Current Title Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	**21206217**	**Search Date:**	28/09/2023 15:12
Date Title Created:	15/04/1983	**Request No:**	45813124
Previous Title:	21189104		

ESTATE AND LAND

Estate in Fee Simple

LOT 15 REGISTERED PLAN 739317
Local Government: TOWNSVILLE

REGISTERED OWNER

Dealing No: 700782722 01/08/1995

BRUCE ANDREW SOMERVILLE
ANGELA JAYNE HAMILTON JOINT TENANTS

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 20113130 (POR 61)

2. MORTGAGE No 700782729 01/08/1995 at 14:35
to
SUNCORP BUILDING SOCIETY LIMITED

ADMINISTRATIVE ADVICES

NIL

UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

Requested by: D-ENQ CITEC CONFIRM

New proposed Waste water connection

Existing conditions

The site is currently not sewered and two options have been investigated:

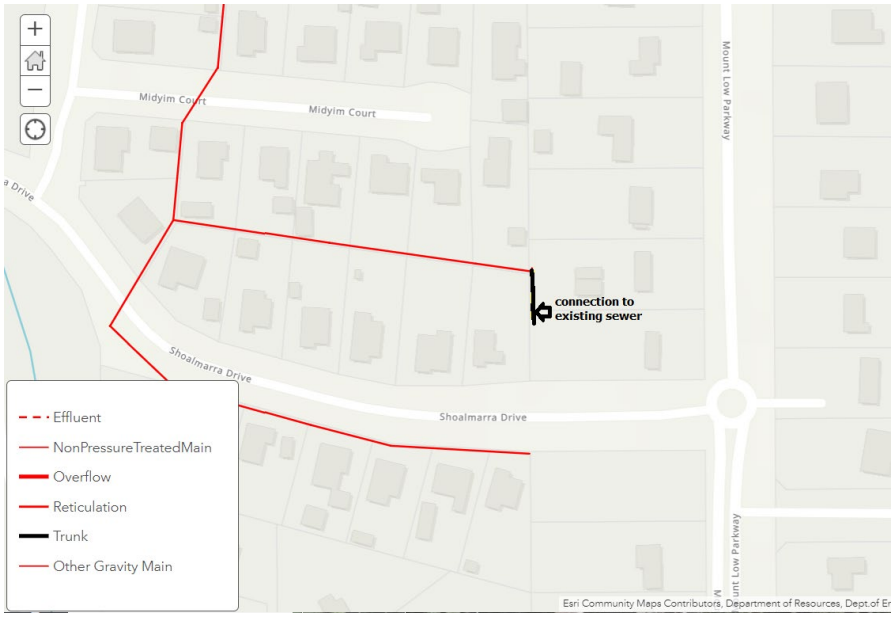
1. Connection to existing gravity main sewer which is stubbed into the neighbouring property to the north (102 Mount Low Parkway, Lot 16 RP 739317), or

2. Use an onsite sewer treatment system.

Subject site

Preference

Given the proposed land use and proximity to the existing infrastructure the preferred servicing option is to connect to the existing gravity main sewer. The location is shown in the marked up aerial photo below:



Neighbouring owner's consent has been received in relation to the connection to the sewer and a copy of the consent is below.

Prepared for: ML Parkway Pty Ltd
Document No. MCUCC290324
Dated: 29 March 2024

Mr Bruce Somerville
100 Mount Low Parkway
Mount, QLD 4818

Dear Mr Somerville

RE: Consent Form to connect sewer line from 100 Mount Low Parkway, Mount Low, Qld 4818 to sewer manhole at the rear of 102 Mount Low Parkway, Mount Low, Qld 4818

As the owner of 102 Mount Low Parkway, Mount Low, Qld, I/we hereby consent to you (or your nominee) connecting a sewer line to the sewer manhole on our property as part of your development as shown on the attachment marked 'X'.

All costs associated with the works will be borne by you (or your nominee) and all areas affected by the installation are to be made good by you (or your nominee).

Please let us know if there are any further documents you (or your nominee) or Council may require to effect the connection.

Yours sincerely,

CONSENT

As owner of 102 Mount Low Parkway, Mount Low, Qld 4818, I hereby provide consent to the works outlined in this letter on the terms and conditions also outlined in this letter, on this:
4th day of December, 2023

Signed: _____

Name: JEANE BORER

DA Form 1 – Development application details

Approved form (version 1.3 effective 28 September 2020) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving only building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) **and** parts 4 to 6 of *DA Form 2 – Building work details.*

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008.* For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

Note: *All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development Assessment Rules (DA Rules).*

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (*individual or company full name*)	ML Parkway Pty Ltd
Contact name *(only applicable for companies)*	Planning Manager
Postal address *(P.O. Box or street address)*	PO Box 1151
Suburb	Milton
State	Queensland
Postcode	4064
Country	Australia
Contact number	07 3254 2200
Email address *(non-mandatory)*	mlparkwaytsv@gmail.com
Mobile number *(non-mandatory)*	
Fax number *(non-mandatory)*	n/a
Applicant's reference number(s) *(if applicable)*	2024/ Mount Low North - Childcare

2) Owner's consent
2.1) Is written consent of the owner required for this development application?
☒ Yes – the written consent of the owner(s) is attached to this development application ☐ No – proceed to 3)

PART 2 – LOCATION DETAILS

3) Location of the premises *(complete 3.1) or 3.2), and 3.3) as applicable)*

***Note**: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see DA Forms Guide: Relevant plans.*

3.1) Street address and lot on plan

☒ Street address **AND** lot on plan (a*ll lots must be listed*), ***or***

☐ Street address **AND** lot on plan for an adjoining or adjacent property of the premises *(appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).*

a)	Unit No.	Street No.	Street Name and Type	Suburb
		100	Mount Low Parkway	Mount Low
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4818	5	RP739317	Townsville City Council
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)

3.2) Coordinates of premises *(appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)*

***Note**: Place each set of coordinates in a separate row.*

☐ Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) *(if applicable)*
		☐ WGS84 ☐ GDA94 ☐ Other:	

☐ Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) *(if applicable)*
		☐ 54 ☐ 55 ☐ 56	☐ WGS84 ☐ GDA94 ☐ Other:	

3.3) Additional premises

☐ Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application

☒ Not required

4) Identify any of the following that apply to the premises and provide any relevant details

☐ In or adjacent to a water body or watercourse or in or above an aquifer

Name of water body, watercourse or aquifer:

☐ On strategic port land under the *Transport Infrastructure Act 1994*

Lot on plan description of strategic port land:

Name of port authority for the lot:

☐ In a tidal area

Name of local government for the tidal area *(if applicable)*:

Name of port authority for tidal area *(if applicable)*:

☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*

Name of airport:

☐ Listed on the Environmental Management Register (EMR) under the *Environmental Protection Act 1994*	
EMR site identification:	
☐ Listed on the Contaminated Land Register (CLR) under the *Environmental Protection Act 1994*	
CLR site identification:	

5) Are there any existing easements over the premises?

Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see DA Forms Guide.

☐ Yes – All easement locations, types and dimensions are included in plans submitted with this development application

☒ No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect

a) What is the type of development? *(tick only one box)*

☒ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☒ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☐ Code assessment ☒ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

Material Change of Use – Child care centre

e) Relevant plans

***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms guide: Relevant plans.*

☒ Relevant plans of the proposed development are attached to the development application

6.2) Provide details about the second development aspect

a) What is the type of development? *(tick only one box)*

☐ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☐ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☐ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

e) Relevant plans

***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.*

☐ Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development

☐ Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application

☒ Not required

Section 2 – Further development details

7) Does the proposed development application involve any of the following?	
Material change of use	☒ Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	☐ Yes – complete division 2
Operational work	☐ Yes – complete division 3
Building work	☐ Yes – complete *DA Form 2 – Building work details*

Division 1 – Material change of use

***Note**: This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.*

8.1) Describe the proposed material change of use			
Provide a general description of the proposed use	Provide the planning scheme definition *(include each definition in a new row)*	Number of dwelling units *(if applicable)*	Gross floor area (m^2) *(if applicable)*
Childcare centre – 128 places	Child care centre	0	940m^2

8.2) Does the proposed use involve the use of existing buildings on the premises?
☐ Yes
☒ No

Division 2 – Reconfiguring a lot

***Note**: This division is only required to be completed if any part of the development application involves reconfiguring a lot.*

9.1) What is the total number of existing lots making up the premises?

9.2) What is the nature of the lot reconfiguration? *(tick all applicable boxes)*	
☐ Subdivision *(complete 10))*	☐ Dividing land into parts by agreement *(complete 11))*
☐ Boundary realignment *(complete 12))*	☐ Creating or changing an easement giving access to a lot from a constructed road *(complete 13))*

10) Subdivision				
10.1) For this development, how many lots are being created and what is the intended use of those lots:				
Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created				

10.2) Will the subdivision be staged?	
☐ Yes – provide additional details below ☐ No	
How many stages will the works include?	
What stage(s) will this development application apply to?	

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?				
Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment			
12.1) What are the current and proposed areas for each lot comprising the premises?			
Current lot		Proposed lot	
Lot on plan description	Area (m^2)	Lot on plan description	Area (m^2)
12.2) What is the reason for the boundary realignment?			

13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? *(attach schedule if there are more than two easements)*				
Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? *(e.g. pedestrian access)*	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

***Note**: This division is only required to be completed if any part of the development application involves operational work.*

14.1) What is the nature of the operational work?		
☐ Road work	☐ Stormwater	☐ Water infrastructure
☐ Drainage work	☐ Earthworks	☐ Sewage infrastructure
☐ Landscaping	☐ Signage	☐ Clearing vegetation
☐ Other – please specify:		
14.2) Is the operational work necessary to facilitate the creation of new lots? *(e.g. subdivision)*		
☐ Yes – specify number of new lots:		
☐ No		
14.3) What is the monetary value of the proposed operational work? *(include GST, materials and labour)*		
$		

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application
Townsville City Council
16) Has the local government agreed to apply a superseded planning scheme for this development application?
☐ Yes – a copy of the decision notice is attached to this development application
☐ The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
☒ No

PART 5 – REFERRAL DETAILS

17) Does this development application include any aspects that have any referral requirements?
***Note**: A development application will require referral if prescribed by the* Planning Regulation 2017.

☒ No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the *Planning Act 2016*:**

☐ Clearing native vegetation
☐ Contaminated land *(unexploded ordnance)*
☐ Environmentally relevant activities (ERA) *(only if the ERA has not been devolved to a local government)*
☐ Fisheries – aquaculture
☐ Fisheries – declared fish habitat area
☐ Fisheries – marine plants
☐ Fisheries – waterway barrier works
☐ Hazardous chemical facilities
☐ Heritage places – Queensland heritage place *(on or near a Queensland heritage place)*
☐ Infrastructure-related referrals – designated premises
☐ Infrastructure-related referrals – state transport infrastructure
☐ Infrastructure-related referrals – State transport corridor and future State transport corridor
☐ Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
☐ Infrastructure-related referrals – near a state-controlled road intersection
☐ Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
☐ Koala habitat in SEQ region – key resource areas
☐ Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
☐ Ports – Brisbane core port land – environmentally relevant activity (ERA)
☐ Ports – Brisbane core port land – tidal works or work in a coastal management district
☐ Ports – Brisbane core port land – hazardous chemical facility
☐ Ports – Brisbane core port land – taking or interfering with water
☐ Ports – Brisbane core port land – referable dams
☐ Ports – Brisbane core port land – fisheries
☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*
☐ SEQ development area
☐ SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – community activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
☐ SEQ regional landscape and rural production area or SEQ rural living area – urban activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – combined use
☐ Tidal works or works in a coastal management district
☐ Reconfiguring a lot in a coastal management district or for a canal
☐ Erosion prone area in a coastal management district
☐ Urban design
☐ Water-related development – taking or interfering with water
☐ Water-related development – removing quarry material *(from a watercourse or lake)*
☐ Water-related development – referable dams
☐ Water-related development –levees *(category 3 levees only)*
☐ Wetland protection area

Matters requiring referral to the **local government:**

☐ Airport land
☐ Environmentally relevant activities (ERA) (*only if the ERA has been devolved to local government)*

☐ Heritage places – Local heritage places

Matters requiring referral to the **Chief Executive of the distribution entity or transmission entity:**
☐ Infrastructure-related referrals – Electricity infrastructure

Matters requiring referral to:
- The **Chief Executive of the holder of the licence**, if not an individual
- The **holder of the licence**, if the holder of the licence is an individual

☐ Infrastructure-related referrals – Oil and gas infrastructure

Matters requiring referral to the **Brisbane City Council:**
☐ Ports – Brisbane core port land

Matters requiring referral to the **Minister responsible for administering the *Transport Infrastructure Act 1994*:**
☐ Ports – Brisbane core port land *(where inconsistent with the Brisbane port LUP for transport reasons)*
☐ Ports – Strategic port land

Matters requiring referral to the **relevant port operator**, if applicant is not port operator**:**
☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*

Matters requiring referral to the **Chief Executive of the relevant port authority:**
☐ Ports – Land within limits of another port *(below high-water mark)*

Matters requiring referral to the **Gold Coast Waterways Authority:**
☐ Tidal works or work in a coastal management district *(in Gold Coast waters)*

Matters requiring referral to the **Queensland Fire and Emergency Service:**
☐ Tidal works or work in a coastal management district *(involving a marina (more than six vessel berths))*

18) Has any referral agency provided a referral response for this development application?

☐ Yes – referral response(s) received and listed below are attached to this development application
☒ No

Referral requirement	Referral agency	Date of referral response

Identify and describe any changes made to the proposed development application that was the subject of the referral response and this development application, or include details in a schedule to this development application *(if applicable).*

PART 6 – INFORMATION REQUEST

19) Information request under Part 3 of the DA Rules

☒ I agree to receive an information request if determined necessary for this development application
☐ I do not agree to accept an information request for this development application

***Note**: By not agreeing to accept an information request I, the applicant, acknowledge:*

- *that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties*
- *Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.*

Further advice about information requests is contained in the DA Forms Guide.

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? *(e.g. a preliminary approval)*			
☐ Yes – provide details below or include details in a schedule to this development application ☒ No			
List of approval/development application references	Reference number	Date	Assessment manager
☐ Approval ☐ Development application			
☐ Approval ☐ Development application			

21) Has the portable long service leave levy been paid? *(only applicable to development applications involving building work or operational work)*		
☐ Yes – a copy of the receipted QLeave form is attached to this development application ☐ No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid ☒ Not applicable *(e.g. building and construction work is less than $150,000 excluding GST)*		
Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?
☐ Yes – show cause or enforcement notice is attached ☒ No

23) Further legislative requirements			
Environmentally relevant activities			
23.1) Is this development application also taken to be an application for an environmental authority for an **Environmentally Relevant Activity (ERA)** under section 115 of the *Environmental Protection Act 1994*?			
☐ Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below ☒ No ***Note**: Application for an environmental authority can be found by searching "ESR/2015/1791" as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.*			
Proposed ERA number:		Proposed ERA threshold:	
Proposed ERA name:			
☐ Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.			
Hazardous chemical facilities			
23.2) Is this development application for a **hazardous chemical facility**?			
☐ Yes – *Form 69: Notification of a facility exceeding 10% of schedule 15 threshold* is attached to this development application ☒ No ***Note**: See www.business.qld.gov.au for further information about hazardous chemical notifications.*			

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

☐ Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)

☒ No

***Note**: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.*

2. See https://www.qld.gov.au/environment/land/vegetation/applying for further information on how to obtain a s22A determination.

Environmental offsets

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

☐ Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter

☒ No

***Note**: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on environmental offsets.*

Koala habitat in SEQ Region

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?

☐ Yes – the development application involves premises in the koala habitat area in the koala priority area

☐ Yes – the development application involves premises in the koala habitat area outside the koala priority area

☒ No

***Note**: If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this development application. See koala habitat area guidance materials at www.des.qld.gov.au for further information.*

Water resources

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the *Water Act 2000***?

☐ Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

☒ No

***Note**: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au for further information.*

DA templates are available from https://planning.dsdmip.qld.gov.au/. If the development application involves:

- *Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1*
- *Taking or interfering with water in a watercourse, lake or spring: complete DA Form1 Template 2*
- *Taking overland flow water: complete DA Form 1 Template 3.*

Waterway barrier works

23.7) Does this application involve **waterway barrier works?**

☐ Yes – the relevant template is completed and attached to this development application

☒ No

DA templates are available from https://planning.dsdmip.qld.gov.au/. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants?**

☐ Yes – an associated *resource* allocation authority is attached to this development application, if required under the *Fisheries Act 1994*

☒ No

***Note**: See guidance materials at www.daf.qld.gov.au for further information.*

Quarry materials from a watercourse or lake

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000?*

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
☒ No

***Note**: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au and www.business.qld.gov.au for further information.*

Quarry materials from land under tidal waters

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995?*

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
☒ No

***Note**: Contact the Department of Environment and Science at www.des.qld.gov.au for further information.*

Referable dams

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the Water Supply Act)?

☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the Water Supply Act is attached to this development application
☒ No

***Note**: See guidance materials at www.dnrme.qld.gov.au for further information.*

Tidal work or development within a coastal management district

23.12) Does this development application involve **tidal work or development in a coastal management district**?

☐ Yes – the following is included with this development application:
- ☐ Evidence the proposal meets the code for assessable development that is prescribed tidal work *(only required if application involves prescribed tidal work)*
- ☐ A certificate of title

☒ No

***Note**: See guidance materials at www.des.qld.gov.au for further information.*

Queensland and local heritage places

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

☐ Yes – details of the heritage place are provided in the table below
☒ No

***Note**: See guidance materials at www.des.qld.gov.au for information requirements regarding development of Queensland heritage places.*

Name of the heritage place:		Place ID:	

Brothels

23.14) Does this development application involve a **material change of use for a brothel**?

☐ Yes – this development application demonstrates how the proposal meets the code for a development application for a brothel under Schedule 3 of the *Prostitution Regulation 2014*
☒ No

Decision under section 62 of the *Transport Infrastructure Act 1994*

23.15) Does this development application involve new or changed access to a state-controlled road?

☐ Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)
☒ No

Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation

23.16) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones (except rural residential zones), where at least one road is created or extended?

☐ Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered

☒ No

***Note**: See guidance materials at www.planning.dsdmip.qld.gov.au for further information.*

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist	
I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17 ***Note**: See the Planning Regulation 2017 for referral requirements*	☒ Yes
If building work is associated with the proposed development, Parts 4 to 6 of *DA Form 2 – Building work details* have been completed and attached to this development application	☐ Yes ☒ Not applicable
Supporting information addressing any applicable assessment benchmarks is with the development application ***Note**: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see DA Forms Guide: Planning Report Template.*	☒ Yes
Relevant plans of the development are attached to this development application ***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.*	☒ Yes
The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued (*see 21*)	☐ Yes ☒ Not applicable

25) Applicant declaration

☒ By making this development application, I declare that all information in this development application is true and correct

☒ Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001*

***Note**: It is unlawful to intentionally provide false or misleading information.*

Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website.

Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, Planning Regulation 2017 and the DA Rules except where:

- such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the Planning Regulation 2017, and the access rules made under the *Planning Act 2016* and Planning Regulation 2017; or
- required by other legislation (including the *Right to Information Act 2009*); or
- otherwise required by law.

This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002.*

PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received: | Reference number(s):

Notification of engagement of alternative assessment manager	
Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	
Relevant licence number(s) of chosen assessment manager	

QLeave notification and payment *Note: For completion by assessment manager if applicable*			
Description of the work			
QLeave project number			
Amount paid ($)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

Noise Impact Assessment

DEVELOPMENT PERMIT FOR A

MATERIAL CHANGE OF USE

Townsville City Council | Mount Low

Material Change of Use – Child Care Centre

100 Mount Low Parkway, Mount Low

Lot 5 RP 739317

April 2024
Ref: MCU-CC-Rev B

Table of Contents

1.0 INTRODUCTION

ML Parkway Pty Ltd is submitting a 'Material Change of Use' (MCU) development application for a single-storey, 128-place childcare centre located at 100 Mount Low Parkway, Mount Low QLD 4818.

This investigation will assess the impact of any noise emission from the operation of the development.

1.1 OBJECTIVES

This assessment aims to achieve the following objectives:

- Quantify the existing acoustic environment via ambient noise monitoring.
- Undertake a review of noise policy and regulatory requirements.
- Identify sensitive receptors (SRs).
- Identify noise-generating activities from existing nearby activities.
- Develop the project-specific noise limits.
- Produce a noise prediction model to assess the potential noise impacts against the adopted noise limits.
- Where required, specify noise management and mitigation measures.

1.2 STUDY EXCLUSIONS

Assessment of noise and vibration generated by the construction of the proposed development has not been assessed within this noise study.

2.0 SUBJECT SITE & PROPOSED DEVELOPMENT

2.1 EXISTING SITE

The site is located at 100 Mount Low Parkway, Mount Low QLD 4818 (Lot 15 on RP739317) and comprises a cumulative area of 4,000m^2. The property is zoned under 'Rural Residential' as per the Townsville City Council Planning Scheme (TCCPS).

Figure 1: Location of Proposed Development (Source: MetroMaps)

2.2 PROPOSED DEVELOPMENT

ML Parkway Pty Ltd intends to construct a one-storey childcare centre as shown in **Figure 2** below. The childcare centre includes the following notable features:

- Outdoor play area (Caters to all children, 1,722m^2);
- Administration services;
- Nursey 1 and 2 (Caters to 12 children in each nursery);
- Toddler (Caters to 16 children);
- Junior Kindy (Caters to 22 children in each room);
- Senior Kindy (Caters to 22 children);
- Kindy (Caters to 22 children);

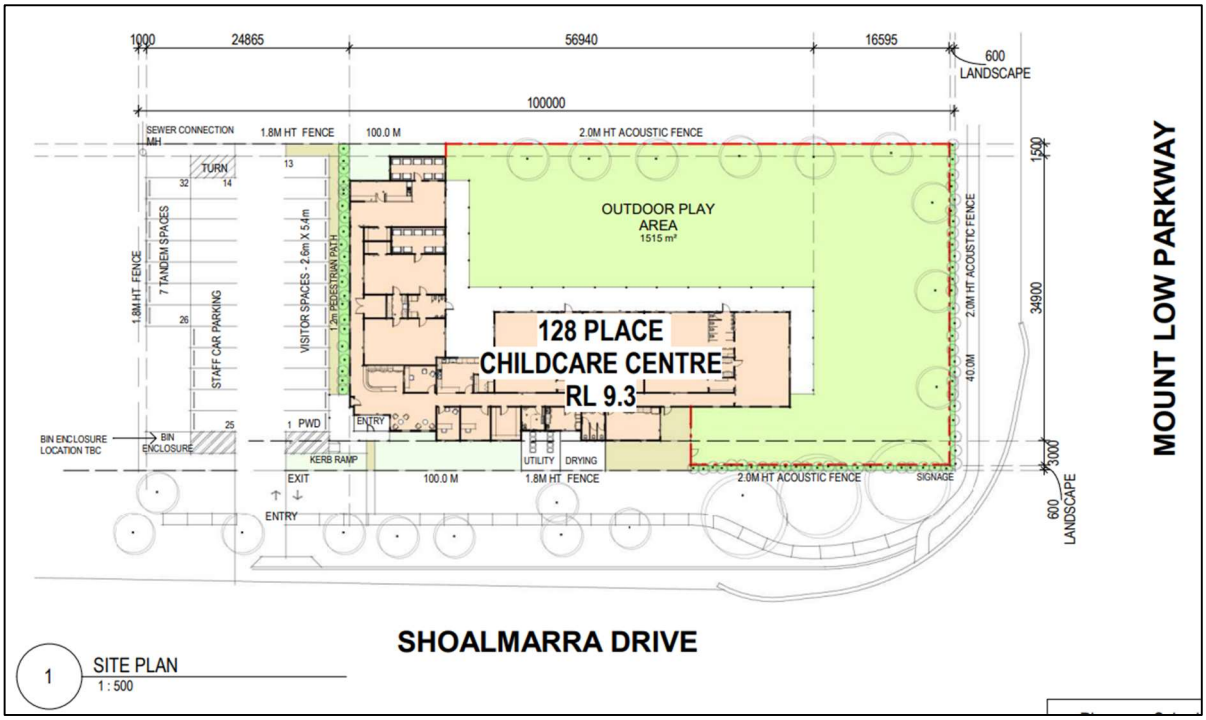


Figure 2: Design Intent of Proposed Facility (Source: ELIA Architects)

See ***Appendix D – Design Drawings*** for the design drawings.

Noise generating activities related to the development have been identified below in ***Table 1***, along with the hours they may potentially cause noise impacts.

Potential Noise Generating Activity	Hours of Noise Generation
Mechanical Plant – Air-conditioning/condenser units	6:00 AM – 7:00PM
Carpark vehicle movements	6:00 AM – 7:00PM
Children noise (Outdoor play)	7:00 AM – 7:00PM

Table 1: Noise Generating Activities

2.3 SENSITIVE RECEPTORS

The Environmental Protection (Noise) Policy 2019 defines an SR as 'an area or place where noise is measured'. In addition, the Policy also provides a list of SRs which are denoted as a:

- Residence;
- Libraries and educational institutions (including schools, colleges and universities);
- Childcare centres or kindergartens;
- School or playground;
- Hospital, surgery or other medical institution;
- Commercial and retail activity;
- Protected area or critical area;
- Marine Park; and
- Park or garden that is open to the public for use other than for sport or organised entertainment.

In addition to the above list of SRs, the Planning Regulation 2017 also defines Sensitive Land Use's. These have been reproduced in ***Appendix H – Sensitive Land Uses***. For the purpose of this assessment the defined Sensitive Land Use's are considered to be SRs.

The proposed development location and assessed SRs are shown on aerial imagery below in **Figure 3**.

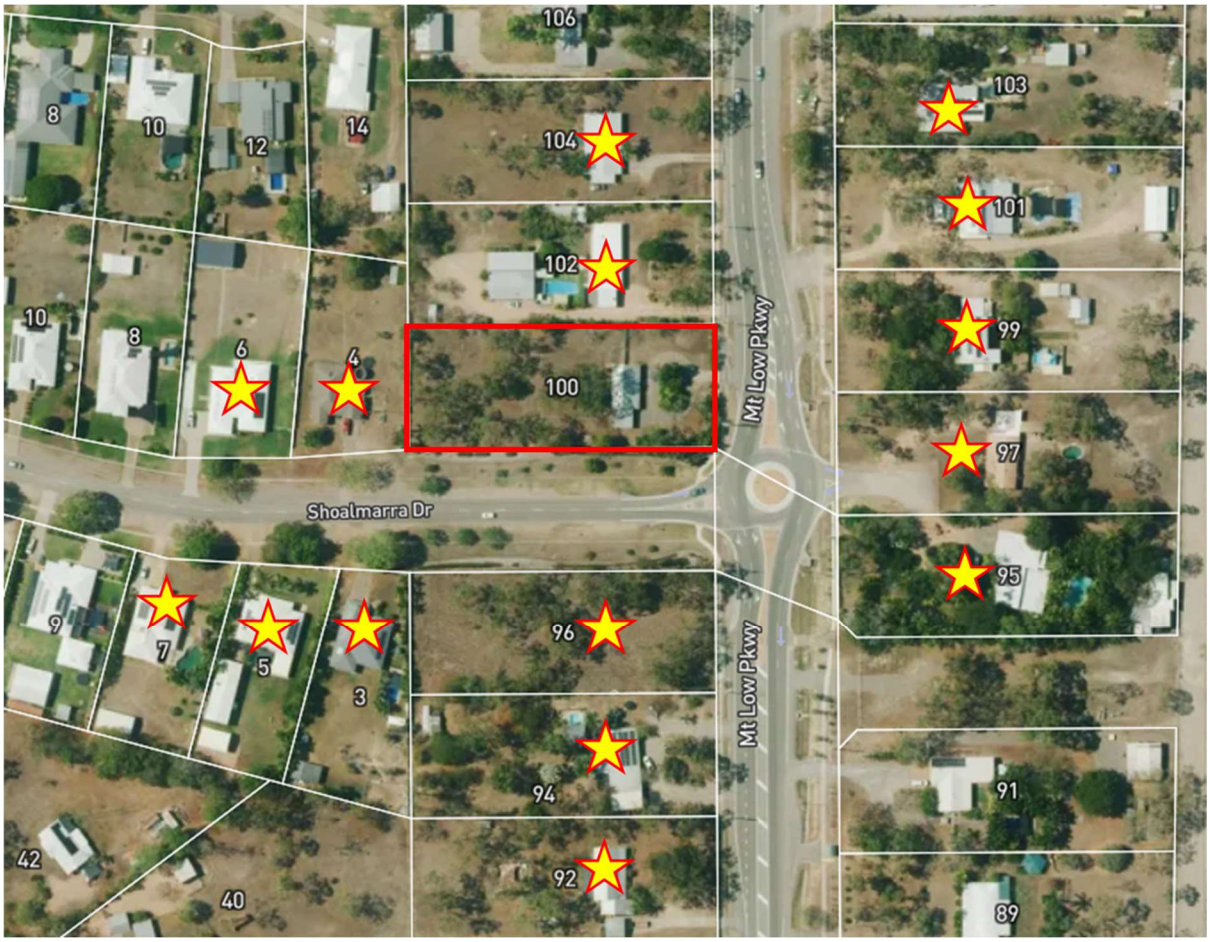


Figure 3: Sensitive Receptor Locations

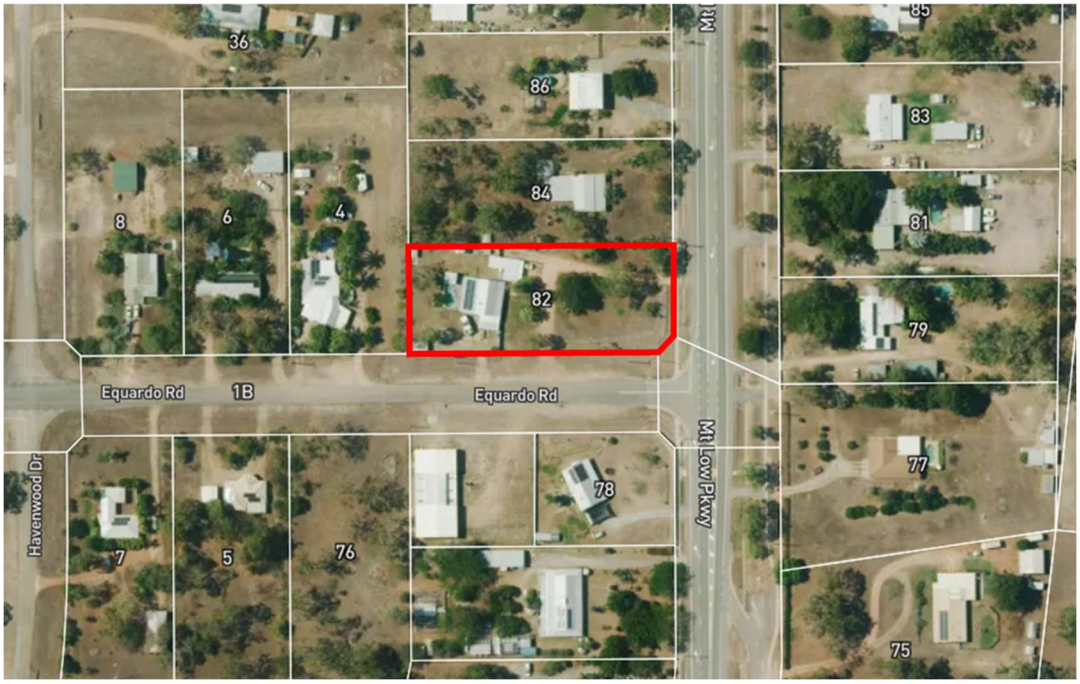
2.4 AMBIENT NOISE MONITORING

Background (ambient) noise data was obtained from the noise impact assessment report by *LiveIt Acoustics* for a nearby property at 82 Mount Low Parkway, Mount Low. The data was collected for a development application for a Material Change of Use for a Childcare Centre (**MCU23/0029**) and was submitted in June 2023 and approved in December 2023.

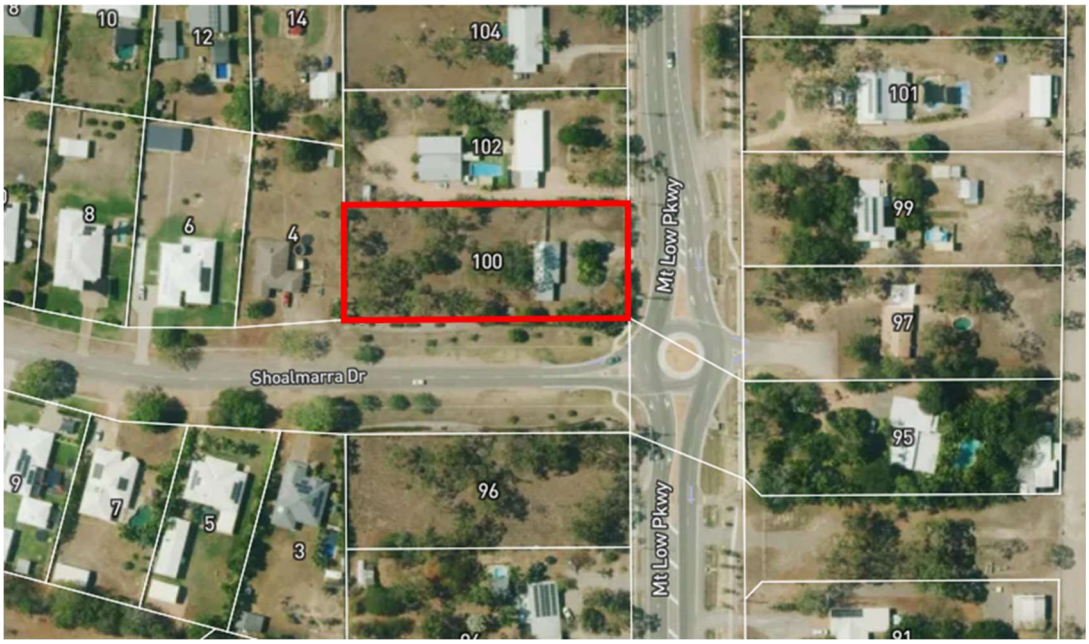
82 Mount Low Parkway is some 320m south of the proposed development. The approved development is almost identical in design as are the site characteristics and surroundings. A comparison can be found on the following page.

The acoustic data recorded at 82 Mount Low Parkway is therefore deemed comparable and applicable to the proposed development at 100 Mount Low Parkway.

