, and effective manner.

5 Hours of Operation

The proposed childcare centre is proposed to operate during weekdays between 6:30 AM to 6:30 PM Monday to Friday with the facility closed on weekends and public holidays.

6 Daily Traffic Volumes and Vehicle Types

6.1 Proposed Development Trip Generation

In order to establish an accurate traffic generation rate for the proposed childcare centre, traffic count surveys undertaken by Transcore at similar centres in the Perth Metropolitan Area during 2022 and 2023 were sourced.

Discussions with the respective centre managers revealed that the peak drop-offs and pick-ups for these centres occur between the hours of 7:30AM – 9:30AM and 3:00PM – 5:00PM.

From the total number of children at each of the centres on the surveyed days, the following average generation rates were established for the morning and afternoon surveyed periods:

- 7:30AM–9:30AM: 1.25 trips per child (57% in / 43% out); and,
- 3:00PM–5:00PM: 1.10 trips per child (49% in / 51% out).

From this information, the traffic generation rate for the combined period of 07:30AM–09:30AM and 3:00PM–05:00PM was calculated as 2.36 trips per child. To convert this figure to a daily generation rate, this figure was increased to 3.5 trips per child to account for any trips outside of the surveyed times. It was assumed that the daily in and out split for vehicle trips was 50/50.

Furthermore, the following peak hour generation rates were established from the surveys for the Child Care Centres:

- AM peak hour: 8:00AM – 9:00AM: 0.87 trips per child (57% in / 43% out); and,
- PM peak hour: 4:00PM – 5:00PM: 0.71 trips per child (47% in/ 53% out).

Accordingly, the following number of trips were estimated for the proposed childcare centre, assuming a maximum scenario of 92 children and 16 staff being present (i.e., centre at full capacity):

- AM peak hour: **80** trips generated (46 in / 34 out); and,
- PM peak hour: **65** trips generated (31 in / 34 out); and,
- Daily traffic generation: **322** trips generated (161 in / 161 out).

6.2 Traffic Flow

Based on the general spatial distribution of existing residential developments in the immediate area and the permeability of the local road network, the childcare centre's traffic distribution adopted for this analysis is as follows:

- 20% to and from the south via Bussell Highway/Ferndale Avenue and
- 40% to and from the west and north via Ferndale Avenue.
- 40% to and from the south and south-west via Parade Road and Norton Promenade.

Figure 4 illustrates trip generation and traffic distribution over the local road network for the proposed childcare centre.

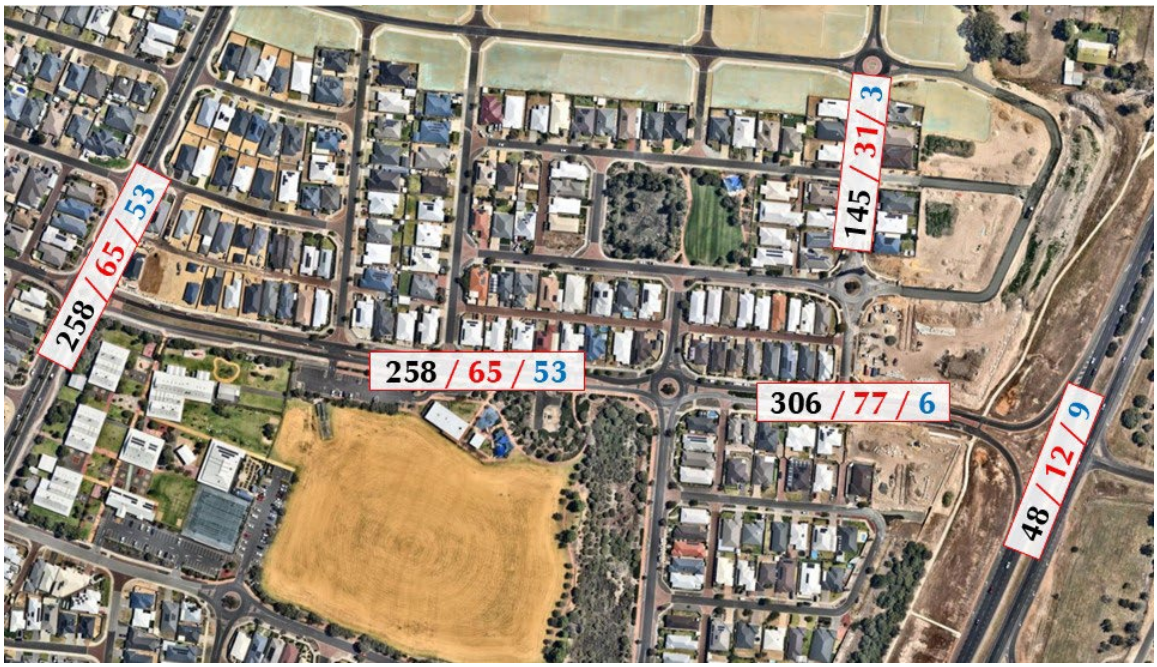


Figure 4: Estimated Daily and Weekday Peak Hour Site-Generated Traffic Generation Volumes

As urban development continues to progress within the Dalyellup East Structure Plan Area, the traffic distribution will progressively change with a higher proportion from the north and less from the south, but traffic distribution at the childcare centre driveway is not expected to change significantly.

6.3 Impact on Surrounding Roads

The WAPC Transport Impact Assessment Guidelines (2016) provides guidance on the assessment of traffic impacts:

"As a general guide, an increase in traffic of less than 10 per cent of capacity would not normally be likely to have a material impact on any particular section of road but increases over 10 per cent may. All sections of road with an increase greater than 10 per cent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 per cent of capacity. Therefore, any section of road where development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

It is clear that the traffic increase from the proposed childcare centre would be significantly less than the critical threshold (100vph per lane). As detailed in **Section 6.2**, the proposed development will not increase traffic on any lanes on the surrounding road network by more than 100vph, therefore the impact of the development traffic on the surrounding road network will not be significant.

7 Traffic Management on the Frontage Streets

Bussell Highway, to the east of the site, is a primary north-south road connecting regional centres of Bunbury through the suburbs of Busselton and Capel through to Busselton, Margaret River, and Augusta.

It has been constructed as a dual divided carriageway with a raised fixed central median in the vicinity of the site. It has been classified as a *Primary Distributor* road under the Main Roads WA *Functional Road Hierarchy*.

It operates under a posted speed limit of 100kph and is operated and maintained by Main Roads WA.

Parade Road, to the west of the site, is a north-south connecting road providing direct access into the Dalyellup Town Centre and the Dalyellup East urban cell as well as the commercial uses situated on Norton Promenade to the south of the site.

It has been constructed as a wide divided single carriageway with a raised 'boulevard-style' fixed central median.

Parade Road is currently classified as a *Local Distributor* road under Main Roads WA *Functional Road Hierarchy* but as part of the build-out of the Dalyellup East Structure Plan Area, it will likely be reclassified as a *District Distributor* road, as per the approved structure plan. It operates under a posted speed limit of 60kph and is operated and maintained by the Shire of Capel.

The intersection of Parade Road with Ferndale Avenue operates under 4-way single circulating roundabout control.

Ferndale Avenue, which runs along the southern boundary of the site is an east-west connecting road providing direct access to and from Bussell Highway via a partial movements (left-in/left-out only) unsignalised T-intersection.

It has been constructed as a single divided carriageway with a raised fixed central median in the vicinity of the site.

Ferndale Avenue is currently classified as an *Access Road* under Main Roads WA *Functional Road Hierarchy* but has been designated as a *District Distributor* road in the approved structure plan. It operates under a posted speed limit of 50kph and is operated and maintained by the Shire of Capel.

The intersection of Ferndale Avenue with Ashberg Link operates under full movements T-intersection control with Give Way control on the Ashberg Link approach.

Ashberg Link and **Starlite Bend,** which run along the western and northern boundaries of the site, respectively, are local access roads providing direct access to abutting properties.

Both roads have been constructed as single undivided carriageways in the vicinity of the site and are classified as *Access Roads* under Main Roads WA *Functional Road Hierarchy*.

Both roads operate under a posted speed limit of 50kph and are operated and maintained by the Shire of Capel. The intersection of Ashberg Link and Starlite Bend operates under 4-way single circulating roundabout control.

Table 2 shows the documented and estimated traffic volumes on the boundary road network. Existing traffic volumes have been sourced from Main Roads WA and other documented studies with traffic volumes on lower order roads estimated based upon a review of existing and future travel patterns, documented transport modelling for the area and spatial distribution of land uses. Future traffic volumes have been based upon modelling for the Dalyellup East Structure Plan area.

Table 2: Existing and 2031 Traffic Volumes

Road	Existing Daily Traffic Volume (vpd)	Future 2031 Traffic Volume (vpd)	Practical Capacity
Bussell Highway (North of Norton Promenade)	25,500 vpd (MRWA, 2023)	30,000 (est.)	40,000 to 50,000 vpd
Parade Road (North of Norton Promenade)	10,800 vpd (MRWA,2021/2022)	12,000 to 15,000 vpd (est.)	15,000 to 20,000 vpd
Ferndale Avenue (West of Bussell Highway)	2,500 vpd (est.)	3,500 vpd (based upon 2031 modelling)	10,000 to 15,000 vpd
Ashberg Link (North of Ferndale Avenue	<500 vpd (est.)	1,500 vpd (est.)	3,000 vpd
Starlite Bend (Jagoon Approach-End Road at Bussell Highway)	<500 vpd (est.)	1,200 vpd (est.)	3,000 vpd

8 Public Transport Access

There is limited bus services within the Dalyellup East urban cell with Route 842 (Park Centre-Dalyellup via Bunbury Health Campus) and Route 843 (Bunbury-Dalyellup via Bunbury Plaza) providing service between Dalyellup and Bunbury.

These services provide a combined service frequency of 30-to-45-minute service during the weekday peak periods with midday frequencies of 30-minutes and hourly service on weekends and public holidays with bus stops in place on both sides of Parade Road to the west of the site.

Figure 5 shows the public transport services in the area.

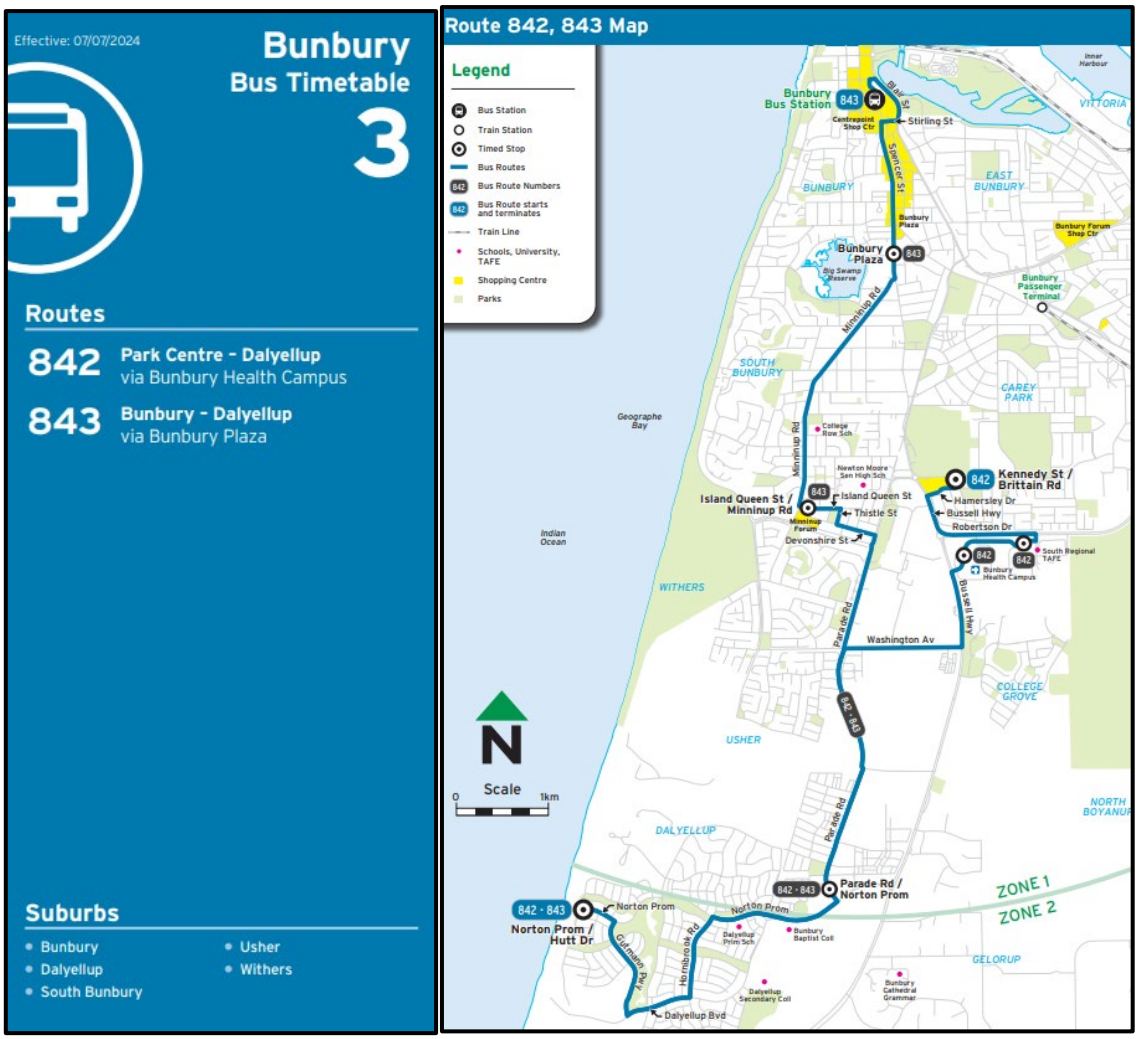


Figure 5: Local Bus Services (Source: Public Transport Authority/TransBunbury))

9 Pedestrian and Cycling Access

Shared paths are in place on both sides of Ferndale Avenue along the southern boundary of the site and on the east side of Ashberg Link and south side of Starlite Bend, in the vicinity of the site.

On-road cycle lanes are in place on both sides of Parade Road to the west of the site with an off-road shared place on the east side of the road and a footpath in place on the west side of the road. A shared path is in place on the west side of Bussell Highway in the vicinity of the site.

Figure 6 shows an excerpt of the existing and future cycling network within the vicinity of the site as per the Shire of Capel's Bike Plan.

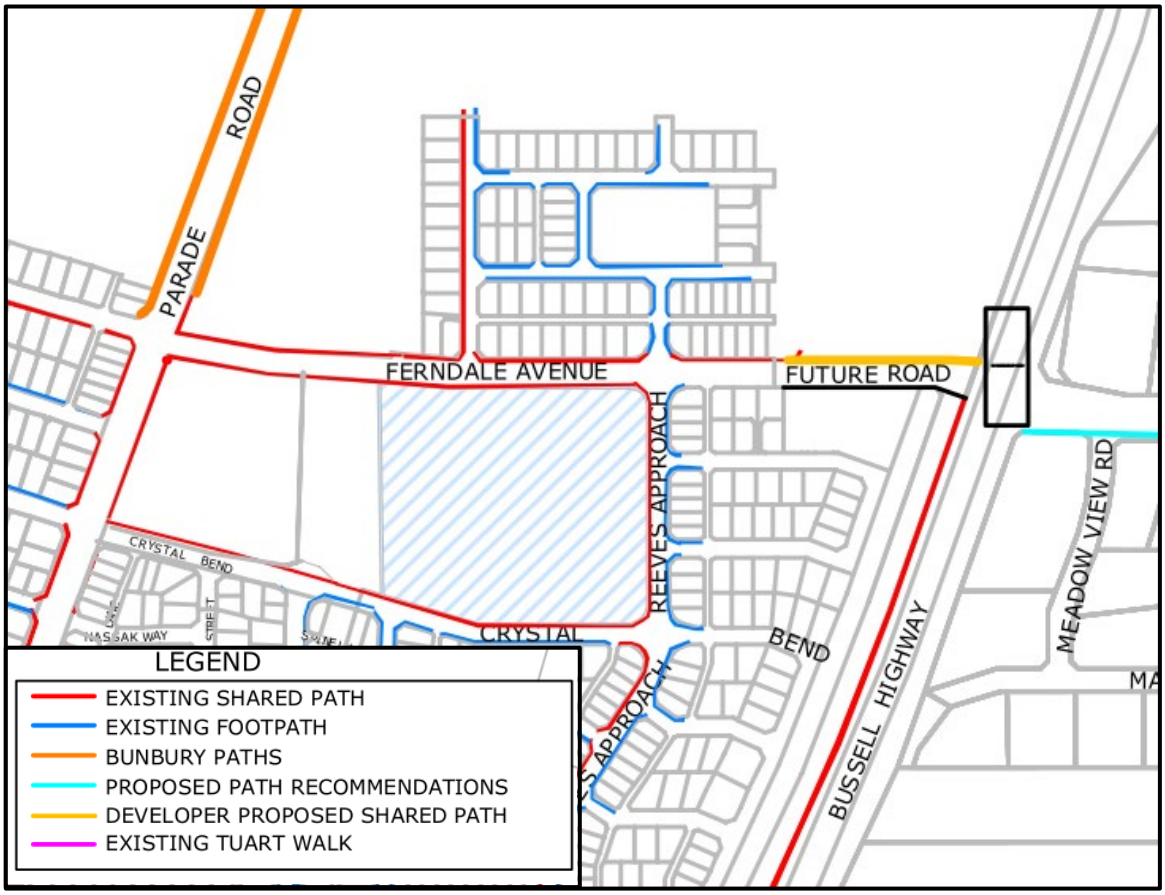


Figure 6: Existing and Future Cycling Network (Source: Shire of Capel Bike Plan)

10 Site Specific Issues

Other than the theoretical parking shortfall for the centre (which has been addressed in this report and the PMP), no other site-specific issues have been identified for the proposed childcare centre.

11 Safety Issues

A review of the documented 5-year crash history for the reporting period 2019-2023 indicates no crashes on the boundary road network in the vicinity of the site.

A review of the sight distances at the respective site crossover was undertaken with regard to both relevant Australian Standards and Austroads guidelines and the results of this review confirm that adequate sight distances are in place to ensure safe, efficient, and effective traffic operations at these locations.

No particular safety issues have been identified for the proposed childcare centre.

12 Conclusions

This Transport Impact Statement (TIS) has been prepared by Transcore on behalf of Satterley Property Group Pty. Ltd. with regard to a proposed childcare centre to be located at the north-east corner of Ferndale Avenue/Ashberg Link intersection, Dalyellup in the Shire of Capel.

The subject site is currently vacant. The site is bounded by Ferndale Avenue to the south, Ashberg Link to the west, Starlite Bend to the north and an easement (right-of-carriageway) to the east. Bussell Highway is located to the east of the site. Tuart Forest Primary School is located to the west of the site.

The Development Application (DA) for the subject site proposes the development of a childcare centre proposed to accommodate up to 92 children and 16 staff members.

As part of the development proposal, a partial movement (left-in/left-out only) crossover to the north side of Ferndale Avenue and a full movements crossover on the easement (right-of-carriageway) near the north-eastern corner of the site via Starlite Bend are proposed.

A total of 19 on-site parking bays, including one ACROD bay, plus eight (8) additional purpose-built on-street public parking bays are proposed to address the parking demand of the proposed childcare centre.

Based on the estimated actual peak parking demand documented in this report, it is established that a minimum of six (6) on-site bays should be reserved for pick-up and drop-off activities with the four (4) proposed on-street bays on Ashberg Link signed and line marked as 15-minutes only between 7:00 a.m. and 9:00 p.m. and 3:00 p.m. and 6:00 p.m. to cater for short-term pick-up/drop-off activities. Also, the four (4) proposed on-street bays on Ferndale Avenue can accommodate any parking overflow. The balance of 13 on-site car parking bays should be allocated to staff.

It should be noted that additional established on-street parking supply consisting of 12 bays on Ferndale Avenue to the immediate west of the site is also available. The proposed development provides a total of 27 new bays (inclusive of both on and off-site car parking) which satisfies and exceeds the estimated maximum parking demand of the proposed childcare centre. Therefore, it is considered that sufficient parking has been provided both on-site and off-site in the form of new and established public on-street parking bays.

It is estimated that the proposed development would generate approximately **322** total daily trips with approximately **80** and **65** trips during typical weekday AM and PM peak hours, respectively. These trips include both inbound and outbound trips. Thus, the traffic generation of the proposed development is relatively low and as such the traffic operations of the road network in the vicinity of the proposed childcare centre would not be adversely impacted by the additional development traffic.

Deliveries and waste collection activities will be accommodated within the site. It is proposed that servicing will be conducted outside of the operating hours of the proposed childcare centre. A swept path analysis has demonstrated that inbound and outbound movements by a maximum size 8.8m service vehicle can be accommodated safely, efficiently, and effectively into and out of the site.

The site features good connectivity via the existing road network and path network and access to the public transport service in this area is expected to be extended as this area becomes more fully developed.

No particular transport or safety issues have been identified for the proposed childcare centre development within the scope of this report.

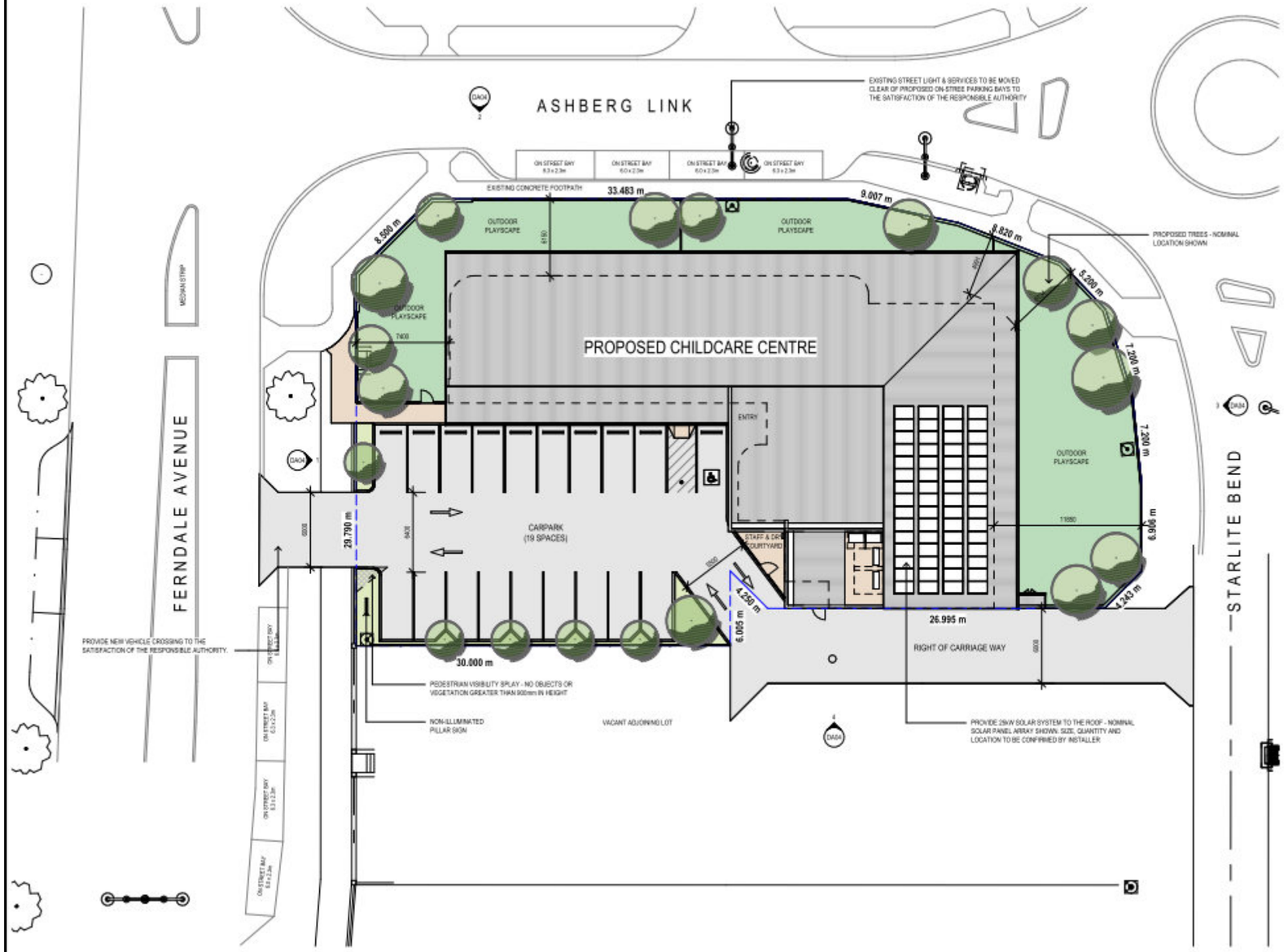
It is concluded that the findings of this Transport Impact Statement are supportive of the proposed childcare centre development.

Appendix A

PROPOSED DEVELOPMENT PLANS

transcore

Engineering a better future for over 20 years!



1 SITE PLAN
1 : 200

2 SITE CONTEXT
1 : 1000

AREA ANALYSIS

TOTAL SITE AREA 2026m²

SITE COVERAGE 730

BUILDING AREA
GROUND FLOOR 683m² gross leaseable area

ON SITE PARKING -
19 bays provided (including one accessible)

LEGEND

- UNENCUMBERED PLAYSPACE
- LANDSCAPING
- BUILDING AREA
- CAR PARK
- PAVING or similar
- PROPOSED TREE nominal location shown
- EXISTING TREE TO BE RETAINED & PROTECTED
- EXISTING TREE TO BE REMOVED

Appendix B

SWEPT PATH ANALYSIS

Engineering a better future for over 20 years!

Cnr Ferndale Ave & Ashberg Link, Dalyellup

8.8m Waste Collection Truck

Bin Store Access

LEGEND

Vehicle Body

Wheel Path

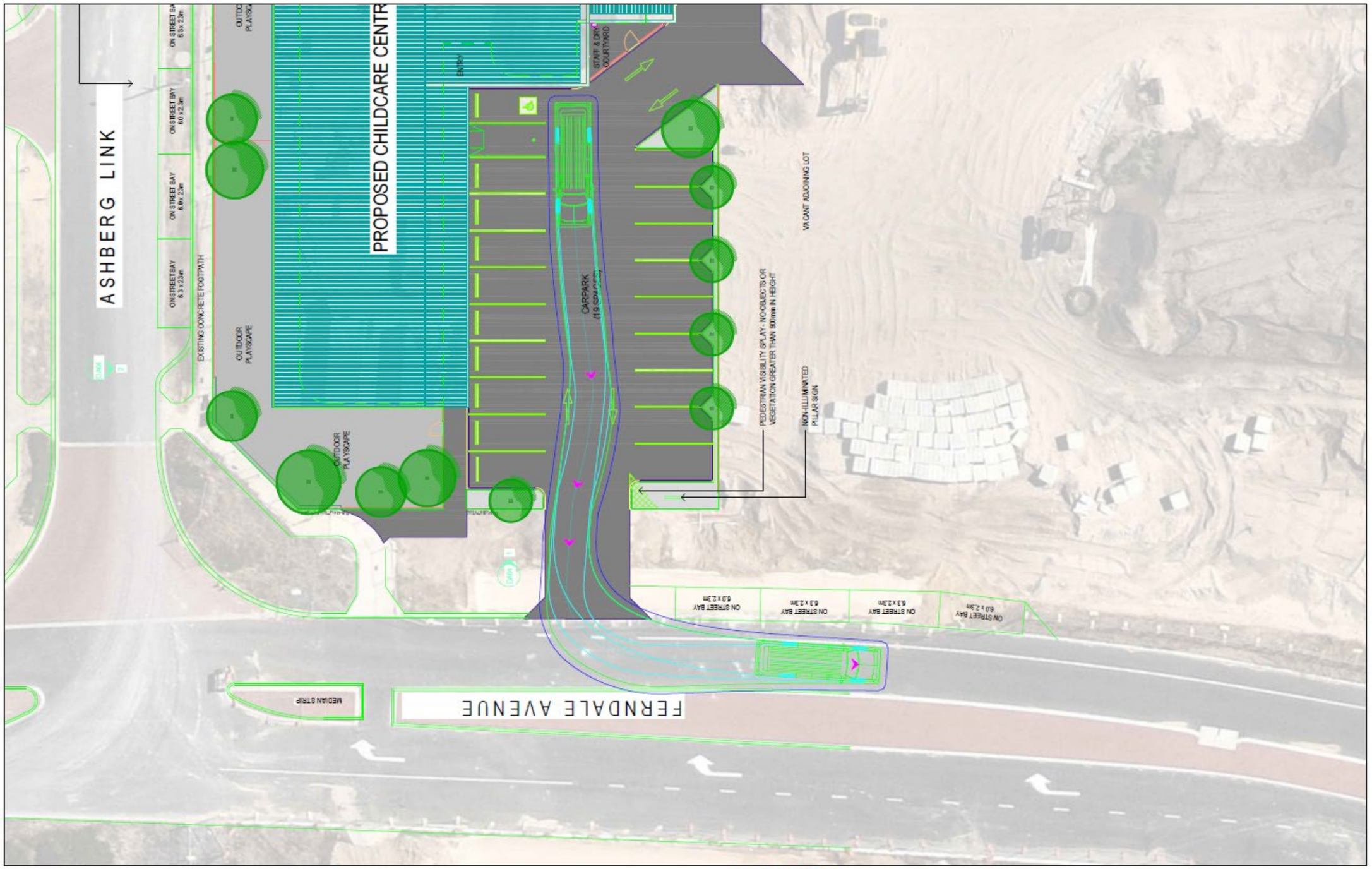
500mm Clearance

t24.307.sk04

19/12/2024

Scale: 1:400 @ A3

transcore



Cnr Ferndale Ave & Ashberg Link, Dalyellup

8.8m Waste Collection Truck

Bin Store Egress

LEGEND

Vehicle Body

Wheel Path

500mm Clearance

t24.307.sk05

19/12/2024

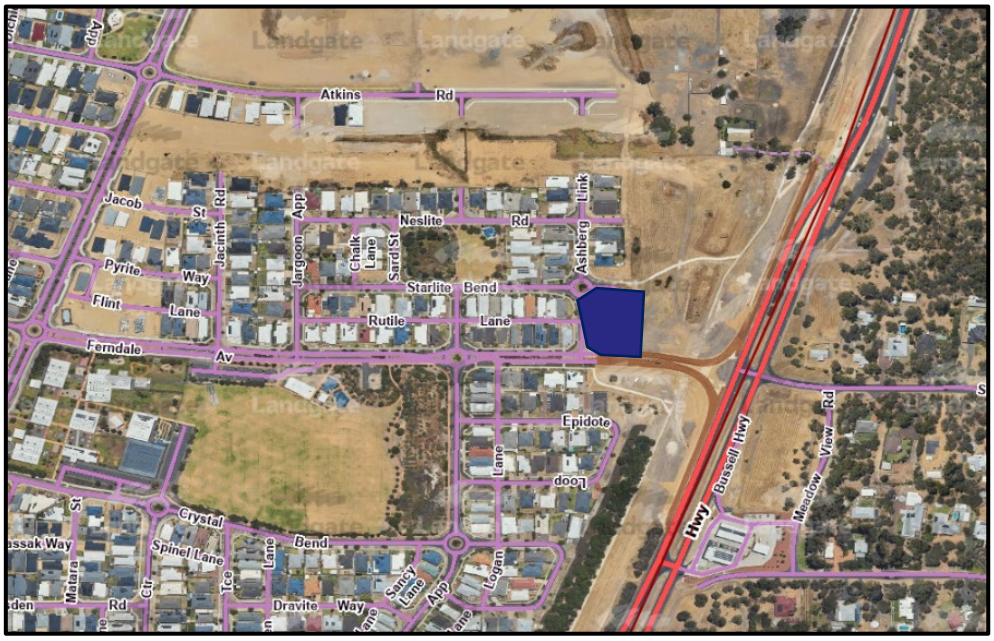
Scale: 1:250 @ A3

Technical Note: No 1 **Date:** 19/12/2024
Project No: t24.307
Project: Proposed Childcare Centre – Corner Ferndale Avenue & Ashberg Link, Dalyellup
Subject: Parking Management Plan

1. Introduction

This Parking Management Plan (PMP) has been prepared by Transcore on behalf of Satterly Property Group Pty Ltd with regard to a proposed childcare centre to be located within the southeastern portion of Lot 9055 which located at the north east corner of Ferndale Avenue/Ashberg Link intersection, Dalyellup in the Shire of Capel. This PMP has been prepared in conjunction with the Transport Impact Statement (TIS) report to address the parking demand and supply for the child care centre and articulate the parking management measures intended to be adopted to ensure satisfactory operations of the proposed childcare facility.