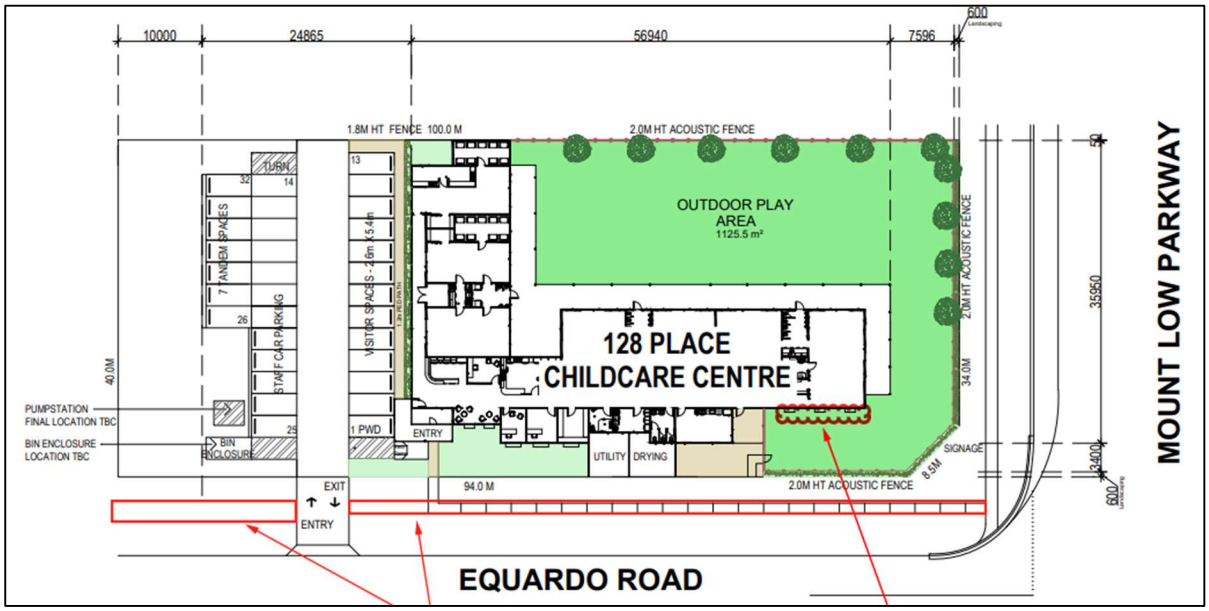
82 Mount Low Parkway, Mount Low – Site Characteristics



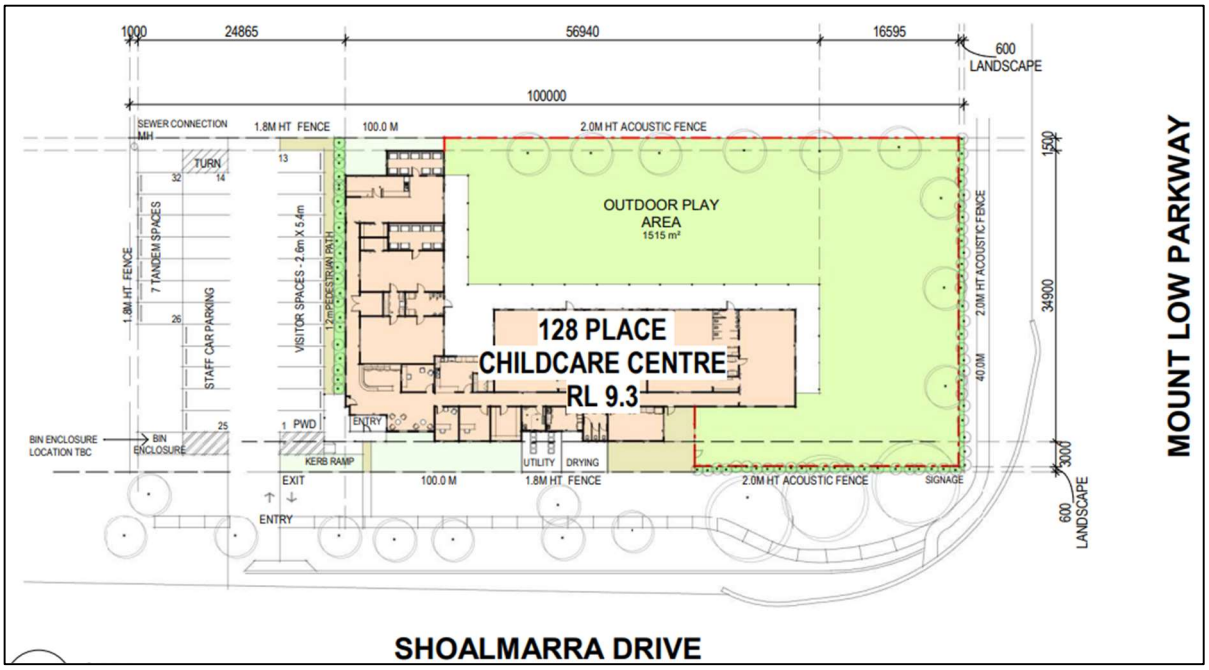
100 Mount Low Parkway, Mount Low – Site Characteristics



82 Mount Low Parkway, Mount Low – Approved Development



100 Mount Low Parkway, Mount Low – Proposed Development



To quantify the existing acoustic environment, unattended noise measurements were conducted at 82 Mount Low Parkway from the 29 May 2023 to 05 June 2023). Noise measurements were conducted in accordance with *AS 1055:2018 Acoustics - Description and measurement of environmental noise*.

The noise logger was calibrated with a sound pressure level of 94.0 dB at 1kHz before the measurements. Calibration drift was found to be within ±0.5 dB and is therefore acceptable.

Equipment	Serial No.	NATA Calibration Date
Rion NL-42 Sound Level Meter	00171476	04/07/2022
Rion NC-73 Field Calibrator	11248297	17/05/2023

Table 2: Equipment

The noise loggers were set to record statistical sound pressure levels LAmin, LA90, LAeq, LA10, LAmax noise descriptors over sampling periods of 1 hour for the entire measurement period.

The microphone heights and GPS locations are presented below in ***Table 3*** as well as a site photograph of the noise logger installation at the monitoring location (see ***Figure 4***).

Monitoring Location	X (1)	Y (1)	Height Above Ground	Microphone Sound Field
Location 1	465207	7873832	1.5m	Free Field

Table 3: Measurement Location

Location of Noise Logger at 82 Mount Low Parkway

Equivalent Location of Noise Logger at 100 Mount Low Parkway

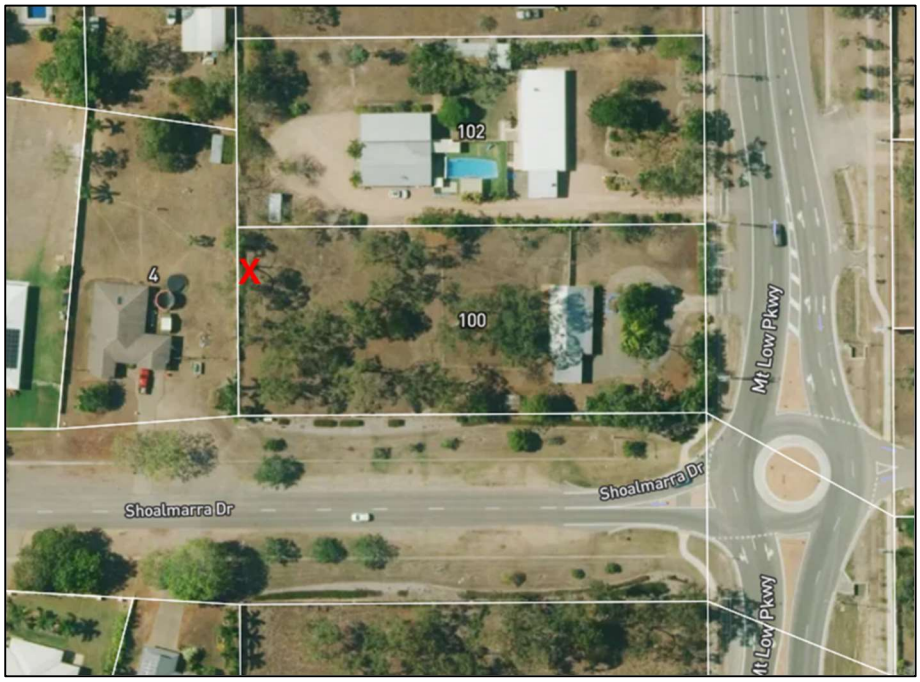


Figure 4: Measurement Location 1

Presented below in **Table 4** are the summarised results of the noise measurements:

Noise Descriptor	Assessment Period	Noise Level in DBA
LA1	Day (07:00 to 18:00)	58
	Evening (18:00 to 22:00)	52
	Night (22:00 to 07:00)	49
LA10	Day (07:00 to 18:00)	52
	Evening (18:00 to 22:00)	48
	Night (22:00 to 07:00)	44
LAeq	Day (07:00 to 18:00)	51
	Evening (18:00 to 22:00)	46
	Night (22:00 to 07:00)	41
Rating Background L	Day (07:00 to 18:00)	45
	Evening (18:00 to 22:00)	40
	Night (22:00 to 07:00)	32

Noise monitoring data sheets for the monitoring period are provided in **Appendix B – Noise Monitoring Data Sheets**.

3.0 POLICY & REGULATORY REQUIREMENTS

In establishing noise criteria for this assessment, the following legislative and regulatory documents were reviewed:

- Environmental Protection Act 1994
- Environmental Protection (Noise) Policy 2019
- Townsville City Plan 2014

3.1 TOWNSVILLE CITY PLAN 2014

Townsville City Plan is the primary planning instrument for development within the Townville Local Government Area. The key section of the Townsville City Plan which relates to this assessment is the planning scheme policy SC6.4.19 Noise and Vibration. The assessment has been conducted in accordance with the Policy requirements.

3.2 ENVIRONMENTAL PROTECTION ACT 1994

Environmental noise control in Queensland is governed under the Environmental Protection Act 1994 (EP Act) and subordinate legislation, which aims to strike a balance between protecting the amenity of SRs and allowing industrial, commercial and development activities to occur in an ecologically sustainable manner.

Under the EP Act, noise is considered a contaminant and noise nuisance is considered environmental harm.

There is a general environmental duty to prevent and minimise environmental harm under the EP Act. The EP Act specifically states:

> *A person must not carry out an activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm (the general environmental duty).*

The Environmental Protection (Noise) Policy 2019 provides a framework as to the prevention and minimisation of environmental harm as it relates to The EP Act.

3.3 ENVIRONMENTAL PROTECTION (NOISE) POLICY 2019

The primary purpose of the Environmental Protection (Noise) Policy is to achieve the overall objective of the Environmental Protection Act in relation to the acoustic environment. This involves the prevention or minimisation of environmental harm.

Environmental harm, which includes environmental nuisance, is the adverse or potential adverse impact on an environmental value. An environmental value is a quality of the environment that is conducive to ecological health or public amenity or safety.

3.3.1 ENVIRONMENTAL VALUES

According to the Environmental Protection (Noise) Policy, environmental values to be enhanced or protected are the qualities of the acoustic environment that are conducive to:

- protecting the health and biodiversity of ecosystems;

- human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to sleep, study and be involved in recreation, including relaxation and conversation; and
- protecting the amenity of the community.

3.3.2 NOISE MANAGEMENT HIERARCHY

The Environmental Protection (Noise) Policy provides a hierarchy for managing noise that affects or may affect an environmental value. The Policy states that to the extent it is reasonable to do so, noise must be dealt with in the following order of preference:

- Firstly—avoid the noise;
- Secondly—minimise the noise, in the following order;
  - firstly—orientate an activity to minimise the noise;
  - secondly—use best available technology to minimise the noise;
- Thirdly—manage the noise.

The Policy also provide quantifiable noise criteria for SRs, which are designed to protect environmental values. This is discussed further below.

3.3.3 ACOUSTIC QUALITY OBJECTIVES

Schedule 1 of the Environmental Protection (Noise) Policy provides Acoustic Quality Objectives for SRs. The relevant Acoustic Quality Objectives have been summarised below in **Table 5**.

Sensitive Receptor	Time of Day	Acoustic Quality Objectives (measured at the receptor) dBA			Environmental Value
		LAeq,adj,1hr	LA10,adj,1hr	LA1,adj,1hr	
Residence (for outdoors)	Daytime and evening	50	55	65	Health and wellbeing
Residence for (indoors)	Daytime and evening	35	40	45	Health and wellbeing
	Night-time	30	35	40	Health and wellbeing, in relation to the ability to sleep

Table 5: Environmental Protection (Noise) Policy – Acoustic Quality Objectives

3.3.4 MAXIMUM RECOMMENDED AMENITY OF NOISE LEVELS FOR ALL SOURCES

As per Section 6.4.19 of the Townsville City Plan, to avoid the potential of nuisance from noise generating activities, the assessment must demonstrate compliance with the Project Noise Trigger Levels reproduced in **Table 6** below.

Receiver	Noise Amenity Area	Time of Day	Maximum Recommended Amenity Noise Level for All Sources LAeq, 15 min
Residence (outdoor)	**Rural** – an area with an acoustical environment that is dominated by natural sounds, having little or no road traffic noise and generally characterised by low background noise levels	Day	50
		Evening	45
		Night	40

3.4 AAAC GUIDELINE FOR CHILD CARE CENTRE ACOUSTIC ASSESSMENT

The Association of Australasian Acoustic Consultants (AAAC) provides baseline noise criteria for outdoor play areas dependent on background noise levels in the area, within the AAAC Guideline for Childcare Centre Acoustic Assessment (V3.0). The criteria are reproduced below in **Table 7**.

Background Noise, LA90	Noise Limit, LAeq, 15min
<40 dBA	45 DBA
>40 DBA	<4 hours of outdoor play = Background + 10 dBA
	>4 hours of outdoor play = Background + 5dBA

Table 7: AAAC Outdoor Play Area Criteria

3.5 SUMMARY OF NOISE GOALS

Table 8 presents the adopted limiting criteria for this assessment. The EPP (Noise) 2019 Acoustic Quality Objectives will be used for assessment of noise generated by general operational noise from the CCC, which include vehicle movements and fixed mechanical plant. Noting the Rural Residential zoning for SRs surrounding the CCC, the maximum recommended outdoor amenity levels provided by Townsville City Council will be used for both the evening and night-time periods. The AAAC guideline noise limits will be utilised to assess noise generated by outdoor play areas.

Noise Source	Compliance Location	Noise Descriptor	Noise limit, dBA		
			Day (7am-6pm)	Evening (6pm-10pm)	Night (10pm-7am)
Fixed mechanical plant & vehicle movements	Residence (for outdoors)	LAeq,adj,1hr	50	45	40
	Residence (for indoors)	LAeq,adj,1hr	35	35	30
Outdoor play areas	Residence (at façade of affected building)	LAeq,15min	50	50	45

Table 8: Adopted Limiting Criteria

Further discussion on the identified SRs in the area, in addition to the existing acoustic environment is discussed below in Section 4.

4.0 NOISE IMPACT ASSESSMENT

Noise prediction was undertaken using computer-aided modelling software SoundPLAN v8.2. SoundPLAN is a well-established, industry-leading noise prediction program, recognised by acoustic consultants, private companies, and government organisations globally.

All noise sources associated with the operations of the childcare centres have been incorporated into the noise prediction model. To predict noise emissions, SoundPLAN was programmed to use the ISO 9613-2:1996 Acoustics - Attenuation of sound during propagation outdoors - Part 2: General methods of calculation prediction methodology.

4.1 NOISE MODELLING EXTENTS

The assessment models the noise sensitive buildings and areas which are adjacent to the boundaries of the proposed development. The model incorporates all terrain within 200 m of the lots and includes all features (i.e. State-controlled roads, railways and buildings).

4.2 TERRAIN

A terrain model based on light detection and ranging (LiDAR) was sourced from the Department of Natural Resources, Mines and Energy (DNRME).

This bald earth digital elevation model (DEM) was created as part of the 'Townsville 2018 Project'. The dataset has a resolution of 1.0 m. The DEM was converted from a raster file format to contour lines using QGIS v3.22. The contour lines were then imported into SoundPLAN as elevation lines, allowing SoundPLAN's triangulation algorithms to generate a digital ground model (DGM).

4.3 BUILDINGS & STRUCTURES

Buildings and structures were identified using a combination of aerial imagery (Queensland Globe & Google Earth) and site visits. The buildings footprints were traced into the noise model from Queensland Government high resolution aerial imagery. Carports and other similar structures with no walls were omitted from the building footprint. Single story buildings were modelled at a height of 4.0 m above natural earth, two-story buildings were modelled at a height of 6.0 m. Auxiliary buildings such as sheds were modelled at 2.5 m.

4.4 GROUND ABSORPTION & VEGETATION

Minimal areas of hard ground were digitised from high-resolution aerial imagery. Local roads were modelled as acoustically 'hard' (i.e. reflective) and the remaining areas were modelled as acoustically 'soft' (i.e. absorbent) throughout.

4.5 NOISE PROTECTION BARRIERS

Noise protection barriers within the development were input into the model as per the architectural drawings displayed in **Appendix D – Design Drawings**. This is a 2.0 m noise barrier surrounding the extents of the Outdoor Play area. No additional noise protection barriers within surrounding the SRs were input into the model.

4.6 NOISE SOURCES

Table 9 below describes the noise source model inputs associated with the activity and includes the overall Sound Power Level (Lw) utilised in the prediction model. Octave band data and the detailed model input for the individual noise source is available in **Appendix C – 1/1 Octave Band – Sound Power Level**.

Activity	Noise descriptor	Lw, dBA	Reference
Vehicle movements	LAeq,adj,1hr	86	AAAC Guideline for Childcare Centre Acoustic Assessment Version 3.0
10 Children – 0 to 2 years of age	LAeq,adj,15min	78	
10 Children – 2 to 3 years of age	LAeq,adj,15min	85	
10 Children – 3 to 5 years of age	LAeq,adj,15min	87	
Air-conditioning condenser unit	LAeq,adj,1hr	80	

Table 9: Sound Power Levels

All above noise sources were input into the noise model, whereby two noise model scenarios were created to assess continuous and variable noise (assessed as LAeq,adj,1hr), as well as outdoor play noise (LAeq,adj,15min) separately.

Further discussion into the selection and use of each of the above noise sources are provided in the below sub-sections.

4.6.1 FIXED MECHANICAL PLANT

Proposed floor plans provided by ELIA Architecture (refer to **Appendix D – Design Drawings**) indicate that fixed mechanical plant will be located within the terrace area, external to the main building's Southern façade (external to the staff room and laundry). To provide indicative noise emissions generated by fixed mechanical plant from the area, two outdoor double-fan condenser units were input into the model within this area as point sources set at 0.5 m from ground. The overall sound power level was set in accordance with guidance provided in the AAAC Guideline for Childcare Centre Acoustic Assessment (refer to **Table 9** above). A spectrum for the noise source was taken from Live It Acoustics' noise measurement database of fixed mechanical plant.

4.6.2 VEHICLE MOVEMENTS

To assess noise emitted by vehicle movement within the development, a moving point source was input into the noise model from the driveway into the carpark. The source follows the driveway through the carpark and represents the typical path a vehicle may take between entry and exit from Shoalmarra Drive. The moving point source was configured to assume:

- Between the hours of 7:00 AM – 9:00 AM and 3:00 PM – 7:00 PM – A maximum of 31 vehicles accessing the development per hour;

- Between the hours of 6:00 AM – 7:00 AM and 9:00 AM – 3:00 PM – A decrease of approximately 50% was modelled (16 vehicles per hour); and
- No vehicles operating in the remaining hours.

This assumption was determined by the number of carpark spaces available on the site and the typical operating hours of the childcare centre, with consideration of peak hours (drop off and pick up times).

4.6.3 CHILDREN – OUTDOOR PLAY

The AAAC Guideline for Childcare Centre Acoustic Assessment provides sound power levels (LAeq,15min dBA) for 10 children playing within the age groups 0 – 2, 2 – 3 and 3 – 5, as shown in **Table 9** above. The guideline also provides an equation to calculate noise levels for more than 10 children within these age ranges, as shown below:

$SWL = 10\ children + 10log\ (n/10)$

Where:

10 children = *SWLs stated in **Table 9***

N = *Number of children*

Based on the design drawings and the equation above, the following inputs have been prepared for the model, as shown below in **Table 10**. It should be noted that the design drawings do not specify the children's age. Therefore, it has been assumed that:

- Children aged 0 – 2 comprise Nursey 1 and Nursery 2 Rooms.
- Children aged 2 – 3 comprise Toddler, Junior Kindy; and
- Children aged 3 – 5 Senior Kindy and Kindergarten

It should be noted that only the children aged 3-5 have been modelled as an area source for a conservative assessment.

Number of children	Age range	Height, m	SWL, dBA
24	0 – 2	0.9	82
44	2 – 3	1.0	91
60	3 – 5	1.0	95

Table 10: Calculated SWL for outdoor play

The noise sources of the children playing have been modelled to be operating for 75% of the time during the hours of 6:00 AM – 7:00 PM.

5.0 RESULTS & DISCUSSION

The predicted noise levels received at the SRs with respect to the type of noise source and established limits, are presented below. Only the loudest point received at the façade of each SR has been displayed below. Noise levels are only shown for the ten nearest SRs to the site, as they are considered to be the worst affected. Should compliance be achieved at these locations, compliance is also expected to be achieved at all other SRs within the wider area due to distance separation and shielding from buildings or structures.

5.1 FIXED MECHANICAL PLANT & VEHICLE MOVEMENTS

Presented in **Table 11** below is the predicted noise levels received at the SRs, due to mechanical plant situated within the ground floor terrace at the southern façade.

Sensitive Receptor	Floor	Façade Direction	Predicted noise levels in dBA			Compliance Day / Evening / Night
			Daytime (7:00AM – 6:00PM),	Evening (6:00PM – 10:00PM)	Night (10:00PM – 7:00AM)	
4 Shoalmarra Drive MOUNT LOW	GF	W	39	35	29	YES / YES / YES
96 Mount Low Parkway MOUNT LOW	GF	S	38	38	37	YES / YES / YES
3 Shoalmarra Drive MOUNT LOW	GF	S	37	35	34	YES / YES / YES
5 Shoalmarra Drive MOUNT LOW	GF	SW	34	32	30	YES / YES / YES
102 Mount Low Parkway MOUNT LOW	GF	N	34	29	23	YES / YES / YES
7 Shoalmarra Drive MOUNT LOW	GF	SW	31	29	28	YES / YES / YES
94 Mount Low Parkway MOUNT LOW	GF	SW	31	28	26	YES / YES / YES
104 Mount Low Parkway MOUNT LOW	GF	N	30	25	19	YES / YES / YES
106 Mount Low Parkway MOUNT LOW	GF	N	30	25	19	YES / YES / YES
Noise limit Residence (Outdoors), LAeq,adj,1hr, dBA			50	45	40	
Noise limit Residence (On façade), LAeq,adj,1hr, dBA			42	42	37	

Table 11: Predicted Noise Levels – Fixed Mechanical Plant & Vehicle Movements

Results of the noise prediction model for mechanical plant and vehicle movements on the site, indicate there are no exceedances of the noise limits.

5.2 OUTDOOR PLAY AREA

The results of the noise prediction model for outdoor play areas are presented below in **Table 12**.

Sensitive Receptor	**Floor**	**Façade Direction**	**Predicted noise levels in dBA**			**Compliance** Day / Evening / Night
			Daytime (7:00AM – 6:00PM),	**Evening (6:00PM – 10:00PM)**	**Night (10:00PM – 7:00AM)**	
102 Mount Low Parkway MOUNT LOW	GF	S	47	44	37	YES / YES / YES
4 Shoalmarra Drive MOUNT LOW	GF	E	40	37	30	YES / YES / YES
101 Mount Low Parkway MOUNT LOW	GF	S	38	35	29	YES / YES / YES
97 Mount Low Parkway MOUNT LOW	GF	N	38	35	28	YES / YES / YES
104 Mount Low Parkway MOUNT LOW	GF	S	36	33	26	YES / YES / YES
99 Mount Low Parkway MOUNT LOW	GF	W	36	33	26	YES / YES / YES
106 Mount Low Parkway MOUNT LOW	GF	S	34	31	25	YES / YES / YES
3 Equardo Road MOUNT LOW	GF	N	34	31	25	YES / YES / YES
108 Mount Low Parkway MOUNT LOW	GF	S	34	31	24	YES / YES / YES
Noise limit Residence (On façade), LAeq,adj,15min, dBA			50	50	45	

Table 12: Predicted Noise Levels – Outdoor Play Area

Results of the noise prediction model indicate that compliance with the noise criteria is expected to be achieved with children noise from outdoor play.

Specification and extents of the barriers are provided in **Appendix D – Design Drawings**.

6.0 RECOMMENDATIONS

It is recommended that the following noise management measures are implemented:

1. Noise barriers should be constructed as per the noise barrier specifications outlined in Appendix D– Design Drawings. All noise barriers should be constructed to have a dry-weight surface density of 12.5 kg/m2 (excluding structural components) and should contain no holes or gaps.

An update to this noise impact assessment should be undertaken if changes are made to the designs that have potential to affect noise generation from the Childcare centre.

7.0 CONCLUSION

An assessment to evaluate the potential noise impacts of the proposed childcare centre development located at 100 Mount Low Parkway, Mount Low QLD 4818 has been undertaken.

The assessment involved identifying nearby sensitive receptors, measuring the existing ambient noise levels near their location. Identifying potential noise emissions, quantifying them and predicting the noise levels at the sensitive receptors using a SoundPLAN noise prediction model. These noise levels were then compared to the noise limits outlined in **Section 3**.

Based on the findings of the assessment, the recommendations outlined in **Section 6** to mitigate any noise impacts should be implemented. Should these recommendations be implemented in full, the proposed development is not expected to produce any noise impacts on the surrounding areas.

Appendix A

Nomenclature

Appendix A – Nomenclature

Term	Description
Acoustic environment	means the part of the environment of an area or place characterised by the total amount of noise that may be experienced there.
Acoustic quality objective	for an area or place, means the maximum level of noise that should be experienced in the acoustic environment of the area or place.
Ambient (or total) noise	Total encompassing sound in each situation at a given time usually composed of sound from many sources near and far.
Assessment background level (ABL)	Assessment Background Level (ABL) is a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels.
Assessment periods	The following time periods are prescribed in the EHP's *Noise Measurement Manual* to be used for long term background noise measurements: 7am to 6pm ('Day'); 6pm to 10pm ('Evening'); and 10pm to 7am ('Night').
Background creep	Background creep occurs when noise levels creep higher and higher over time with the establishment of new development in or near an area.
Background noise level, (LA90,T)	The A-weighted sound pressure level of the residual noise (dB) exceeded for 90 per cent of a given time interval, T, measured using time weighting 'F' and quoted to the nearest whole number of decibels.
Residence	means a building or part of a building used or capable of being used as a residence.
Equivalent continuous A-weighted sound pressure level (LAeq,T)	The value of the A-weighted sound pressure level of a continuous steady sound that within a specified time interval, T, has the same mean-square sound pressure as a sound under consideration whose level varies with time. The equivalent continuous A-weighted sound pressure level is quoted to the nearest whole number of decibels.
Free field	A position where there are no reflecting surfaces, other than the ground, close enough to influence the sound pressure level. Taken as a minimum of 1.2 metres above ground level and 4m from the closest building façade.
Immission	The sound energy received at a receptor point.
Impulsive sound	Sound characterised by brief excursions of sound pressure (acoustic impulses) that significantly exceed the background sound pressure. The duration of a single impulsive sound is usually less than one second.
Sensitive Receptors	An area or place where noise is measured. A list of Sensitive Receptors is defined in *EPP (Noise) 2019* Schedule 1.
Rating background level (RBL)	Rating Background Level (RBL) is the overall single-figure background level representing each assessment period (day/evening/night) over the whole monitoring period (as opposed to over each 24-hour period used for the ABL). The RBL (or minLA90,1hour) is the level used for assessment purposes.
Sleep disturbance	Defined objectively in several different ways ranging from the smallest detectable physiological response to some external stimulus whilst asleep to actual behavioural awakening. Sleep disturbance can also be described subjectively using some appropriate scale after the event. If there are any effects on mood, attitudes or performance of some task the next day, such variables could also be measured, both objectively and subjectively.
Sound pressure level (SPL)	Sound Pressure Level (SPL) in decibels is a logarithmic measure of the effective pressure of a sound relative to a reference level of 20 micro pascals (uPA)
Sound power level (SWL)	Sound Power Level (SWL) in decibels is ten times the logarithm of the ratio of the sound power to a sound power reference level of 1 pico Watt (pW).
Specific noise source	Component of the ambient noise (or total noise) that can be specifically identified by acoustical means and is associated with a specific source.
Steady noise	Noise that gives fluctuations over a range of not more than 3dB on a sound level meter set to frequency weighting 'A' and time weighting 'F.'

Appendix B

Noise Monitoring Data Sheets

Appendix B – Noise Monitoring Data Sheets

Noise Monitoring Data Sheet

Controlled Version 1.3 | 29 Sep 2022

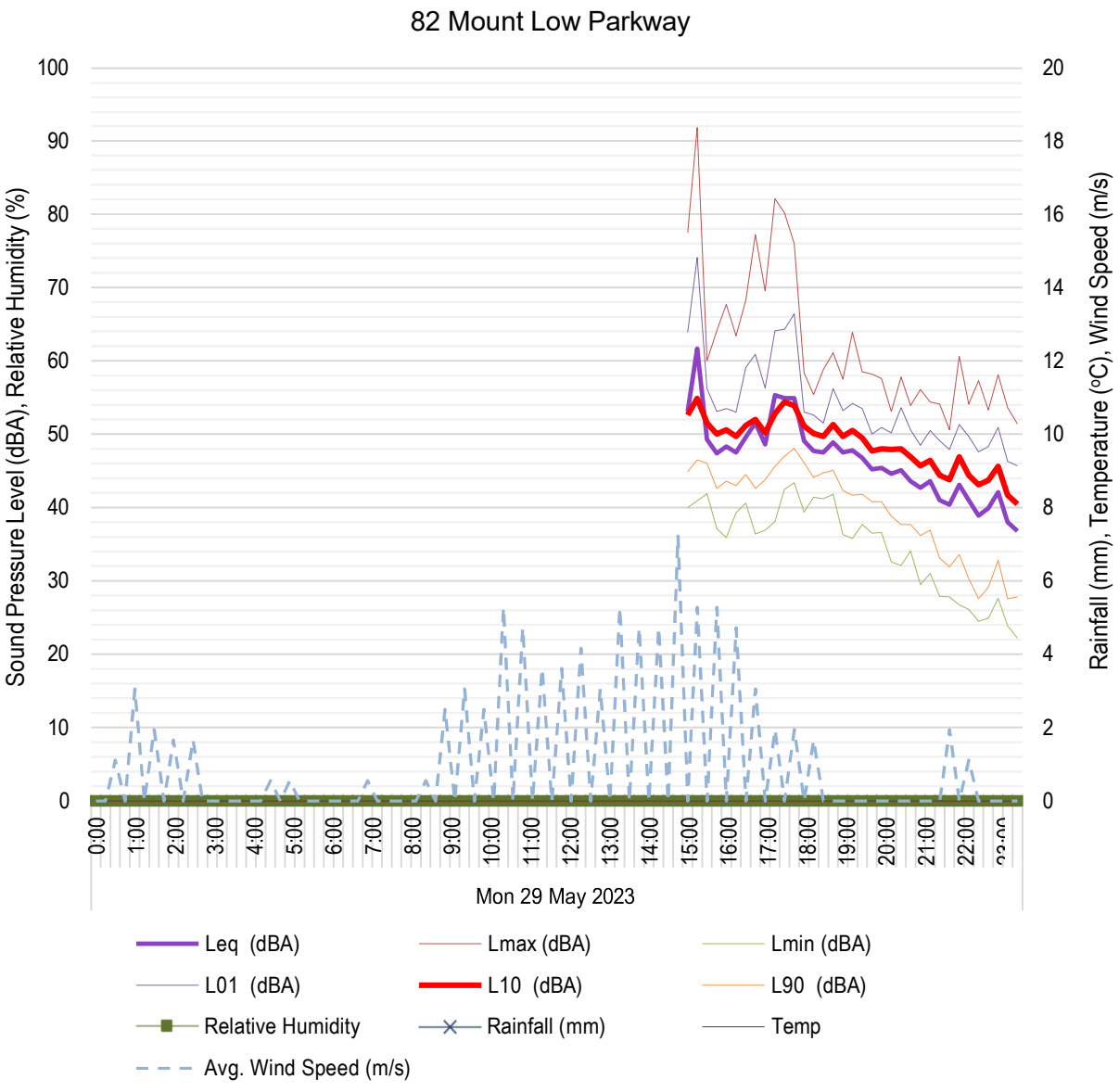
Project Number	1556
District	Townsville
Assessment	Noise Impact Assessment
Address	82 Mount Low Parkway
Lot and RP numbers	Lot 6 on RP738360
Site Contact	Bryan Fitzgerald
Engineer / Scientist	Tristan Shalhoub

Instrument Type	Rion NL-42
Serial Number	171476
Pre Calibration	94
Post Calibration	94
Sample Interval	15 minutes
Measurement No.	1
Microphone Height	1.5
Façade Affected?	Free-Field

LAeq,1hr daytime	50.9 dBA
LAeq,1hr evening	46.3 dBA
LAeq,1hr night	41.4 dBA
LA90,1hr daytime	44.6 dBA
LA90,1hr evening	41.0 dBA
LA90,1hr night	32.4 dBA
Lmax, 1hr daytime	71.8 dBA
Lmax, 1hr evening	58.4 dBA
Lmax, 1hr night	56.7 dBA
LA1,1hr daytime	59.0 dBA
LA1,1hr evening	52.8 dBA
LA1,1hr night	49.9 dBA
LA10,1hr daytime	51.7 dBA
LA10,1hr evening	48.8 dBA
LA10, 1hr night	44.8 dBA