The subject site is located within the southeastern portion of portion of Lot 9055. The land is currently vacant and is bounded by Starlite Bend (a road which is currently undergoing extension/construction) to the north, easement (right of carriageway) to the east, Ferndale Avenue to the south and Ashberg Link to the west. Please refer to **Figure 1.** Tuart Forest Primary School is located approximately 400m due west of the site along Ferndale Avenue.



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Email: admin@transcore.net.au
Transcore Pty Ltd ACN 094 951 318 ABN 19 094 951 318

www.transcore.net.au
www.linkedin.com/company/transcore/
instagram: @transcoreaustralia

Figure 1: Location of the subject site

2. Development Proposal

The Development Application (DA) for the subject site proposes the development of a childcare centre with an associated car park and on-street parking in the suburb of Dalyellup within the Shire of Capel. This childcare centre is proposed to accommodate up to 92 children and 16 staff members.

According to the development plan provided in **Appendix A**, a total of 19 on-site parking bays, including one ACROD bay, are proposed for the on-site car park. In addition, as part of the development four (4) additional on-street parallel parking bays proposed along the western boundary of the site on Ashberg Link and four (4) on-street parallel bays are proposed along the southern boundary of the site on Ferndale Avenue. Further, there is an existing on-street public car parking supply of 12 bays on Ferndale Avenue within close walking distance to the site.

Proposed vehicular access to the proposed development consists of a left-in/left-out only crossover to the north side of Ferndale Avenue and a full movements crossover located at the southern end of the easement (right-of-carriageway) along the eastern boundary of the site. Pedestrian access will be facilitated via the existing footpaths located on the east side of Ashberg Link and the north side of Ferndale Avenue.

3. Childcare Centre Operations

It is proposed that childcare centre operations will be managed by a total of 16 staff including "room ratio" staff and "float staff" including a cook and lunch cover staff.

Accordingly, the "float staff" (i.e., admin, chef, kitchen hand, lunch cover etc.) will not work a full day but would attend the site generally between 9:30AM – 3:30PM. As float staff will work at the site outside of peak drop-off/pick-up periods, they can utilise the available visitor bays for parking, which will be underutilised significantly during this period. Combining the proposed on-street parking bays on Ashburg Link and Ferndale Avenue provides a total supply of 27 parking bays.

As advised by the operator, this ancillary and float staff would:

- Attend the site outside the peak drop off/pick up periods on an "as needed" basis;
- Provide support during staff shift changeovers and lunch breaks to maintain the required number of staff on duty during peak attendance periods;
- Attend the site in case of permanent staff planned/unplanned absence (sick leave, personal leave, holiday periods etc);
- Assist with special event days such as "open days", staff inductions, children's enrolments, etc.; and,
- Apprentices and trainees attending as part of the education and training programs.

As advised by the childcare centre operator, the number of staff will fluctuate throughout the typical weekday in accordance with the children's attendance rate but is envisaged to occur as follows:

Table 1: Staff Schedule

Time	Staff Rostered
6:30AM – 7:00AM	4
7:00AM – 8:00AM	7
8:00AM – 9:00AM	10
9:00AM – 10:00AM	14
10:00AM – 3:00PM	16
3:00PM – 4:00PM	11
4:00PM – 5:00PM	7
5:00PM – 6:30PM	6

As can be seen, although there will be a total of up to 16 staff, a maximum of 10 staff members are required during the peak drop-off period (7:00AM – 9:00AM) in the morning and a maximum of 11 staff members are required during the peak pick-up period in the afternoon (3:00PM – 5:00PM). The staff will be at full capacity at the site only between 10:00AM – 3:00PM. During this time period, they can utilise the visitor bays for parking which will be underutilised during this period.

Parking demand analysis in the TIS outlines a minimum of six (6) on-site bays should be reserved for pick-up and drop-off activities with the four (4) proposed on-street bays on Ashberg Link signed and line marked with 15-minutes restriction only between 7:00 a.m. and 9:00 p.m. and 3:00 p.m. and 6:00 p.m. to cater for short-term pick-up/drop-off activities. Also, the four (4) proposed on-street bays on Ferndale Avenue can accommodate any parking overflow. The balance of 13 on-site car parking bays should be allocated to staff.

It should be noted that additional established on-street parking supply consisting of 12 bays on Ferndale Avenue to the immediate west of the site is also available. The proposed development provides a total of 27 new bays (inclusive of both on and off-site car parking) which satisfies and exceeds the estimated maximum parking demand of the proposed childcare centre. Therefore, it is considered that sufficient parking has been provided both on-site and off-site in the form of new and established public on-street parking bays.

4. Management Plan

The parking associated with this development is to serve employees and visitors/parents of the childcare centre, including occasional service vehicles as needed.

The development includes a total of 19 on-site parking bays. It is recommended the 13 parking bays are allocated to staff and 6 parking bays be allocated to visitors. The balance of the parking demand and any parking overflow can be comfortably addressed by the proposed on-street parking bays.

The staff should be informed to not parked in the unallocated bays during the peak drop off/pick up periods. All dedicated staff bays/ visitors bays in the car park should be pavement-marked to indicate their specific use and avoid unnecessary and internal congestion.

The following principles/strategies would serve to reduce the demand for staff parking at the subject site:

- The Childcare Centre (CCC) operator will support local employment and will ensure proper consideration is given to local job applicants where possible over those residing further away from the CCC. This is of direct benefit as it secures flexibility in staff commute via alternative modes of

transport (walking, cycling and public transport) and their ability to attend the site on short notice if/when required. This would reduce the demand for staff parking;

- As described in the Transport Impact Statement prepared for the CCC, has limited bus services within the Dalyellup East urban cell with Route 842 (Park Centre-Dalyellup via Bunbury Health Campus) and Route 843 (Bunbury-Dalyellup via Bunbury Plaza) providing service between Dalyellup and Bunbury. The bus services is likely to be expanded when the locality is further developed.
- The subject site also enjoys good access to the local network of shared paths and footpaths and roads classified as *"Good Road Riding Environment"*; and,
- The CCC operator will also encourage car-pooling as additional means of parking demand reduction strategy.

1.1 ACROD Parking

One ACROD parking bay is proposed within the car parking area, which satisfies the requirements of the relevant Australian Standards.

1.2 Service Vehicles

A bin storage area is located along the eastern edge of the building adjacent to the crossover to the easement (right-of-carriageway) as shown in the site plan in **Appendix A**.

Waste collection and deliveries will take place within the site with a private contractor engaged to collect waste using a maximum size 8.8m service vehicle. Waste collection vehicles will enter via the crossover to the right-of-carriageway via Starlite Bend at the north end of the site and then exit via the partial movements crossover to Ferndale Avenue with all vehicles entering and exiting the site in forward gear.

It is proposed that service and delivery activities will be conducted outside of the peak operating hours of the proposed childcare centre or after hours. It is expected that the childcare centre will generate a relatively low volume of additional service vehicle traffic primarily associated with the deliveries for the childcare centre. It is recommended that smaller vehicles such as vans should be used for deliveries.

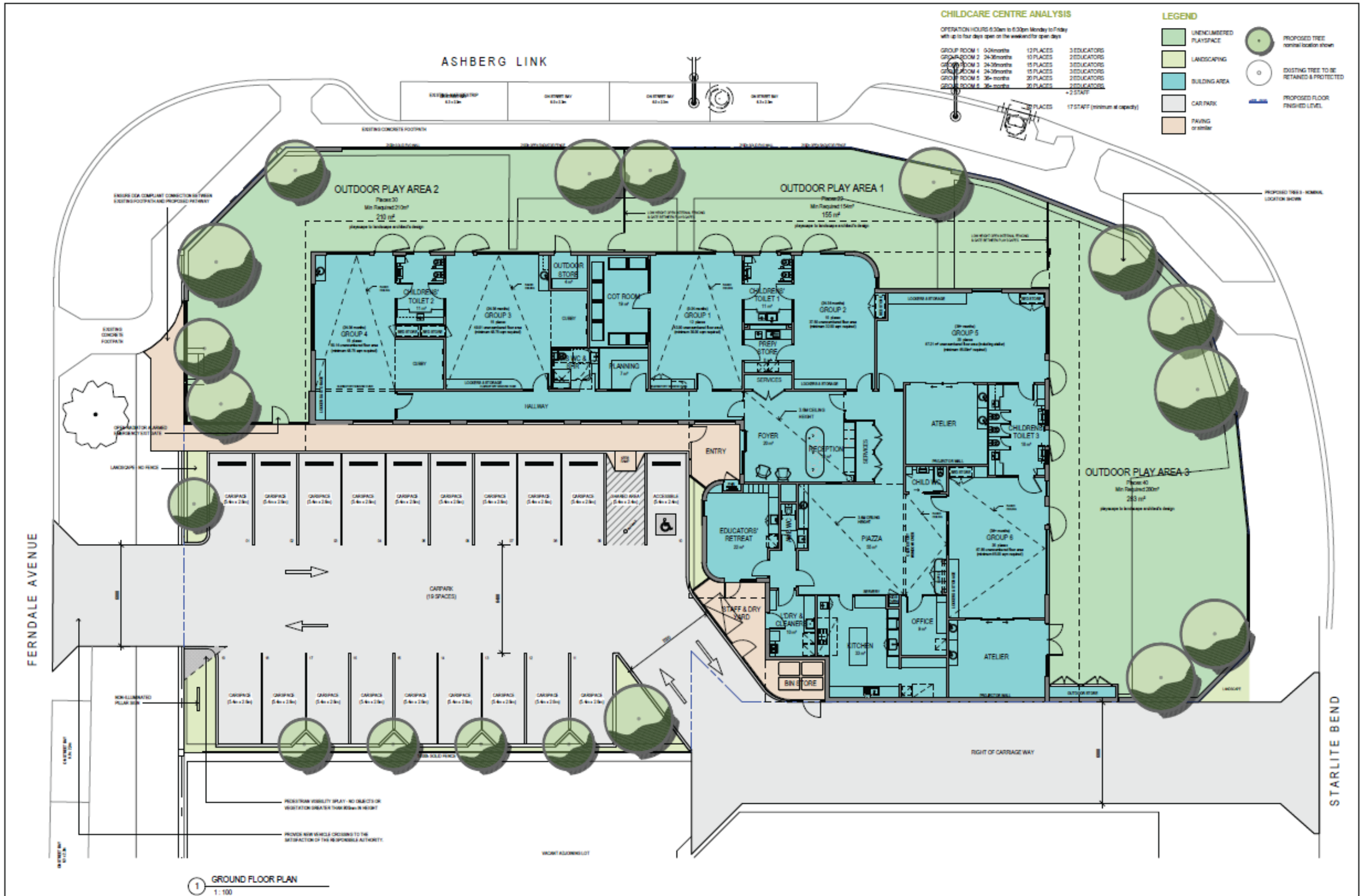
5. Communication and Education

It is proposed that all staff and visitors/parents be introduced to the PMP principles. This should be done at the time of children enrolment/staff hire by summarising the PMP and including a car park map in the induction session.

The CCC management will continually monitor the operation of the car park and propose improvements and changes to the PMP if required.

APPENDIX A

Proposed Development Plan



1 GROUND FLOOR PLAN
1 : 100

GENERAL NOTES

DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALING.

VERIFY LOCATION OF EXISTING SERVICES BEFORE COMMENCEMENT.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OF AUSTRALIA, RELEVANT STATE BUILDING ACT AS AMENDED, STANDARD BUILDING BY-LAWS AND RELEVANT AUSTRALIAN STANDARDS.

ISSUE	DESCRIPTION	DATE
A	PRELIMINARY DA	19/7/2024

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4/120 Upper Heidelberg Road, Ivanhoe VIC 3079
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nido Early Learning

CLIENT: SATTERLY PROPERTY GROUP PTY LTD

PROJECT: PROPOSED CHILDCARE CENTRE (92 places)

LOCATION: CNR FERNDALE AVE & ASHBERG LINK, DALYELLUP W.A.

DRAWING TITLE: FLOOR PLAN

SCALE: As Indicated@A1 DATE: NOV 2024
DRAWN: CW PRINTED: 19/7/2024 3:09:20 PM
CHECKED: AH JOB No.: J0001162

APPROVE

DA02/A

PRELIMINARY ISSUE
NOT FOR SUBMISSION

APPENDIX 4 - Environmental Noise Assessment

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Noise Assessment – Childcare Centre

Corner of Ferndale Ave & Ashberg Link, Dalyellup

Reference: 24119628-01

Prepared for:
Satterley Property Group

Reference: 24119628-01

Lloyd George Acoustics Pty Ltd
ABN: 79 125 812 544

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P:	0410 107 440	0438 481 207	0448 912 604	0410 468 203

Date	Rev	Description	Author	Verified
19-Dec-24	0	Issued to Client	Matt Nolan	Matt Moyle

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Appendices

EXECUTIVE SUMMARY

Lloyd George Acoustics was engaged by Satterley Property Group to undertake a noise assessment for a proposed childcare centre (CCC) to be located on the Corner of Ferndale Ave & Ashberg Link, Dalyellup. This report considered noise emissions from the proposed childcare centre to surrounding properties, as well as the impact of road traffic noise to the childcare centre.

With regard to the noise emission assessment, this was undertaken using noise modelling and considered child play, mechanical plant and car door closings. The predicted noise from all children playing outside is compliant provided the fencing around the child play areas (not including a small section on the southeast side) is 2.1 metres high as per the *Appendix A* plans. The predicted noise from car doors was also shown to be compliant provided there is a 1.8-metre-high fence located on the east boundary, noting a gap was included for the driveway. Outside of these noted gaps, this fencing is to be solid, free of any gaps and have a minimum surface mass of 8 kg/m^2 which includes such material as brick, limestone or double sheeted *Colorbond*.

Mechanical plant noise was calculated to be compliant at all receivers except at future receivers located to the east of site. It must be noted that the assessment is based on assumptions in relation to the number, location, size and type of mechanical plant. Therefore, once the mechanical plant has been designed and selected, noise is to be reviewed by a suitably qualified acoustical consultant.

It is also noted that single storey receivers have been used within the model for the future residential receivers. If these were double storey, additional noise mitigation may be required.

With regard to road traffic noise impacts, an assessment was undertaken in accordance with State Planning Policy 5.4 Guidelines. The CCC was determined to be located in an area below the outdoor noise target. As a result, no further mitigation measures are required.

1. INTRODUCTION

Lloyd George Acoustics was engaged by Satterley Property Group to undertake a noise assessment for a proposed childcare centre (CCC) to be located on the Corner of Ferndale Ave & Ashberg Link, Dalyellup (refer *Figure* 1-1) with the site plan shown in *Figure 1-2* and full Development Application (DA) plans provided in *Appendix A*. The purpose of this report is to consider noise emissions from the proposed childcare centre to surrounding properties, as well as the impact of road traffic noise to the childcare centre.