Date	Start Time	Lmax (dBA)	L01 (dBA)	L10 (dBA)	Leq (dBA)	L90 (dBA)	Lmin (dBA)	Rainfall (mm)	Temp	Relative Humidity	Air Pressure	Wind Direction	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Valid
Sun 28 May 2023	22:00														*
	22:15														*
	22:30														*
	22:45														*
	23:00														*
	23:15														*
	23:30														*
	23:45														*
Mon 29 May 2023	0:00								13 °C	88 %	1,015.91 hPa	CALM	0.0		*
	0:15								-	-	-	-	-		*
	0:30								13 °C	88 %	1,015.91 hPa	S	1.1		*
	0:45								-	-	-	-	-		*
	1:00								15 °C	82 %	1,015.91 hPa	SSW	3.1		*
	1:15								-	-	-	-	-		*
	1:30								12 °C	88 %	1,015.91 hPa	S	1.9		*
	1:45								-	-	-	-	-		*
	2:00								12 °C	94 %	1,015.91 hPa	SW	1.7		*
	2:15								-	-	-	-	-		*
	2:30								12 °C	94 %	1,015.91 hPa	NW	1.7		*
	2:45								-	-	-	-	-		*
	3:00								12 °C	94 %	1,015.91 hPa	CALM	0.0		*
	3:15								-	-	-	-	-		*
	3:30								12 °C	88 %	1,015.91 hPa	CALM	0.0		*
	3:45								-	-	-	-	-		*
	4:00								12 °C	94 %	1,015.91 hPa	CALM	0.0		*
	4:15								-	-	-	-	-		*
	4:30								11 °C	94 %	1,015.91 hPa	N	0.6		*
	4:45								-	-	-	-	-		*
	5:00								12 °C	88 %	1,015.91 hPa	N	0.6		*
	5:15								-	-	-	-	-		*
	5:30								12 °C	88 %	1,015.91 hPa	CALM	0.0		*
	5:45								-	-	-	-	-		*
	6:00								11 °C	94 %	1,016.91 hPa	CALM	0.0		*
	6:15								-	-	-	-	-		*
	6:30								11 °C	94 %	1,016.91 hPa	CALM	0.0		*
	6:45								-	-	-	-	-		*
	7:00								11 °C	94 %	1,017.91 hPa	WNW	0.6		*
	7:15								-	-	-	-	-		*
	7:30								11 °C	100 %	1,017.91 hPa	CALM	0.0		*
	7:45								-	-	-	-	-		*
	8:00								13 °C	94 %	1,017.91 hPa	CALM	0.0		*
	8:15								-	-	-	-	-		*
	8:30								16 °C	82 %	1,018.91 hPa	NNW	0.6		*
	8:45								-	-	-	-	-		*
	9:00								22 °C	43 %	1,018.91 hPa	S	2.5		*
	9:15								-	-	-	-	-		*
	9:30								23 °C	38 %	1,018.91 hPa	SSW	3.1		*
	9:45								-	-	-	-	-		*
	10:00								25 °C	29 %	1,018.91 hPa	SE	2.5		*
	10:15								-	-	-	-	-		*
	10:30								25 °C	28 %	1,017.91 hPa	SE	5.3		*
	10:45								-	-	-	-	-		*
	11:00								25 °C	22 %	1,017.91 hPa	S	4.7		*
	11:15								-	-	-	-	-		*
	11:30								25 °C	24 %	1,016.91 hPa	ESE	3.6		*
	11:45								-	-	-	-	-		*
	12:00								25 °C	34 %	1,016.91 hPa	ENE	3.6		*

	12:15								-	-	-	-	-		*
	12:30								25 °C	29 %	1,015.91 hPa	ENE	4.2		*
	12:45								-	-	-	-	-		*
	13:00								26 °C	28 %	1,015.91 hPa	ENE	3.1		*
	13:15								-	-	-	-	-		*
	13:30								26 °C	28 %	1,014.92 hPa	NE	5.3		*
	13:45								-	-	-	-	-		*
	14:00								26 °C	26 %	1,014.92 hPa	NE	4.7		*
	14:15								-	-	-	-	-		*
	14:30								24 °C	44 %	1,014.92 hPa	NE	4.7		*
	14:45								-	-	-	-	-		*
	15:00								24 °C	44 %	1,015.91 hPa	NE	7.2		*
	15:15	77.5	63.9	52.6	53.1	44.9	40.0		-	-	-	-	-		*
	15:30	91.8	74.1	54.9	61.7	46.5	40.9		23 °C	47 %	1,015.91 hPa	NE	5.3		*
	15:45	60.0	56.2	51.5	49.3	46.0	41.9		-	-	-	-	-		*
	16:00	64.1	53.1	50.0	47.4	42.6	37.1		23 °C	47 %	1,015.91 hPa	ENE	5.3		*
	16:15	67.7	53.5	50.6	48.3	43.6	35.9		-	-	-	-	-		*
	16:30	63.4	53.0	49.7	47.5	43.0	39.3		22 °C	50 %	1,015.91 hPa	ENE	4.7		*
	16:45	68.3	59.1	51.2	49.6	44.5	40.6		-	-	-	-	-		*
	17:00	77.2	60.9	52.0	51.5	42.6	36.4		20 °C	56 %	1,016.91 hPa	E	3.1		*
	17:15	69.5	56.3	50.2	48.6	43.8	36.9		-	-	-	-	-		*
	17:30	82.1	64.1	52.8	55.3	45.6	38.1		19 °C	64 %	1,016.91 hPa	WSW	1.9		*
	17:45	80.2	64.3	54.4	54.9	47.0	42.5		-	-	-	-	-		*
	18:00	76.0	66.4	53.9	54.9	48.1	43.4		19 °C	60 %	1,017.91 hPa	S	1.9		*
	18:15	58.4	53.0	51.1	49.1	46.1	39.4		-	-	-	-	-		*
	18:30	55.4	52.6	50.1	47.7	44.1	41.4		17 °C	63 %	1,017.91 hPa	S	1.7		*
	18:45	58.8	51.5	49.7	47.5	44.7	41.2		-	-	-	-	-		*
	19:00	61.1	56.2	51.3	48.9	45.1	41.8		17 °C	68 %	1,017.91 hPa	CALM	0.0		*
	19:15	57.5	53.2	49.7	47.5	42.3	36.3		-	-	-	-	-		*
	19:30	63.9	54.2	50.5	47.8	41.7	35.8		15 °C	77 %	1,017.91 hPa	CALM	0.0		*
	19:45	58.5	53.5	49.5	46.8	41.8	37.7		-	-	-	-	-		*
	20:00	58.2	50.0	47.7	45.2	40.8	36.5		16 °C	77 %	1,018.91 hPa	CALM	0.0		*
	20:15	57.6	50.9	48.0	45.4	40.8	36.6		-	-	-	-	-		*
	20:30	53.1	50.2	47.9	44.6	38.8	32.6		15 °C	82 %	1,018.91 hPa	CALM	0.0		*
	20:45	57.8	53.6	48.0	45.1	37.7	32.1		-	-	-	-	-		*
	21:00	53.9	50.6	46.9	43.6	37.7	34.1		15 °C	88 %	1,018.91 hPa	CALM	0.0		*
	21:15	56.1	48.5	45.7	42.7	36.2	29.5		-	-	-	-	-		*
	21:30	54.4	50.5	46.4	43.6	36.9	31.0		14 °C	88 %	1,018.91 hPa	CALM	0.0		*
	21:45	54.1	49.1	44.4	41.0	33.1	27.9		-	-	-	-	-		*
	22:00	50.6	47.9	43.8	40.4	31.9	27.8		13 °C	88 %	1,018.91 hPa	WNW	1.9		*
	22:15	60.6	51.3	46.9	43.1	33.6	26.7		-	-	-	-	-		*
	22:30	54.1	49.7	44.4	41.0	30.3	26.1		13 °C	88 %	1,018.91 hPa	WNW	1.1		*
	22:45	57.3	47.6	43.1	38.9	27.6	24.5		-	-	-	-	-		*
	23:00	53.3	48.3	43.7	39.9	29.1	24.9		13 °C	82 %	1,018.91 hPa	CALM	0.0		*
	23:15	58.1	50.9	45.6	42.1	32.8	27.6		-	-	-	-	-		*
	23:30	53.6	46.3	41.7	38.0	27.6	23.9		13 °C	82 %	1,018.91 hPa	CALM	0.0		*
	23:45	51.4	45.7	40.5	36.8	27.8	22.2		-	-	-	-	-		*
Tue 30 May 2023	0:00	51.4	46.4	42.4	37.9	26.6	23.2								*
	0:15	54.7	49.9	43.1	38.8	23.9	21.0								*
	0:30	52.3	45.1	40.2	36.1	25.5	20.6								*
	0:45	54.2	49.3	41.8	37.8	23.5	20.1								*
	1:00	53.6	44.7	36.1	33.7	25.5	23.6								*
	1:15	55.8	46.3	39.4	35.1	22.4	19.9								*
	1:30	55.0	45.1	39.7	36.1	27.1	23.0								*
	1:45	54.6	44.7	39.0	35.2	25.1	21.6								*
	2:00	52.9	45.2	37.7	33.9	21.4	19.7								*
	2:15	51.4	46.4	39.7	36.2	24.2	20.6								*
	2:30	50.7	43.3	38.2	33.0	20.3	18.7								*
	2:45	50.7	46.3	40.2	35.8	23.8	21.3								*
	3:00	52.3	47.2	42.6	38.4	24.6	20.5								*
	3:15	50.4	46.6	41.0	37.0	26.3	21.7								*
	3:30	50.7	46.2	42.7	38.0	27.3	24.1								*
	3:45	52.8	49.1	44.3	40.5	30.9	25.4								*
	4:00	53.7	48.9	44.6	40.4	30.9	25.5								*
	4:15	52.6	48.6	45.8	42.7	35.3	29.9								*
	4:30	53.6	51.4	48.8	45.8	39.3	34.5								*
	4:45	60.3	52.9	48.4	45.7	40.2	35.3								*
	5:00	63.2	53.1	48.9	46.7	42.1	35.1								*
	5:15	63.6	57.7	50.5	48.2	42.0	38.0								*
	5:30	65.2	58.4	53.1	51.1	46.9	42.8								*
	5:45	61.9	56.8	53.0	51.0	47.7	41.1								*
	6:00	61.8	56.8	54.0	51.8	48.8	45.0								*
	6:15	68.9	60.4	54.1	52.6	49.0	45.8								*
	6:30	77.3	60.2	56.1	54.7	51.8	48.2								*
	6:45	76.9	62.1	57.1	55.8	52.3	49.4								*


82 Mount Low Parkway
Sound Pressure Level (dBA), Relative Humidity (%)
Rainfall (mm), Temperature (°C), Wind Speed (m/s)
100
90
80
70
60
50
40
30
20
10
0
20
18
16
14
12
10
8
6
4
2
0
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Mon 29 May 2023
Leq (dBA)
Lmax (dBA)
Lmin (dBA)
L01 (dBA)
L10 (dBA)
L90 (dBA)
Relative Humidity
Rainfall (mm)
Temp
Avg. Wind Speed (m/s)

Noise Monitoring Data Sheet

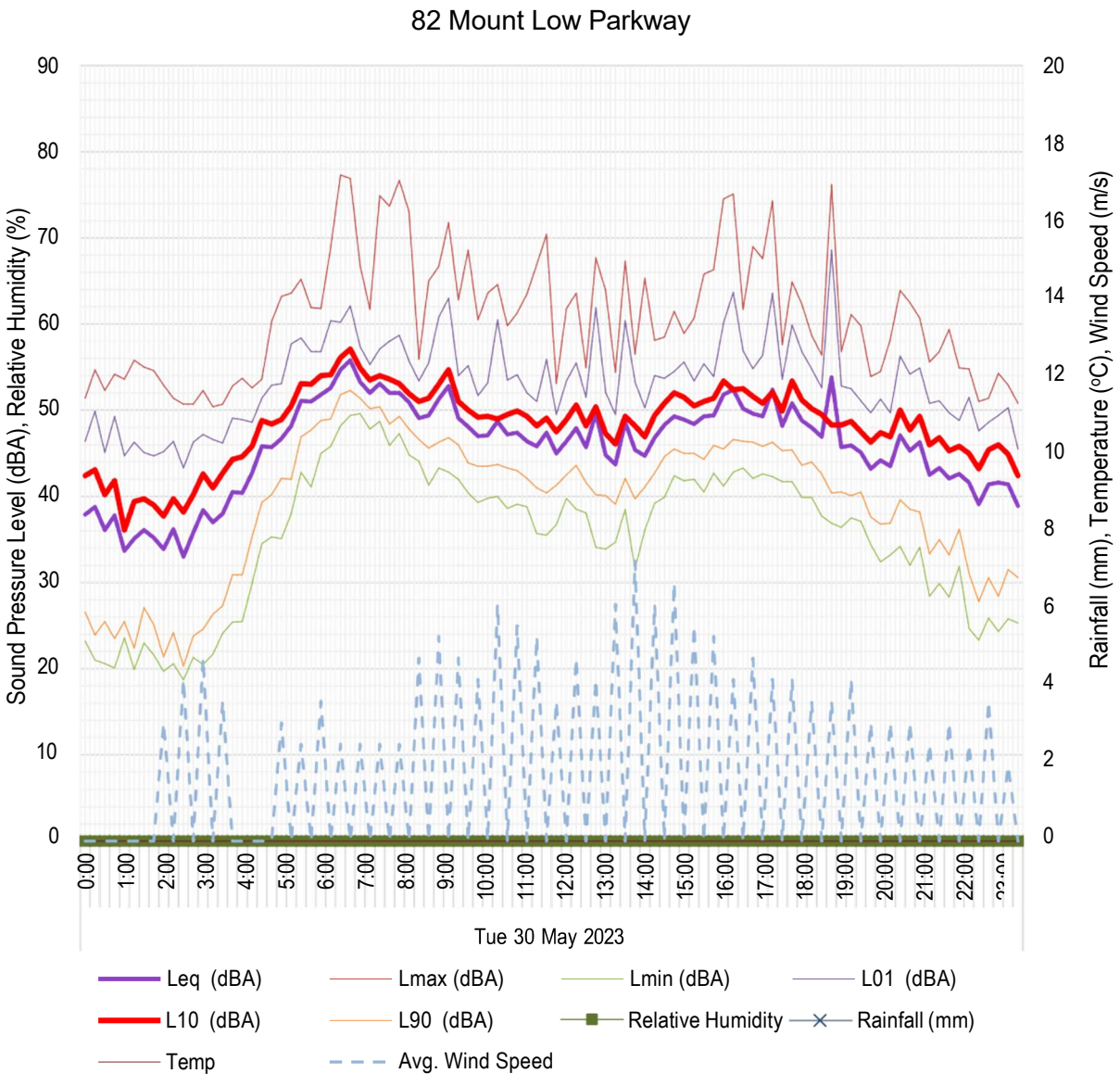
Controlled Version 1.3 | 29 Sep 2022

Project Number	1556	**Instrument Type**	Rion NL-42
District	Townsville	**Serial Number**	171476
Assessment	Noise Impact Assessment	**Pre Calibration**	94
Address	82 Mount Low Parkway	**Post Calibration**	94
Lot and RP numbers	Lot 6 on RP738360	**Sample Interval**	15 minutes
Site Contact	Bryan Fitzgerald	**Measurement No.**	1
Engineer / Scientist	Tristan Shalhoub	**Microphone Height**	1.5
		Façade Affected?	Free-Field

LAeq,1hr daytime	49.1 dBA
LAeq,1hr evening	46.3 dBA
LAeq,1hr night	41.1 dBA
LA90,1hr daytime	44.9 dBA
LA90,1hr evening	39.6 dBA
LA90,1hr night	32.1 dBA
Lmax, 1hr daytime	65.6 dBA
Lmax, 1hr evening	60.1 dBA
Lmax, 1hr night	56.2 dBA
LA1,1hr daytime	55.8 dBA
LA1,1hr evening	54.2 dBA
LA1,1hr night	49.2 dBA
LA10,1hr daytime	50.9 dBA
LA10,1hr evening	48.6 dBA
LA10, 1hr night	44.3 dBA

Date	Start Time	Lmax (dBA)	L01 (dBA)	L10 (dBA)	Leq (dBA)	L90 (dBA)	Lmin (dBA)	Rainfall (mm)	Temp	Relative Humidity	Air Pressure	Wind Direction	Avg. Wind Speed	Max. Wind Speed (m/s)	Valid
Mon 29 May 2023	22:00	50.6	47.9	43.8	40.4	31.9	27.8								*
	22:15	60.6	51.3	46.9	43.1	33.6	26.7								*
	22:30	54.1	49.7	44.4	41.0	30.3	26.1								*
	22:45	57.3	47.6	43.1	38.9	27.6	24.5								*
	23:00	53.3	48.3	43.7	39.9	29.1	24.9								*
	23:15	58.1	50.9	45.6	42.1	32.8	27.6								*
	23:30	53.6	46.3	41.7	38.0	27.6	23.9								*
	23:45	51.4	45.7	40.5	36.8	27.8	22.2								*
Tue 30 May 2023	0:00	51.4	46.4	42.4	37.9	26.6	23.2		13 °C	82 %	1,018.91 hPa	CALM	0.0		*
	0:15	54.7	49.9	43.1	38.8	23.9	21.0		-	-	-	-	-		*
	0:30	52.3	45.1	40.2	36.1	25.5	20.6		13 °C	82 %	1,018.91 hPa	CALM	0.0		*
	0:45	54.2	49.3	41.8	37.8	23.5	20.1		-	-	-	-	-		*
	1:00	53.6	44.7	36.1	33.7	25.5	23.6		13 °C	88 %	1,018.91 hPa	CALM	0.0		*
	1:15	55.8	46.3	39.4	35.1	22.4	19.9		-	-	-	-	-		*
	1:30	55.0	45.1	39.7	36.1	27.1	23.0		13 °C	82 %	1,018.91 hPa	CALM	0.0		*
	1:45	54.6	44.7	39.0	35.2	25.1	21.6		-	-	-	-	-		*
	2:00	52.9	45.2	37.7	33.9	21.4	19.7		15 °C	77 %	1,018.91 hPa	SSW	3.1		*
	2:15	51.4	46.4	39.7	36.2	24.2	20.6		-	-	-	-	-		*
	2:30	50.7	43.3	38.2	33.0	20.3	18.7		14 °C	82 %	1,017.91 hPa	S	4.2		*
	2:45	50.7	46.3	40.2	35.8	23.8	21.3		-	-	-	-	-		*
	3:00	52.3	47.2	42.6	38.4	24.6	20.5		14 °C	77 %	1,017.91 hPa	SSE	4.7		*
	3:15	50.4	46.6	41.0	37.0	26.3	21.7		-	-	-	-	-		*
	3:30	50.7	46.2	42.7	38.0	27.3	24.1		14 °C	77 %	1,017.91 hPa	S	3.6		*
	3:45	52.8	49.1	44.3	40.5	30.9	25.4		-	-	-	-	-		*
	4:00	53.7	48.9	44.6	40.4	30.9	25.5		11 °C	88 %	1,018.91 hPa	CALM	0.0		*
	4:15	52.6	48.6	45.8	42.7	35.3	29.9		-	-	-	-	-		*
	4:30	53.6	51.4	48.8	45.8	39.3	34.5		12 °C	82 %	1,018.91 hPa	CALM	0.0		*
	4:45	60.3	52.9	48.4	45.7	40.2	35.3		-	-	-	-	-		*
	5:00	63.2	53.1	48.9	46.7	42.1	35.1		12 °C	82 %	1,018.91 hPa	SSE	3.1		*
	5:15	63.6	57.7	50.5	48.2	42.0	38.0		-	-	-	-	-		*
	5:30	65.2	58.4	53.1	51.1	46.9	42.8		12 °C	82 %	1,018.91 hPa	SSE	2.5		*
	5:45	61.9	56.8	53.0	51.0	47.7	41.1		-	-	-	-	-		*
	6:00	61.8	56.8	54.0	51.8	48.8	45.0		12 °C	82 %	1,019.91 hPa	S	3.6		*
	6:15	68.9	60.4	54.1	52.6	49.0	45.8		-	-	-	-	-		*
	6:30	77.3	60.2	56.1	54.7	51.8	48.2		13 °C	77 %	1,019.91 hPa	SSE	2.5		*
	6:45	76.9	62.1	57.1	55.8	52.3	49.4		-	-	-	-	-		*
	7:00	66.8	57.4	54.9	53.3	51.4	49.6		16 °C	68 %	1,020.91 hPa	S	2.5		*
	7:15	61.7	55.3	53.5	52.0	50.2	47.8		-	-	-	-	-		*
	7:30	74.9	57.1	54.0	53.1	50.4	48.7		18 °C	56 %	1,020.91 hPa	S	2.5		*
	7:45	73.7	58.0	53.6	52.0	48.4	45.9		-	-	-	-	-		*
	8:00	76.7	58.7	53.1	52.0	49.3	47.3		19 °C	49 %	1,020.91 hPa	S	2.5		*
	8:15	73.0	55.7	51.9	50.9	47.8	44.8		-	-	-	-	-		*
	8:30	55.9	53.4	51.0	49.1	46.6	44.1		22 °C	33 %	1,021.91 hPa	S	4.7		*
	8:45	65.0	55.5	51.4	49.4	45.6	41.3		-	-	-	-	-		*
	9:00	66.7	60.8	53.0	51.3	46.3	43.3		23 °C	31 %	1,021.91 hPa	S	5.3		*
	9:15	71.8	63.0	54.7	52.8	46.8	42.8		-	-	-	-	-		*
	9:30	62.8	54.0	51.0	49.1	46.0	42.0		23 °C	29 %	1,021.91 hPa	SSE	4.7		*
	9:45	68.6	55.2	50.0	48.1	43.9	40.4		-	-	-	-	-		*
	10:00	60.5	51.7	49.2	47.0	43.5	39.3		24 °C	29 %	1,020.91 hPa	SSE	4.2		*
	10:15	63.6	53.2	49.3	47.1	43.5	39.8		-	-	-	-	-		*
	10:30	64.6	60.5	49.0	48.7	43.7	40.0		25 °C	39 %	1,020.91 hPa	ESE	6.1		*
	10:45	59.8	53.5	49.5	47.2	43.3	38.6		-	-	-	-	-		*
	11:00	61.3	54.1	49.9	47.4	43.0	39.1		25 °C	36 %	1,019.91 hPa	ESE	5.6		*
	11:15	63.5	52.0	49.3	46.4	42.1	38.8		-	-	-	-	-		*
	11:30	66.9	51.0	48.2	45.8	41.0	35.7		25 °C	32 %	1,019.91 hPa	S	5.3		*
	11:45	70.4	55.9	49.1	47.4	40.4	35.5		-	-	-	-	-		*
	12:00	53.1	49.5	47.5	45.0	41.3	36.7		26 °C	26 %	1,018.91 hPa	SSE	3.6		*
	12:15	61.8	53.4	48.9	46.4	42.5	39.8		-	-	-	-	-		*
	12:30	63.6	55.5	50.6	47.9	43.6	38.5		25 °C	26 %	1,018.91 hPa	SSE	4.7		*
	12:45	54.9	51.5	48.2	45.7	41.6	38.1		-	-	-	-	-		*

	13:00	67.7	61.9	50.4	49.7	40.2	34.1		26 °C	23 %	1,017.91 hPa	ESE	4.2		*
	13:15	63.9	52.1	47.3	44.8	40.1	33.9		-	-	-	-	-		*
	13:30	54.4	49.5	46.1	43.7	39.1	34.7		26 °C	21 %	1,017.91 hPa	ESE	6.1		*
	13:45	67.3	60.4	49.3	48.6	42.1	38.5		-	-	-	-	-		*
	14:00	56.5	53.3	48.2	45.4	39.7	31.6		25 °C	34 %	1,017.91 hPa	ENE	7.2		*
	14:15	65.3	50.3	46.9	44.7	41.1	36.1		-	-	-	-	-		*
	14:30	58.1	54.0	49.4	46.8	42.7	39.2		25 °C	39 %	1,016.91 hPa	E	6.1		*
	14:45	58.5	53.7	50.8	48.3	44.6	39.9		-	-	-	-	-		*
	15:00	61.5	54.5	52.0	49.3	45.5	42.4		24 °C	50 %	1,017.91 hPa	E	6.7		*
	15:15	58.9	55.6	51.5	48.9	45.0	41.8		-	-	-	-	-		*
	15:30	60.7	53.4	50.5	48.4	45.0	42.0		23 °C	57 %	1,017.91 hPa	E	5.6		*
	15:45	65.8	55.4	51.0	49.3	44.3	40.5		-	-	-	-	-		*
	16:00	66.3	53.9	51.4	49.4	45.9	42.7		22 °C	60 %	1,017.91 hPa	E	5.3		*
	16:15	74.5	60.1	53.4	51.8	45.5	41.2		-	-	-	-	-		*
	16:30	75.1	63.7	52.4	52.4	46.6	42.8		21 °C	60 %	1,017.91 hPa	E	4.2		*
	16:45	61.7	56.9	52.5	50.2	46.4	43.3		-	-	-	-	-		*
	17:00	69.0	54.8	51.6	49.6	46.3	42.1		21 °C	64 %	1,018.91 hPa	E	4.7		*
	17:15	67.6	56.4	50.8	49.3	45.8	42.6		-	-	-	-	-		*
	17:30	74.3	63.6	52.1	52.4	46.3	42.3		21 °C	68 %	1,018.91 hPa	ESE	4.2		*
	17:45	57.6	53.6	49.9	48.2	45.3	41.7		-	-	-	-	-		*
	18:00	64.9	59.9	53.4	50.8	45.4	41.7		21 °C	68 %	1,018.91 hPa	ESE	4.2		*
	18:15	62.3	56.8	51.2	48.8	43.6	39.9		-	-	-	-	-		*
	18:30	58.7	54.8	50.2	48.0	44.0	39.9		20 °C	73 %	1,019.91 hPa	SE	3.6		*
	18:45	56.4	52.6	49.5	46.9	42.6	37.7		-	-	-	-	-		*
	19:00	76.2	68.6	48.3	53.8	40.4	36.9		20 °C	68 %	1,019.91 hPa	SE	3.6		*
	19:15	56.8	52.8	48.3	45.7	40.5	36.4		-	-	-	-	-		*
	19:30	61.1	52.5	48.7	45.9	40.1	37.5		20 °C	68 %	1,019.91 hPa	SE	4.2		*
	19:45	59.8	51.1	47.5	45.1	40.5	37.1		-	-	-	-	-		*
	20:00	53.9	49.7	46.3	43.2	37.6	34.4		18 °C	73 %	1,019.91 hPa	SSE	3.1		*
	20:15	54.5	51.3	47.4	44.2	36.8	32.4		-	-	-	-	-		*
	20:30	58.2	49.7	46.9	43.5	36.9	33.2		18 °C	73 %	1,019.91 hPa	SSE	3.1		*
	20:45	63.9	56.3	50.0	47.1	39.6	34.2		-	-	-	-	-		*
	21:00	62.5	54.2	47.7	45.3	38.5	32.0		18 °C	73 %	1,019.91 hPa	SE	3.1		*
	21:15	60.7	54.9	49.3	46.3	38.2	34.1		-	-	-	-	-		*
	21:30	55.6	50.8	46.0	42.5	33.3	28.4		17 °C	72 %	1,019.91 hPa	SSE	2.5		*
	21:45	56.8	51.1	46.8	43.3	35.0	29.9		-	-	-	-	-		*
	22:00	59.4	49.7	45.3	42.1	33.2	28.3		17 °C	72 %	1,019.91 hPa	S	3.1		*
	22:15	54.9	48.8	45.8	42.6	36.2	31.9		-	-	-	-	-		*
	22:30	54.8	51.5	45.0	41.6	31.1	24.7		13 °C	88 %	1,018.91 hPa	WNW	2.5		*
	22:45	51.0	47.6	43.2	39.1	27.8	23.3		-	-	-	-	-		*
	23:00	51.4	48.6	45.4	41.4	30.6	25.9		13 °C	88 %	1,018.91 hPa	WNW	3.6		*
	23:15	54.3	49.4	46.0	41.6	28.4	24.3		-	-	-	-	-		*
	23:30	52.9	50.3	44.9	41.4	31.5	25.8		14 °C	88 %	1,018.91 hPa	W	1.9		*
	23:45	50.8	45.5	42.4	38.9	30.6	25.3		-	-	-	-	-		*
Wed 31 May 2023	0:00	50.9	47.1	42.2	38.2	28.6	23.5								*
	0:15	52.1	48.4	44.0	39.2	25.3	22.1								*
	0:30	51.4	43.5	38.2	33.6	24.0	21.2								*
	0:45	55.1	48.0	42.3	37.8	24.7	21.8								*
	1:00	55.9	50.1	45.3	40.9	24.4	20.3								*
	1:15	50.0	46.3	41.1	37.0	25.9	21.0								*
	1:30	48.6	45.9	41.9	37.4	24.5	20.9								*
	1:45	53.2	46.8	41.3	36.6	22.8	20.3								*
	2:00	52.7	44.6	37.3	34.2	24.0	20.3								*
	2:15	54.6	49.9	39.6	37.1	23.4	20.5								*
	2:30	55.9	47.0	42.0	37.8	24.1	21.1								*
	2:45	63.1	48.1	40.2	38.3	26.8	23.8								*
	3:00	50.3	44.1	38.8	34.8	25.1	21.8								*
	3:15	50.8	45.0	40.4	36.4	25.8	22.4								*
	3:30	53.5	45.8	40.3	36.8	29.5	25.7								*
	3:45	48.8	43.8	38.9	35.5	26.9	24.0								*
	4:00	55.8	46.8	42.0	38.4	26.6	24.0								*
	4:15	54.6	49.2	44.6	41.5	33.5	28.9								*
	4:30	50.3	48.0	45.4	42.5	37.1	30.3								*
	4:45	69.6	52.1	45.4	45.7	37.8	34.1								*
	5:00	58.8	51.1	47.8	45.0	40.1	35.6								*
	5:15	56.3	51.5	48.4	46.1	42.5	37.4								*
	5:30	62.5	56.6	50.6	48.9	45.5	41.6								*
	5:45	59.8	53.0	50.2	48.2	45.4	42.8								*
	6:00	60.1	53.4	50.6	48.8	46.3	43.1								*
	6:15	74.8	54.7	51.0	49.7	46.7	44.0								*
	6:30	74.9	62.0	54.6	52.8	47.8	44.0								*
	6:45	67.7	57.5	53.4	51.6	49.3	45.8								*


82 Mount Low Parkway
Sound Pressure Level (dBA), Relative Humidity (%)
Rainfall (mm), Temperature (°C), Wind Speed (m/s)
90
80
70
60
50
40
30
20
10
0
20
18
16
14
12
10
8
6
4
2
0
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Tue 30 May 2023
Leq (dBA)
Lmax (dBA)
Lmin (dBA)
L01 (dBA)
L10 (dBA)
L90 (dBA)
Relative Humidity
Rainfall (mm)
Temp
Avg. Wind Speed

Noise Monitoring Data Sheet

Controlled Version 1.3 | 29 Sep 2022

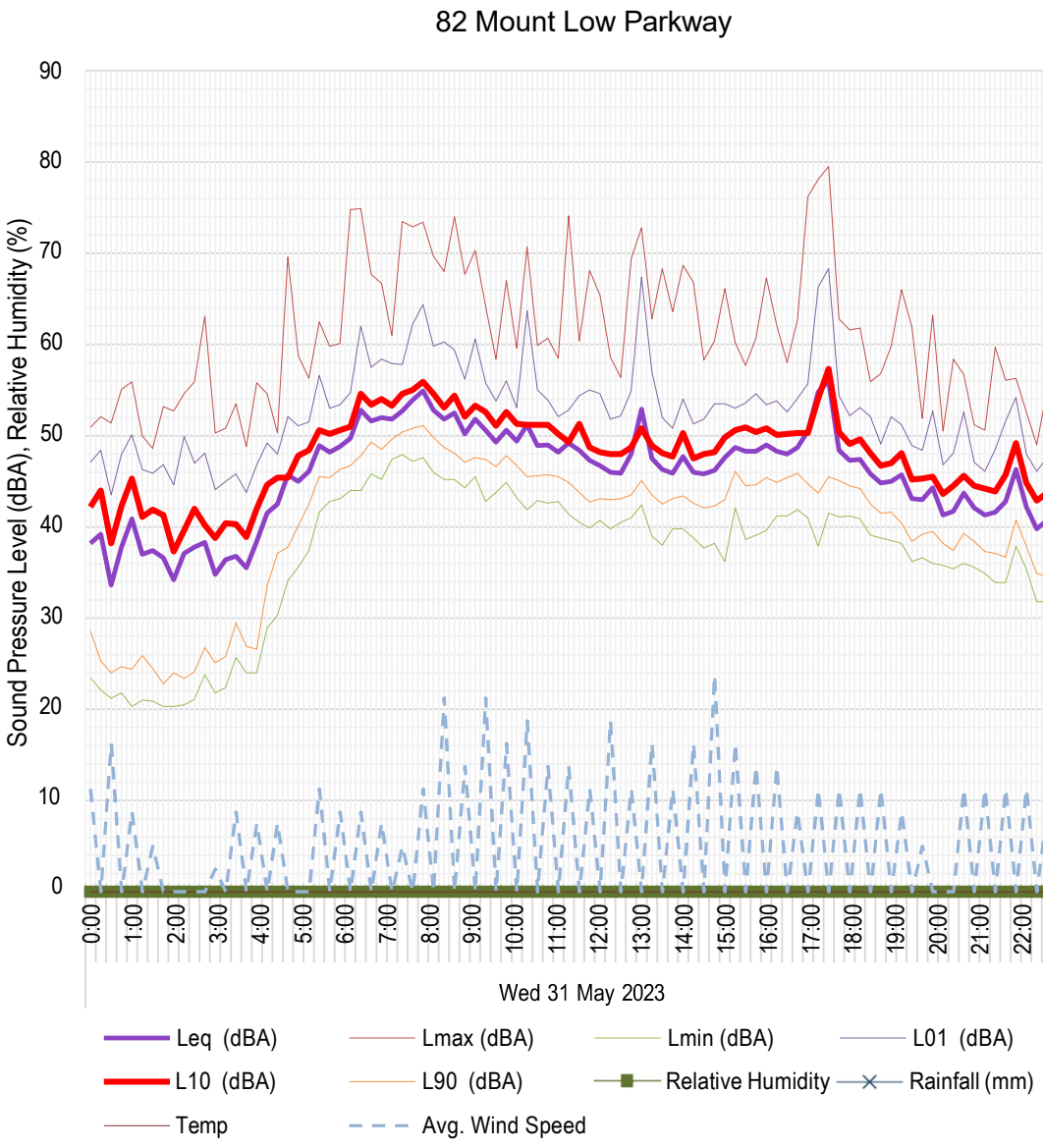
Project Number 1556
District Townsville
Assessment Noise Impact Assessment
Address 82 Mount Low Parkway
Lot and RP numbers Lot 6 on RP738360
Site Contact Bryan Fitzgerald
Engineer / Scientist Tristan Shalhoub

Instrument Type Rion NL-42
Serial Number 171476
Pre Calibration 94
Post Calibration 94
Sample Interval 15 minutes
Measurement No. 1
Microphone Height 1.5
Façade Affected? Free-Field

LAeq,1hr daytime 49.5 dBA
LAeq,1hr evening 44.2 dBA
LAeq,1hr night 41.3 dBA
LA90,1hr daytime 45.6 dBA
LA90,1hr evening 40.3 dBA
LA90,1hr night 36.4 dBA
Lmax, 1hr daytime 65.9 dBA
Lmax, 1hr evening 58.1 dBA
Lmax, 1hr night 55.7 dBA
LA1,1hr daytime 56.2 dBA
LA1,1hr evening 50.2 dBA
LA1,1hr night 49.3 dBA
LA10,1hr daytime 51.1 dBA
LA10,1hr evening 46.3 dBA
LA10, 1hr night 44.1 dBA