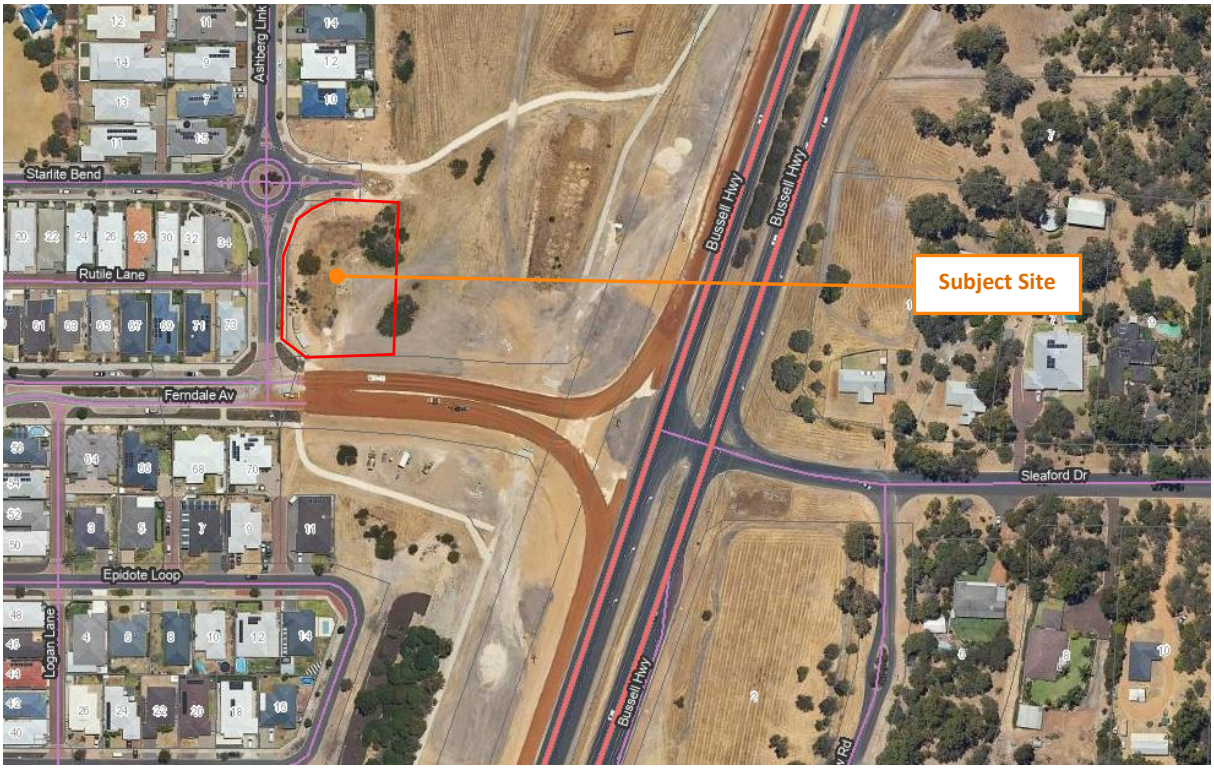

Figure 1-1: Subject Site Location (Source: DPLH PlanWA)

The proposed childcare centre will be open Monday to Friday, 6.30am to 6.30pm and consist of the following:

- Six internal teaching spaces capable of accommodating up to 92 children, grouped as follows:
  - Group 1: 12 places for children aged 0-2 years;
  - Group 2: 10 places for children aged 2-3 years;
  - Group 3: 15 places for children aged 2-3 years;
  - Group 4: 15 places for children aged 2-3 years;
  - Group 5 & 6: each with 20 places for children aged 3+ years;
- Three outdoor play areas (not used prior to 7.00am);
- Amenities and associated mechanical plant such as:
  - Kitchen exhaust fan assumed to be located on roof above;
  - Various exhaust fans (toilets, laundry, nappy room) assumed to be located on the roof above;
  - Air-conditioning (AC) plant, assumed to located on the ground in the Drying Yard as shown on the DA Plans;
- Car parking on the southeast side of the lot including nine staff car parks only to be used after 7.00am.

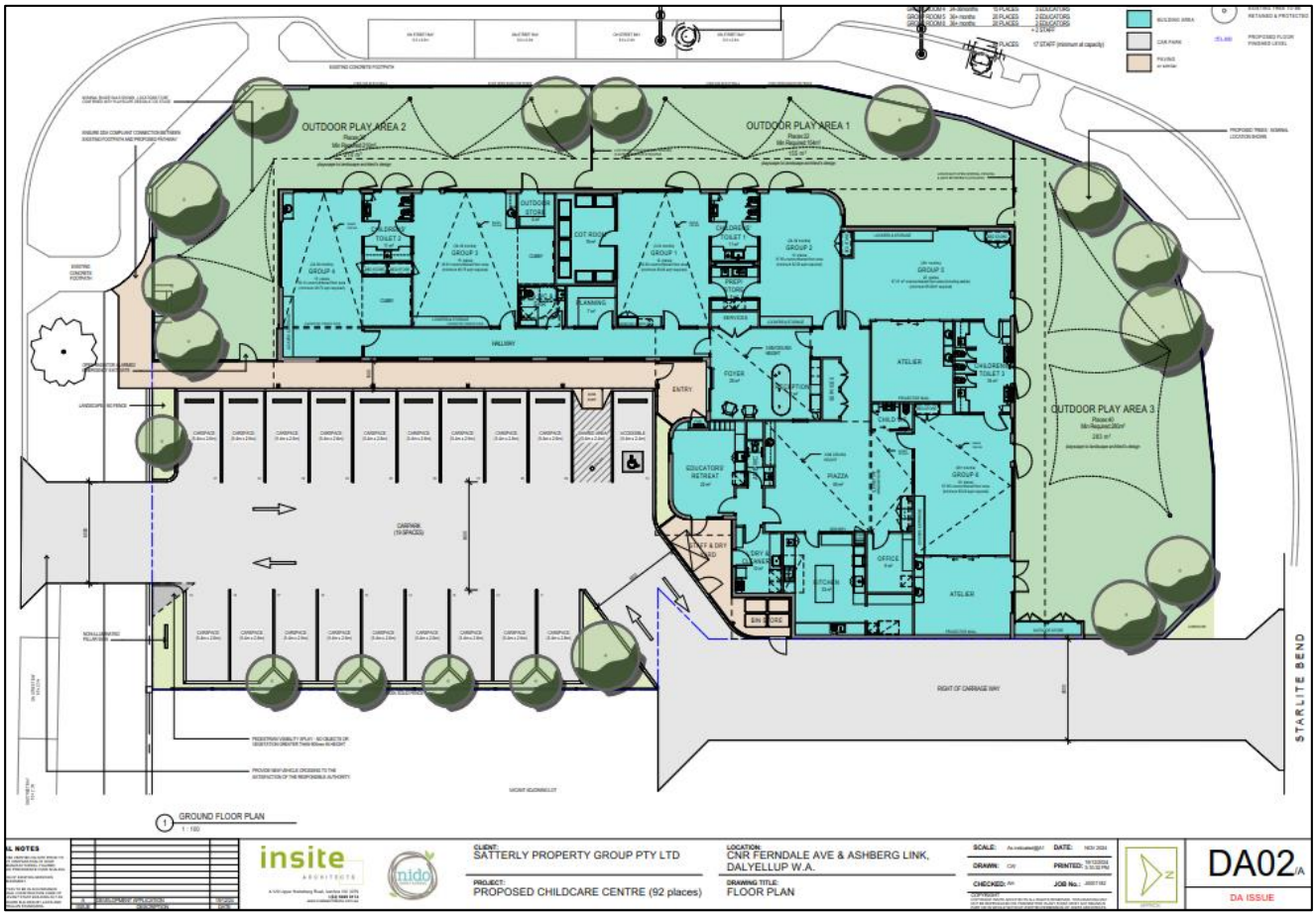

Figure 1-2: Proposed Site Plan

With regard to noise emissions, consideration is given to noise from child play, mechanical services and closing car doors at neighbouring properties, against the prescribed standards of the *Environmental Protection (Noise) Regulations 1997*.

With regard to road traffic noise impacts, the childcare centre is considered noise sensitive and is located within approximately 130 metres from Bussell Highway. This road is considered a 'Strategic Freight/Major Traffic Route' in accordance with the PlanWA Maps and as such, a noise assessment is required against *State Planning Policy No. 5.4 Road and Rail Noise*.

Appendix C contains a description of some of the terminology used throughout this report.

2. CRITERIA

2.1. Environmental Noise

Environmental noise in Western Australia is governed by the *Environmental Protection Act 1986*, through the *Environmental Protection (Noise) Regulations 1997* (the Regulations).

2.1.1. Regulations 7, 8 & 9

This group of regulations defines the prescribed standard for noise emissions applicable to child play, mechanical services and car door closing as follows:

*"**7. Prescribed standard for noise emissions***

(1) Noise emitted from any premises or public place when received at other premises –

(a) must not cause, or significantly contribute to, a level of noise which exceeds the assigned level in respect of noise received at premises of that kind; and

(b) must be free of –

(i) tonality; and

(ii) impulsiveness; and

(iii) modulation,

when assessed under regulation 9.

(2) For the purposes of subregulation (1)(a), a noise emission is taken to significantly contribute to a level of noise if the noise emission … exceeds a value which is 5 dB below the assigned level at the point of reception."

Tonality, impulsiveness and modulation are defined in regulation 9 (refer *Appendix C*). Under regulation 9(3), *"Noise is taken to be free of the characteristics of tonality, impulsiveness and modulation if -*

(a) the characteristics cannot be reasonably and practicably removed by techniques other than attenuating the overall level of noise emission; and

(b) the noise emission complies with the standard prescribed under regulation 7(1)(a) after the adjustments in the table [Table 2-1] … are made to the noise emission as measured at the point of reception."

Table 2-1 Adjustments Where Characteristics Cannot Be Removed

Where Noise Emission is Not Music*			Where Noise Emission is Music	
Tonality	Modulation	Impulsiveness	No Impulsiveness	Impulsiveness
+ 5 dB	+ 5 dB	+ 10 dB	+ 10 dB	+ 15 dB

* These adjustments are cumulative to a maximum of 15 dB.

The assigned levels (prescribed standards) for all premises are specified in regulation 8(3) and are shown in *Table 2-2*. The L_{A10} assigned level is applicable to noises present for more than 10% of a representative assessment period, generally applicable to "steady-state" noise sources. The L_{A1} is for short-term noise sources present for less than 10% and more than 1% of the time. The L_{Amax} assigned level is applicable for incidental noise sources, present for less than 1% of the time.

Table 2-2 Baseline Assigned Levels

Premises Receiving Noise	Time Of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: highly sensitive area[1]	0700 to 1900 hours Monday to Saturday (Day)	45 + influencing factor	55 + influencing factor	65 + influencing factor
	0900 to 1900 hours Sunday and public holidays (Sunday)	40 + influencing factor	50 + influencing factor	65 + influencing factor
	1900 to 2200 hours all days (Evening)	40 + influencing factor	50 + influencing factor	55 + influencing factor
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	35 + influencing factor	45 + influencing factor	55 + influencing factor
Noise sensitive premises: any area other than highly sensitive area	All hours	60	75	80
Commercial Premises	All hours	60	75	80
Industrial and Utility Premises	All hours	65	80	90

1. ***highly sensitive area*** means that area (if any) of noise sensitive premises comprising —
   (a) a building, or a part of a building, on the premises that is used for a noise sensitive purpose; and
   (b) any other part of the premises within 15 metres of that building or that part of the building.

The influencing factor (IF), in relation to noise received at noise sensitive premises, has been calculated as 2 dB, as determined in *Appendix B*. *Table 2-3* shows the assigned levels including the influencing factor and transport factor at the receiving locations.

Table 2-3 Assigned Levels

Premises Receiving Noise	Time Of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
+2 dB IF Noise sensitive premises: highly sensitive area[1]	0700 to 1900 hours Monday to Saturday (Day)	47	57	67
	0900 to 1900 hours Sunday and public holidays (Sunday)	42	52	67
	1900 to 2200 hours all days (Evening)	42	52	57
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	37	47	57

It must be noted the assigned levels above apply outside the receiving premises and at a point at least 3 metres away from any substantial reflecting surfaces.

The assigned levels are statistical levels and therefore the period over which they are determined is important. The Regulations define the Representative Assessment Period (RAP) as "*a period of time of not less than 15 minutes, and not exceeding 4 hours*, *determined by* an *inspector* or *authorised person to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission"*. An inspector or authorised person is a person appointed under Sections 87 & 88 of the *Environmental Protection Act 1986* and include Local Government Environmental Health Officers and Officers from the Department of Water Environmental Regulation. Acoustic consultants or other environmental consultants are not appointed as an inspector or authorised person. Therefore, whilst this assessment is based on a 4-hour RAP, which is assumed to be appropriate given the nature of the operations, this is to be used for guidance only.

2.1.2. Regulation 3

*"**3. Regulations do not apply to certain noise emissions***

(1) Nothing in these regulations applies to the following noise emissions –

(a) Noise emissions from the propulsion and braking systems of motor vehicles operating on a road;"

The childcare centre car park is open to the public and considered a road and therefore vehicle noise (propulsion and braking) is not assessed. Noise from vehicle car doors however are assessed, since these are not part of the propulsion or braking system.

2.1.3. Regulation 14A

"14A. Waste Collection and Other Works

(2) Regulation 7 does not apply to noise emitted in the course of carrying out class 1 works if –

(a) The works are carried out in the quietest reasonable and practicable manner; and

(b) The equipment used to carry out the works is the quietest reasonably available;

class 1 works means specified works carried out between -

(a) 0700 hours and 1900 hours on any day that is not a Sunday or a public holiday; or

(b) 0900 hours and 1900 hours on a Sunday or public holiday.

specified works means -

(a) The collection of waste; or

(b) The cleaning of a road or the drains for a road; or

(c) The cleaning of public places, including footpaths, cycle paths, car parks and beaches;"

In the case where specified works are to be carried out outside of class 1, a noise management plan is to be prepared and approved by the CEO.

2.2. Road Traffic Noise

The criteria for road traffic noise is provided in *State Planning Policy No. 5.4 Road and Rail Noise* (hereafter referred to as SPP 5.4) produced by the Western Australian Planning Commission (WAPC). SPP 5.4 is supported by the *Road and Rail Noise Guidelines* (the Guidelines) and the Department of Planning, Lands and Heritage mapping. The objectives of SPP 5.4 are to:

- Protect the community from unreasonable levels of transport noise;
- Protect strategic and other significant freight transport corridors from incompatible urban encroachment;
- Ensure transport infrastructure and land-use can mutually exist within urban corridors;
- Ensure that noise impacts are addressed as early as possible in the planning process; and
- Encourage best practice noise mitigation design and construction standards.

Table 2-4 sets out noise targets that are to be achieved by proposals under which SPP 5.4 applies. Where the targets are exceeded, an assessment is required to determine the likely level of transport noise and management/mitigation required.

Table 2-4: Noise Targets for Noise Sensitive Land-Use

Scenario	Outdoor Noise Target		Indoor Noise Target	
Noise-sensitive land-use and/or development	55 dB $L_{Aeq(Day)}$	50 dB $L_{Aeq(Night)}$	40 dB $L_{Aeq(Day)}$ (Living and Work Areas)	35 dB $L_{Aeq(Night)}$ (Bedrooms)

Notes:

- Day period is from 6am to 10pm and night period from 10pm to 6am.
- The outdoor noise target is to be measured at 1-metre from the most exposed, habitable[1] facade of a noise sensitive building.
- For all noise-sensitive land-use and/or development, indoor noise targets for other room usages may be reasonably drawn from Table 1 of Australian Standard/New Zealand Standard AS/NZS 2107:2016 *Acoustics – Recommended Design Sound Levels and Reverberation Times for Building Interiors* (as amended) for each relevant time period.
- Outdoor targets are to be met at all outdoor areas as far as is reasonable and practicable to do so using the various noise mitigation measures outlined in the Guidelines.

The application of SPP 5.4 is to consider anticipated traffic volumes for the next 20 years from when the noise assessment has been undertaken.

In the application of the noise targets, the objective is to achieve:

- Indoor noise levels as specified in *Table 2-4* in noise-sensitive areas (e.g. activity and cot rooms); and
- A reasonable degree of acoustic amenity for outdoor play areas.

[1] *A habitable room is defined in State Planning Policy 3.1 as a room used for normal domestic activities that includes a bedroom, living room, lounge room, music room, sitting room, television room, kitchen, dining room, sewing room, study, playroom, sunroom, gymnasium, fully enclosed swimming pool or patio.*

3. METHODOLOGY

3.1. Environmental Noise Modelling

Computer modelling has been used to predict the noise emissions from the development to all nearby receivers. The software used was *SoundPLAN 9.0* with the ISO 9613 algorithms (ISO 17534-3 improved method) selected, as they include the influence of wind and are considered appropriate given the relatively short source to receiver distances. Input data required in the model are listed below and discussed in *Section 3.1.1* to *Section 3.1.4*:

- Meteorological Information;
- Topographical data;
- Ground Absorption; and
- Source sound power levels.

3.1.1. Meteorological Conditions

Meteorological information utilised is provided in *Table 3-1* and is considered to represent worst-case conditions for noise propagation. At wind speeds greater than those shown, sound propagation may be further enhanced, however background noise from the wind itself and from local vegetation is likely to be elevated and dominate the ambient noise levels.

Table 3-1: Modelling Meteorological Conditions

Parameter	Day (7.00am to 7.00pm)	Night (7.00pm to 7.00am)
Temperature (°C)	20	15
Humidity (%)	50	50
Wind Speed (m/s)	Up to 5	Up to 5
Wind Direction*	All	All

* The modelling package allows for all wind directions to be modelled simultaneously.

Alternatives to the above default conditions can be used where one year of weather data is available and the analysis considers the worst 2% of the day and night for the month of the year in which the worst-case weather conditions prevail (source: *Draft Guideline on Environmental Noise for Prescribed Premises*, May 2016). In most cases, the default conditions occur for more than 2% of the time and therefore must be satisfied.

3.1.2. Topographical Data

Topographical data was adapted from publicly available information (e.g. *Google*) in the form of spot heights and combined with the site plan, noting flat terrain has been assumed for the CCC and nearby surrounding area.

Surrounding existing buildings were also incorporated in the noise model, as these can provide noise shielding as well as reflection paths. Single storey buildings are modelled with a height of 3.5-metres with receivers 1.4-metres above floor level.

The childcare centre building is incorporated in the noise model as per the *Appendix A* plans. Solid fencing around the child play areas (not including a small section on the southeast side) is noted as being 2.1 metres high in the drawings as per the *Appendix A* plans. In addition to this, a 1.8-metre-high fence has been included on the east boundary and surrounding the Drying Yard within the model as shown in *Figure 3-1*. This fencing is to be solid, free of any gaps and minimum surface mass 8 kg/m^2. Such material includes brick, limestone or double sheeted *Colorbond*. For areas where visual permeability is required, sound-rated plexiglass can be used.

Figure 3-1 shows a 2D overview of the noise model with the location of all relevant receivers identified. Pink dots represent point sources in the noise model (mechanical plant) with the pink polygon representing child play and car doors.

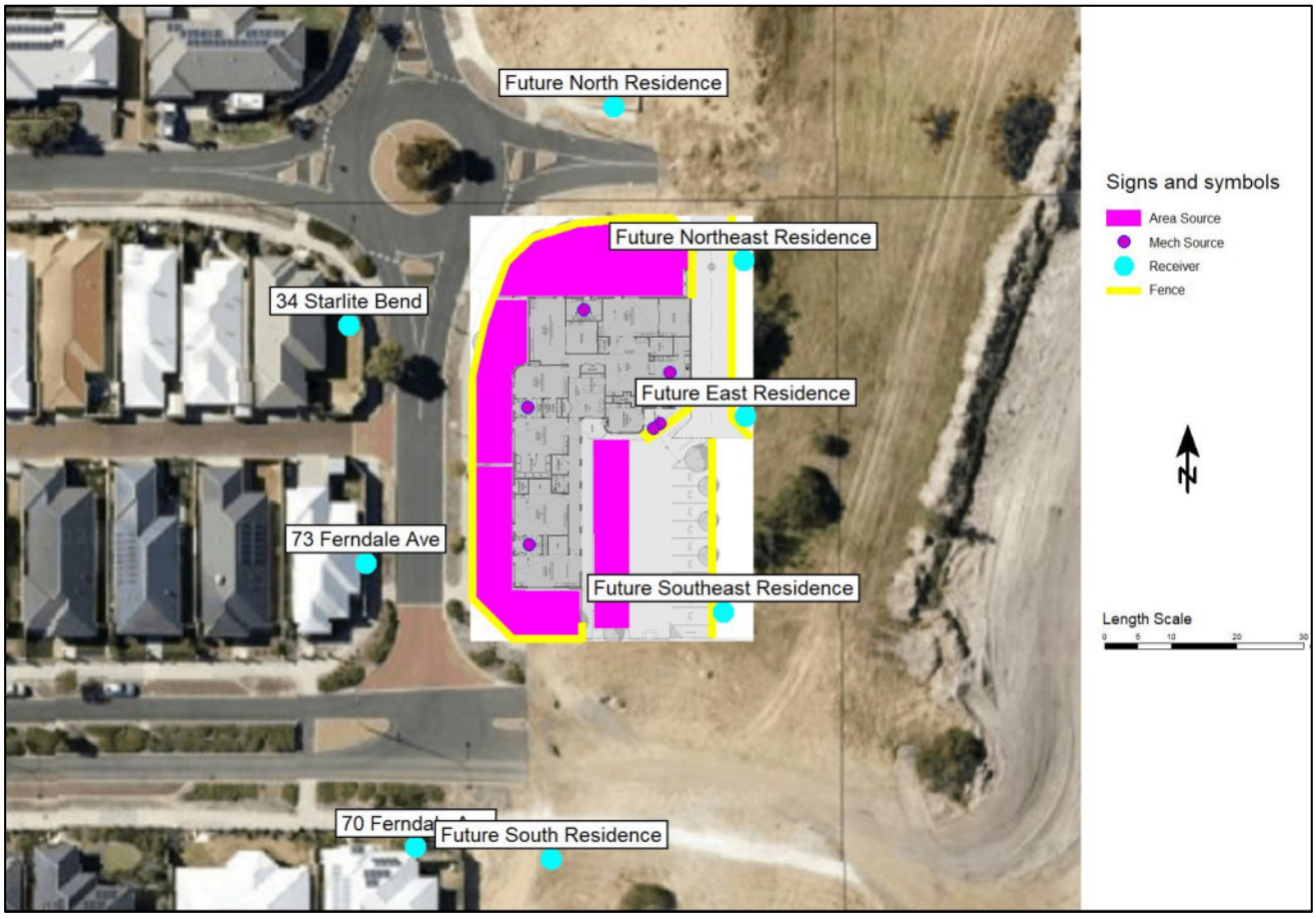

Figure 3-1: Overview of Noise Model

3.1.3. Ground Absorption

The ground absorption has been assumed to be 0.1 (10%) for the roads, 0.5 (50%) outside of the roads and 1.0 (100%) for the play areas, noting that 0.0 represents hard reflective surfaces such as water and 1.0 represents absorptive surfaces such as grass.

3.1.4. Source Sound Levels

The source sound power levels used in the modelling are provided in *Table 3-2*.

Table 3-2: Source Sound Power Levels, dB

Description	Octave Band Centre Frequency (Hz)								Overall dB(A)
	63	125	250	500	1k	2k	4k	8k	
Babies Play Aged 0-2 Years (10 kids), L_{10}	54	60	66	72	74	71	67	64	**78**
Toddler Play Aged 2-3 Years (10 kids), L_{10}	61	67	73	79	81	78	74	70	**85**
Kindy Play Aged 3+ Years (10 kids), L_{10}	64	70	75	81	83	80	76	72	**87**
AC Plant, double fan unit (each), L_{10}	72	74	68	69	63	61	53	47	**70**
General Exhaust Fans (each), L_{10}	60	65	62	63	60	61	56	53	**67**
Kitchen Exhaust Fan, L_{10}	50	64	61	70	69	66	62	50	**73**
Closing Car Door (each), L_{max}	71	74	77	81	80	78	72	61	**84**

The following is noted in relation to *Table 3-2*:

- Child play source levels are based on *Guideline for Childcare Centre Acoustic Assessments Version 3.0* produced by the Association of Australasian Acoustical Consultants (AAAC) published September 2020. Where the number of children for individual play areas is specified in the plans, these have been adjusted from the reference source levels using appropriate acoustical calculations. Outdoor child play was modelled as area sources at 1.0-metre above ground level. The sound power levels used in the model were scaled as follows:
  - Outdoor Play Area 1:
    - 12 children aged 0-2 years = 78 dB(A);
    - 10 children aged 2-3 years = 85 dB(A).
  - Outdoor Play Area 2:
    - 30 children aged 2-3 years = 89 dB(A);
  - Outdoor Play Area 3:
    - 40 children aged 3+ years = 93 dB(A).
- Based on the AAAC Guideline 3.0, source sound power levels for AC condensing units were assumed. Medium sized (double fan) outdoor units were deemed appropriate with two (2) modelled as point sources in the Drying Area.
- Other mechanical plant includes four (4) exhaust fans (toilets and laundry) and one kitchen exhaust fan. All were modelled as point sources approximately 0.5-metres above roof level and above the area serviced.
- Car doors closing were modelled as an area source 1.0-metre above ground level, with the results showing the total sound power located in the 'worst-case' location for each receiver. Since noise from a car door closing is a short term event, only the L_{Amax} level is applicable. The nine daytime staff car parks on the east side of the car park were not included within the night period car door noise assessment.

3.2. Transportation Noise

A combination of noise measurements and modelling have been undertaken in accordance with the requirements of SPP 5.4 and associated Guidelines, as described in *Section 3.2.1* and *Section 3.2.2*.

3.2.1. Transportation Site Measurements

Noise monitoring was undertaken on site using a Brüel & Kjær 2250 (S/N: 3024760) sound level meter (refer *Figure 3-2*). This meter complies with the instrumentation requirements of *Australian Standard 2702-1984 Acoustics – Methods for the Measurement of Road Traffic Noise*. The meter was field calibrated before and the after the measurement session and found to be accurate to within ± 1 dB. Lloyd George Acoustics holds current laboratory calibration certificates for the meter.

The microphone was approximately 1.4-metres above existing ground level and approximately 86-metres from the edge of Bussell Highway main carriageway. The measurements were recorded on 18 November 2024, between 2.00pm and 3.00pm.

Figure 3-2: Photograph of Sound Level Meter on Site

From the one-hour measurement, a relationship between noise levels and the hourly traffic volumes can then be derived to determine the existing $L_{Aeq(Day)}$ and $L_{Aeq(Night)}$ at the measurement location.

3.2.2. Transportation Noise Modelling

The computer program *SoundPLAN 9.0* was utilised incorporating the *Calculation of Road Traffic Noise* (CoRTN) algorithms, modified to reflect Australian conditions. The modifications included the following:

- Vehicles were separated into heavy (Austroads Class 3 upwards) and non-heavy (Austroads Class 1 and 2) with non-heavy vehicles having a source height of 0.5-metres above road level and heavy vehicles having two source heights at 1.5-metres and 3.6-metres above road level;
- A -0.8 dB correction has been applied to the lower level heavy vehicle noise source and -8.0 dB to the higher level noise source based on the *Transportation Noise Reference Book*; Paul Nelson (1987), so as to provide consistent results with the CoRTN algorithms.

Predictions are made at heights of 1.4-metres above floor level and at 1.0-metre from various rooms of the proposed building, resulting in a + 2.5 dB correction due to reflected noise. For the outdoor play areas, this correction is not applicable and the height above ground level is 1.0-metres, to reflect the height of the children.

Various input data are included in the modelling and these are discussed in *Section 3.2.2.1* to *Section 3.2.2.3*, noting that some inputs are common to both environmental noise and road traffic noise (topography and ground absorption).

3.2.2.1. Road Surface

The corrections applied for different road surface finishes are provided in *Table 3-3*.

Table 3-3: Noise Relationship Between Different Road Surfaces

Chip Seal				Asphalt			
14mm	10mm	5mm	Slurry	Dense Graded	Novachip	Stone Mastic	Open Graded
+3.5 dB	+2.5 dB	+1.5 dB	+1.0 dB	0.0 dB	-0.2 dB	-1.5 dB	-2.5 dB

The existing road surface is dense graded asphalt and assumed to remain unchanged into the future.

3.2.2.2. Vehicle Speed

The existing posted speed is 80 km/hr and assumed to remain unchanged into the future.

3.2.2.3. Traffic Volumes

Existing traffic volumes were obtained from Main Roads WA Traffic Map. Main Roads WA indicates a growth rate of 0.2% along Bussell Highway which would total 27,578 vehicles per day by 2046. Additionally, the Bunbury Outer Ring Road Alignment Selection Report provides long-term traffic projections for Bussell Highway near Dalyellup, estimating traffic volumes between 32,700 and 36,500 vehicles per day. As a worst case, a total of 36,500 vehicles per day have been assumed for the future 2046 volumes. Note that the percentage heavy vehicles and the ratio of northbound/southbound vehicles per day are assumed to be the same in the future as existing.

Table 3-4: Traffic Information Used in Noise Modelling

Parameter	Scenario			
	Existing – 2023/24		Future – 2046	
	Northbound	Southbound	Northbound	Southbound
24-hour Volume	13,548	14,283	17,768	18,732
% Heavy	11.8	11.6	11.8	11.6

4. RESULTS AND ASSESSMENT

4.1. Environmental Noise

4.1.1. Outdoor Child Play Noise

The childcare development will host up to 92 children. It is noted play time is generally staggered and therefore not all children would be playing outside at once for extended periods of time. However, noise levels were conservatively predicted for all children playing simultaneously, as a worst-case scenario with the results provided and assessed in *Table 4-1*. The critical assigned level is during the day, as whilst the childcare centre will open at 6.30am, child play will not commence until after 7.00am. Noise from child play is not considered to contain annoying characteristics within the definition of the Regulations and therefore no adjustments are made to the predicted noise levels. A noise contour plot is also provided in *Figure 4-1* showing noise levels at ground floor.

Table 4-1: Child Play Noise Predicted Levels and Assessment, dB L_{A10}

Receiver	Babies (0-2 yo)	Toddler (2-3 yo)	Kindy (3+ yo)	Total	Assigned Level	Assessment
34 Starlite Bend	32	43	44	**46**	**47**	*Complies*
70 Ferndale Ave	26	39	32	**40**	**47**	*Complies*
73 Ferndale Ave	30	44	36	**45**	**47**	*Complies*
Future Residential East (single storey)	15	32	34	**36**	**47**	*Complies*
Future Residential North (single storey)	27	34	46	**46**	**47**	*Complies*
Future Residential Northeast (single storey)	18	27	45	**45**	**47**	*Complies*
Future Residential South (single storey)	23	39	28	**39**	**47**	*Complies*
Future Residential Southeast (single storey)	15	40	28	**40**	**47**	*Complies*

Based on a conservative scenario of all 92 children playing outside simultaneously, the assessment demonstrates compliance is achieved during the day.

Figure 4-1 Child Play Noise Contour Plot (1.4m AGL), dB L_{A10}

Predicted Noise level

= 47
= 52
= 57
= 62
= 67

Legend

Receiver
Outdoor Childplay
Fence

N

Scale 1:900

0 5 10 20 30 m

Project No: 24119628
Consultant: MN
Date: 19/12/2024
Algorithm: ISO 9613
SoundPLAN Version: 9.0

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4.1.2. Mechanical Plant Noise

Mechanical plant noise consists of the outdoor AC condensing units and exhaust fans. Predicted and assessed noise levels are provided in *Table 4-2*. The critical assigned level is during the night, as the plant may operate prior to 7.00am. An adjustment of + 5 dB is included for tonality, since this may be present for such noise sources. A noise contour plot is also provided in *Figure 4-2* showing noise levels at ground floor.

Table 4-2: Mechanical Plant Noise Predicted Levels and Assessment, dB L_{A10}

Receiver	AC	Exhaust Fans	Total	Total Adjusted	Assigned Level	Assessment
34 Starlite Bend	10	31	**31**	**36**	**37**	*Complies*
70 Ferndale Ave	11	23	**24**	**28**	**37**	*Complies*
73 Ferndale Ave	11	29	**29**	**34**	**37**	*Complies*
Future Residential East (single storey)	29	37	**37**	**42**	**37**	*+5 dB*
Future Residential North (single storey)	10	30	**30**	**35**	**37**	*Complies*
Future Residential Northeast (single storey)	15	33	**33**	**38**	**37**	*+1 dB*
Future Residential South (single storey)	20	26	**27**	**32**	**37**	*Complies*
Future Residential Southeast (single storey)	24	31	**32**	**36**	**37**	*Complies*

The calculations show compliance at all receiver locations except at future receivers located to the east of the site. It must be noted that the assessment is based on assumptions in relation to the number, location, size and type of mechanical plant. Therefore, once the mechanical plant has been designed and selected, noise is to be reviewed by a suitably qualified acoustical consultant.

Figure 4-2 Mechanical Plant Noise Contour Plot (1.4m AGL), dB L_{A10}

Predicted Noise level

- = 37
- = 42
- = 47
- = 52
- = 57

Legend

- Receiver
- Mech Source
- Fence

N

Scale 1:900

0 5 10 20 30 m

Project No: 24119628
Consultant: MN
Date: 19/12/2024
Algorithm: ISO 9613
SoundPLAN Version: 9.0

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4.1.3. Car Door Closing Noise

Predicted and assessed noise levels for car doors closing are provided in *Table 4-3* being the maximum noise level from all car bays except the nine daytime staff only bays. The critical assigned level is during the night, as car door closings will occur prior to 7.00am. An adjustment of + 10 dB is included for impulsiveness, since this may be present for such noise sources. The nine daytime staff only car bays are shown in *Figure 4-3* and a noise contour plot is also provided in *Figure 4-4* showing noise levels at ground floor.