Date	Start Time	Lmax (dBA)	L01 (dBA)	L10 (dBA)	Leq (dBA)	L90 (dBA)	Lmin (dBA)	Rainfall (mm)	Temp	Relative Humidity	Air Pressure	Wind Direction	Avg. Wind Speed	Max. Wind Speed (m/s)	Valid
Tue 30 May 2023	22:00	59.4	49.7	45.3	42.1	33.2	28.3								*
	22:15	54.9	48.8	45.8	42.6	36.2	31.9								*
	22:30	54.8	51.5	45.0	41.6	31.1	24.7								*
	22:45	51.0	47.6	43.2	39.1	27.8	23.3								*
	23:00	51.4	48.6	45.4	41.4	30.6	25.9								*
	23:15	54.3	49.4	46.0	41.6	28.4	24.3								*
	23:30	52.9	50.3	44.9	41.4	31.5	25.8								*
	23:45	50.8	45.5	42.4	38.9	30.6	25.3								*
Wed 31 May 2023	0:00	50.9	47.1	42.2	38.2	28.6	23.5		13 °C	88 %	1,018.91 hPa	WNW	2.5		*
	0:15	52.1	48.4	44.0	39.2	25.3	22.1		-	-	-	-	-		*
	0:30	51.4	43.5	38.2	33.6	24.0	21.2		13 °C	88 %	1,018.91 hPa	WNW	3.6		*
	0:45	55.1	48.0	42.3	37.8	24.7	21.8		-	-	-	-	-		*
	1:00	55.9	50.1	45.3	40.9	24.4	20.3		14 °C	88 %	1,018.91 hPa	W	1.9		*
	1:15	50.0	46.3	41.1	37.0	25.9	21.0		-	-	-	-	-		*
	1:30	48.6	45.9	41.9	37.4	24.5	20.9		13 °C	88 %	1,018.91 hPa	NE	1.1		*
	1:45	53.2	46.8	41.3	36.6	22.8	20.3		-	-	-	-	-		*
	2:00	52.7	44.6	37.3	34.2	24.0	20.3		13 °C	88 %	1,017.91 hPa	CALM	0.0		*
	2:15	54.6	49.9	39.6	37.1	23.4	20.5		-	-	-	-	-		*
	2:30	55.9	47.0	42.0	37.8	24.1	21.1		14 °C	82 %	1,017.91 hPa	CALM	0.0		*
	2:45	63.1	48.1	40.2	38.3	26.8	23.8		-	-	-	-	-		*
	3:00	50.3	44.1	38.8	34.8	25.1	21.8		14 °C	88 %	1,017.91 hPa	SSW	0.6		*
	3:15	50.8	45.0	40.4	36.4	25.8	22.4		-	-	-	-	-		*
	3:30	53.5	45.8	40.3	36.8	29.5	25.7		16 °C	77 %	1,017.91 hPa	SW	1.9		*
	3:45	48.8	43.8	38.9	35.5	26.9	24.0		-	-	-	-	-		*
	4:00	55.8	46.8	42.0	38.4	26.6	24.0		17 °C	68 %	1,017.91 hPa	S	1.7		*
	4:15	54.6	49.2	44.6	41.5	33.5	28.9		-	-	-	-	-		*
	4:30	50.3	48.0	45.4	42.5	37.1	30.3		18 °C	64 %	1,017.91 hPa	SSW	1.7		*
	4:45	69.6	52.1	45.4	45.7	37.8	34.1		-	-	-	-	-		*
	5:00	58.8	51.1	47.8	45.0	40.1	35.6		17 °C	77 %	1,017.91 hPa	CALM	0.0		*
	5:15	56.3	51.5	48.4	46.1	42.5	37.4		-	-	-	-	-		*
	5:30	62.5	56.6	50.6	48.9	45.5	41.6		18 °C	64 %	1,017.91 hPa	SSE	2.5		*
	5:45	59.8	53.0	50.2	48.2	45.4	42.8		-	-	-	-	-		*
	6:00	60.1	53.4	50.6	48.8	46.3	43.1		19 °C	56 %	1,017.91 hPa	SSW	1.9		*
	6:15	74.8	54.7	51.0	49.7	46.7	44.0		-	-	-	-	-		*
	6:30	74.9	62.0	54.6	52.8	47.8	44.0		18 °C	64 %	1,017.91 hPa	SSW	1.9		*
	6:45	67.7	57.5	53.4	51.6	49.3	45.8		-	-	-	-	-		*
	7:00	66.7	58.4	54.0	52.0	48.5	45.2		19 °C	56 %	1,018.91 hPa	SSW	1.7		*
	7:15	61.0	57.9	53.3	51.8	49.6	47.4		-	-	-	-	-		*
	7:30	73.5	57.8	54.6	52.7	50.4	47.9		19 °C	56 %	1,018.91 hPa	SSW	1.1		*
	7:45	72.9	62.2	55.0	53.9	50.8	47.2		-	-	-	-	-		*
	8:00	73.4	64.4	55.9	54.9	51.1	47.6		20 °C	64 %	1,018.91 hPa	S	2.5		*
	8:15	69.7	59.8	54.6	52.8	49.8	46.0		-	-	-	-	-		*
	8:30	68.0	60.3	53.1	51.8	48.7	45.2		20 °C	64 %	1,018.91 hPa	SSW	4.7		*
	8:45	74.0	59.4	54.4	52.5	48.1	45.2		-	-	-	-	-		*
	9:00	67.7	56.2	52.1	50.2	47.1	44.3		22 °C	57 %	1,018.91 hPa	S	3.1		*
	9:15	70.3	60.6	53.3	51.8	47.6	45.5		-	-	-	-	-		*
	9:30	64.2	55.8	52.6	50.6	47.4	42.8		22 °C	57 %	1,018.91 hPa	SW	4.7		*
	9:45	58.4	53.8	51.1	49.3	46.6	43.8		-	-	-	-	-		*
	10:00	67.0	56.0	52.6	50.6	47.8	44.9		22 °C	60 %	1,018.91 hPa	SW	3.6		*
	10:15	59.6	53.1	51.3	49.4	46.7	43.2		-	-	-	-	-		*
	10:30	70.7	63.7	51.2	51.2	45.5	41.9		23 °C	57 %	1,017.91 hPa	SSW	4.2		*
	10:45	59.9	55.0	51.2	48.9	45.6	42.9		-	-	-	-	-		*
	11:00	60.7	53.9	51.2	49.0	45.7	42.6		23 °C	65 %	1,017.91 hPa	S	3.1		*
	11:15	58.5	52.1	50.2	48.2	45.5	42.8		-	-	-	-	-		*
	11:30	74.1	52.8	49.3	49.2	44.9	41.4		23 °C	65 %	1,017.91 hPa	SSE	3.1		*
	11:45	60.4	54.4	51.3	48.4	43.8	40.5		-	-	-	-	-		*
	12:00	68.1	55.0	48.7	47.3	42.7	39.9		23 °C	65 %	1,016.91 hPa	SSE	2.5		*
	12:15	65.4	54.6	48.2	46.7	43.1	40.7		-	-	-	-	-		*
	12:30	58.6	51.8	48.0	46.0	43.0	39.8		23 °C	69 %	1,016.91 hPa	SE	4.2		*
	12:45	56.4	52.2	48.0	45.9	43.1	40.5		-	-	-	-	-		*

	13:00	69.4	54.9	48.7	48.0	43.5	41.0		23 °C	69 %	1,015.91 hPa	S	2.5		*
	13:15	72.8	67.4	50.8	52.9	45.1	42.4		-	-	-	-	-		*
	13:30	62.8	57.0	48.9	47.5	43.5	39.0		23 °C	69 %	1,015.91 hPa	SW	3.6		*
	13:45	68.3	52.0	48.1	46.3	42.5	38.0		-	-	-	-	-		*
	14:00	63.6	50.8	47.7	45.9	43.1	39.8		24 °C	65 %	1,015.91 hPa	SSW	2.5		*
	14:15	68.7	54.0	50.3	47.7	43.4	39.8		-	-	-	-	-		*
	14:30	66.8	51.3	47.5	46.0	42.6	38.8		23 °C	73 %	1,015.91 hPa	E	3.6		*
	14:45	58.3	51.8	48.0	45.8	42.1	37.7		-	-	-	-	-		*
	15:00	60.4	53.5	48.2	46.2	42.3	38.2		21 °C	83 %	1,015.91 hPa	ESE	5.3		*
	15:15	66.1	53.5	49.8	47.6	43.0	36.2		-	-	-	-	-		*
	15:30	60.2	53.0	50.6	48.7	46.1	42.1		21 °C	88 %	1,015.91 hPa	ESE	3.6		*
	15:45	57.7	53.6	50.9	48.3	44.5	38.6		-	-	-	-	-		*
	16:00	60.7	54.6	50.4	48.3	44.6	39.1		21 °C	88 %	1,015.91 hPa	SE	3.1		*
	16:15	67.3	53.4	50.8	49.0	45.4	39.6		-	-	-	-	-		*
	16:30	62.1	53.8	50.1	48.3	44.9	41.2		21 °C	88 %	1,015.91 hPa	ESE	3.1		*
	16:45	58.0	52.6	50.2	48.0	45.4	41.2		-	-	-	-	-		*
	17:00	62.7	54.1	50.3	48.7	45.9	41.9		21 °C	88 %	1,015.91 hPa	ESE	1.9		*
	17:15	76.2	55.7	50.3	50.5	44.7	41.0		-	-	-	-	-		*
	17:30	78.1	66.3	54.1	54.8	43.7	37.9		21 °C	88 %	1,015.91 hPa	SE	2.5		*
	17:45	79.5	68.3	57.3	56.0	45.5	41.5		-	-	-	-	-		*
	18:00	62.8	54.4	50.4	48.4	45.1	41.1		21 °C	88 %	1,015.91 hPa	SSE	2.5		*
	18:15	61.6	52.2	49.1	47.3	44.5	41.2		-	-	-	-	-		*
	18:30	61.8	53.1	49.6	47.4	44.2	40.9		21 °C	88 %	1,016.91 hPa	ESE	2.5		*
	18:45	55.9	52.1	48.1	45.8	42.5	39.1		-	-	-	-	-		*
	19:00	56.8	49.1	46.7	44.8	41.5	38.8		21 °C	88 %	1,016.91 hPa	ESE	2.5		*
	19:15	59.8	52.1	47.0	45.0	41.6	38.5		-	-	-	-	-		*
	19:30	66.0	51.2	48.1	45.7	40.4	38.2		21 °C	88 %	1,016.91 hPa	ESE	1.9		*
	19:45	61.9	48.9	45.2	43.1	38.4	36.2		-	-	-	-	-		*
	20:00	51.9	48.4	45.3	43.0	39.2	36.6		21 °C	88 %	1,016.91 hPa	SE	1.1		*
	20:15	63.2	52.7	45.5	44.3	39.5	36.0		-	-	-	-	-		*
	20:30	50.5	46.8	43.6	41.3	38.2	35.8		21 °C	88 %	1,017.91 hPa	CALM	0.0		*
	20:45	58.4	48.1	44.5	41.7	37.4	35.4		-	-	-	-	-		*
	21:00	56.7	52.6	45.6	43.7	39.3	36.0		21 °C	88 %	1,017.91 hPa	E	2.5		*
	21:15	51.2	47.1	44.5	42.1	38.4	35.6		-	-	-	-	-		*
	21:30	50.6	46.1	44.2	41.3	37.3	34.9		21 °C	88 %	1,017.91 hPa	SSE	2.5		*
	21:45	59.7	48.5	43.9	41.6	37.1	33.9		-	-	-	-	-		*
	22:00	56.1	51.6	45.7	42.8	36.7	33.9		21 °C	88 %	1,017.91 hPa	S	2.5		*
	22:15	56.3	54.2	49.2	46.3	40.8	37.9		-	-	-	-	-		*
	22:30	52.6	48.0	44.8	42.2	37.9	35.4		21 °C	88 %	1,017.91 hPa	S	2.5		*
	22:45	49.0	46.1	42.9	39.8	34.9	31.8		-	-	-	-	-		*
	23:00	55.1	47.6	43.7	40.7	34.6	31.8		21 °C	88 %	1,017.91 hPa	SSE	1.9		*
	23:15	68.3	54.7	47.7	44.0	33.6	31.5		-	-	-	-	-		*
	23:30	48.6	44.6	40.9	37.4	32.2	30.4		22 °C	78 %	1,017.91 hPa	ESE	3.6		*
	23:45	56.5	45.7	40.5	37.2	32.2	28.6		-	-	-	-	-		*
Thu 1 Jun 2023	0:00	51.9	46.1	39.4	36.6	32.3	30.8								*
	0:15	49.9	43.0	37.8	35.2	32.1	30.6								*
	0:30	46.9	43.4	38.6	35.5	31.9	30.1								*
	0:45	54.5	46.3	41.7	38.0	32.6	31.1								*
	1:00	48.2	44.0	39.1	35.8	32.4	30.9								*
	1:15	54.0	49.1	39.5	38.0	33.0	31.7								*
	1:30	56.8	46.2	39.4	36.5	32.1	30.1								*
	1:45	50.8	47.6	39.8	37.4	32.4	31.0								*
	2:00	50.5	44.0	37.8	35.8	32.5	30.1								*
	2:15	49.0	43.1	38.5	35.8	33.1	31.6								*
	2:30	50.8	46.2	38.8	36.6	33.1	31.8								*
	2:45	52.6	47.4	40.4	37.7	33.5	31.8								*
	3:00	50.1	44.2	38.8	36.9	34.6	33.0								*
	3:15	50.8	45.8	40.7	37.5	34.2	32.9								*
	3:30	64.5	48.3	43.5	40.0	34.2	32.6								*
	3:45	51.3	46.4	42.1	38.0	33.0	31.3								*
	4:00	54.7	51.4	44.4	41.1	33.3	30.5								*
	4:15	50.6	47.4	44.1	40.7	35.0	32.3								*
	4:30	55.6	49.9	46.2	43.0	36.5	32.8								*
	4:45	56.2	51.2	47.5	44.5	38.4	34.5								*
	5:00	59.4	51.9	47.9	45.4	40.3	35.0								*
	5:15	59.5	52.5	49.5	46.1	39.1	33.1								*
	5:30	67.0	58.6	52.0	50.1	45.2	38.6								*
	5:45	57.1	54.2	52.1	48.9	41.3	34.3								*
	6:00	61.9	56.7	53.3	50.8	47.1	43.3								*
	6:15	69.4	59.3	52.7	51.3	47.2	42.9								*
	6:30	67.1	58.3	53.5	51.5	48.6	46.1								*
	6:45	71.6	59.2	54.1	52.3	48.9	45.3								*


82 Mount Low Parkway
Sound Pressure Level (dBA), Relative Humidity (%)
Rainfall (mm), Temperature (°C), Wind Speed (m/s)
90
80
70
60
50
40
30
20
10
0
20
18
16
14
12
10
8
6
4
2
0
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Wed 31 May 2023
Leq (dBA)
Lmax (dBA)
Lmin (dBA)
L01 (dBA)
L10 (dBA)
L90 (dBA)
Relative Humidity
Rainfall (mm)
Temp
Avg. Wind Speed

Noise Monitoring Data Sheet

Controlled Version 1.3 | 29 Sep 2022

Project Number	1556
District	Townsville
Assessment	Noise Impact Assessment
Address	82 Mount Low Parkway
Lot and RP numbers	Lot 6 on RP738360
Site Contact	Bryan Fitzgerald
Engineer / Scientist	Tristan Shalhoub

Instrument Type	Rion NL-42
Serial Number	171476
Pre Calibration	94
Post Calibration	94
Sample Interval	15 minutes
Measurement No.	1
Microphone Height	1.5
Façade Affected?	Free-Field

LAeq,1hr daytime	52.9 dBA
LAeq,1hr evening	#DIV/0!
LAeq,1hr night	#DIV/0!
LA90,1hr daytime	45.9 dBA
LA90,1hr evening	#DIV/0!
LA90,1hr night	#DIV/0!
Lmax, 1hr daytime	72.7 dBA
Lmax, 1hr evening	#DIV/0!
Lmax, 1hr night	#DIV/0!
LA1,1hr daytime	61.1 dBA
LA1,1hr evening	#DIV/0!
LA1,1hr night	#DIV/0!
LA10,1hr daytime	53.1 dBA
LA10,1hr evening	#DIV/0!
LA10, 1hr night	#DIV/0!

Date	Start Time	Lmax (dBA)	L01 (dBA)	L10 (dBA)	Leq (dBA)	L90 (dBA)	Lmin (dBA)	Rainfall (mm)	Temp	Relative Humidity	Air Pressure	Wind Direction	Avg. Wind Speed	Max. Wind Speed (m/s)	Valid
Wed 31 May 2023	22:00	56.1	51.6	45.7	42.8	36.7	33.9								*
	22:15	56.3	54.2	49.2	46.3	40.8	37.9								*
	22:30	52.6	48.0	44.8	42.2	37.9	35.4								*
	22:45	49.0	46.1	42.9	39.8	34.9	31.8								*
	23:00	55.1	47.6	43.7	40.7	34.6	31.8								*
	23:15	68.3	54.7	47.7	44.0	33.6	31.5								*
	23:30	48.6	44.6	40.9	37.4	32.2	30.4								*
	23:45	56.5	45.7	40.5	37.2	32.2	28.6								*
Thu 1 Jun 2023	0:00	51.9	46.1	39.4	36.6	32.3	30.8		22 °C	73 %	1,017.91 hPa	ESE	4.7		*
	0:15	49.9	43.0	37.8	35.2	32.1	30.6		-	-	-	-	-		*
	0:30	46.9	43.4	38.6	35.5	31.9	30.1		22 °C	73 %	1,017.91 hPa	ESE	5.3		*
	0:45	54.5	46.3	41.7	38.0	32.6	31.1		-	-	-	-	-		*
	1:00	48.2	44.0	39.1	35.8	32.4	30.9		22 °C	73 %	1,017.91 hPa	ESE	6.1		*
	1:15	54.0	49.1	39.5	38.0	33.0	31.7		-	-	-	-	-		*
	1:30	56.8	46.2	39.4	36.5	32.1	30.1		22 °C	73 %	1,016.91 hPa	SE	6.7		*
	1:45	50.8	47.6	39.8	37.4	32.4	31.0		-	-	-	-	-		*
	2:00	50.5	44.0	37.8	35.8	32.5	30.1		22 °C	73 %	1,016.91 hPa	ESE	6.1		*
	2:15	49.0	43.1	38.5	35.8	33.1	31.6		-	-	-	-	-		*
	2:30	50.8	46.2	38.8	36.6	33.1	31.8		22 °C	73 %	1,016.91 hPa	ESE	6.7		*
	2:45	52.6	47.4	40.4	37.7	33.5	31.8		-	-	-	-	-		*
	3:00	50.1	44.2	38.8	36.9	34.6	33.0		22 °C	73 %	1,016.91 hPa	ESE	5.6		*
	3:15	50.8	45.8	40.7	37.5	34.2	32.9		-	-	-	-	-		*
	3:30	64.5	48.3	43.5	40.0	34.2	32.6		21 °C	78 %	1,015.91 hPa	ESE	6.1		*
	3:45	51.3	46.4	42.1	38.0	33.0	31.3		-	-	-	-	-		*
	4:00	54.7	51.4	44.4	41.1	33.3	30.5		21 °C	78 %	1,015.91 hPa	ESE	5.3		*
	4:15	50.6	47.4	44.1	40.7	35.0	32.3		-	-	-	-	-		*
	4:30	55.6	49.9	46.2	43.0	36.5	32.8		21 °C	78 %	1,015.91 hPa	ESE	5.3		*
	4:45	56.2	51.2	47.5	44.5	38.4	34.5		-	-	-	-	-		*
	5:00	59.4	51.9	47.9	45.4	40.3	35.0		21 °C	78 %	1,015.91 hPa	E	5.3		*
	5:15	59.5	52.5	49.5	46.1	39.1	33.1		-	-	-	-	-		*
	5:30	67.0	58.6	52.0	50.1	45.2	38.6		21 °C	78 %	1,015.91 hPa	E	6.1		*
	5:45	57.1	54.2	52.1	48.9	41.3	34.3		-	-	-	-	-		*
	6:00	61.9	56.7	53.3	50.8	47.1	43.3		21 °C	73 %	1,016.91 hPa	ESE	3.6		*
	6:15	69.4	59.3	52.7	51.3	47.2	42.9		-	-	-	-	-		*
	6:30	67.1	58.3	53.5	51.5	48.6	46.1		20 °C	78 %	1,016.91 hPa	SSE	3.6		*
	6:45	71.6	59.2	54.1	52.3	48.9	45.3		-	-	-	-	-		*
	7:00	70.5	58.9	53.6	52.0	49.1	46.8		20 °C	73 %	1,016.91 hPa	SE	1.7		*
	7:15	67.5	60.7	53.4	51.9	48.6	46.4		-	-	-	-	-		*
	7:30	71.9	56.9	52.8	51.9	49.2	46.3		19 °C	78 %	1,016.91 hPa	SW	1.9		*
	7:45	71.7	56.1	52.5	51.0	48.8	45.9		-	-	-	-	-		*
	8:00	65.9	55.3	51.4	50.0	47.4	45.1		20 °C	78 %	1,017.91 hPa	SW	2.5		*
	8:15	69.5	59.5	52.7	51.0	47.1	44.2		-	-	-	-	-		*
	8:30	66.6	54.1	50.0	48.5	45.9	42.9		20 °C	78 %	1,017.91 hPa	SW	0.6		*
	8:45	71.2	65.2	55.3	53.6	45.9	42.9		-	-	-	-	-		*
	9:00	71.4	61.5	52.2	50.5	44.0	40.7		22 °C	73 %	1,017.91 hPa	SSW	1.1		*
	9:15	84.5	61.6	55.1	56.3	43.3	39.8		-	-	-	-	-		*
	9:30	83.7	63.1	51.7	56.7	42.7	39.3		25 °C	61 %	1,018.91 hPa	ESE	4.2		*
	9:45	64.7	61.0	53.6	50.5	42.5	39.0		-	-	-	-	-		*
	10:00	68.8	60.9	51.2	50.1	43.3	40.4		25 °C	61 %	1,018.91 hPa	E	6.1		*
	10:15	70.9	63.1	56.7	52.8	44.4	41.0		-	-	-	-	-		*
	10:30	63.3	59.3	51.3	49.1	42.9	39.9		26 °C	57 %	1,017.91 hPa	E	6.1		*
	10:45	87.9	78.9	53.0	63.6	43.0	40.5		-	-	-	-	-		*
	11:00	72.1	62.5	51.2	50.9	43.2	39.6		26 °C	57 %	1,017.91 hPa	ESE	6.1		*
	11:15														*
	11:30														*
	11:45														*
	12:00														*
	12:15														*

	12:30														*
	12:45														*
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	2:30														*
	2:45														*
	3:00														*
Fri 2 Jun 2023	3:15														*
	3:30														*
	3:45														*
	4:00														*
	4:15														*
	4:30														*
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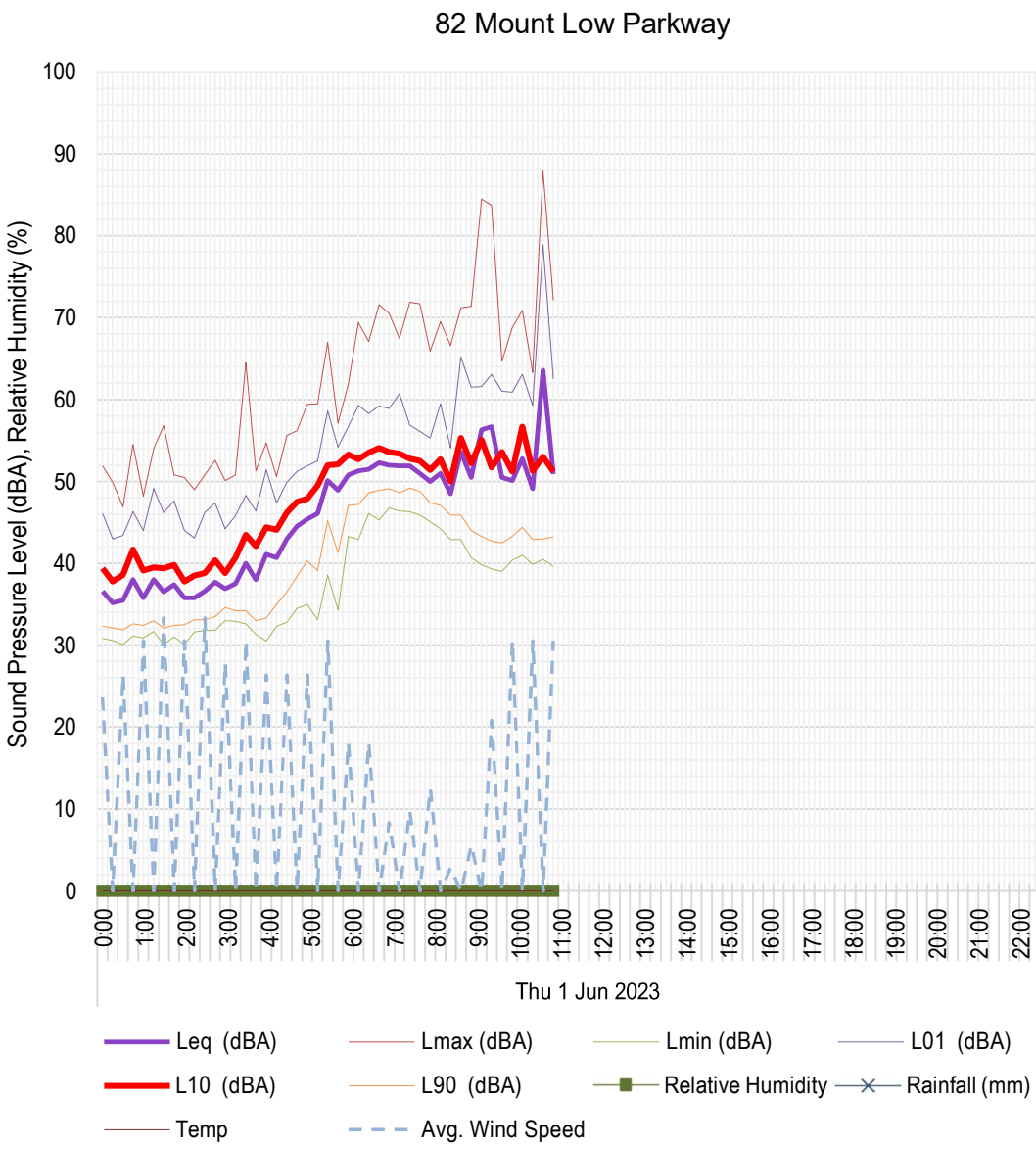
	6:45														*


82 Mount Low Parkway
Sound Pressure Level (dBA), Relative Humidity (%)
Rainfall (mm), Temperature (°C), Wind Speed (m/s)
100
90
80
70
60
50
40
30
20
10
0
20
18
16
14
12
10
8
6
4
2
0
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
Thu 1 Jun 2023
Leq (dBA)
Lmax (dBA)
Lmin (dBA)
L01 (dBA)
L10 (dBA)
L90 (dBA)
Relative Humidity
Rainfall (mm)
Temp
Avg. Wind Speed

Appendix C

1/1 Octave Band – Sound Power Levels

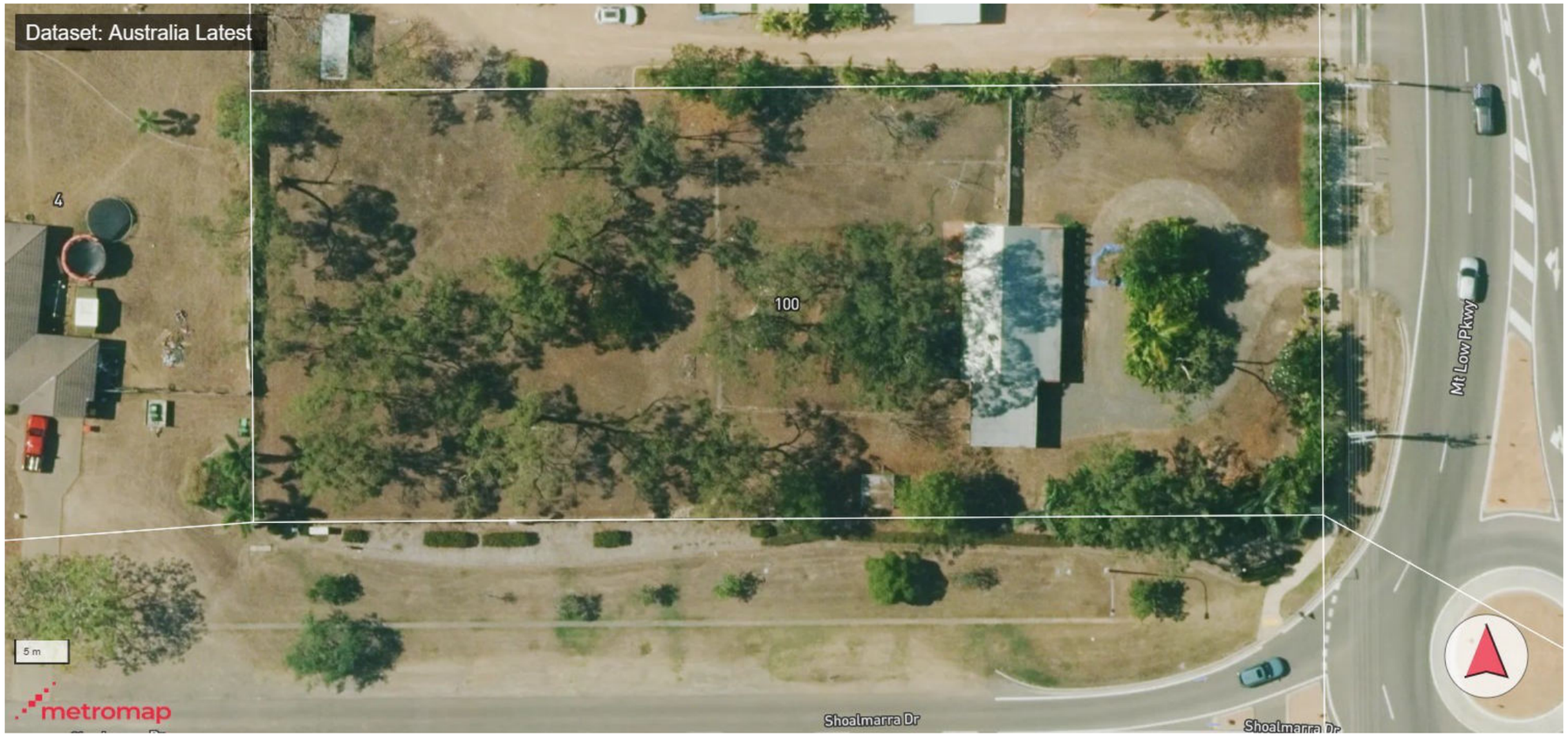
Appendix C – 1/1 Octave Band – Sound Power Levels

Mount Low impact assessment
EmisX.abs - SoundPLAN Emission Library

No.	Element name	Unit	16 Hz	31 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz	16k Hz	Sum
1	Outdoor Play 0-2	dB(A)/ Lw/unit			27.8	43.9	57.4	68.8	74.0	72.2	68.0	62.9		77.6
2	Outdoor Play 2-3	dB(A)/ Lw/unit			34.8	50.9	64.4	75.8	81.0	79.2	75.0	68.9		84.6
3	Outdoor Play 3-5	dB(A)/ Lw/unit			37.8	53.9	66.4	77.8	83.0	81.2	77.0	70.9		86.6
4	Air-conditioning units (taken from project #1173d1-b)	dB(A)/ Lw/unit			60.8	63.9	64.4	68.8	73.0	70.2	63.0	51.9		76.7
5	Daikin outdoor unit (RZQ180MY1) - #1544	dB(A)/ Lw/unit	-9.9 -3.5 3.3	11.0 15.6 25.3	38.8 32.4 36.7	42.9 44.2 50.9	52.9 57.8 56.6	59.5 59.8 58.9	58.3 56.9 56.3	55.3 54.1 53.6	52.8 50.5 48.1	45.3 41.8 37.1	32.3 33.1 17.8	68.4
6	Car, driving on asphalt < 30 km/h	dB(A)/ Lw/m, m²			28.6	32.6	36.6	39.6	42.6	40.6	35.6	30.6		47.0

Appendix D

Design Drawings



RPD

LOT 15 on RP739317
Area 4000m^2

Cnr Mt Low Parkway and Shoalmarra Drive

MOUNT LOW
TOWNSVILLE QLD

100 Mount Low Parkway

PROPOSAL

NEW 128 PLACE CHILDCARE CENTRE

AREAS

CHILDCARE CENTRE - GFA 940m^2

VERANDAH AREAS - 207 m^2

OUTDOOR PLAY - 1555 m^2 (13.7m^2 / CHILD)

CARPARKING

PARKING REQUIRED 1/10 = 12

PLUS 1/FTE STAFF = 19

TOTAL REQUIRED = 32 (incl 1 PWD)

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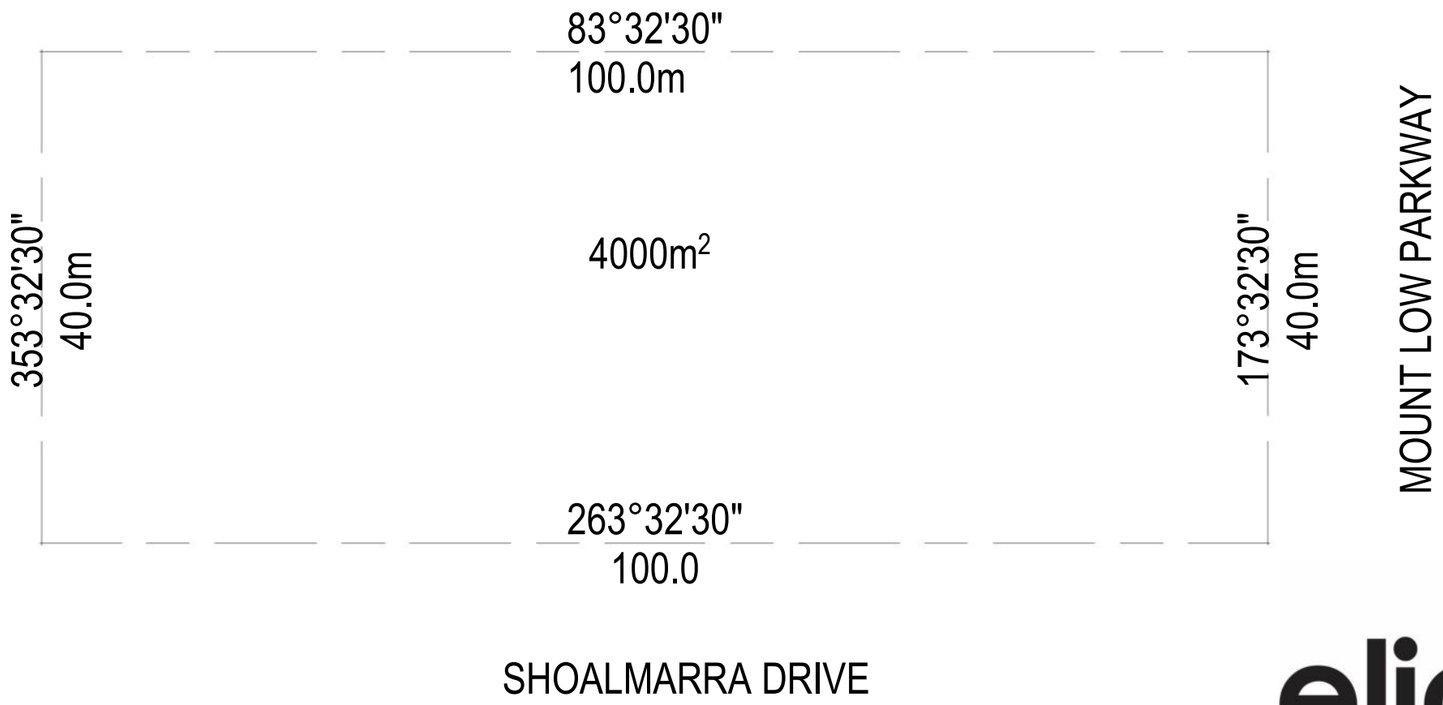