Table 4-3: Car Door Closing Noise Predicted Levels and Assessment, dB L_{Amax}

Receiver	Car Door	Total Adjusted	Assigned Level	Assessment
34 Starlite Bend	**22**	**32**	**57**	*Complies*
70 Ferndale Ave	**42**	**52**	**57**	*Complies*
73 Ferndale Ave	**36**	**46**	**57**	*Complies*
Future Residential East (single storey)	**43**	**53**	**57**	*Complies*
Future Residential North (single storey)	**22**	**32**	**57**	*Complies*
Future Residential Northeast (single storey)	**35**	**45**	**57**	*Complies*
Future Residential South (single storey)	**44**	**54**	**57**	*Complies*
Future Residential Southeast (single storey)	**45**	**55**	**57**	*Complies*

Noise from car doors closing from all car bays except the nine daytime staff only bays is predicted to comply at all nearest receivers during the critical night period. Where parking occurs in all the bays after 7.00am, compliance is predicted given the assigned level is increased by +10 dB.

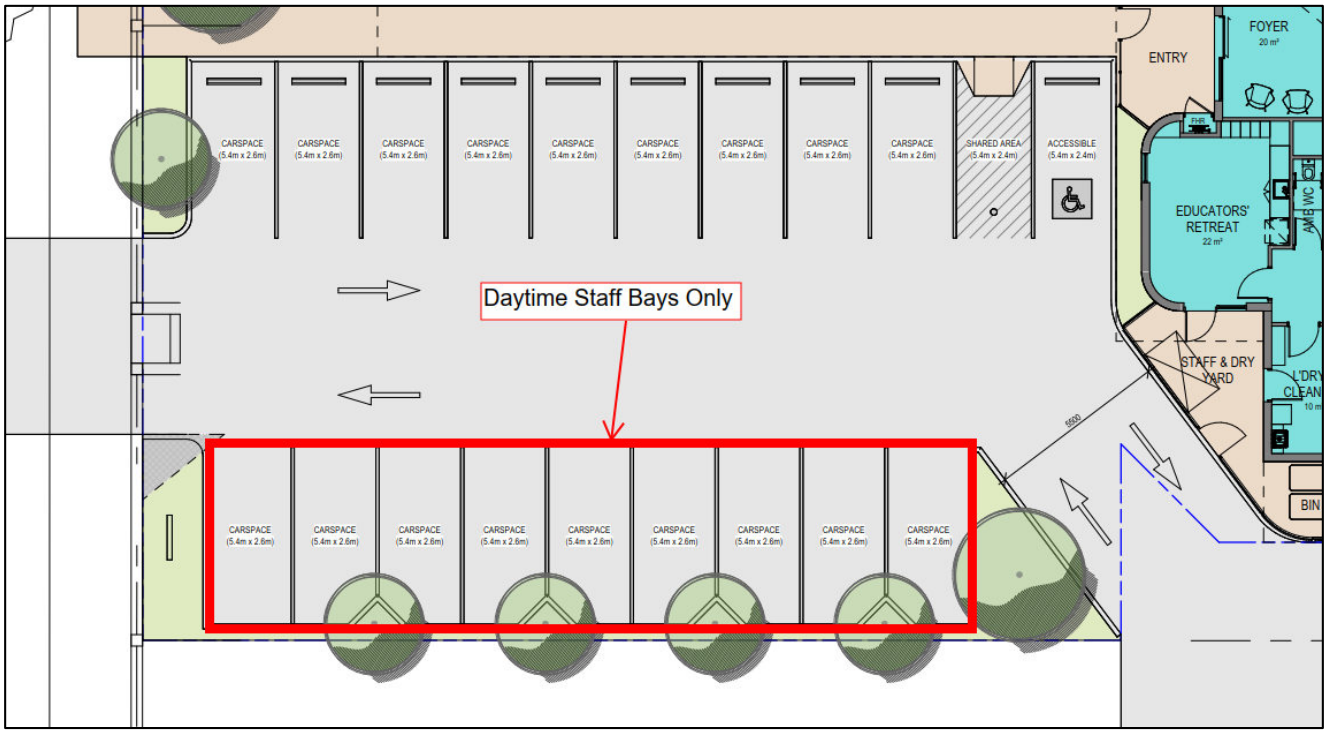


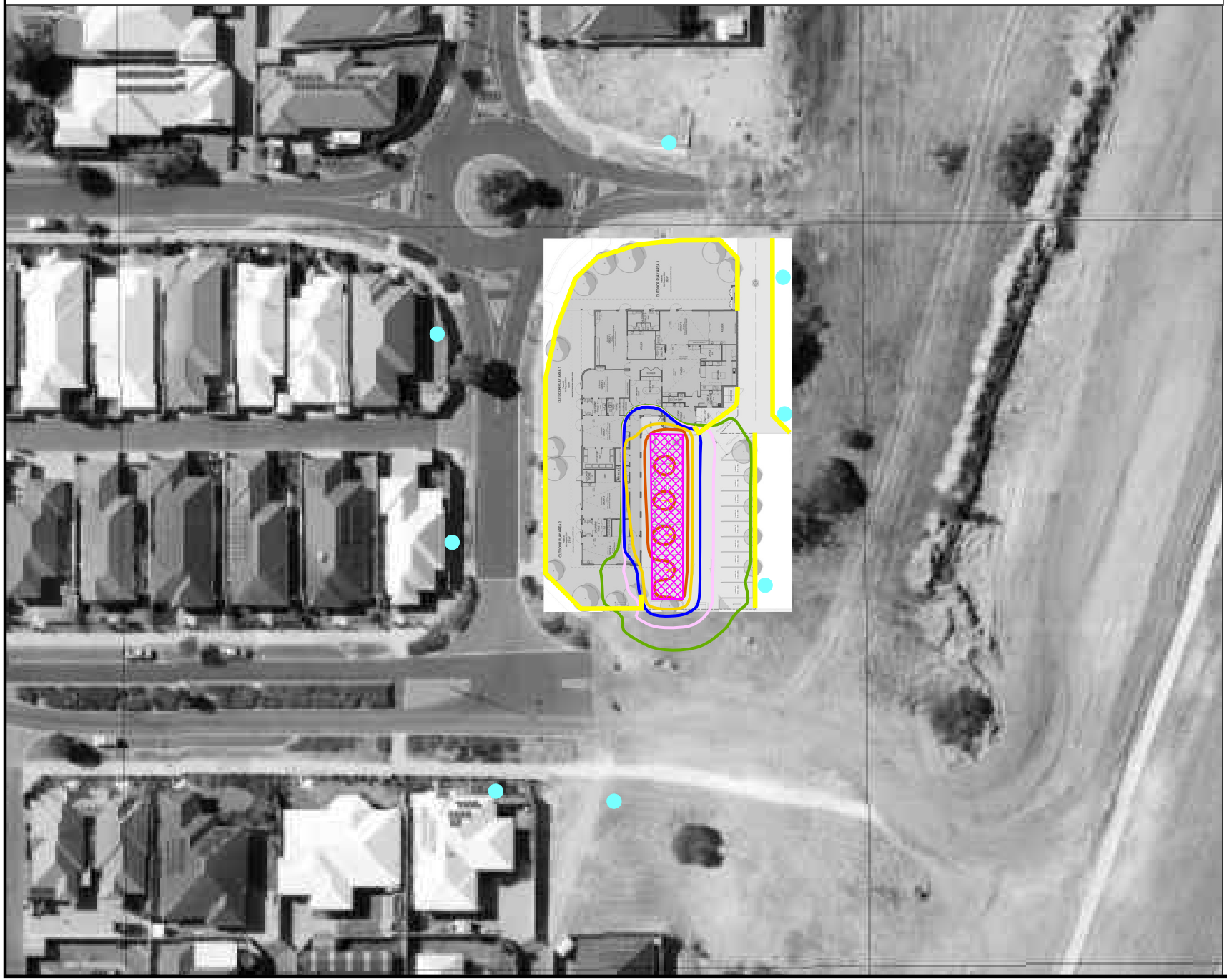
Figure 4-3: Daytime Staff Bays

4.1.4. Indoor Child Play

An assessment of noise levels from indoor child play was carried out and the resulting noise levels at all locations were predicted to be well below that of outdoor child play considered in *Section 4.1.1*. This assessment was carried out based on the following considerations:

- Internal noise levels within activity rooms would not exceed those from outdoor play for each age group, regardless of windows being open or closed; and
- Any music played within the internal activity areas would be 'light' music with no significant bass content and played at a relatively low level.

Figure 4-4 Car Door Noise Contour Plot (1.4m AGL), dB L_{Amax}



Predicted Noise level

	= 57
	= 62
	= 67
	= 72
	= 77

Legend

- Car Door Noise Area
- Receiver
- Fence

N

Scale 1:900

0 5 10 20 30 m

Project No: 24119628
Consultant: MN
Date: 19/12/2024
Algorithm: ISO 9613
SoundPLAN Version: 9.0

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(08) 9401 7770

4.2. Transportation Noise

The results of the hourly noise level measurements, in free-field conditions, were:

- 18 November 2024: 2.00pm and 3.00pm – 53.7 dB $L_{Aeq,1hour}$.

Combining the measured noise level with the corresponding hourly traffic volume, as shown in *Figure 4-5*, results in 52.7 $L_{Aeq(Day)}$.

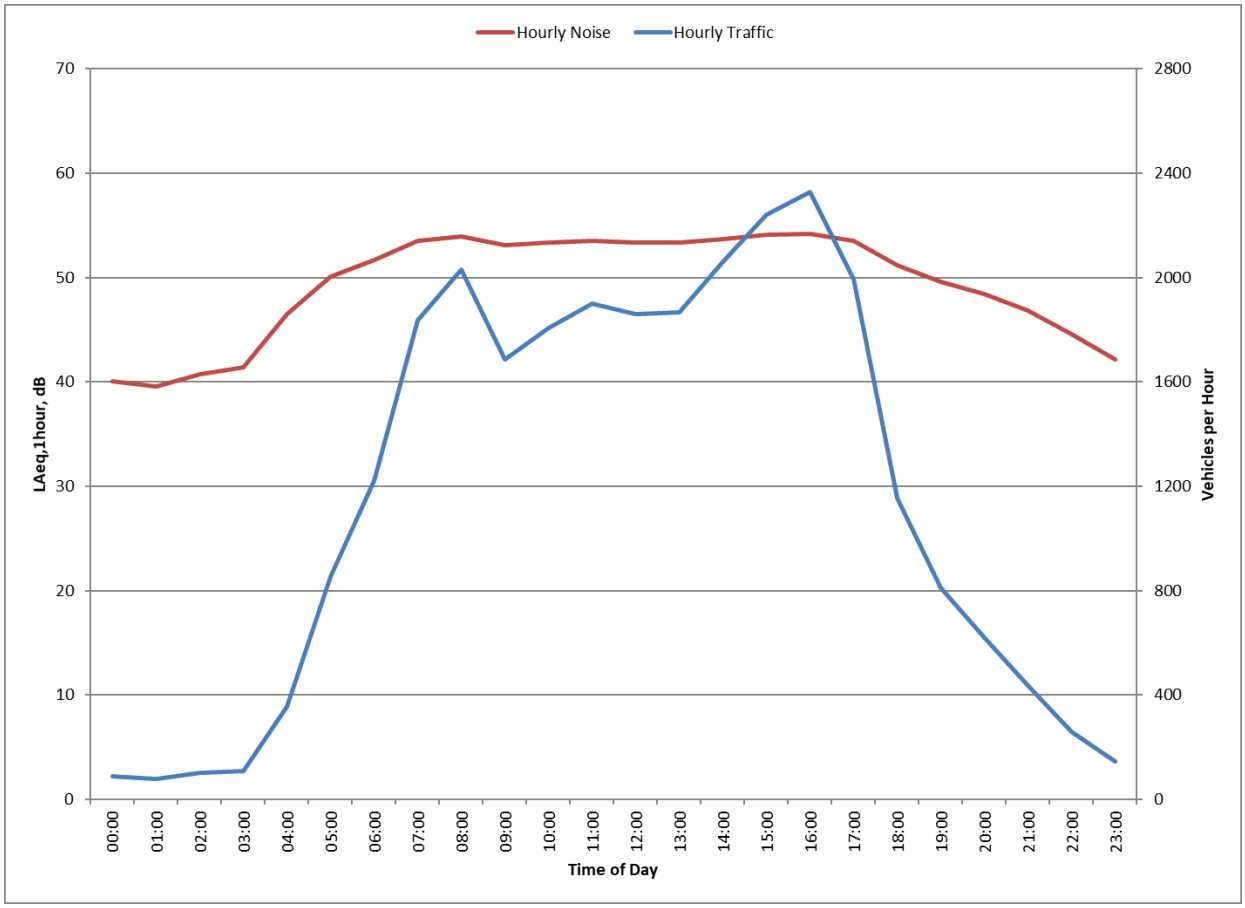
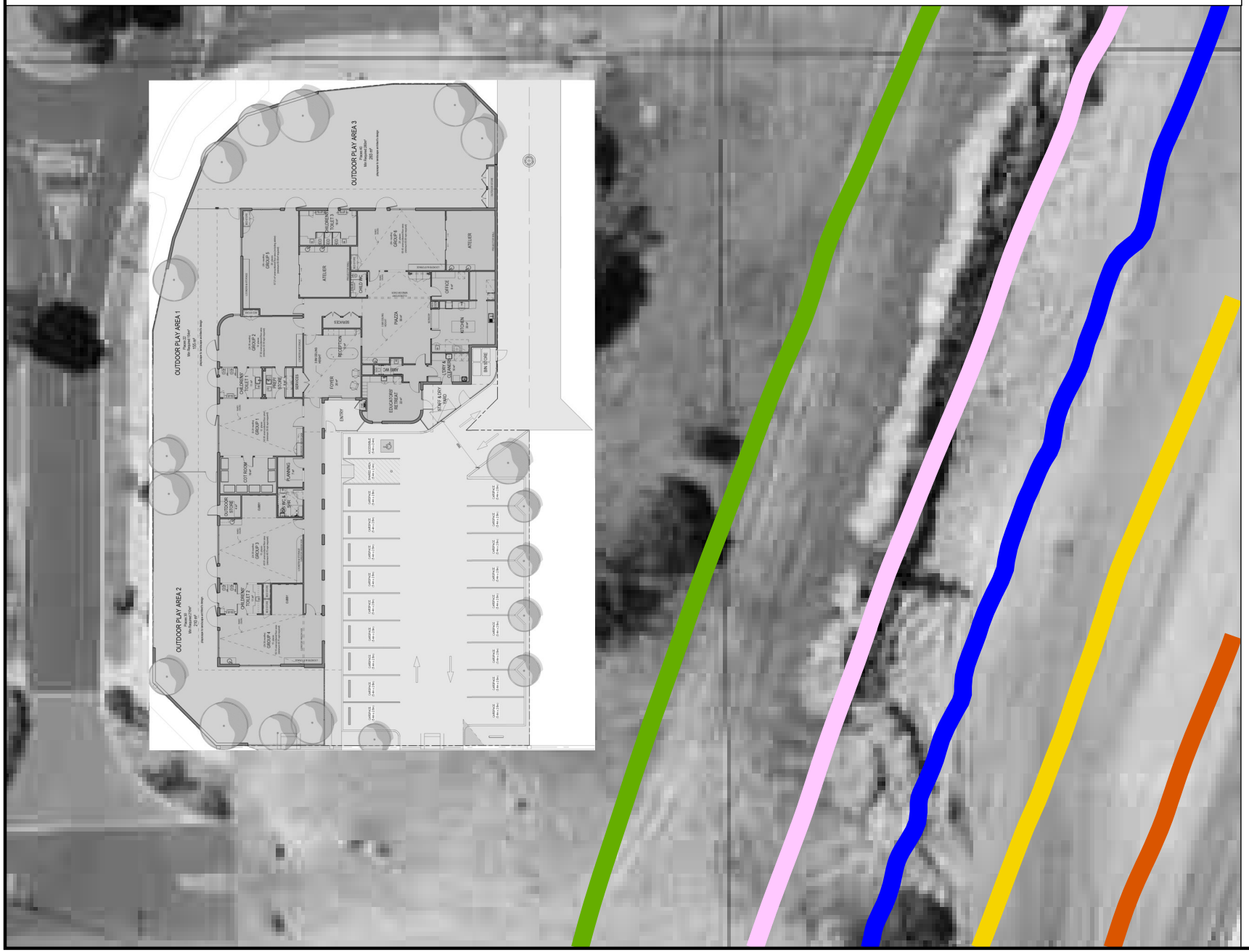


Figure 4-5: Noise Level Relationship to Hourly Traffic Volumes

The noise model is initially calibrated for existing daytime conditions and then modified for future conditions, including increased traffic and the inclusion of the proposed development. The results of this modelling are presented in *Figure 4-6* and *Figure 4-7* as noise contour plots. These are effectively the same plot with *Figure 4-6* including the facade reflection, appropriate for building upgrade design, and *Figure 4-7* without the facade correction, appropriate for assessment to the outdoor play areas.

From *Figure 4-6* and *Figure 4-7*, it can be seen that noise levels at the CCC building and all outdoor play areas will be located in an area below the outdoor noise target. As a result, no further mitigation measures are required.

Figure 4-6 Future Road Traffic Noise Contour Plot with Facade Correction (1.4m AGL), dB L_{Aeq}



Predicted Noise level

- = 56
- = 57
- = 58
- = 59
- = 60

Scale 1:500

0 3 6 12 18 m

Project No: 24119628
Consultant: MN
Date: 19/12/2024
Algorithm: ISO 9613
SoundPLAN Version: 9.0

Lloyd George Acoustics
PO Box 717
HILLARYS WA 6923
(08) 9401 7770

Figure 4-7 Future Road Traffic Noise Contour Plot with No Facade Correction (1.0m AGL), dB L_{Aeq}

Predicted Noise level

- = 56
- = 57
- = 58
- = 59
- = 60

N

Scale 1:500

0 3 6 12 18 m

Project No: 24119628
Consultant: MN
Date: 19/12/2024
Algorithm: ISO 9613
SoundPLAN Version: 9.0

Lloyd George Acoustics
PO Box 717
HILLARYS WA 6923
(08) 9401 7770

5. RECOMMENDATIONS

5.1. Environmental Noise

5.1.1. Child Play

The predicted noise from all children playing outside is compliant provided the fences noted on the DA Plans are constructed. This includes 2.1-metre-high solid fencing around the child play areas (not including a small section on the southeast side) which must be free of any gaps and have a minimum surface mass of 8 kg/m^2. Such material includes brick, limestone or double sheeted *Colorbond*. For areas where visual permeability is required, sound-rated plexiglass can be used.

Whilst not necessarily required for compliance, to further minimise noise impacts as part of best practice, the following are provided:

- The behaviour and 'style of play' of children should be monitored to prevent particularly loud activity e.g. loud banging/crashing of objects, 'group' shouts/yelling;
- Favour soft finishes in the outdoor play area to minimise impact noise (e.g. soft grass, sand pit(s), rubber mats) over timber or plastic;
- Favour soft balls and rubber wheeled toys;
- Crying children should be taken inside to be comforted;
- Child play to be staggered;
- No amplified music to be played outside;
- Any music played within the internal activity areas to be 'light' music with no significant bass content and played at a relatively low level;
- Car park drainage grates or similar to be plastic or metal with rubber gasket and secured to avoid excess banging.

5.1.2. Mechanical Plant

For mechanical plant, the following are recommended:

- Once the mechanical plant has been designed and selected, the noise levels shall be reviewed prior to Building Permit;
- All exhaust fans shall be located inside the ceiling void and shall be axial fan type, allowing the incorporation of an attenuator if required;
- All fans shall be variable speed drive so that maximum speed is only occurring when necessary with demand;
- Air-conditioning shall have a ‘night’ / ‘quiet’ mode option, in case required for prior to 7.00am operation, subject to final detailed analysis;
- All plant shall be selected taking into consideration noise levels. That is, when comparing manufacturers of equivalent equipment, select the quieter model;
- All plant is to be appropriately vibration isolated to 95% isolation efficiency.

5.1.3. Car Doors

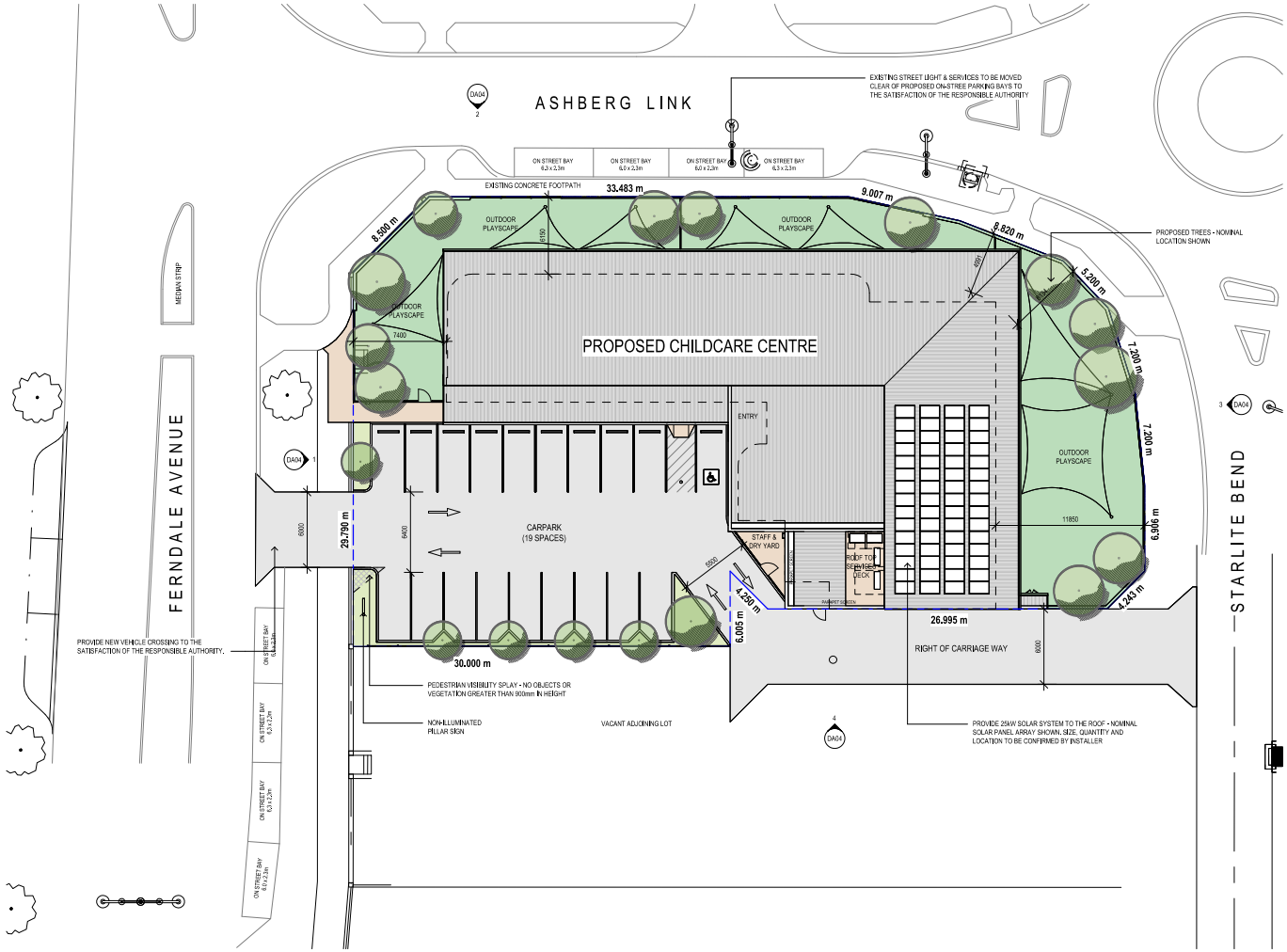
The predicted noise from car door closings is compliant provided the following:

- Minimum 1.8-metre-high fence on the east boundary as shown in *Figure 3-1*. Not including the gap for the driveway, this fence must be solid, free of any gaps and minimum surface mass 8 kg/m^2. Such material includes brick, limestone or double sheeted *Colorbond*; and
- Nine staff car parks on the east side of the car park only to be used after 7.00am.

5.2. Transportation Noise

From *Section 4.2* the CCC building and outdoor play areas are determined to be located in an area below the outdoor noise target. As a result, no further mitigation measures are required.

Appendix A – Development Plans



1 SITE PLAN
1 : 200

2 SITE CONTEXT
1 : 1000

AREA ANALYSIS

TOTAL SITE AREA 2026m²

SITE COVERAGE 730

BUILDING AREA
GROUND FLOOR 683m² gross leaseable area

ON SITE PARKING -
19 bays provided (including one accessible)

LEGEND

- UNENCUMBERED PLAYSPACE
- LANDSCAPING
- BUILDING AREA
- CAR PARK
- PAVING or similar
- PROPOSED TREE nominal location shown
- EXISTING TREE TO BE RETAINED & PROTECTED
- EXISTING TREE TO BE REMOVED

GENERAL NOTES

DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT, PREPARATION OF SHOP DRAWINGS OR MANUFACTURING. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALING.

VERIFY LOCATION OF EXISTING SERVICES BEFORE COMMENCEMENT.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA, RELEVANT STATE BUILDING ACT AS AMENDED, STANDARD BUILDING BY-LAWS AND RELEVANT AUSTRALIAN STANDARDS.

ISSUE	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	19/12/24

insite ARCHITECTS
4/120 Upper Heidelberg Road, Ivanhoe VIC 3079
t (03) 9499 8174
www.insitearchitects.com.au

nido EARLY SCHOOL

CLIENT: SATTERLY PROPERTY GROUP PTY LTD

PROJECT: PROPOSED CHILDCARE CENTRE (92 places)

LOCATION: CNR FERNDALE AVE & ASHBERG LINK, DALYELLUP W.A.

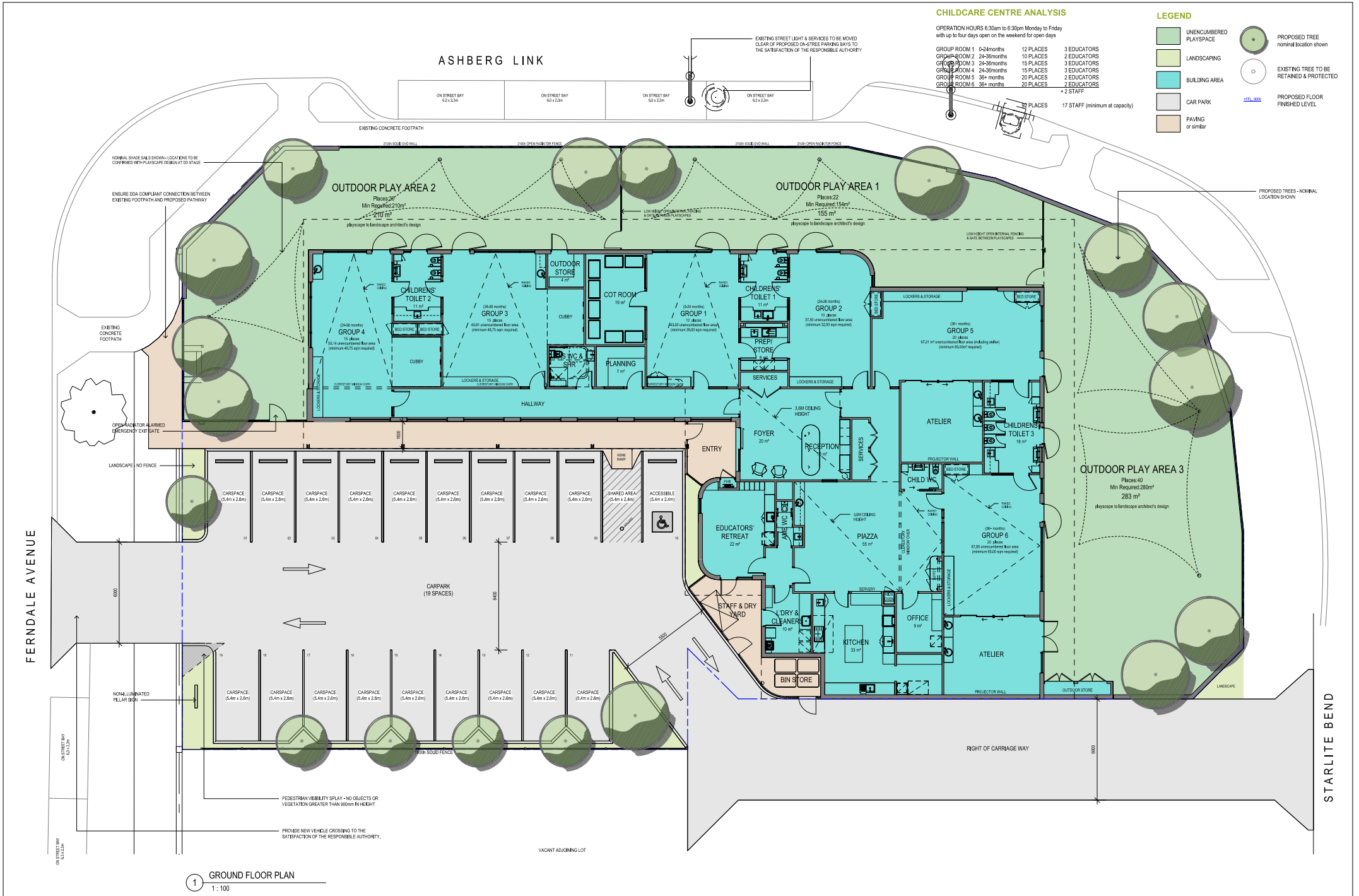
DRAWING TITLE: SITE PLAN

SCALE:	As indicated@A1	DATE:	NOV 2024
DRAWN:	CW	PRINTED:	19/12/2024 3:10:30 PM
CHECKED:	AH	JOB No.:	J0001182

APPROX

DA01/A

DA ISSUE



CHILDCARE CENTRE ANALYSIS

OPERATION HOURS 6:30am to 6:30pm Monday to Friday
with up to four days open on the weekend for open days

GROUP ROOM 1	0-24months	12 PLACES	3 EDUCATORS
GROUP ROOM 2	24-36months	10 PLACES	2 EDUCATORS
GROUP ROOM 3	24-36months	15 PLACES	3 EDUCATORS
GROUP ROOM 4	24-36months	15 PLACES	3 EDUCATORS
GROUP ROOM 5	36+ months	20 PLACES	2 EDUCATORS
GROUP ROOM 6	36+ months	20 PLACES	2 EDUCATORS
			+ 2 STAFF
		92 PLACES	17 STAFF (minimum at capacity)

LEGEND

- UNENCUMBERED PLAYSPACE
- LANDSCAPING
- BUILDING AREA
- CAR PARK
- PAVING or similar
- PROPOSED TREE nominal location shown
- EXISTING TREE TO BE RETAINED & PROTECTED
- xFFL 0000 PROPOSED FLOOR FINISHED LEVEL

1 GROUND FLOOR PLAN
1 : 100

GENERAL NOTES

DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT. PREPARATION OF SHOP DRAWINGS OR MANUFACTURING. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALING.

VERIFY LOCATION OF EXISTING SERVICES BEFORE COMMENCEMENT.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA, RELEVANT STATE BUILDING ACT AS AMENDED, STANDARD BUILDING BY-LAWS AND RELEVANT AUSTRALIAN STANDARDS.

ISSUE	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	19/12/24

insite ARCHITECTS
4/120 Upper Heidelberg Road, Ivanhoe VIC 3079
t (03) 9499 8174
www.insitearchitects.com.au

nido EARLY SCHOOL

CLIENT: SATTERLY PROPERTY GROUP PTY LTD

PROJECT: PROPOSED CHILDCARE CENTRE (92 places)

LOCATION: CNR FERNDALE AVE & ASHBERG LINK, DALYELLUP W.A.