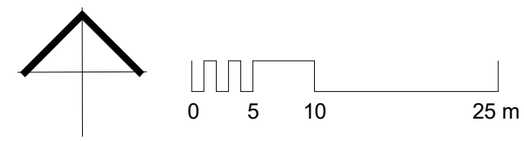

elia architecture

MOUNT LOW NORTH CHILDCARE CENTRE **SD0-00 A**

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

EXISTING SITE PLAN

B240012
1 : 500 @ A3
03/27/24

109 Herries Street, PO Box 547, Toowoomba 4350
P: 07 4632 0200, F: 07 4638 8044, E: tmba@elia.com.au

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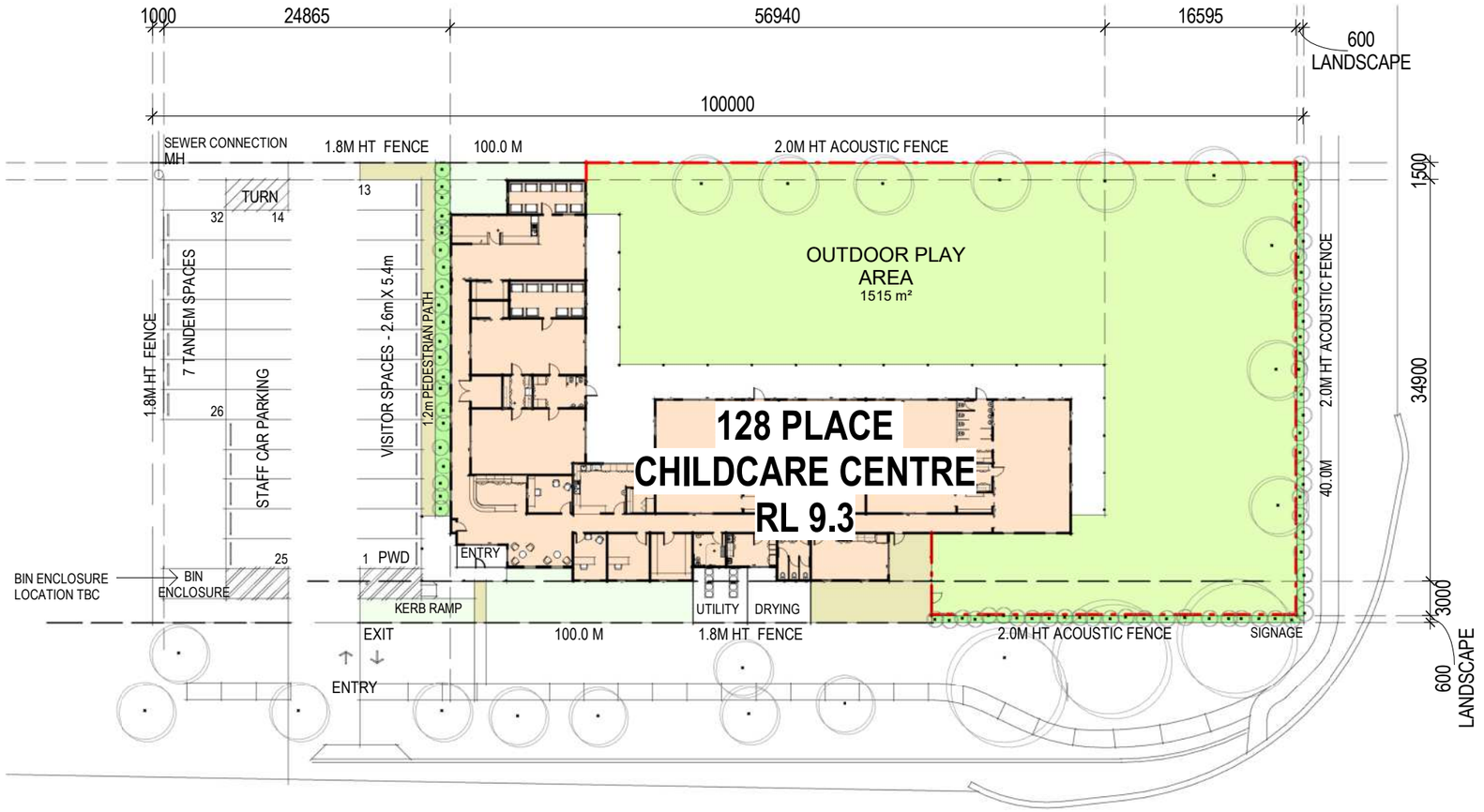

SHOALMARRA DRIVE

1 SITE PLAN
1 : 500

0 5 10 25 m

MOUNT LOW PARKWAY

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Rural Residential

SITE AREA
4000 m²

LOCAL AUTHORITY
TOWNSVILLE CITY COUNCIL

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NEW 128 PLACE CHILDCARE CENTRE

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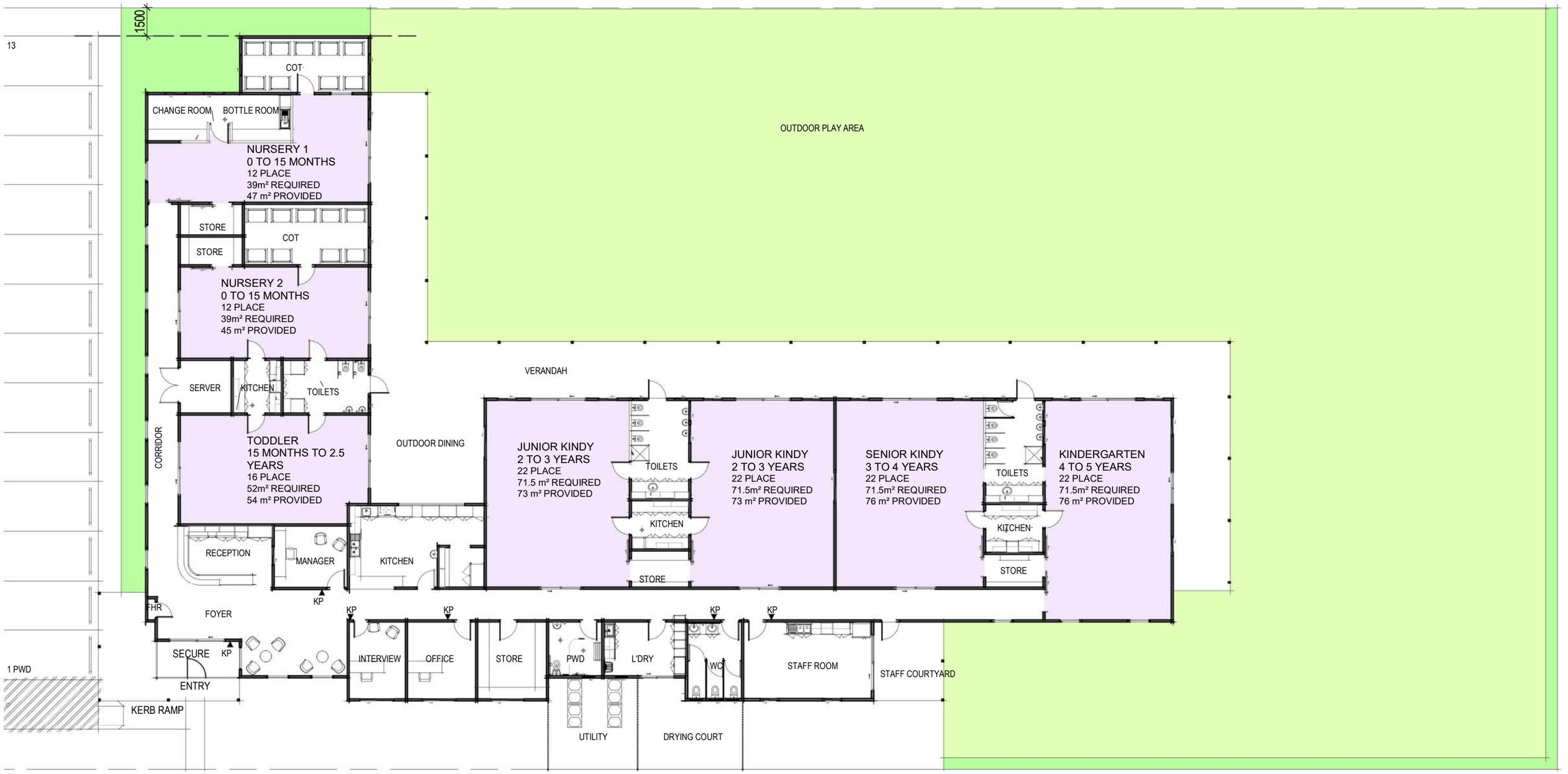

1 GROUND FLOOR PLAN
1 : 200

0 5 10 m

elia architecture

MOUNT LOW NORTH CHILDCARE CENTRE

SD1-01 A

For ML Parkway Pty Ltd
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GROUND FLOOR PLAN

B240012
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21/11/23

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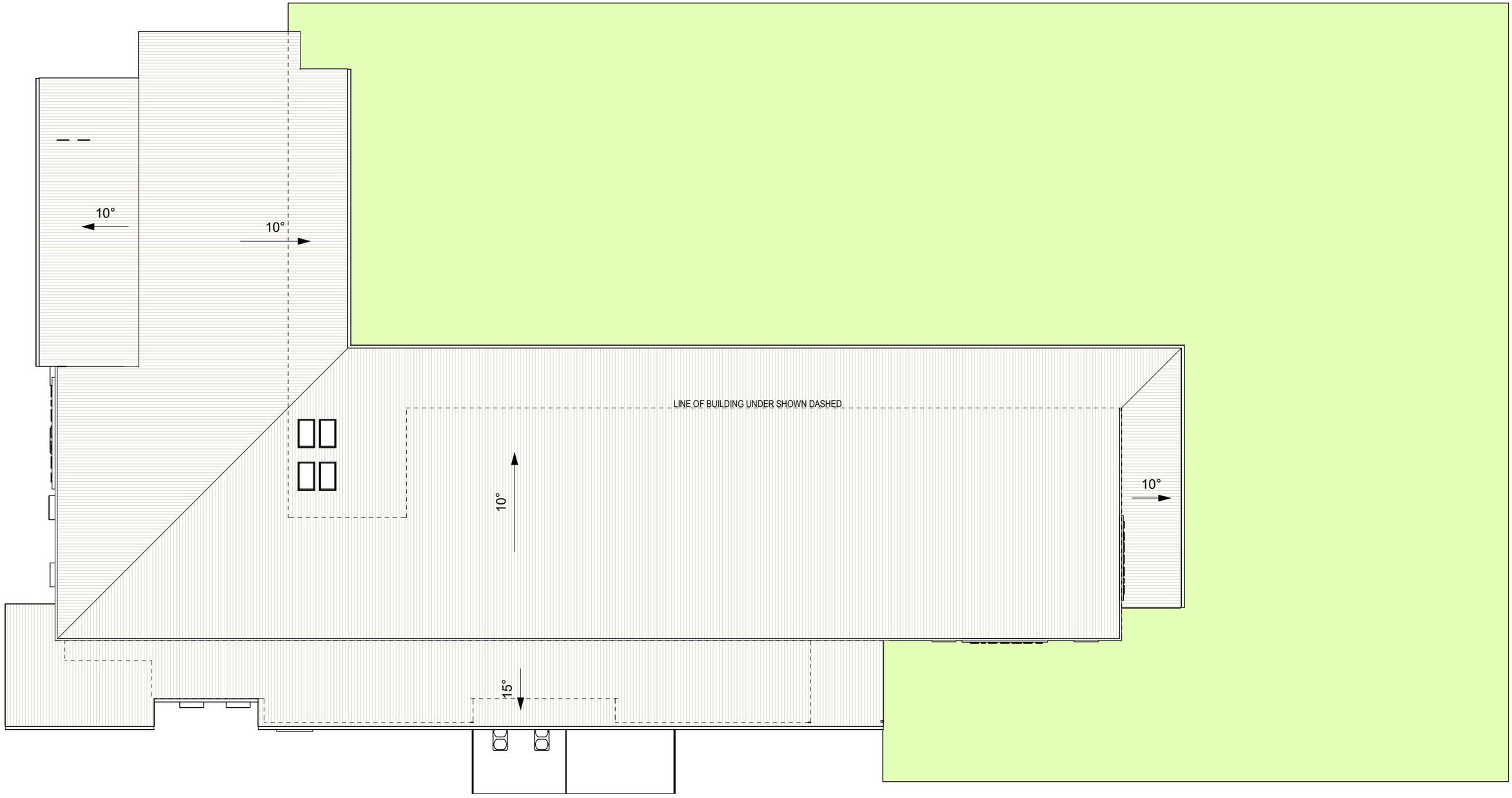

1 ROOF PLAN
1 : 200

0 5 10 m

MOUNT LOW NORTH CHILDCARE CENTRE

SD1-03 A

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

ROOF PLAN

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07/13/18

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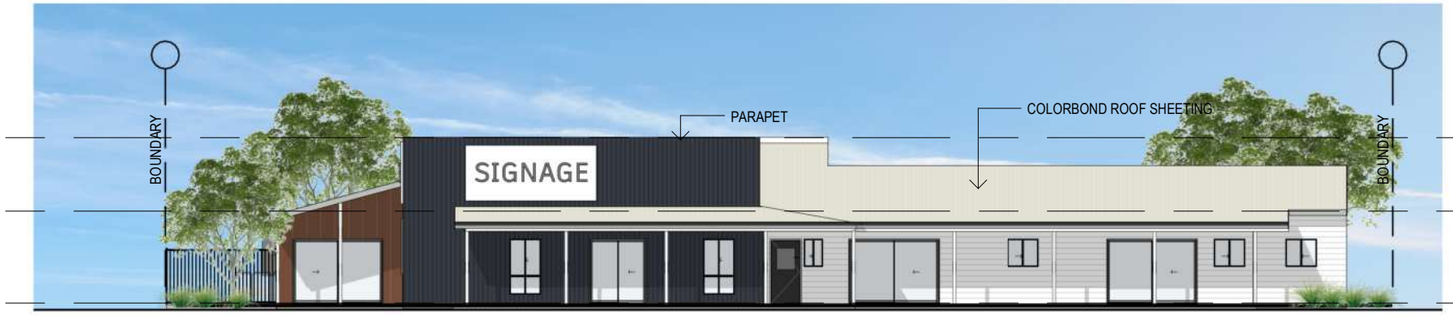
WEST ELEVATION

NORTH ELEVATION



EAST ELEVATION

SOUTH ELEVATION

elia architecture

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SD3-01 A

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Your ref:
Our ref: BF:NK
Reply to: Bryan Fitzgerald
Email: admin@parmacproperty.com.au

Suite 1 & 2
32 Park Road
Milton Qld 4064

PO Box 1151
Milton Qld 4064

Ph: 07 3254 2200
E: admin@parmac
property.com.au

3 April 2024

STRICTLY PRIVATE AND CONFIDENTIAL
To the Assessment Manager
Townsville City Council

Submitted with Development Application

Dear Sir or Madam

Development Application for MCU – Childcare Centre
Property: 100 Mount Low Parkway, Mount Low Qld 4818

This letter is to certify that Parmac Property Investments Pty Ltd ACN 626 744 603 has appointed **ML Parkway Pty Ltd ACN 664 118 209** to make and prosecute the abovementioned application in relation to the following property:

- 100 Mount Low Parkway, Mount Low Qld 4818 – described as Lot 15 on RP 739317 contained in Title Reference 21189104).

Yours sincerely,

Bryan Fitzgerald
Director
PARMAC PROPERTY INVESTMENTS PTY LTD
ACN 626 744 603

Traffic Impact Assessment

DEVELOPMENT PERMIT FOR A

MATERIAL CHANGE OF USE

Townsville City Council | Mount Low

Material Change of Use – Child Care Centre

100 Mount Low Parkway, Mount Low

Lot 5 RP 739317

April 2024

Ref: MLN - 04/27

Table of Contents

1.0 INTRODUCTION

ML Parkway Pty Ltd is submitting a 'Material Change of Use' (MCU) development application for a single-storey, 128-place childcare centre located at 100 Mount Low Parkway, Mount Low QLD 4818.

This investigation will assess the impact of any traffic associated components of the development.

2.0 THE PROPOSED DEVELOPMENT

2.1 DEVELOPMENT PROFILE

The proposed development includes a single-storey childcare centre with an on-grade parking area to the rear. The proposed childcare centre is to cater up to 128 children at any one time, and up to 19 staff to assist with operations.

The development plans, prepared by **ELIA Architecture**, can be found in **Appendix A**.

2.2 PARKING

The development plan includes 32 parking spaces on-grade, inclusive of a PWD space. In addition to the above, a turnaround space has been provided to the rear of the development to allow for vehicles to exit where the parking is full.

Further details regarding the proposed car parking spaces provisions is included in **Section 4**.

2.3 ACCESS

The development plan includes a 6.2m wide Category 2 access from Shoalmarra Drive. This access will accommodate all vehicles in an all-movements manner.

Further details regarding the proposed access arrangements is included in **Section 5**.

2.4 SERVICING

Kerbside collection is proposed for the development, with no specifications for servicing on site. It is assumed that Vans will utilise the development parking spaces.

Further details regarding the proposed servicing arrangements are included in **Section 6**.

3.0 SITE TRAVEL ENVIRONMENT

3.1 SITE LOCATION

The site is located at the corner of Shooalmarra Drive and Mount Low Parkway, as shown in **Figure 3.1** and **Figure 3.2**. The site has road frontages to both of these roads and is currently occupied by a single detached dwelling. The property description for the site is Lot 15 on RP 739317.

Key site characteristics from a planning perspective include: 4,000sqm site area and Rural Residential zoning.

Figure 3.1 Site Location – Surrounding Context

Figure 3.2: Site Location – Immediate Context

3.2 ACTIVE TRANSPORT FACILITIES & SERVICES

3.2.1 PUBLIC TRANSPORT

Bus routes run along Mount Low Parkway in the immediate vicinity of the site, with stops to both the north and south servicing route 233. This service runs between Aitkenvale and Bushland Beach, with the southbound route running at a 1–2-hour frequency in the AM and northbound at the same frequency in the PM. No train facilities are within the typical walking distance of 1km.

3.2.2 PEDESTRIANS

Formal pedestrian footpaths are located on both sides of Mount Low Parkway. No formal pathways are provided on Shoalmarra Drive, with a grass verge provided on both sides. A pedestrian refuge is provided to the south of the intersection of Mount Low Parkway / Shoalmarra Drive, allowing for informal crossing of Mount Low Parkway. The overall walkability and active transport options for visitors to the site are of a moderate level and allow for ease of access for these user types.

3.3 THE ROAD NETWORK

3.3.1 ROAD HIERARCHY

The hierarchy and characteristics of roads in the immediate vicinity of the site are shown in **Table 3.1** below.

Road	Speed Limit	Road Configuration			Classification
		Reserve Width	Carriageway Width	Lane Configuration	
Shoalmarra Drive	50km/h	40m	~10m	2 traffic lanes	Local
Mount Low Parkway	70km/h	40m	10.5m	2 traffic lanes plus parking lanes on both sides	Arterial

Table 3.1: Local Road Hierarchy

4.0 PARKING ARRANGEMENTS

4.1 CAR PARKING SUPPLY

The car parking supply requirements for the proposed development land use has been determined in line with *SC6.10.2.1 Parking rate planning scheme policy*. **Table 4.1** provides a summary of the parking supply requirements in line with the Townsville Planning Scheme and the proposed provisions for the development scheme.

Land Use/Component	Requirement	Extent	Requirement	Provision
Childcare Centre (Staff)	1 space per eft employee based on the maximum number of employees on the premises at any one time	19 staff	19	32 spaces
Childcare Centre (Visitors)	1 space per 6 approved places for children	128 children	22	
Total			**41 spaces**	**31 spaces**

Table 4.1: Car Parking Supply Requirement

As seen in **Table 4.1**, the development scheme proposes a total of 32 car parking spaces which is a performance solution on the parking provision noted above.

This performance solution is deemed acceptable given the typical parking provisions of such a development throughout other councils of relevance are typically provided at a rate of 1 space per 10 approved places for children. This parking rate is consistent with with childcare centre developments, given the propensity of children to be absent and the staggering of times attending the development.

On this basis, the car parking supply is considered acceptable.

4.2 PWD Parking

The *Building Code of Australia* indicates the following requirements for PWD parking:

- A provision of 1 PWD space for every 50 'ordinary' spaces (with a minimum of 1 space; and
- PWD spaces are provided as close as possible to the main building entrance.

Based on 32 spaces, a minimum of 1 PWD space is therefore required. The development plan includes allowance for a PWD parking space located in close proximity to the building entrance.

4.3 PARKING LAYOUT

Table 4.3 identifies the characteristics of the proposed parking layouts with respect to the TCC and therefore *AS2890.1* design provisions.

Design Aspect	*AS2890.1 Provision*	Proposed Provision	Compliance
Car Parking			
Parking space length: • Standard space (Class 3) • PWD Space (Class 5)	 • 5.4m (min) • 5.4m (min)	 • 5.4m (min) • 5.4m (min	 • Compliant • Compliant
Parking space width: • Staff space (Class 1)	• 2.5m (min) • 2.6m (min) • 2.4m + 2.4m 'Shared Area'	• 2.5m (min) • 2.6m (min) • 2.4m + 2.4m 'Shared Area'	• Compliant • Compliant • Compliant
Aisle Width: • Parking aisle	• 6.2m (min)	• 6.2m (min)	• Compliant
Maximum Gradient: • PWD parking • Parking aisle	• 1:40 (2.5%) • 1:20 (5%)	• Flat • Flat	• Compliant – further information provided below
Blind Aisle Extension	1m or 8m extension to aisle width beyond final space	Turnaround area provided	Compliant

Table 4.3: AS2890.1 Parking Design Requirements

Parking Aisle Gradient

Given the nature of the plans, it is difficult to ascertain the gradient of the parking aisle. Satellite and street imagery of the site indicate that the development would not require any significant gradient, and as such meets the requirement of *AS2890.1*.

Overall, the proposed car parking layout is designed generally in accordance with *AS2890.1*, and as such can be deemed fit-for-purpose.

5.0 ACCESS ARRANGEMENTS

5.1 CAR PARKING SUPPLY

TCC do not have standard drawings for a commercial/childcare land use, and as such reference has been taken to *AS2890.1*. The provisions of the Shoalmarra Drive access and the *AS2890.1* requirements are detailed in **Table 5.1**.

Design Aspect	*AS2890.1* Provision	Proposed Provision	Compliance
Width / Crossover Type	6-9m / Category 2	6.2m / Category 2	Compliant
Distance from adjacent driveway	3m (min)	10m +	Compliant
Sight Distance	83m (desirable) 65m (minimum)	East – to intersection West – 150m+	Compliant
Driveway Sight Splays	2m wide x 2.5m deep (on exit side)	2m wide x 2.5 deep (on exit side)	Compliant – see further info below
Minimum queuing provision	2 vehicles / 12m	1 vehicle / 6m	Performance solution

Table 5.1: Shoalmarra Drive Arrangements

Further details in relation to deemed compliance of require provisions are provided in the following.

Driveway Gradient

A calculation of the driveway gradient based of the RL's provided within the plans has been undertaken. Given the nature of the plans not indicating formal grades, no measurements are shown with respect to the gradients may not be a strictly accurate measurement and as such should be monitored within the further design stages.

Minimum Queuing Provisions

The probability (using the Poisson distribution method) of more than 1 vehicle entering the site at the same time (or say within a 30 second period whilst a car is manoeuvring in/out of initial parking spaces) and all requiring to queue in advance of the first internal car parking space, extending back onto Shoalmarra Drive, is less than 1%. As such, the proposed internal queuing capacity of 1 vehicle is sufficient to cater for the 99th percentile entry queue of the site and is therefore considered acceptable.

Overall, the Shoalmarra Drive access arrangements are considered acceptable.

5.2 OUTDOOR PLAY AREA

A dedicated pedestrian pathway has been provided to allow pedestrian access to the site separate from the vehicle access. This is provided as a connection to Mount Low Parkway via a new pedestrian pathway from the existing footpath, which will connect to the main building entrance from Shoalmarra Drive. This pathway along the eastern side of the site is shown in **Appendix A**.

6.0 SERVICE VEHICLE ARRANGEMENTS

6.1 COUNCIL REQUIREMENTS

No specific requirements are outlined within the planning scheme.

6.1 REFUSE COLLECTION PROVISIONS

These bins will be wheeled to the kerb on the appropriate collection days, in order to service the development. A bin storage area has been provided within the development plans, in order to screen these bins outside of collection periods.

7.0 DEVELOPMENT TRANSPORT DEMANDS

7.1 SITE TRAFFIC DEMANDS

For a childcare centre, the Department of Transport and Main Roads 'Road Planning and Design Manual' (RPDM) and the RTA's 'Guide to Traffic Generating Developments' recommends, for planning purposes, adopting a peak hour traffic generation rate dependant on the type of centre. Given the proposed development will cater for day long childcare, the adopted rates are:

- 0.8 vehicular trips per child to be adopted during the AM peak (7am – 9am); and
- 0.7 vehicular trips per child during the PM peak (4pm – 6pm).

During each peak 50% of the development traffic will be inbound and 50% of the development traffic will be outbound. Application of the above rates to the proposed development results in the following peak hour volumes:

- AM peak hour traffic generation for childcare centre = 0.8vph / child = 102vph (51 in, 51 out)
- PM peak hour traffic generation for childcare centre = 0.7vph / child = 90vph (45 in, 45 out)

It is noted that given the proximity of the adjacent subdivision, a larger walking contingent is possible for the development and as such these vehicle numbers are considered a conservative estimate.

7.1.1 TRIP SEGMENTATION

It is common for parents to drop-off and pick-up children prior to and following workdays. As such, not all trips associated with the development will be new trips on the road network. it is expected that a portion of development trips will be drop-in trips; with the parents already on the road network enroute to employment. For the purposes of this assessment trip types have been categorised as either ‘new trips’ or ‘pass-by trips’. It is assumed that 70% of development traffic will be ‘Pass-by Trips’ and 30% will be ‘New Trips’.

7.1.2 TRAFFIC DISTRIBUTION

Pass-by Trips

Given the nature of the residential catchment, pass-by trips are expected to be primarily for vehicles currently travelling along Shoalmarra Drive. Survey data shows that the volumes are significantly higher travelling eastbound in the AM and westbound in the PM peak periods. This represents residents leaving the residential catchment in the AM to go to work and returning in the PM via the same route.

New Trips

It is assumed that the majority of new trips will be accessed from the north and south along Mount Low Parkway. This will include some residents from the Bushland Beach area to the North and residents from the more southern areas of Mount Low and also Burdell.

Figure 7.1: New Trip Distribution

8.0 FUTURE TRAFFIC DEMANDS

8.1 ASSESSMENT YEARS & TRAFFIC GROWTH

It assumed that the development will be complete and commence operations by 2026. Survey data was retrieved from The Townsville Aimsum Integrated Model (TAIM) Forecast Model.

8.2 FUTURE YEAR SCENARIOS

The following future year scenarios have been derived for the purposes of the TIA:

- **2026 Base Case Scenario**: To establish base operations at the opening, considering base traffic growth. For these purposes, no changes are proposed to the existing road network configuration.
- **2026 Base + Development Case Scenario**: This will be used to determine road network operations with inclusion of the proposed development at the opening year. Comparison against the Base Case Scenario will determine the overall impact of the proposed development and any necessary mitigation works required.

Based on the development transport demand estimates (**Section 7**) and base traffic growth (**Section 8.1**) traffic network diagrams have been prepared showing traffic movements on the roads/intersections surrounding the development site for each of the above scenario's future year cases. These network diagrams are included in **Appendix B**, with the respective diagrams identified as follows:

- **Traffic Network Diagram 1:** Traffic Generation
- **Traffic Network Diagram 2:** New Trip Traffic Distribution (%)
- **Traffic Network Diagram 3:** New Trip Traffic Volume (vph)
- **Traffic Network Diagram 4:** Drop-in Traffic Distribution (%)
- **Traffic Network Diagram 5:** Drop-Iin Traffic Volume (vph)
- **Traffic Network Diagram 6**: Total Development Traffic Distribution (vph)
- **Traffic Network Diagram 7**: 2026 Base Traffic Volumes (TAIM – Forecast Models)
- **Traffic Network Diagram 8**: 2026 Base + Development Case Traffic Volumes
    - Calculated by adding volumes in Diagram 6 & 7 together.

9.0 SUMMARY & CONCLUSIONS

9.1 PARKING ARRANGEMENTS

The proposed parking supply of 32 spaces is a performance solution based on the requirements of the TCC which is deemed acceptable based on experiences and surrounding jurisdictions requirements for childcare parking. The car park layout generally complies with the *AS2890.1* requirements, with the exception of clarification around the driveway gradients which is deemed fit-for-purpose. Overall, the car parking arrangements for the development are acceptable.

9.2 ACCESS ARRANGEMENTS

Access for the development to Shoalmarra Drive is provided as a 6.2m wide Type B2 crossover north to the road frontage. The access generally complies with the *AS2890.1* requirements, with further information to be provided at the further design stages. A performance solution with respect to the queuing provision is proposed, which is deemed acceptable given the probability of a queue of more than 1 vehicle being less than 1%. Overall, the access arrangements for the development are acceptable (subject to conditioning of the pedestrian sight splays).

9.3 SERVICE VEHICLE ARRANGEMENTS

Refuse collection is to be undertaken in a kerbside manner, with no specifications for service vehicles on-site.

9.4 ACTIVE TRANSPORT PROVISIONS

A dedicated pedestrian access point to the parking aisle has been provided at the eastern boundary. This has been provided via connection to Mount Low Parkway, which allows for direct access to the site and separation from the main vehicle access.

9.5 TRAFFIC IMPACT ASSESSMENT

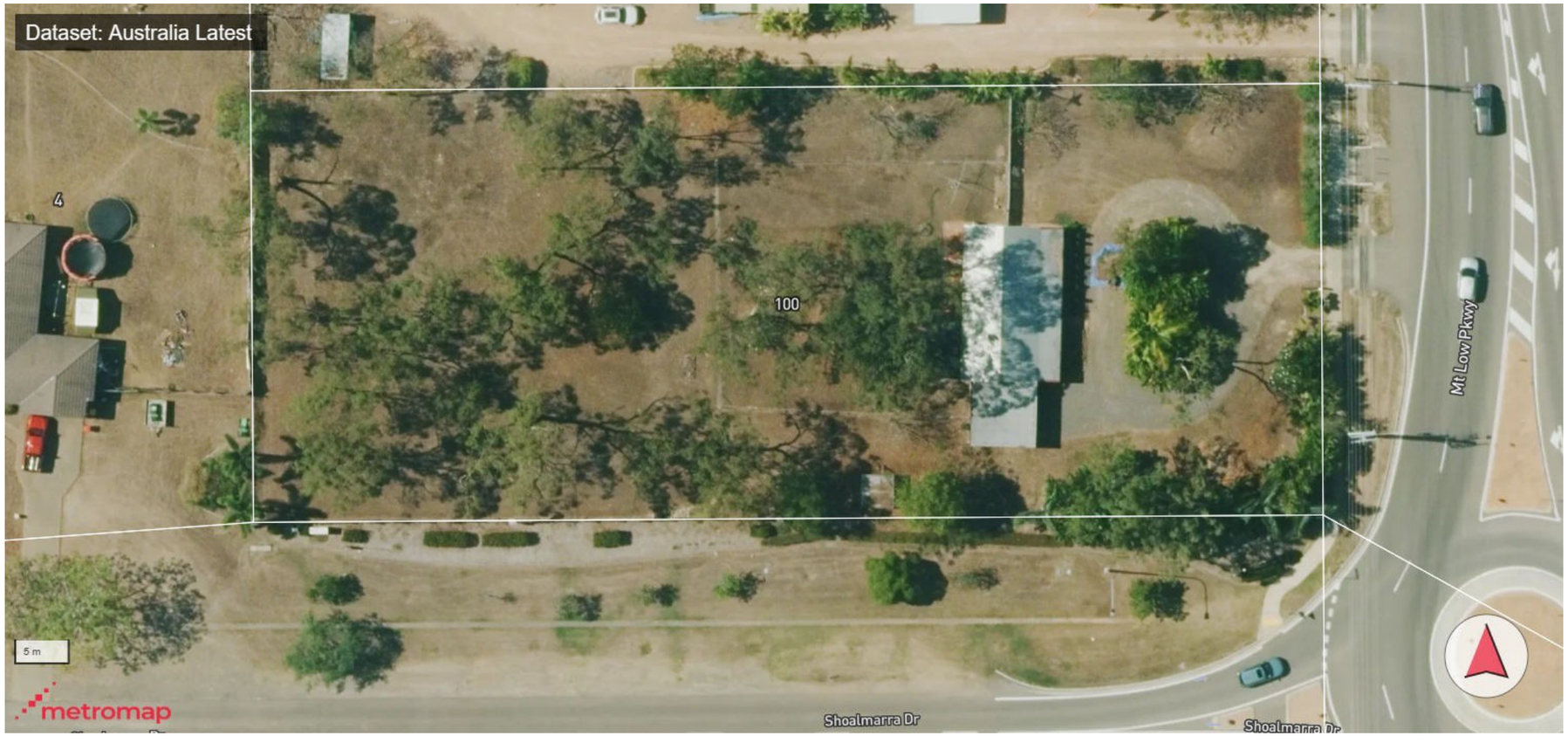
The proposed development is expected to generate up to 102vph in peak hours, which includes also a proportion of drop-in trips which are already on the road network. This is considered a conservative estimate of the operation and as such a traffic impact assessment to be warranted.

9.6 CONCLUSION

Based on the assessment contained within this report, there is no traffic engineering reason why the relevant approvals should not be granted.

Appendix A

Development Plans



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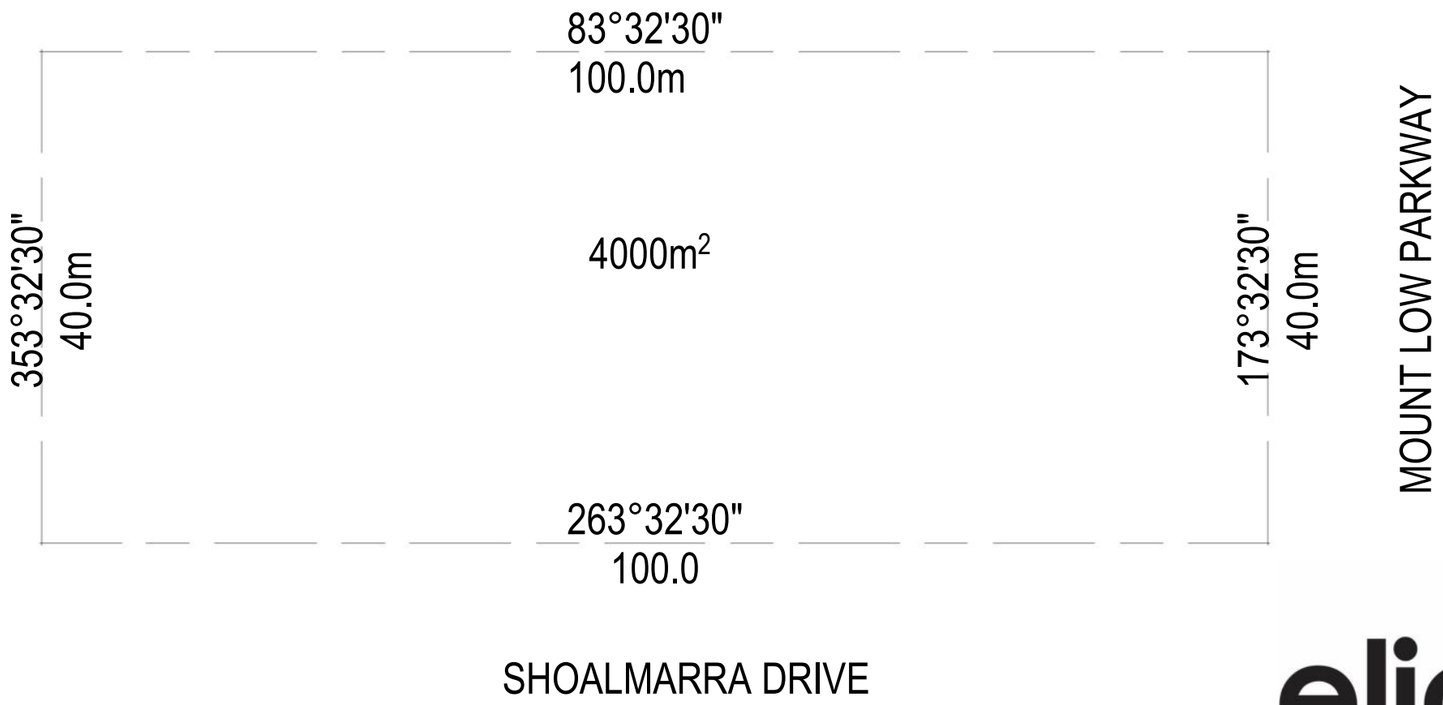

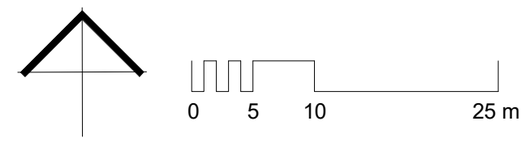

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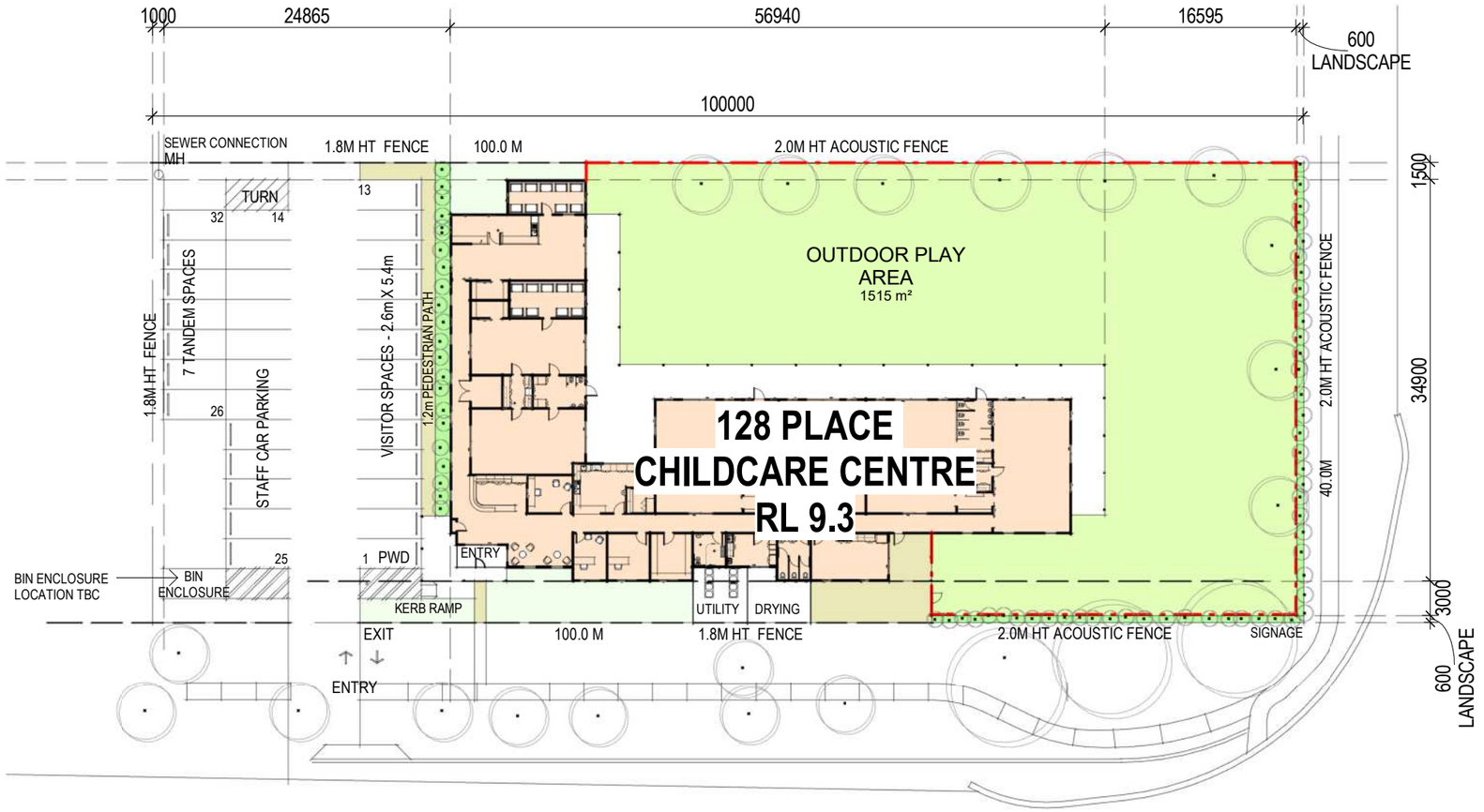

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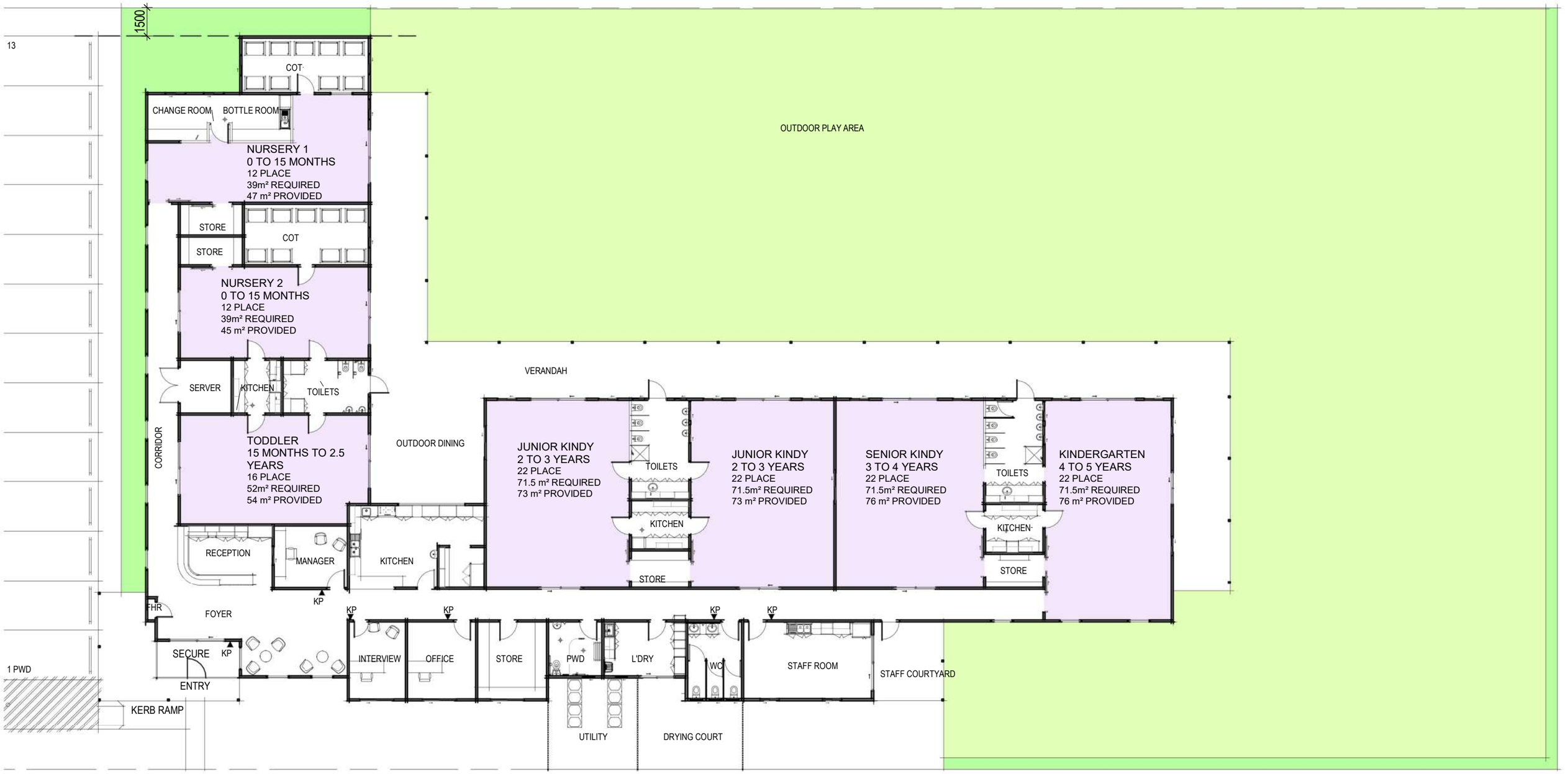

1 GROUND FLOOR PLAN
1 : 200

0 5 10 m

elia architecture

MOUNT LOW NORTH CHILDCARE CENTRE

SD1-01 A

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

GROUND FLOOR PLAN

B240012
1 : 200 @ A3
21/11/23

109 Herries Street, PO Box 547, Toowoomba 4350
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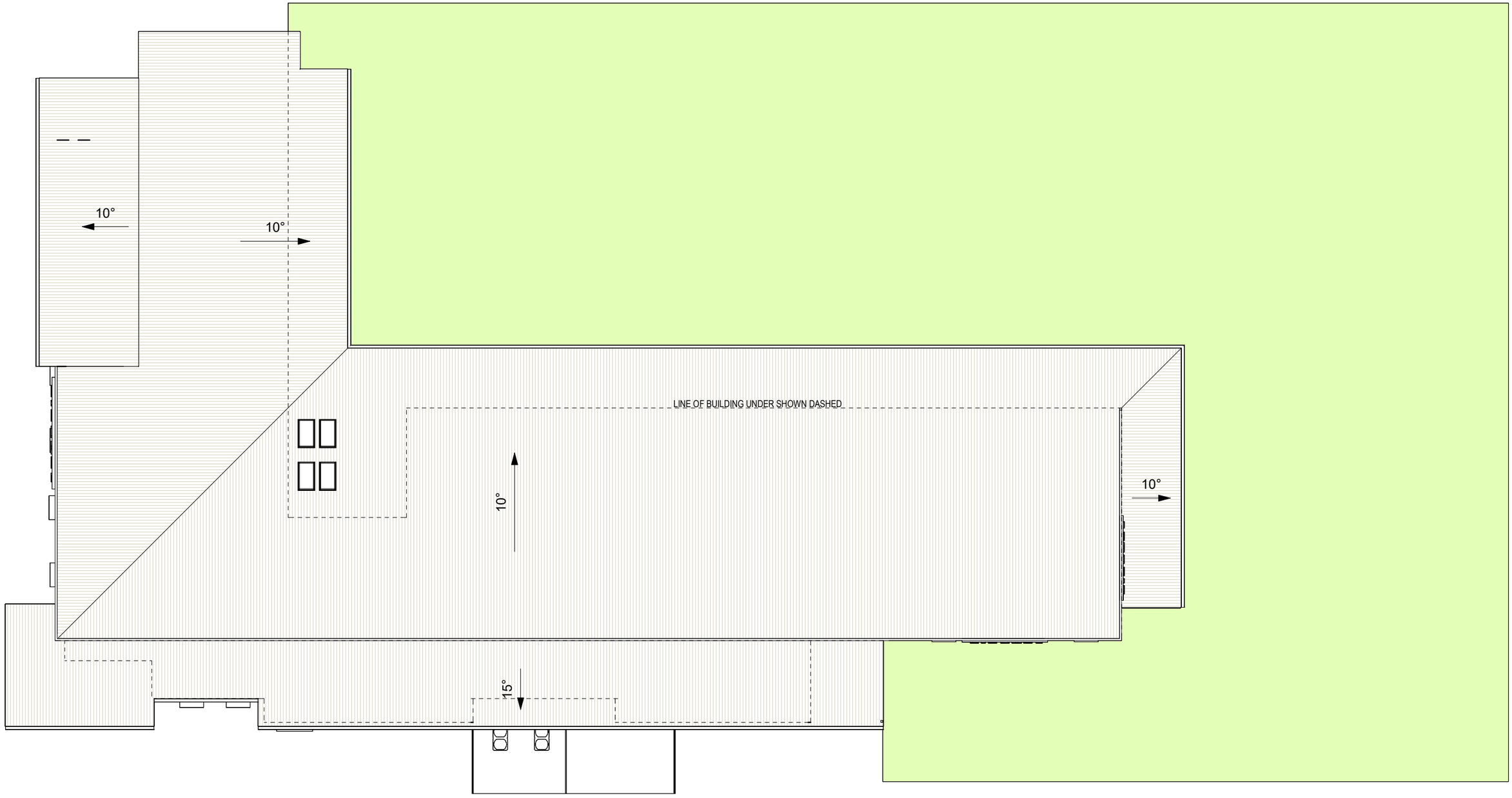

1 ROOF PLAN
1 : 200

0 5 10 m

MOUNT LOW NORTH CHILDCARE CENTRE

SD1-03 A

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ROOF PLAN

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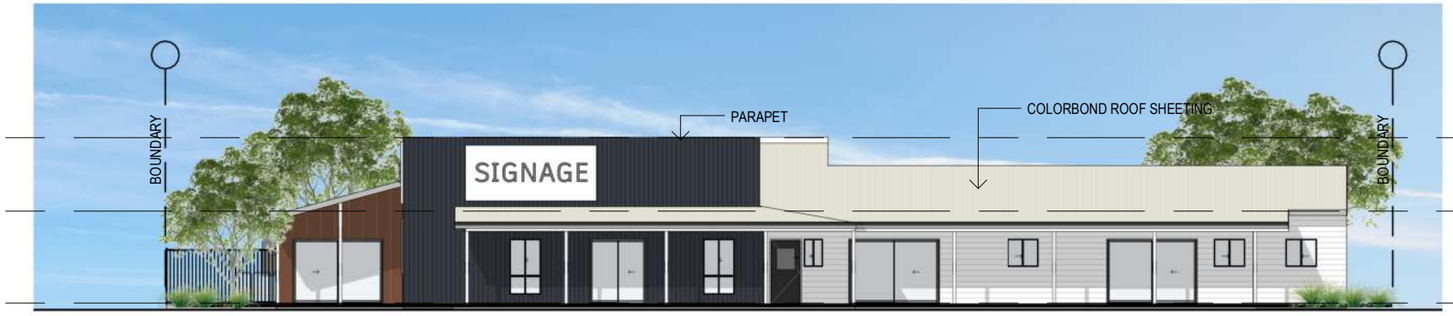
WEST ELEVATION

NORTH ELEVATION



EAST ELEVATION

SOUTH ELEVATION

MOUNT LOW NORTH CHILDCARE CENTRE

SD3-01 A

For ML Parkway Pty Ltd
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ELEVATIONS

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P: 07 3379 7611 E: bris@elia.com.au

Appendix B

Traffic Network Diagrams

Sheet 1 - Traffic Generation

Land Use	Extent		Weekday AM				Weekday PM			
			Generation Rate		Trip Generation		Generation Rate		Trip Generation	
Childcare	128	children	0.8	/child	102	vph	0.7	/child	90	vph

AM

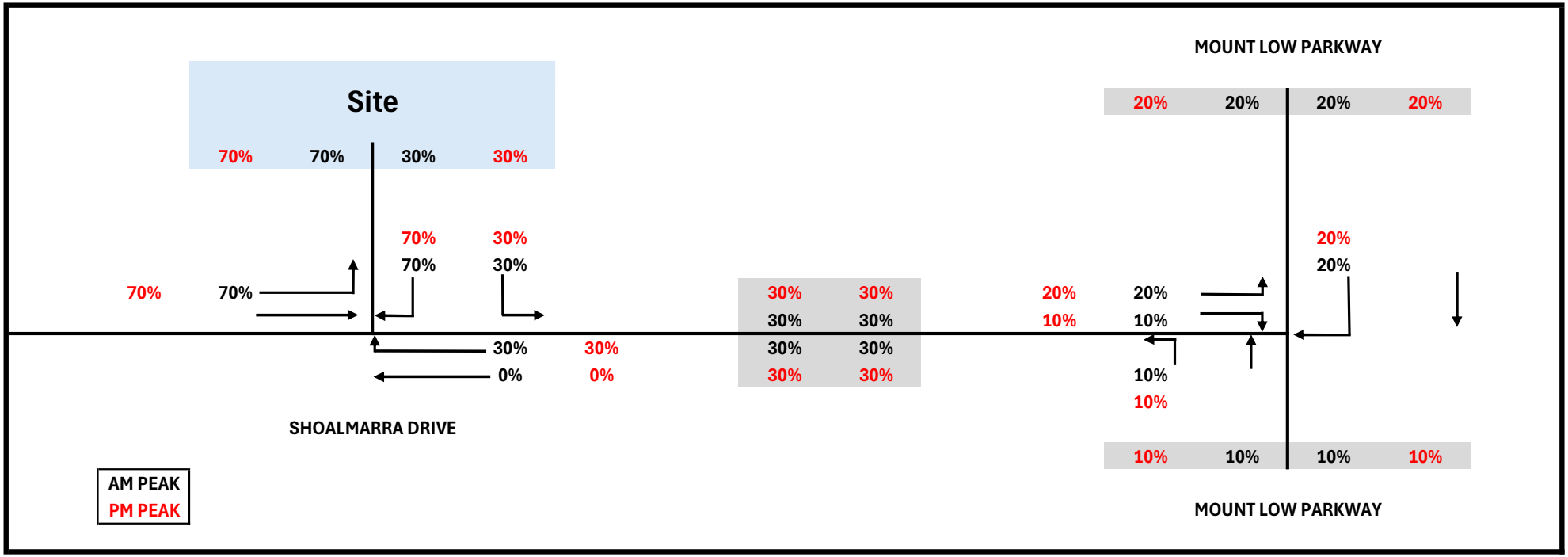
Land Use	Trip Generation		New Trip					Drop-in Trip				
			New Trip %	In	Out	New Trip Generation		Drop-in Trip %	In	Out	Drop-in Trip Generation	
Childcare	102	vph	30%	15	15	31	vph	70%	36	36	71	vph

PM

Land Use	Trip Generation		New Trip					Drop-in Trip				
			New Trip %	In	Out	New Trip Generation		Drop-in Trip %	In	Out	Drop-in Trip Generation	
Childcare	90	vph	30%	14	14	27	vph	70%	32	32	63	vph

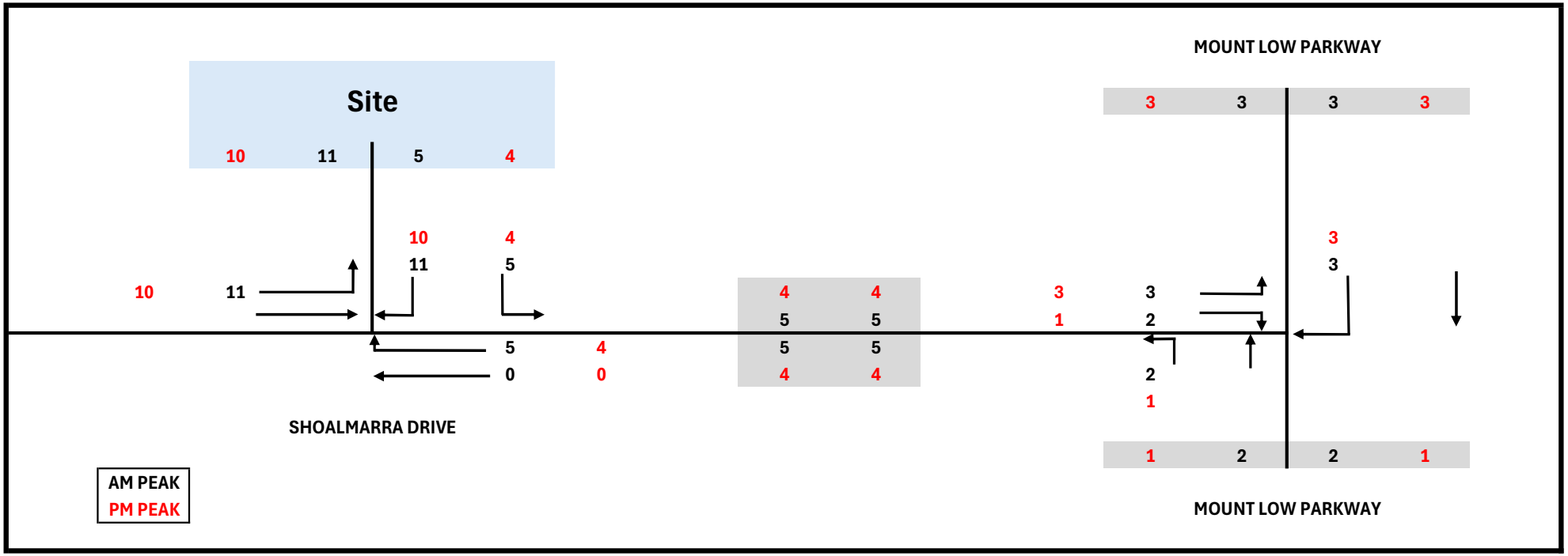
Sheet 2 - New Trip Distribution

AM & PM Peak Hours



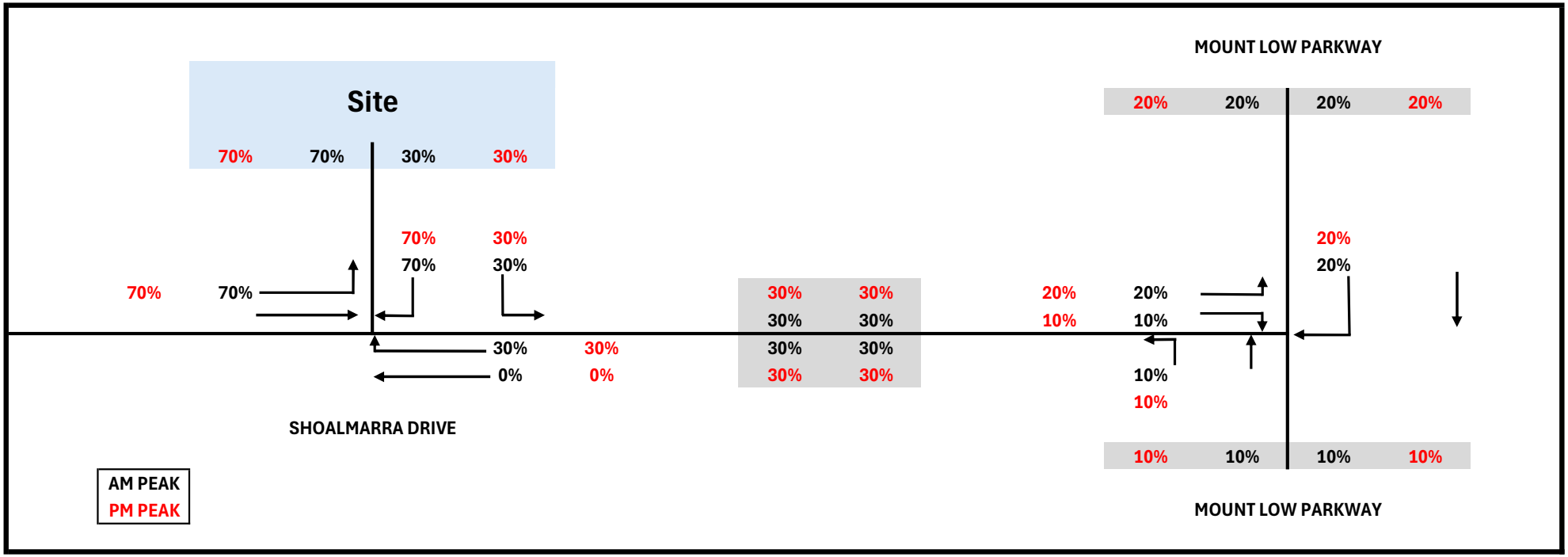
Sheet 3 - New Trip Volumes (vph)

AM & PM Peak Hours



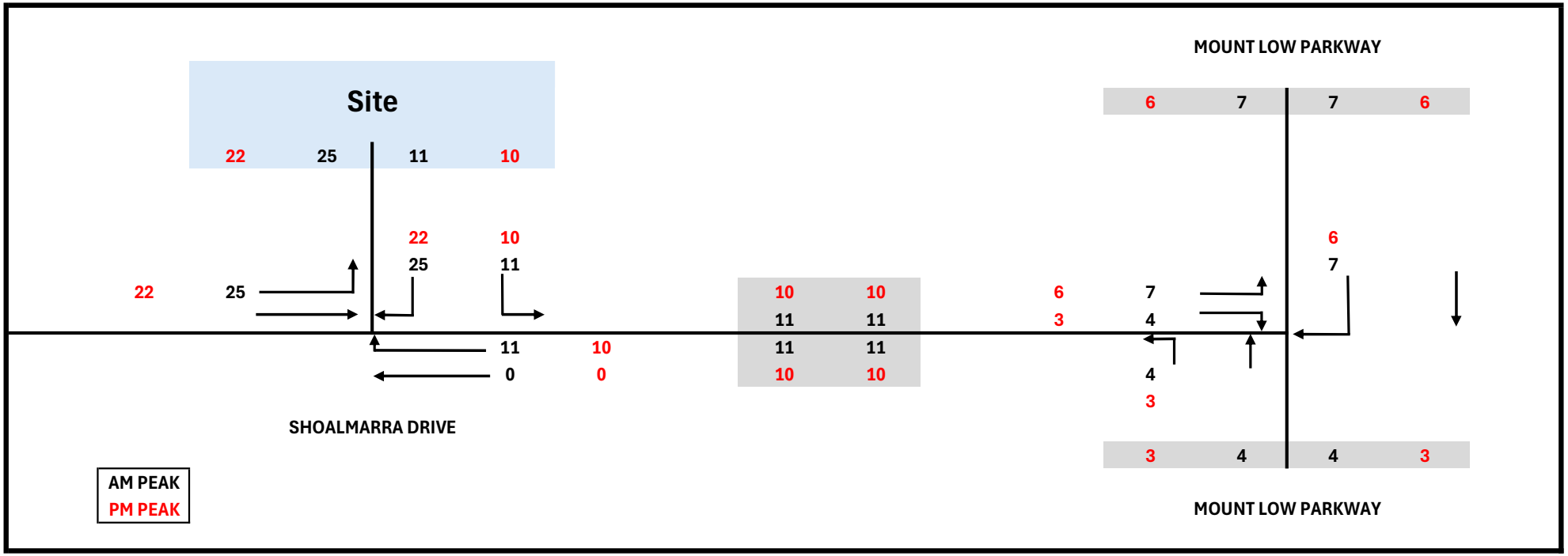
Sheet 4 - Drop-in Trip Distribution

AM & PM Peak Hours



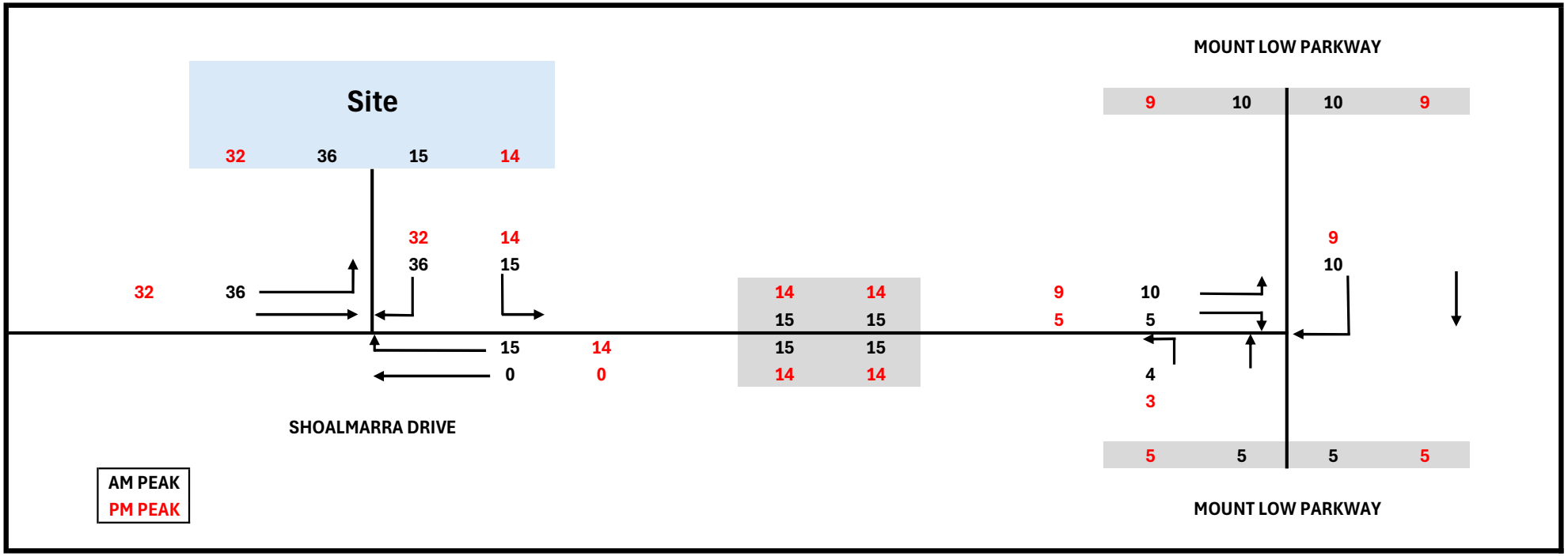
Sheet 5 - Drop-in Trip Volumes (vph)

AM & PM Peak Hours



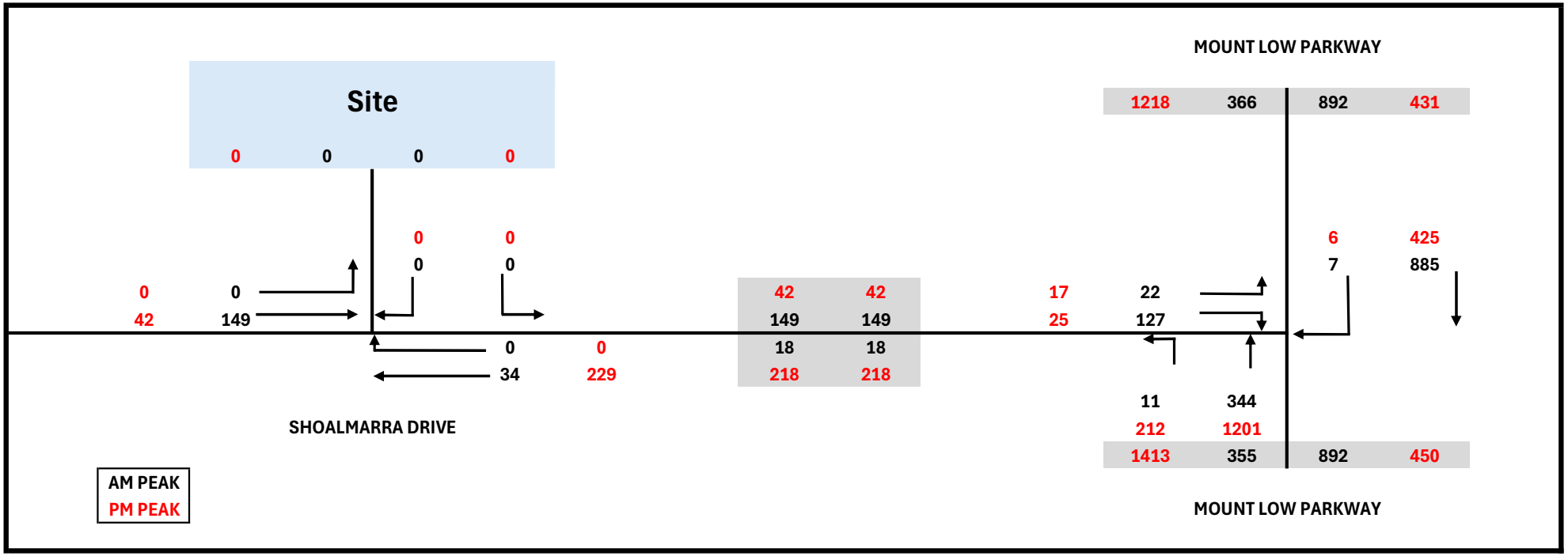
Sheet 6 - Total Development Traffic Distribution (vph)

AM & PM Peak Hours



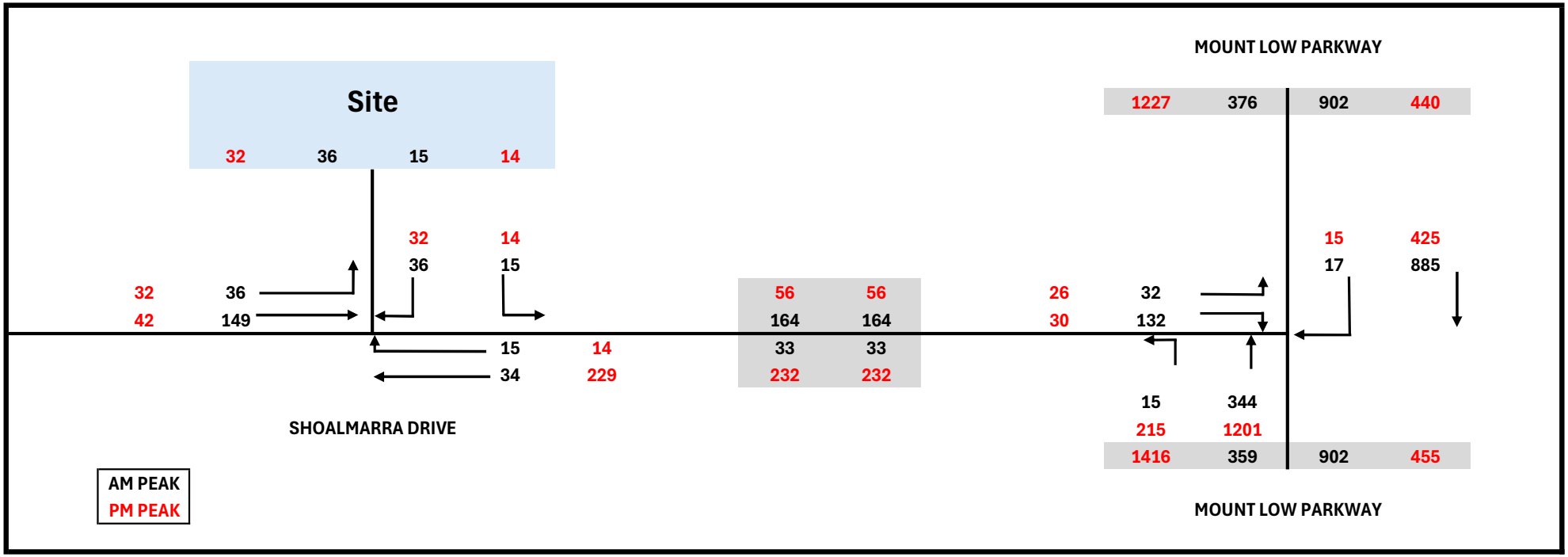
Sheet 7 - 2026 Base Conditions (vph)

AM & PM Peak Hours



Sheet 8 - 2026 Base + Development Case Traffic Volumes

AM & PM Peak Hours



Economic Need Assessment

DEVELOPMENT PERMIT FOR A

MATERIAL CHANGE OF USE

Townsville City Council | Mount Low

Material Change of Use – Child Care Centre

100 Mount Low Parkway, Mount Low

Lot 5 RP 739317

April 2024
Ref: Rev B - MLN CC

Table of Contents

1.0 INTRODUCTION

ML Parkway Pty Ltd is submitting a 'Material Change of Use' (MCU) development application for a single-storey, 128-place childcare centre located at 100 Mount Low Parkway, Mount Low QLD 4818.