DRAWING TITLE: FLOOR PLAN

SCALE:	As indicated@A1	DATE:	NOV 2024
DRAWN:	CW	PRINTED:	19/12/2024 3:10:32 PM
CHECKED:	AH	JOB No.:	J0001182

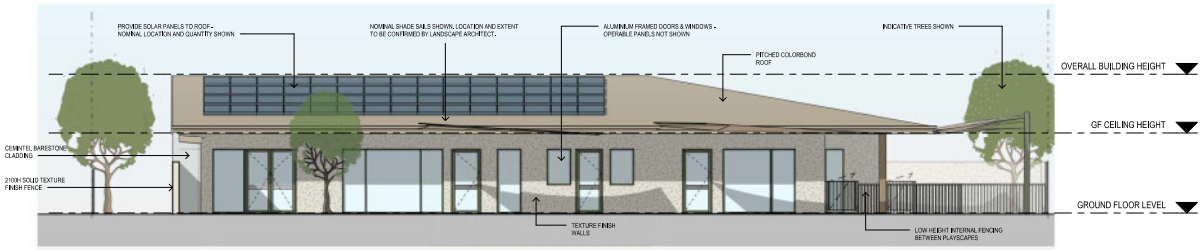
APPROX

DA02/A

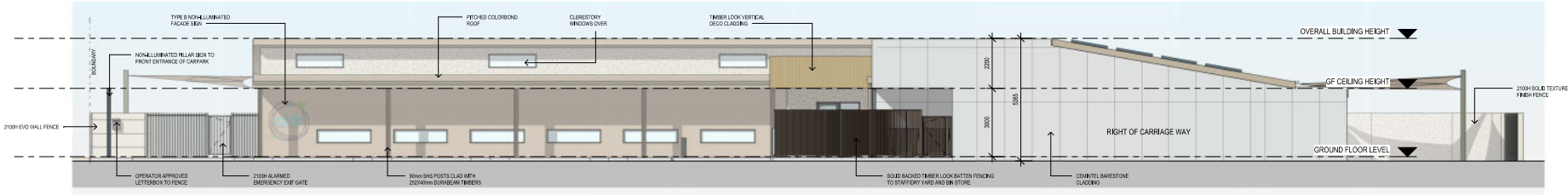
DA ISSUE

1 SOUTH ELEVATION
1 : 100

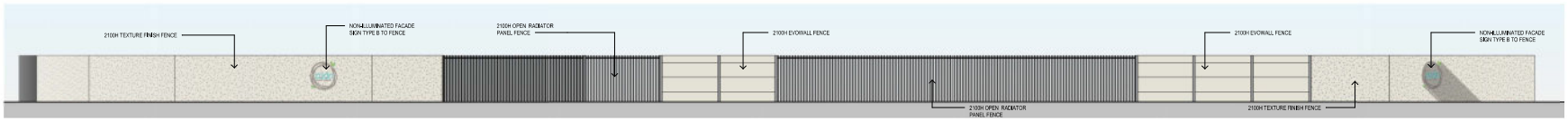
2 WEST ELEVATION
1 : 100



3 NORTH ELEVATION
1 : 100

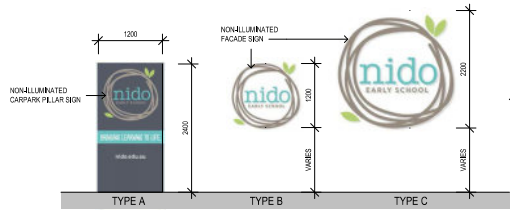


4 EAST ELEVATION
1 : 100



5 ASHBERG LINK FENCE ELEVATION
1 : 100

MATERIAL/COLOUR SCHEDULE



6 SIGNAGE DETAILS
1 : 50

FENCE HEIGHT

ENSURE ALL PLAYSCAPE FENCING COMPLIES WITH AS1926.1 WITH MINIMUM INTERNAL HEIGHT OF 2.1m AND MINIMUM EXTERNAL HEIGHT OF 1.2m.

GENERAL NOTES

DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT. PREPARATION OF SHOP DRAWINGS OR MANUFACTURING. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALING.

VERIFY LOCATION OF EXISTING SERVICES BEFORE COMMENCEMENT.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA, RELEVANT STATE BUILDING ACT AS AMENDED, STANDARD BUILDING BY-LAWS AND RELEVANT AUSTRALIAN STANDARDS.

ISSUE	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	19/12/24

insite ARCHITECTS
4/120 Upper Heidelberg Road, Ivanhoe VIC 3079
t (03) 9499 8174
www.insitearchitects.com.au

CLIENT: SATTERLY PROPERTY GROUP PTY LTD

PROJECT: PROPOSED CHILDCARE CENTRE (92 places)

LOCATION: CNR FERNDALE AVE & ASHBERG LINK, DALYELLUP W.A.

DRAWING TITLE: ELEVATIONS

SCALE: As indicated@A1 **DATE:** NOV 2024
DRAWN: PR / CW **PRINTED:** 19/12/2024 3:10:35 PM
CHECKED: AH **JOB No.:** J0001182

DA04/A

DA ISSUE

Appendix B – Influencing Factor Calculation

The assigned levels combine a baseline assigned level with an influencing factor, with the latter increasing the assigned level on the basis of the existence of significant roads and commercial or industrial zoned land within an inner circle (100 metre radius) and an outer circle (450 metre radius) of the noise sensitive premises. The calculation for the influencing factor is:

$$= \frac{1}{10}(\%\ \text{Type A}_{100} + \%\ \text{Type A}_{450}) + \frac{1}{20}(\%\ \text{Type B}_{100} + \%\ \text{Type B}_{450})$$

where:

$\%\ \text{Type A}_{100}$ = the percentage of industrial land within a 100m radius of the premises receiving the noise

$\%\ \text{Type A}_{450}$ = the percentage of industrial land within a 450m radius of the premises receiving the noise

$\%\ \text{Type B}_{100}$ = the percentage of commercial land within a 100m radius of the premises receiving the noise

$\%\ \text{Type B}_{450}$ = the percentage of commercial land within a 450m radius of the premises receiving the noise

+ Transport Factor (maximum of 6 dB)

= 2 for each secondary road (6,000 to 15,000 vpd) within 100m

= 2 for a major road (>15,000 vpd) within 450m

= 6 for a major road within 100m

The nearest existing noise sensitive premises are identified as:

- 34 Starlite Bend
- 70 Ferndale Ave
- 73 Ferndale Ave

Table B-1 shows the percentage of industrial and commercial land within the inner (100 metre radius) and outer (450 metre radius) circles of the noise sensitive premises.

Table B-1: Percentage of Land Types within 100m and 450m Radii

Receiver	Land Type	Within 100m	Within 450m
Nearest Noise Sensitive Receivers	Type A - Industrial and Utility	0	0
	Type B – Commercial	7	0

Figure B-1: Land Types within 100m and 450m Radii

From the Main Roads WA Traffic Map (refer *Figure B-2*), *Table B-2* shows the relevant roads and their traffic counts within the inner (100 metre radius) and outer (450 metre radius) circles.

Table B-2: Relevant Roads within 100m and 450m Radii

Receiver	Within 100m		Within 450m
	Major Road (+ 6 dB)	Secondary Road (+ 2 dB)	Major Road Not Within 100m (+ 2 dB)
Nearest Noise Sensitive Receivers	-	-	Bussell Highway (26,340 vpd 2023/24 #50871)

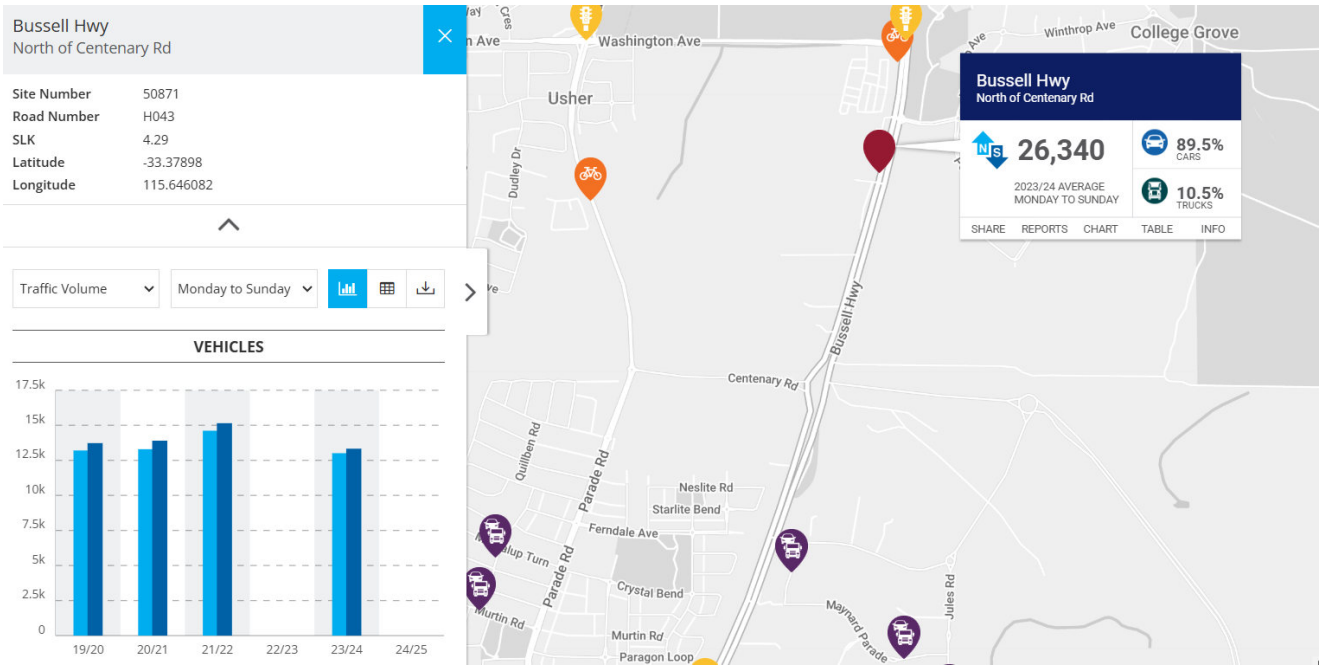


Figure B-2: MRWA Published Traffic Data

Table B-3 combines the percentage land types and Transport Factor to calculate the influencing factor.

Table B-3: Influencing Factor Calculation, dB

Receiver	Industrial Land	Commercial Land	Transport Factor	Total
Nearest Noise Sensitive Receivers	0	0.4	2	**2**

The influencing factor calculated in *Table B-3* is combined with those baseline assigned levels of *Table 2-2*, resulting in the project assigned levels provided in *Table 2-3*.

Appendix C – Terminology

The following is an explanation of the terminology used throughout this report:

- **Decibel (dB)**

The decibel is the unit that describes the sound pressure levels of a noise source. It is a logarithmic scale referenced to the threshold of hearing.

- **A-Weighting**

An A-weighted noise level has been filtered in such a way as to represent the way in which the human ear perceives sound. This weighting reflects the fact that the human ear is not as sensitive to lower frequencies as it is to higher frequencies. An A-weighted sound level is described as L_A, dB.

- **Sound Power Level (L_w)**

Under normal conditions, a given sound source will radiate the same amount of energy, irrespective of its surroundings, being the sound power level. This is similar to a 1kW electric heater always radiating 1kW of heat. The sound power level of a noise source cannot be directly measured using a sound level meter but is calculated based on measured sound pressure level at known distances. Noise modelling incorporates source sound power levels as part of the input data.

- **Sound Pressure Level (L_p)**

The sound pressure level of a noise source is dependent upon its surroundings, being influenced by distance, ground absorption, topography, meteorological conditions etc. and is what the human ear actually hears. Using the electric heater analogy above, the heat will vary depending upon where the heater is located, just as the sound pressure level will vary depending on the surroundings. Noise modelling predicts the sound pressure level from the sound power levels taking into account ground absorption, barrier effects, distance etc.

- **L_{ASlow}**

This is the noise level in decibels, obtained using the A-frequency weighting and the S (slow) time weighting. Unless assessing modulation, all measurements use the slow time weighting characteristic.

- **L_{AFast}**

This is the noise level in decibels, obtained using the A-frequency weighting and the F (fast) time weighting. This is used when assessing the presence of modulation.

- **L_{APeak}**

This is the greatest absolute instantaneous sound pressure level in decibels using the A-frequency weighting.

- **L_{Amax}**

An L_{Amax} level is the maximum A-weighted noise level during a particular measurement.

- **L_{A1}**

The L_{A1} level is the A-weighted noise level exceeded for 1 percent of the measurement period and is considered to represent the average of the maximum noise levels measured.

- **L_{A10}**

The L_{A10} level is the A-weighted noise level exceeded for 10 percent of the measurement period and is considered to represent the "intrusive" noise level.

- **L_{A90}**

The L_{A90} level is the A-weighted noise level exceeded for 90 percent of the measurement period and is considered to represent the "background" noise level.

- **L_{Aeq}**

The equivalent steady state A-weighted sound level ("equal energy") in decibels which, in a specified time period, contains the same acoustic energy as the time-varying level during the same period. It is considered to represent the "average" noise level.

- **One-Third-Octave Band**

Means a band of frequencies spanning one-third of an octave and having a centre frequency between 25 Hz and 20000 Hz inclusive.

- **Representative Assessment Period**

Means a period of time not less than 15 minutes, and not exceeding four hours, determined by an inspector or authorised person to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission.

- **L_{Amax} assigned level**

Means an assigned level, which, measured as a L_{ASlow} value, is not to be exceeded at any time.

- **L_{A1} assigned level**

Means an assigned level, which, measured as a L_{ASlow} value, is not to be exceeded for more than 1 percent of the representative assessment period.

- **L_{A10} assigned level**

Means an assigned level, which, measured as a L_{ASlow} value, is not to be exceeded for more than 10 percent of the representative assessment period.

- **$L_{Aeq(Day)}$**

The $L_{Aeq(Day)}$ level is the logarithmic average of the L_{Aeq} levels from 6.00am to 10.00pm.

- **$L_{Aeq(Night)}$**

The $L_{Aeq(Night)}$ level is the logarithmic average of the L_{Aeq} levels from 10.00pm to 6.00am.

- **Tonal Noise**

A tonal noise source can be described as a source that has a distinctive noise emission in one or more frequencies. An example would be whining or droning. The quantitative definition of tonality is:

– the presence in the noise emission of tonal characteristics where the difference between -

(a) the A-weighted sound pressure level in any one-third octave band; and

(b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as $L_{A\ Slow}$ levels.

This is relatively common in most noise sources.

- **Modulating Noise**

A modulating source is regular, cyclic and audible and is present for at least 10% of the measurement period. The quantitative definition of modulation is:

– a variation in the emission of noise that —

(a) is more than 3 dB $L_{A\ Fast}$ or is more than 3 dB $L_{A\ Fast}$ in any one-third octave band; and

(b) is present for at least 10% of the representative assessment period; and

(c) is regular, cyclic and audible.

- **Impulsive Noise**

An impulsive noise source has a short-term banging, clunking or explosive sound. The quantitative definition of impulsiveness means:

– a variation in the emission of a noise where the difference between L_{Apeak} and L_{Amax} is more than 15 dB when determined for a single representative event.

- **Major Road**

Is a road with an estimated average daily traffic count of more than 15,000 vehicles.

- **Secondary / Minor Road**

Is a road with an estimated average daily traffic count of between 6,000 and 15,000 vehicles.

- **Noise-sensitive land use and/or development**

Land-uses or development occupied or designed for occupation or use for residential purposes (including dwellings, residential buildings or short-stay accommodation), caravan park, camping ground, educational establishment, child care premises, hospital, nursing home, corrective institution or place of worship.

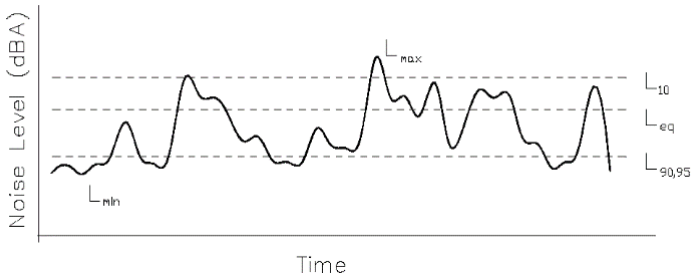
- **R_w**

This is the weighted sound reduction index. It is a single number rating determined by moving a grading curve in integral steps against the laboratory measured transmission loss until the sum of the deficiencies at each one-third-octave band, between 100 Hz and 3.15 kHz, does not exceed 32 dB. The higher the R_w value, the better the acoustic performance.

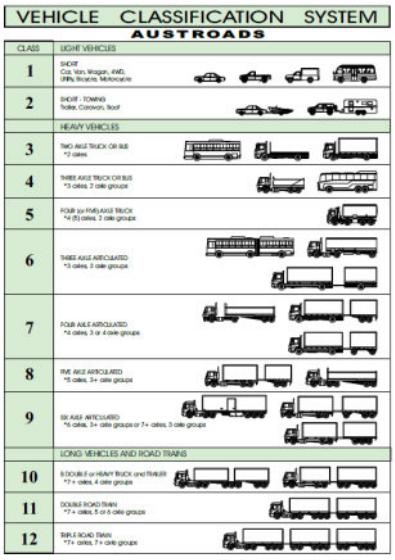
- **C_{tr}**

This is a spectrum adaptation term for airborne noise and provides a correction to the R_w value to suit source sounds with significant low frequency content such as road traffic or home theatre systems. A wall that provides a relatively high level of low frequency attenuation (i.e. masonry) may have a value in the order of – 4 dB, whilst a wall with relatively poor attenuation at low frequencies (i.e. stud wall) may have a value in the order of -12 dB.

- **Chart of Noise Level Descriptors**



- **Austroads Vehicle Class**



- **Typical Noise Levels**