This investigation will assess the economic and community need of the proposed development.

Figure 1: Site Location

1.1 THE PROPOSAL

Current plans indicate the proposed development will have a gross floor area of 940m^2 and offer 128 places – refer to **Appendix A – Development Plans.** The applicant has advised they have held discussions with several potential operators that have expressed an interest in occupying the site on a long-term lease.

2.0 MARKET FUNDAMENTALS

2.1 TYPE OF CHILDCARE

The proposed childcare centre will operate as a long day care centre. A long day care centre (**LDC**) is defined as care for children from birth to school age, with centres operating Monday to Friday for at least 10 hours a day for a minimum of 48 weeks a year.

2.2 DEFINED MAIN SERVICE AREA

The defined Main Service Area (**MSA**) represents the area from which the proposed centre is likely to draw a significant portion of its custom. It was defined in consideration of the typical draw distance of childcare centres, the location of existing and future LDC childcare centres, the local road network, and other factors.

Figure 2.1 on the following page shows the defined MSA for the proposed childcare centre. The MSA contains the suburb of Mount Low. The majority of the population of the MSA is within a 5-10 minute drive of the proposed development.

Main Service Area | Mount Low

● = Approved

2.3 POPULATION GROWTH

Table 2.1 below sets out the historical and forecast population of the MSA.

Year	2016	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Population	**4,749**	**5,604**	**5,760**	**5,942**	**6,148**	**6,378**	**6,612**	**6,820**	**7,028**	**7,236**	**7,444**	**7,657**
Growth Rate	-	*3.60%*	*2.78%*	*3.16%*	*3.47%*	*3.74%*	*3.67%*	*3.15%*	*3.05%*	*2.96%*	*2.87%*	*2.86%*
Population Aged 0-4	**494**	**583**	**600**	**623**	**650**	**679**	**710**	**738**	**766**	**795**	**824**	**854**
% of Total Population	*10.41%*	*10.41%*	*10.41%*	*10.49%*	*10.57%*	*10.65%*	*10.73%*	*10.82%*	*10.90%*	*10.98%*	*11.07%*	*11.15%*

Table 2.1: MSA Population (Source: ABS 2021)

At the 2021 Census, the MSA had a population of around 5,604 people. The MSA is forecast to grow to around 7,657 people by 2031 with an average annual growth rate of 3.33% p.a. During the same period, the Queensland population is predicted to grow at an annual average growth rate of 1.36% p.a (***Source: ABS 2021, GapMaps 2022 2021).***

The driving population growth factor in the MSA is the Sanctum Estate residential development. This estate is predicted to accommodate around 4,800 residential lots upon completion.

The MSA population aged 0-4 (i.e. the primary market for long day care) is expected to increase from 583 to 854 children. Furthermore, over this period, the population of children aged 0-4 is predicted to increase from 10.41% to 11.15% respectively.

2.4 DEMOGRAPHIC SUMMARY

Key socio-economic characteristics of the MSA at the 2021 Census, as well as the Queensland benchmarks are set out below in **Table 2.2**:

	Mount Low	QLD Average
Avg. Annual Population Growth (2016-21)	3.60%	1.54%
Average Age (Years)	28.91	38.61
0 to 4 year olds	*10.41%*	*5.61%*
0 to 4 year olds (2031 projection)	11.14%	6.41%
Average Household Size	*2.96*	*2.54*
Average Annual Income per Household	$123,716	$102,179
Average No. of Motor Vehilces per House	*2.17*	*1.82*
No. of Residents in Education - Preschool	39.63%	28.74%

Table 2.2: Key MSA Socio-Economic Benchmarks (Source: ABS 2021)

These characteristics suggest that demand for childcare services by MSA residents is likely much higher than the benchmark areas of Queensland.

3.0 SUPPLY ASSESSMENT

This section provides insight into the existing network of potentially competitive long day centres within the MSA.

3.1 SUPPLY IN THE MSA

There is currently zero (0) operating LDC centres within the MSA and only one (1) approved LDC centre. The approved LDC centre at 82 Mount Low Parkway will supply up to 128 LDC places for the MSA. This is displayed graphically in **Figure 2.1** in the previous section.

4.0 DEMAND ASSESSMENT

This section provides insight into the estimated current and future demand for LDC childcare places within the MSA.

4.1 CURRENT & FORECAST DEMAND

Table 4.1 below depicts the current and forecast daily demand for long day care childcare places generated by the MSA residents.

It is estimated that the LDC participation rate for children aged 0-4 in the MSA will be between around 60% in line with the Queensland average for selected SEQ LGAs (**Source: Department of Education *Early Childhood Education and Care Census Dec-2022***). It is also estimated that the average attendance rate, which is a percentage of full-time attendance, will be similar to the Queensland average of 60% (3 out of 5 days per week).

No allowance has been made for 5-year-old children. This is considered a conservative assumption. It is highly likely that there will be children aged 5 who have not commenced formal schooling requiring long day care.

Under the following assumptions, it is estimated that around 211 children will require long day care within the MSA in 2024. This will increase up to 248 and 263 children by 2026 and 2028 respectively.

	2024		2025		2026				2028			
	(estimate)		*(estimate)*		*(low forecast)*		*(high forecast)*		*(low forecast)*		*(high forecast)*	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total Population	6,148	100%	6,378	100%	6,612	100%	6,612	100%	7,028	100%	7,028	100%
Children Aged 0 - 4	640	10.41%	664	10.41%	688	10.41%	688	10.41%	732	10.41%	732	10.41%
Estimated Particpation Rate	55%		55%		55%		60%		55%		60%	
Children Attending LDC	352		365		379		413		402		439	
Attendance Rate	60%		60%		60%		60%		60%		60%	
Daily Demand (0-4)	**211**		**219**		**227**		**248**		**241**		**263**	
Gross Daily Demand	**211**		**219**		**227**		**248**		**241**		**263**	

Table 4.1: Current & Forecast Demand for LDC Places in the MSA (Source: ABS 2021 & GapMaps)

4.2 SUPPORTABLE PLACES & NEED

Table 4.2 on the following page displays the indicative number of supportable long day care places demanded in the MSA.

An average occupancy rate of 80% has been assumed across the MSA and is considered to represent a balance between an accessible supply of LDC places for the community and a viable operating capacity for childcare centres. This is a commonly used methodology for childcare needs assessments.

Assuming the proposed centre becomes operational by 2026 (allowing time for approval & construction), it is estimated that there will be sufficient demand to support the additional 128 places proposed by the development. In fact, it is estimated that there will still be a shortfall of 22 to 43 places within the MSA with the proposed development operational. This shortfall will increase to 37 to 59 places by 2028.

If the proposed development was not built, it is estimated that there would be a need for 124 to 145 places in the MSA by 2026. This suggests there is a strong undersupply of LDC childcare services in the catchment.

Supportable Places & Need

	2024		2025		2026				2028			
	(estimate)		*(estimate)*		*(low forecast)*		*(high forecast)*		*(low forecast)*		*(high forecast)*	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total Population	6,148	100%	6,378	100%	6,612	100%	6,612	100%	7,028	100%	7,028	100%
Children Aged 0 - 4	640	10.41%	664	10.41%	688	10.41%	688	10.41%	732	10.41%	732	10.41%
Estimated Particpation Rate	55%		55%		55%		60%		55%		60%	
Children Attending LDC	352		365		379		413		402		439	
Attendance Rate	60%		60%		60%		60%		60%		60%	
Daily Demand (0-4)	**211**		**219**		**227**		**248**		**241**		**263**	
Gross Daily Demand	**211**		**219**		**227**		**248**		**241**		**263**	
Supply (Places)	128		128		128		128		128		128	
Proposed (Places)	0		0		128		128		128		128	
Total Supply (Places)	**128**		**128**		**256**		**256**		**256**		**256**	
Standard Occupancy Rate	80%		80%		80%		80%		80%		80%	
Available Places	**102**		**102**		**205**		**205**		**205**		**205**	
Total Places Needed	109		117		22		43		37		59	
Needs Assessment	**UNDERSUPPLY**		**UNDERSUPPLY**		**UNDERSUPPLY**		**UNDERSUPPLY**		**UNDERSUPPLY**		**UNDERSUPPLY**	

5.0 SITE SUITABILITY

This section provides context to why the proposed development is suitable for the subject site.

5.1 APPROPRIATELY ZONED LOCATIONS

There is currently only one (1) commercially zoned site in the MSA. This property is located at 82 Mount Low Parkway, Mount Low and has recently been approved for a 128-place childcare centre (**MCU23/0029**). As such, this site is not suitable for acquisition. Refer to **Figure 5.1** below for location of the commercially zoned site in the MSA.

Figure 5.1: Commercially Zoned Sites in Mount Low MSA (Source: TownsvilleMAPS – Townsville City Plan)

5.2 PROPOSED SITE

The proposed site has the characteristics of a commercially zoned site and would be suitable for the development of a childcare centre. The site provides access for all movements of traffic by utilising the roundabout at the intersection of Mount Low Parkway and Shoalmarra Drive.

Shoalmarra Drive is the main road providing access in and out of Mount Low for the majority of residents. Positioning the proposal at the subject site will ensure residents have a convenient location to access childcare services (**Figure 5.2**).

Figure 5.2: Proposal Location (Source: Metromaps)

6.0 NEED & BENEFITS

This section of the report identifies the economic and community need for the proposed development.

6.1 ECONOMIC & COMMUNITY NEED

The need for the proposed LDC childcare centre at 100 Mount Low Parkway is demonstrated by the following:

- Demand generated by the Main Service Area (MSA) residents in 2024 is sufficient to support an additional 109 places to the approved 128 place centre at 82 Mount Low Parkway.
- By 2026 when it is estimated the proposed site would be operational, the demand generated by the MSA residents is sufficient to support 124 to 145 additional places to the 128 place childcare centre at 82 Mount Low Parkway.
- With the introduction of the proposed centre to the MSA in 2026, it is estimated that the demand generated by the MSA residents would still require an additional 22 to 43 places.
- Due to the increasing need for additional LDC places within the MSA, the subject proposal is forecast to have minimal impacts on existing and future childcare centres within, and nearby, to the MSA.
- Demand generated by MSA residents is sufficient to support existing and future facilities, as well as the subject proposal.
- Whilst it's acknowledged that some demand will be met outside the MSA, there will also be demand inflows to the MSA from surround rural area.

6.2 COMMUNITY BENEFITS

Benefits of the proposed development include:

- Provision of a childcare centre which is convenient and accessible to local residents and workers.
- Establishment of a new facility to meet parent's needs and expectations, particularly in an area with a very high proportion of children aged 0-4.
- Provision of increased choice and variety in LDC childcare services for the local community.
- Contribution to local employment during the construction phase as well as ongoing employment positions during operation.
- The proposal will be within walking distance of any existing households and would therefore promote and enhance walkability in the community.

7.0 CONCLUSION & RECOMMENDATION

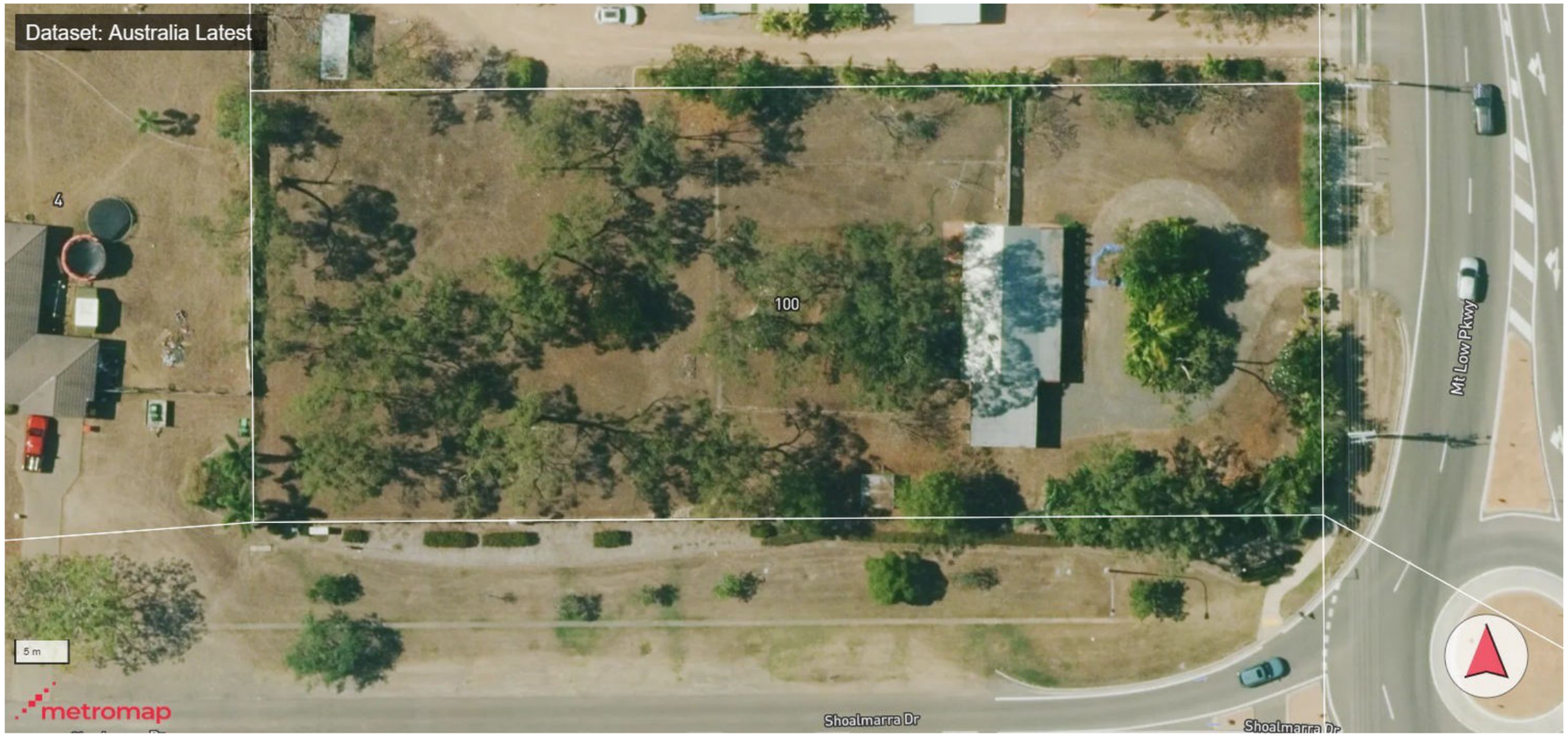
The proposal seeks to address a current need and significant demand growth in the Main Service Area as young family continues to move into the growing estate.

Local demand is more than sufficient to support the proposed development as well as the existing approved childcare centre.

It is concluded that there is a strong economic, community and planning need for the proposed childcare at the subject site.

Appendix A

Development Plans



RPD

LOT 15 on RP739317
Area 4000m^2

Cnr Mt Low Parkway and Shoalmarra Drive

MOUNT LOW
TOWNSVILLE QLD

100 Mount Low Parkway

PROPOSAL

NEW 128 PLACE CHILDCARE CENTRE

AREAS

CHILDCARE CENTRE - GFA 940m^2

VERANDAH AREAS - 207 m^2

OUTDOOR PLAY - 1555 m^2 (13.7m^2 / CHILD)

CARPARKING

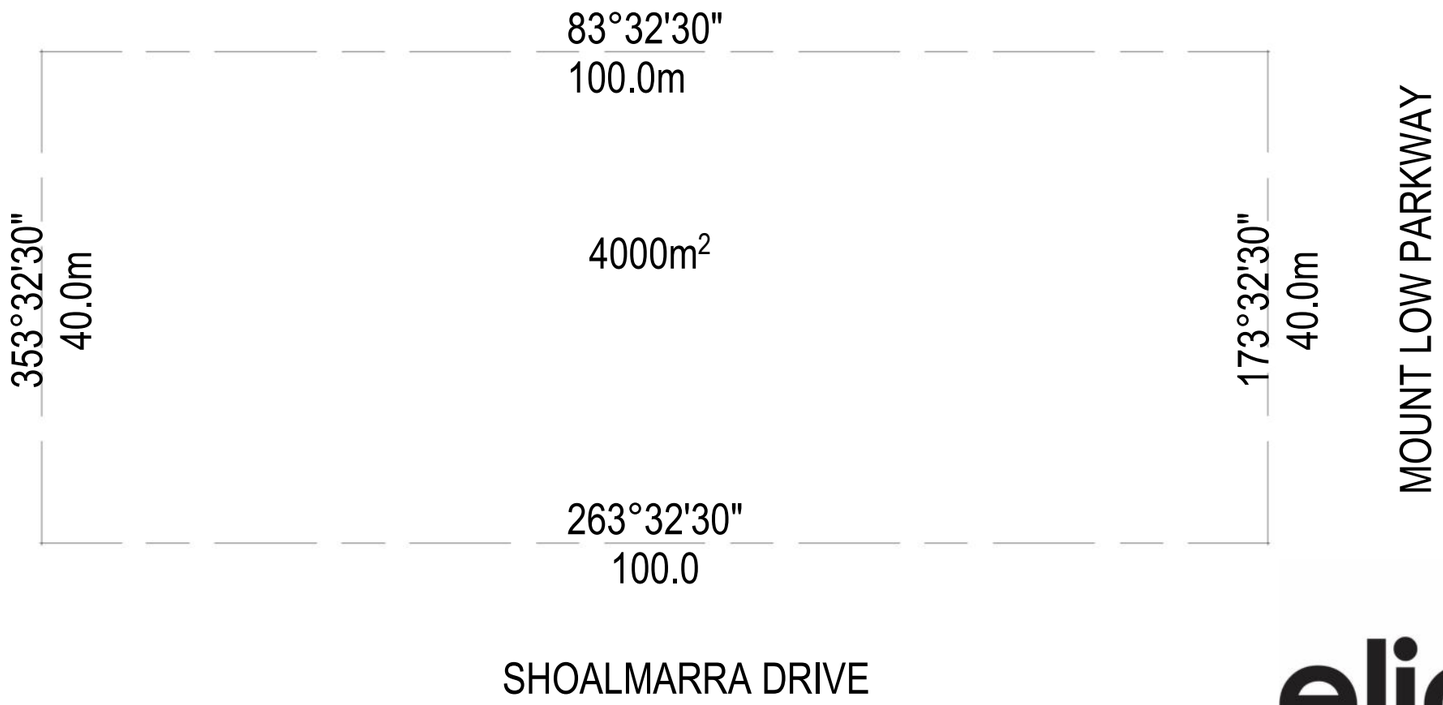
PARKING REQUIRED 1/10 = 12

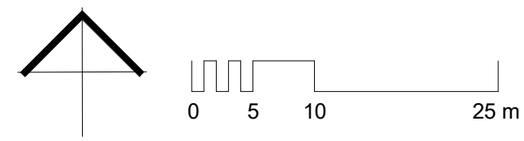
PLUS 1/FTE STAFF = 19

TOTAL REQUIRED = 32 (incl 1 PWD)

EXISTING HOUSE, SHED, DRIVEWAY, TREES TO BE REMOVED

EXISTING SITE PLAN 1:500





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MOUNT LOW NORTH CHILDCARE CENTRE **SD0-00 A**

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

EXISTING SITE PLAN

B240012
1 : 500 @ A3
03/27/24

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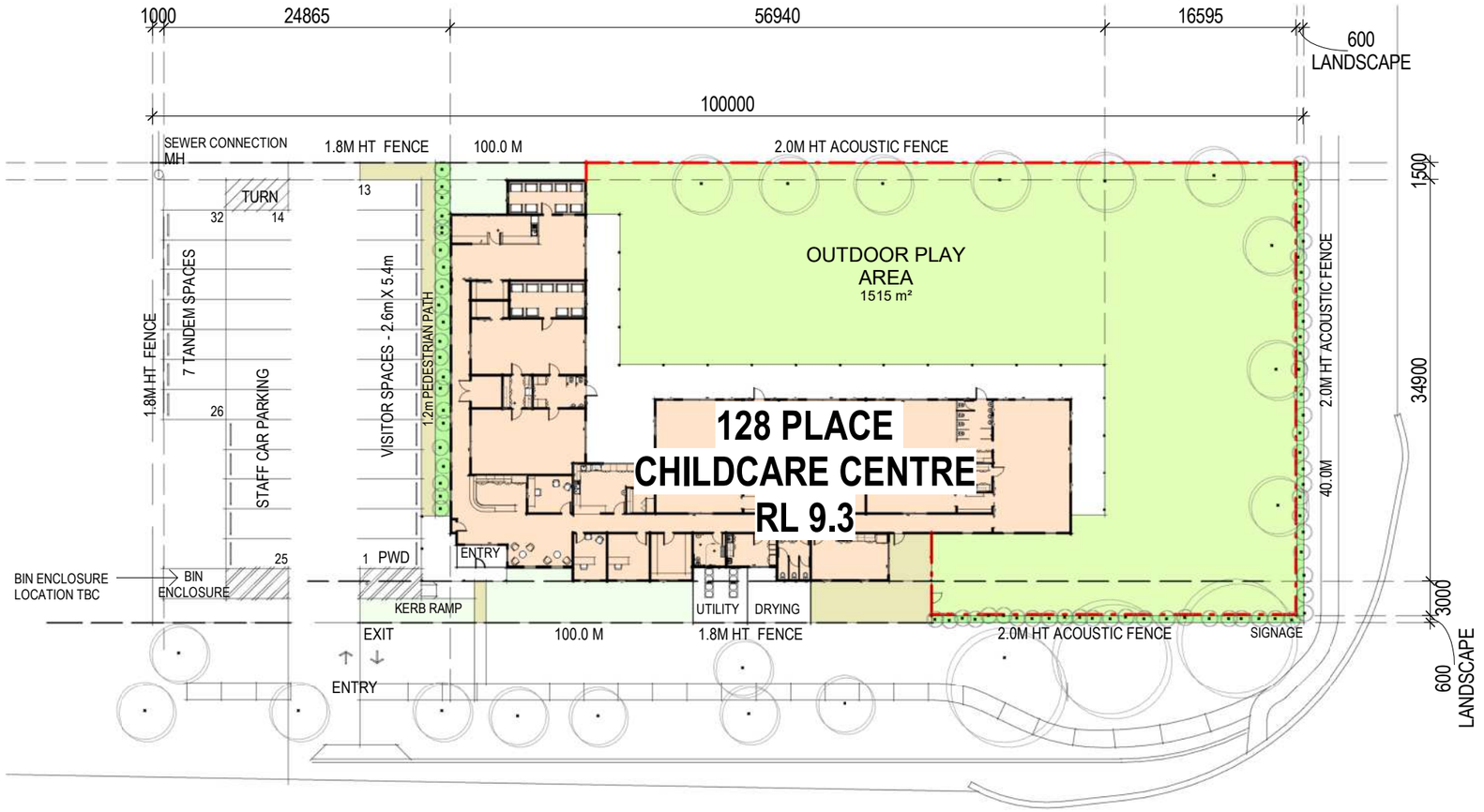

SHOALMARRA DRIVE

1 SITE PLAN
1 : 500

0 5 10 25 m

MOUNT LOW PARKWAY

RPD
LOT 15 on RP739317
Cnr Mt Low Parkway and Shoalmarra Drive
MOUNT LOW
TOWNSVILLE QLD

ZONE
Rural Residential

SITE AREA
4000 m²

LOCAL AUTHORITY
TOWNSVILLE CITY COUNCIL

PROPOSAL
NEW 128 PLACE CHILDCARE CENTRE

BUILDING CLASSIFICATION
CLASS 9b TYPE C CONSTRUCTION

GROSS FLOOR AREA (GFA)

TOTAL GFA	**940 m²**
(+ VER, O/D AREA & SECURE PORCH)	

OUTDOOR PLAY AREAS

OUTDOOR PLAY AREA (PROVIDED)	1515 m²
VERANDAH AREA (PROVIDED)	207m²
TOTAL OUTDOOR PLAY AREA PROVIDED (13.4 m² PER CHILD)	1,722 m²

CARPARKING

STAFF REQUIRED	19	CARPARKS
VISITOR REQUIRED	12	CARPARKS
CARPARKING REQUIRED	31	
CARPARKING PROVIDED	32	

Playroom Schedule

Name	Area
NURSERY 2	45 m²
NURSERY 1	47 m²
TODDLER	54 m²
JUNIOR KINDY	73 m²
JUNIOR KINDY	73 m²
KINDERGARTEN	76 m²
SENIOR KINDY	76 m²
Grand total: 7	443 m²

elia architecture

MOUNT LOW NORTH CHILDCARE CENTRE **SD0-01 B**

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

SITE PLAN

B240012
1 : 500 @ A3
01/02/24

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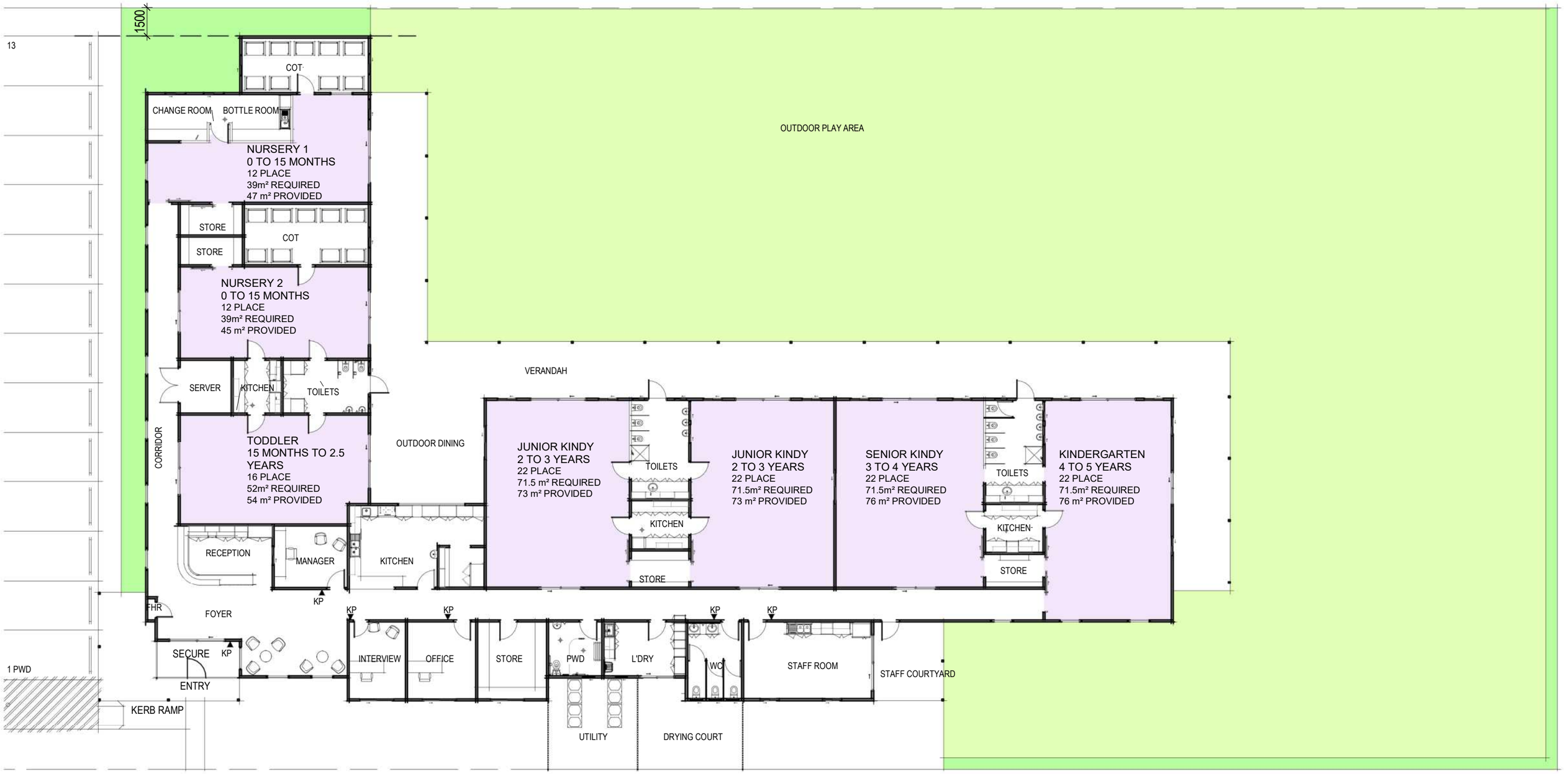

1 GROUND FLOOR PLAN
1 : 200

0 5 10 m

elia architecture

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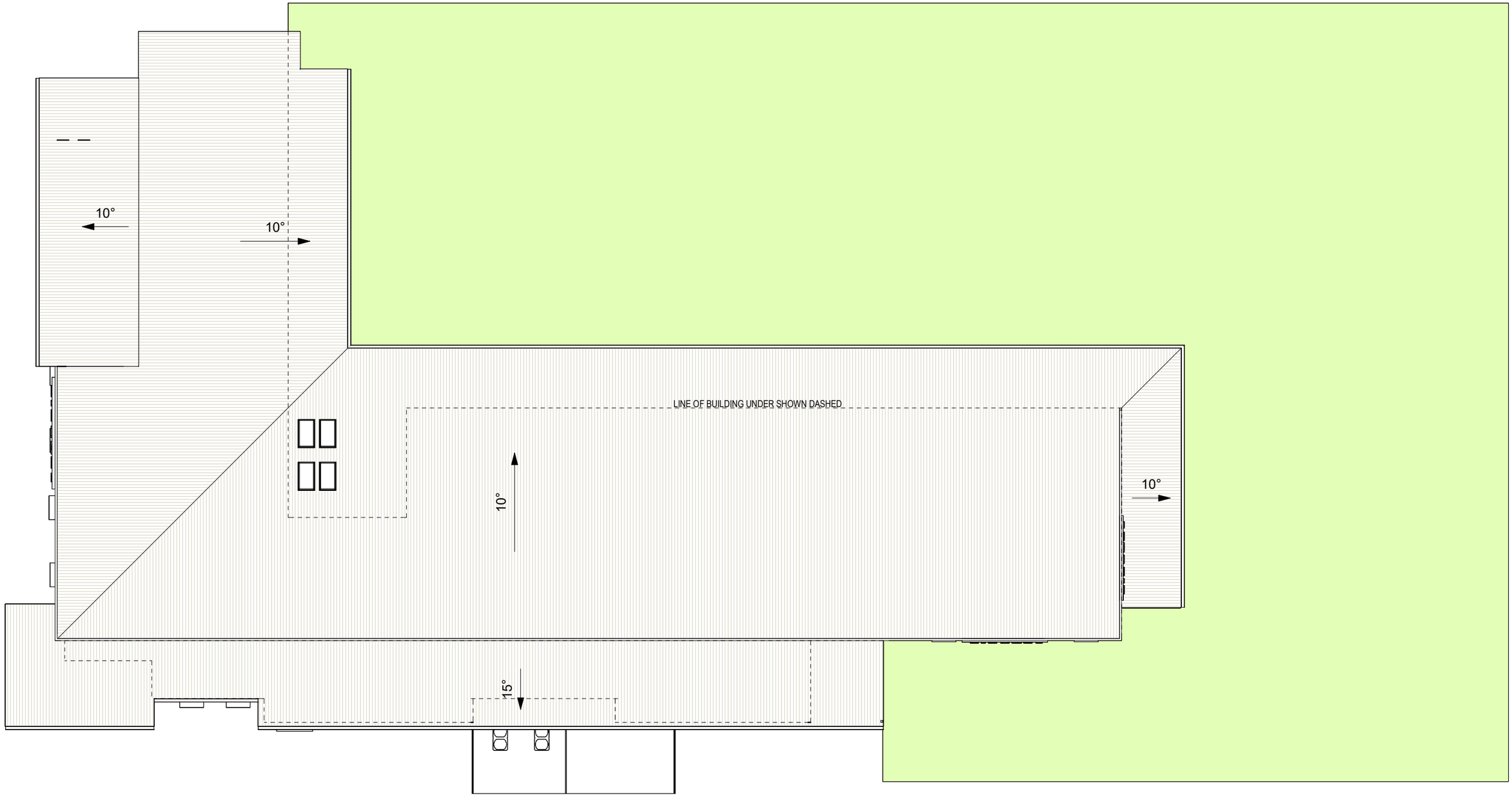

1 ROOF PLAN
1 : 200

0 5 10 m

MOUNT LOW NORTH CHILDCARE CENTRE

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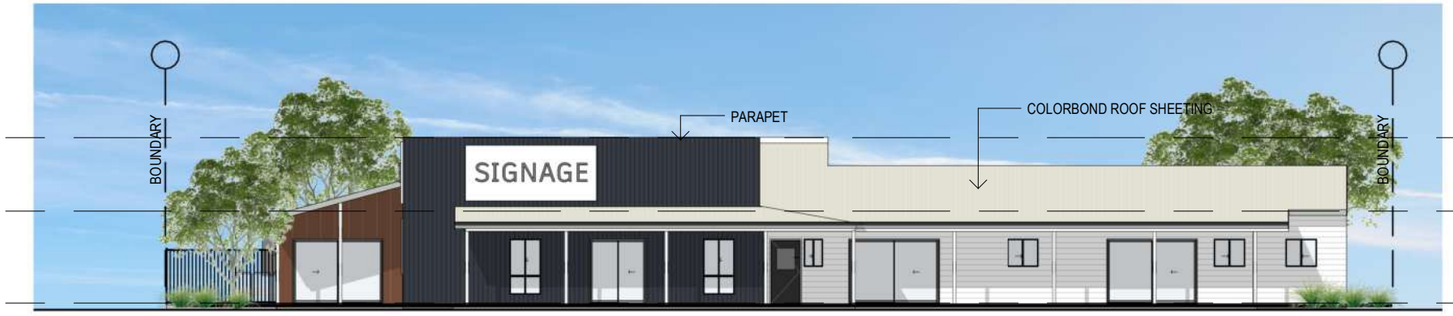
WEST ELEVATION

NORTH ELEVATION



EAST ELEVATION

SOUTH ELEVATION

MOUNT LOW NORTH CHILDCARE CENTRE

SD3-01 A

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

ELEVATIONS

B240012
1 : 200 @ A3
07/13/18

elia architecture
109 Herries Street, PO Box 547, Toowoomba 4350
P: 07 4632 0200, F: 07 4638 8044, E: tmba@elia.com.au
09/661 Oxley Road, PO Box 380, Corinda 4075
P: 07 3379 7611 E: bris@elia.com.au

Landscape Intent Statement

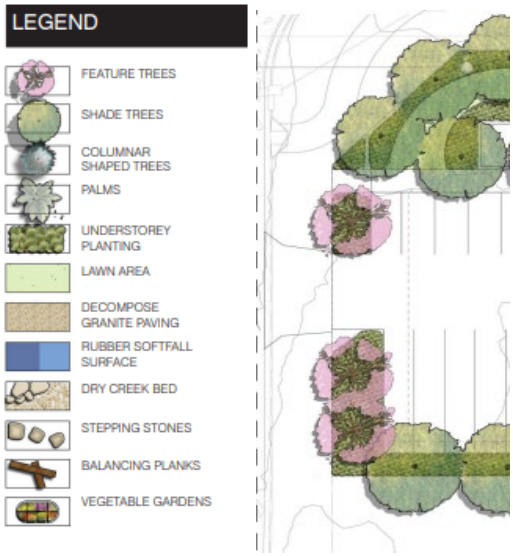
The Landscape Concept/Intent is to be finalised in conjunction with the childcare centre play scape design.

At a high level, the landscape element will incorporate the following:

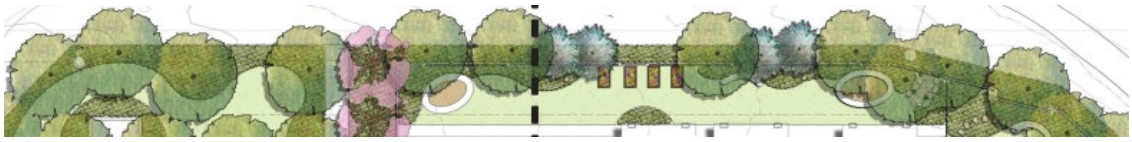
- Entry landscaping to highlight arrival points
- Shade Tree Planting of evergreens
- Screen planting, where appropriate
- Feature Trees
- Combination planting: -Shade trees, columnar trees underplanted with shrubs and ground covers
- Street trees to be provided in accordance with TCC Landscape Code

The figure overleaf identifies the proposed plant palette for the development. Examples of typical planting to be adopted are shown below:

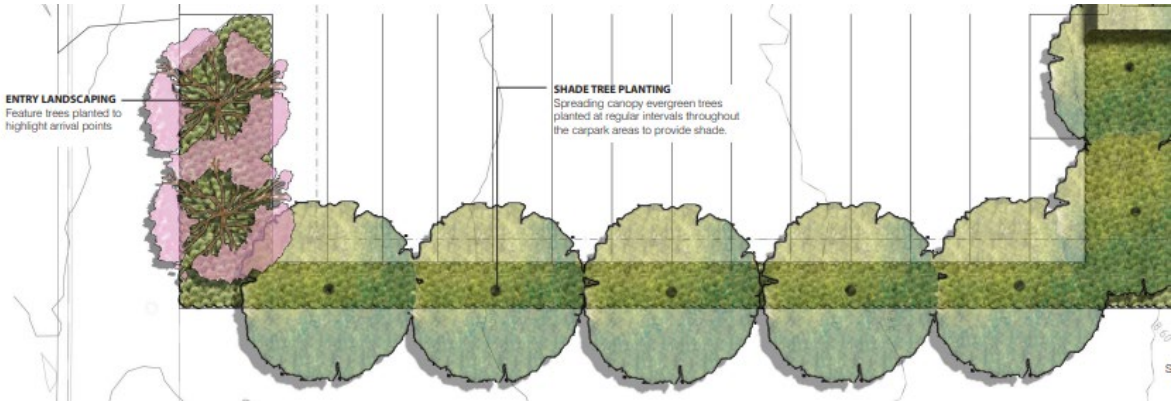
Illustration of Features *Typical Place of Entry Planting*



Typical spacing and articualtion of planting to be adopted.



Typical fence/ bed planting



PLANT PALETTE (From TCC Prefered Plant Species List)

FEATURE TREES

BRACHYCHITON
acerfolius

TABEBUIA
pallida

SHADE TREES

CUPANIOPSIS
anacardiodes

HARPULLIA
pendula

HIBISCUS
tiliaceus

LOPHOSTEMON
confertus

MELALEUCA
leucadendra

XANTHOSTEMON
chrysanthus

PALMS

ARCHONTOPHOENIX
alexandrae

PTYCHOSPERMA
macarthurii

COLUMNAR SHAPED TREES

ELAEOCARPUS
eumundii

GREVILLEA
baileyana

SYZYGIUM
Hinterland Gold

TROPICAL FOLIAGE PLANTS

ALPINIA
Variegata

HELOCONIA
species

RAPHIS excelsa

STRELITZIA
Reginae

SHRUBS

BANKSIA
robur

CALLISTEMON
Great Balls of Fire

CALLISTEMON
Little John

GARDENIA
florida

HIBISCUS
Swan Lake

IXORA
species

MELALEUCA
Claret Tops

MELASTOMA
Affine

SYZYGIUM
Resilience

GROUNDCOVERS/ TURFED PAVING

DIANELLA
caerulea

EVOLVULUS
pilosus

HYMENOCALLIS
littoralis

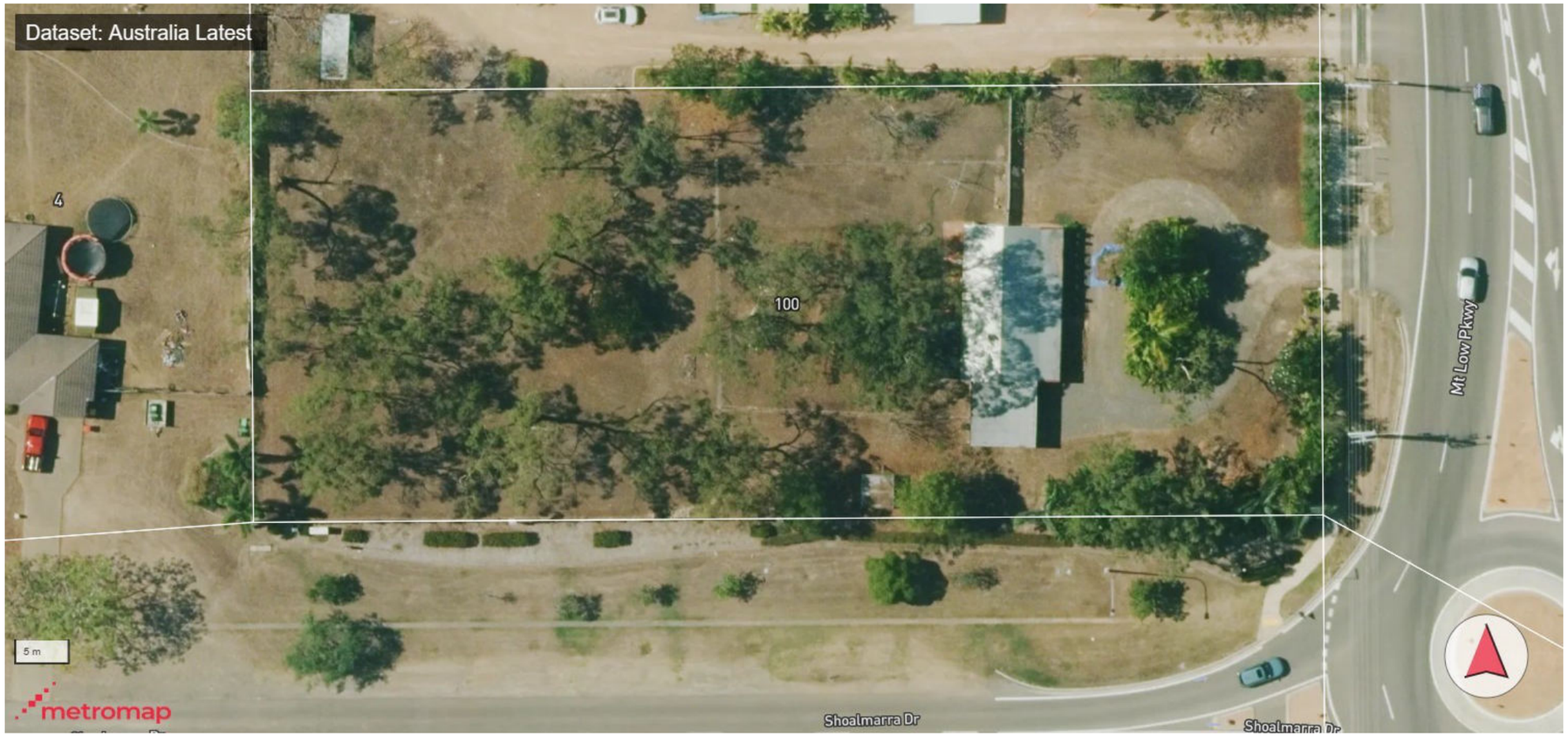
LIRIOPE
Evergreen Giant

LIRIOPE
Stripey White

LOMANDRA
hystrix

PHYLLANTHUS
multiflorus

TRACHELOSPERMUS
jasminoides



RPD

LOT 15 on RP739317
Area 4000m^2

Cnr Mt Low Parkway and Shoalmarra Drive

MOUNT LOW
TOWNSVILLE QLD

100 Mount Low Parkway

PROPOSAL

NEW 128 PLACE CHILDCARE CENTRE

AREAS

CHILDCARE CENTRE - GFA 940m^2

VERANDAH AREAS - 207 m^2

OUTDOOR PLAY - 1555 m^2 (13.7m^2 / CHILD)

CARPARKING

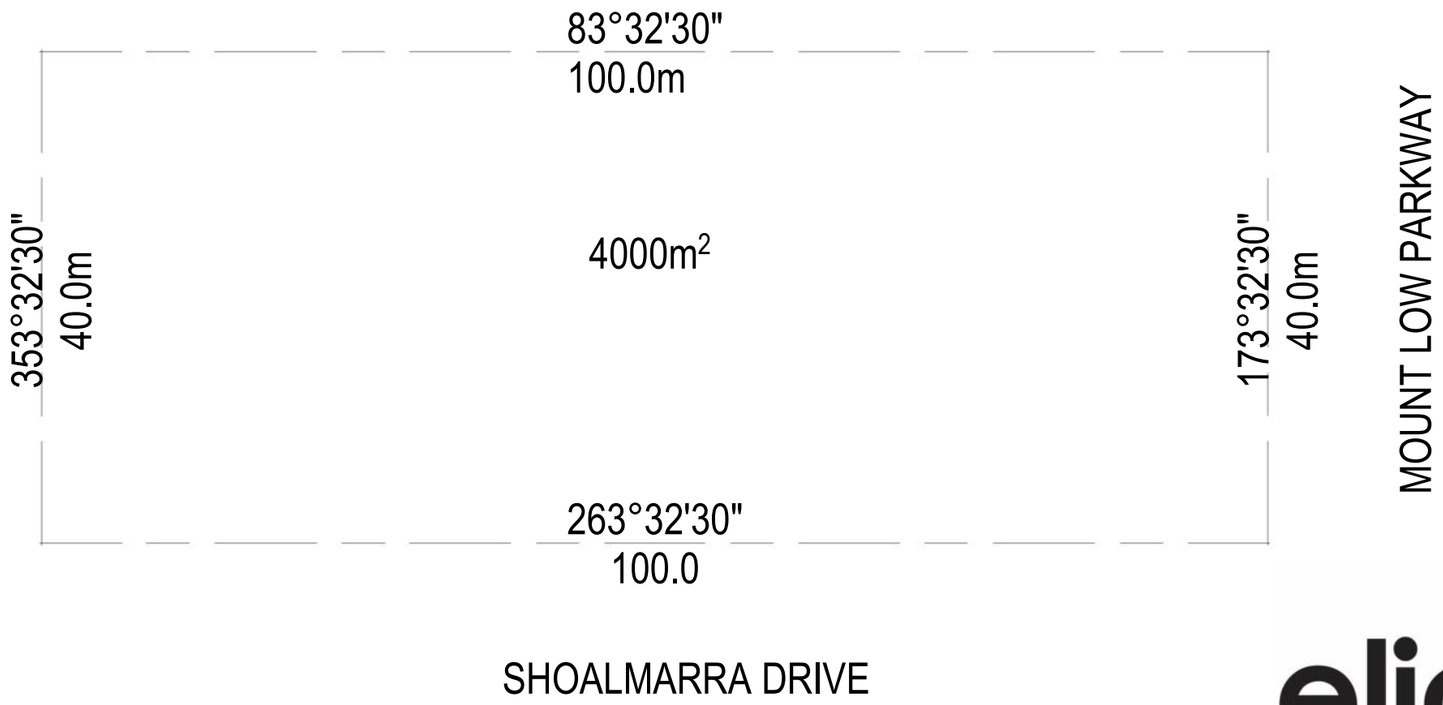
PARKING REQUIRED 1/10 = 12

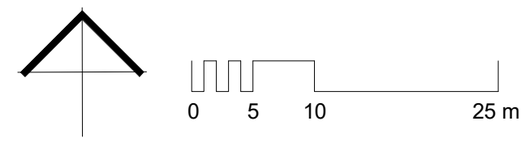
PLUS 1/FTE STAFF = 19

TOTAL REQUIRED = 32 (incl 1 PWD)

EXISTING HOUSE, SHED, DRIVEWAY, TREES TO BE REMOVED

EXISTING SITE PLAN 1:500





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MOUNT LOW NORTH CHILDCARE CENTRE **SD0-00 A**

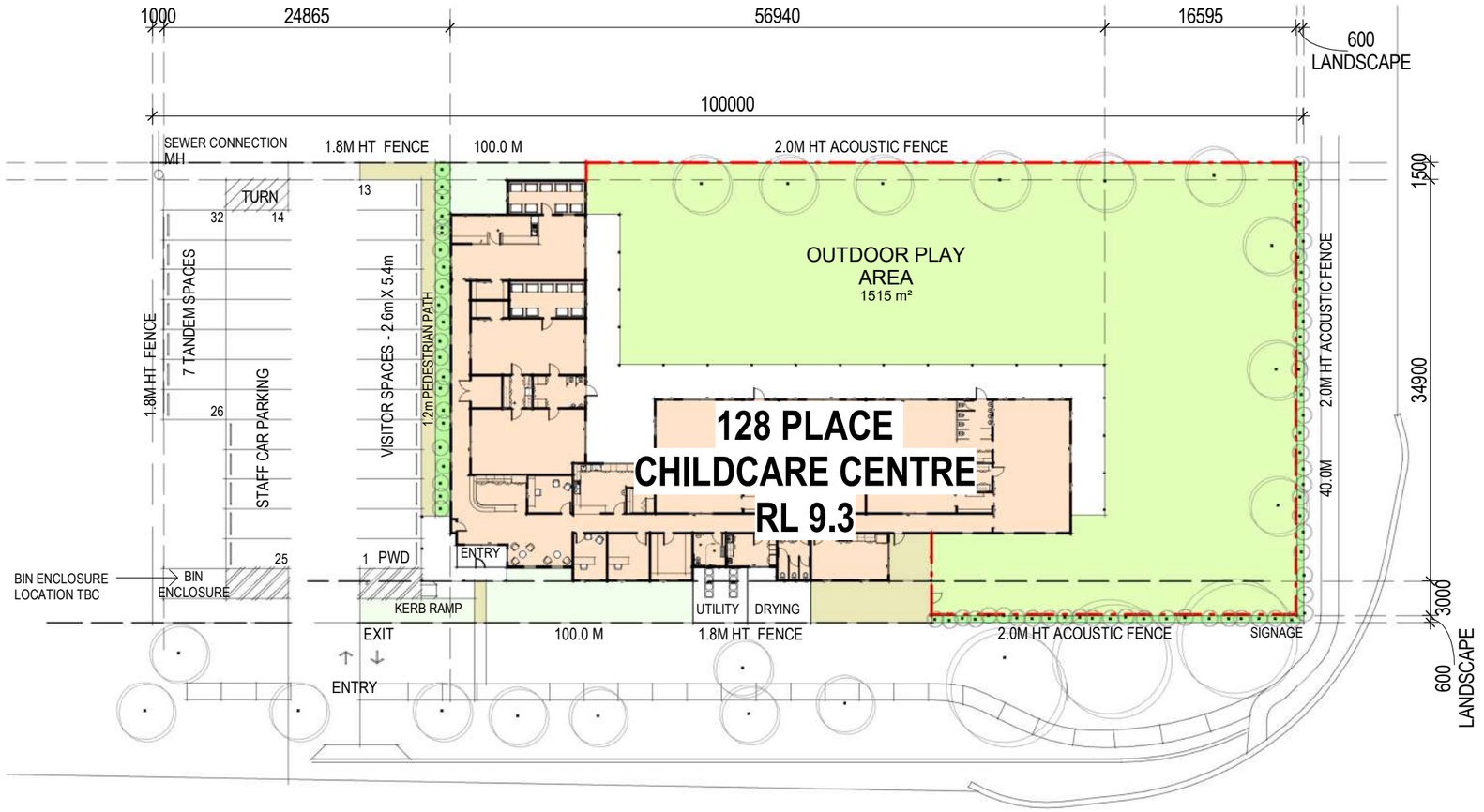
For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

EXISTING SITE PLAN

B240012
1 : 500 @ A3
03/27/24

109 Herries Street, PO Box 547, Toowoomba 4350
P: 07 4632 0200, F: 07 4638 8044, E: tmba@elia.com.au

09/661 Oxley Road, PO Box 380, Corinda 4075
P: 07 3379 7611 E: bris@elia.com.au



SHOALMARRA DRIVE

1 SITE PLAN
1 : 500

0 5 10 25 m

MOUNT LOW PARKWAY

RPD
LOT 15 on RP739317
Cnr Mt Low Parkway and Shoalmarra Drive
MOUNT LOW
TOWNSVILLE QLD

ZONE
Rural Residential

SITE AREA
4000 m²

LOCAL AUTHORITY
TOWNSVILLE CITY COUNCIL

PROPOSAL
NEW 128 PLACE CHILDCARE CENTRE

BUILDING CLASSIFICATION
CLASS 9b TYPE C CONSTRUCTION

GROSS FLOOR AREA (GFA)

TOTAL GFA	**940 m²**
(+ VER, O/D AREA & SECURE PORCH)	

OUTDOOR PLAY AREAS

OUTDOOR PLAY AREA (PROVIDED)	1515 m²
VERANDAH AREA (PROVIDED)	207m²
TOTAL OUTDOOR PLAY AREA PROVIDED (13.4 m² PER CHILD)	1,722 m²

CARPARKING

STAFF REQUIRED	19	CARPARKS
VISITOR REQUIRED	12	CARPARKS
CARPARKING REQUIRED	31	
CARPARKING PROVIDED	32	

Playroom Schedule

Name	Area
NURSERY 2	45 m²
NURSERY 1	47 m²
TODDLER	54 m²
JUNIOR KINDY	73 m²
JUNIOR KINDY	73 m²
KINDERGARTEN	76 m²
SENIOR KINDY	76 m²
Grand total: 7	443 m²

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MOUNT LOW NORTH CHILDCARE CENTRE **SD0-01 B**

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

SITE PLAN

B240012
1 : 500 @ A3
01/02/24

109 Herries Street, PO Box 547, Toowoomba 4350
P: 07 4632 0200, F: 07 4638 8044, E: tmba@elia.com.au

09/661 Oxley Road, PO Box 380, Corinda 4075
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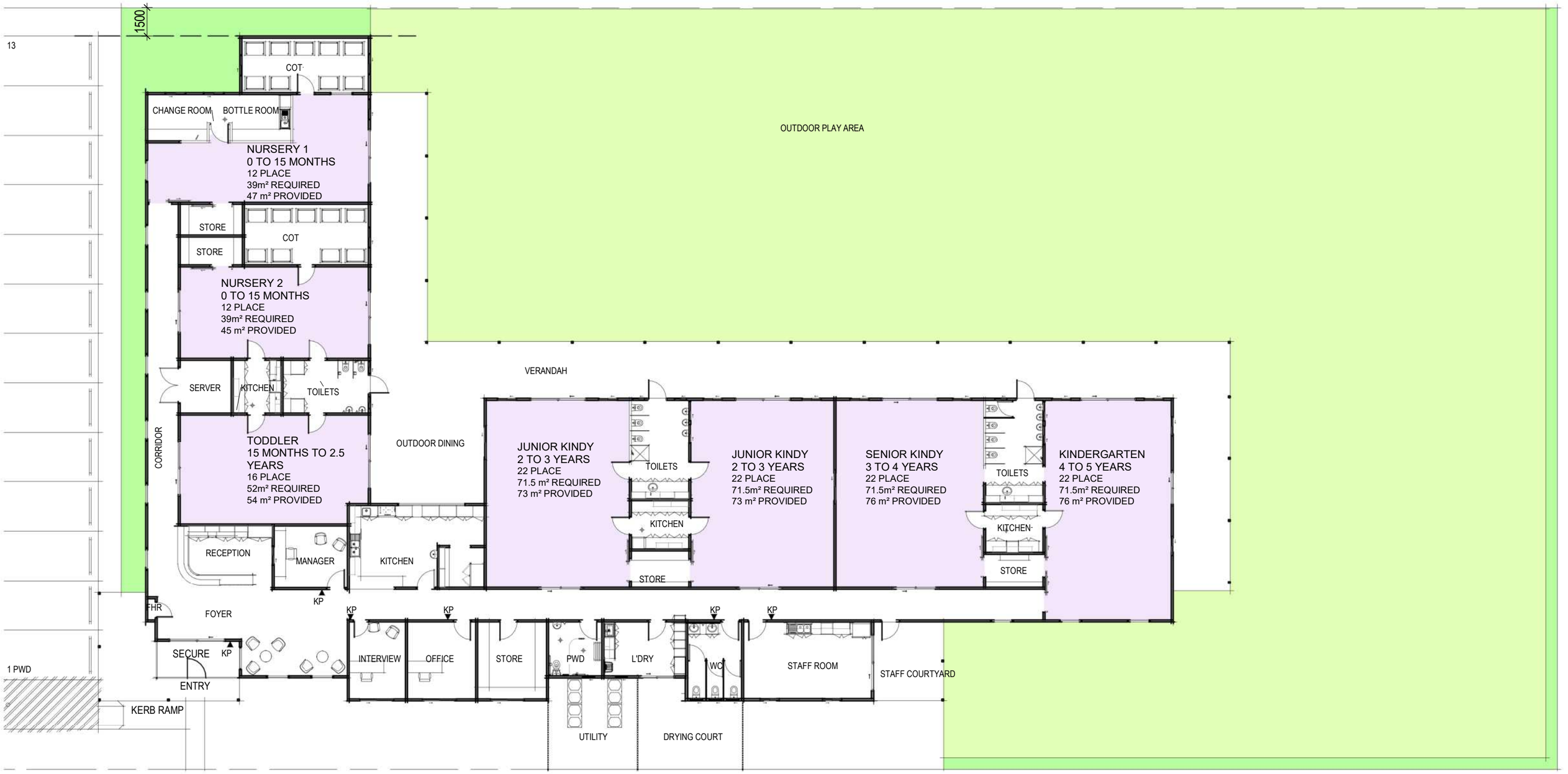

1 GROUND FLOOR PLAN
1 : 200

0 5 10 m

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MOUNT LOW NORTH CHILDCARE CENTRE

SD1-01 A

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

GROUND FLOOR PLAN

B240012
1 : 200 @ A3
21/11/23

109 Herries Street, PO Box 547, Toowoomba 4350
P: 07 4632 0200, F: 07 4638 8044, E: tmba@elia.com.au

09/661 Oxley Road, PO Box 380, Corinda 4075
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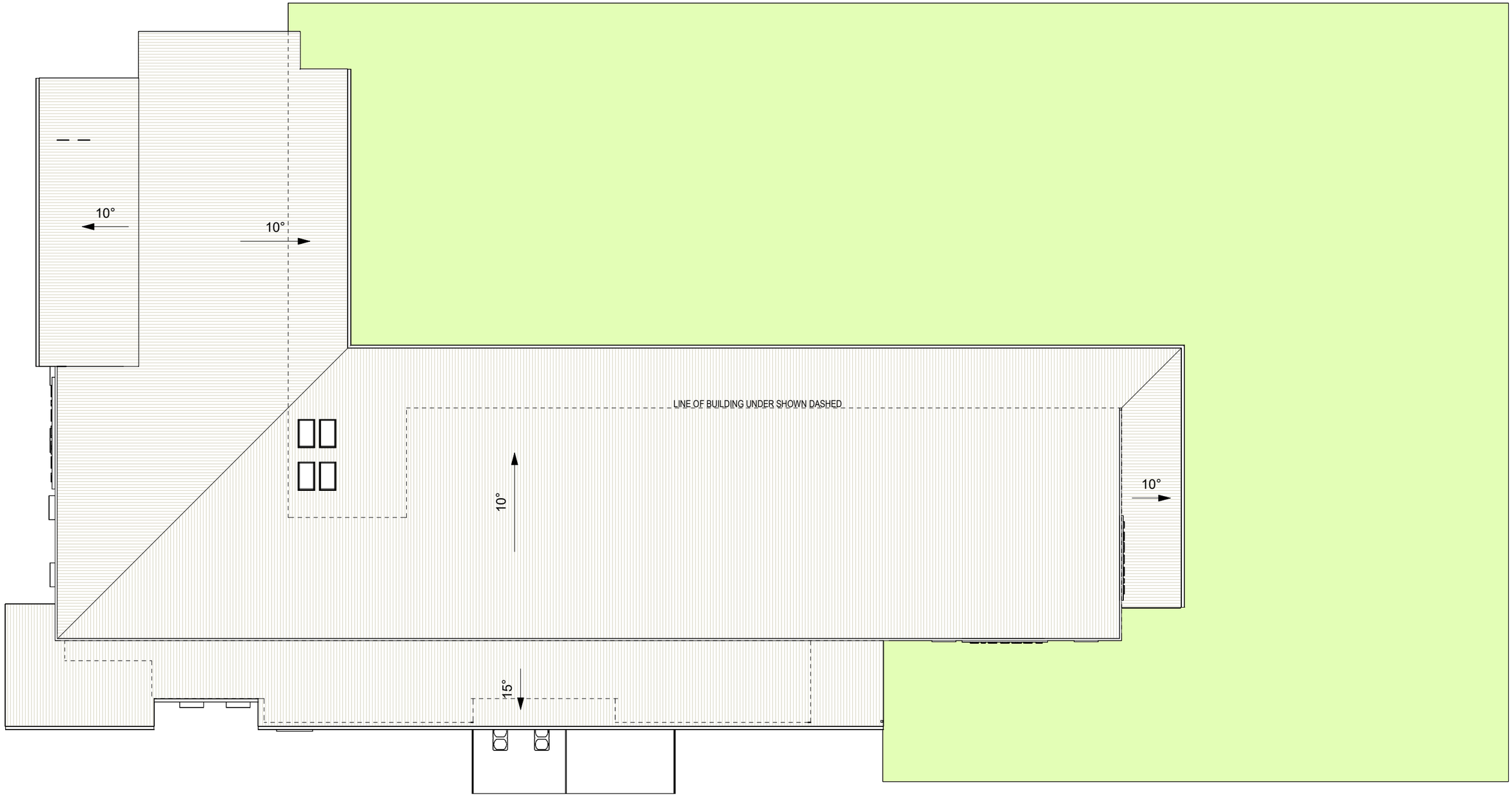

1 ROOF PLAN
1 : 200

0 5 10 m

MOUNT LOW NORTH CHILDCARE CENTRE

SD1-03 A

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

ROOF PLAN

B240012
1 : 200 @ A3
07/13/18

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109 Herries Street, PO Box 547, Toowoomba 4350
P: 07 4632 0200, F: 07 4638 8044, E: tmba@elia.com.au
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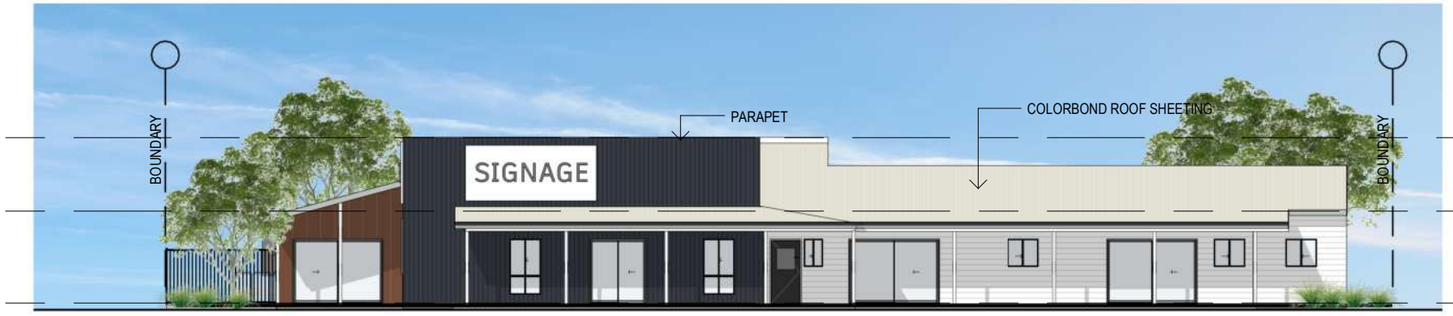
WEST ELEVATION

NORTH ELEVATION



EAST ELEVATION

SOUTH ELEVATION

MOUNT LOW NORTH CHILDCARE CENTRE

SD3-01 A

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

ELEVATIONS

B240012
1 : 200 @ A3
07/13/18

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Appendix 7 – Code Assessment –100 Mount Low Parkway

6.2.4 Rural Residential Zone Code

Table 6.2.4.3—Accepted development subject to requirements and assessable development (Part)		
Performance outcomes	Acceptable outcomes	Comment
For accepted development subject to requirements and assessable development		
Home based business		
PO1 The use does not adversely impact on the amenity of the surrounding residential land uses and local character.	AO1.1 The home based business: a) is carried out in an existing building or structure (excluding truck parking); b) does not use more than 60m² of the gross floor area of the building or structure; c) involves at least one or more residents of the dwelling house; d) involves not more than two non-resident employees; e) where bed and breakfast or farm stay accommodation does not exceed three bedrooms; f) does not generate more than 1 heavy vehicle trip per week; Editor's note—A heavy vehicle is a vehicle with more than 4.5 tonnes gross vehicle mass. g) does not generate more than 28 vehicle trips per day by other vehicles, where one trip includes arriving at the site and a second trip is departing the site. These trips are additional to normal domestic trips associated with the dwelling; h) contains visitor parking within the site; i) does not involve hiring out of materials, goods, appliances or vehicles; and j) does not involve the repair or maintenance of vehicles, other than minor maintenance of vehicles used in conjunction of the home business on the site.	Not applicable – the application is not for a home-based business. However, it is noted the use does not adversely impact on the amenity of the surroundings.

	Editor's note—Home based business operators should also refer to signage requirements under Table 5.8.2 - Operational work being placing an advertising device on a premises and Section 9.3.1-Advertising devices code.	
	AO1.2 Functional aspects of the use such as service areas, material storage or use activities are not visible from the street.	**Not applicable**
	AO1.3 Other than where a bed and breakfast, farm stay or home based childcare, the business use does not operate outside the hours of 8am to 5pm Monday to Friday, 8am to 2pm Saturday and does not operate on Sunday.	**Not applicable.**
	AO1.4 Noise levels do not exceed acoustic quality objectives under the Environmental Protection (Noise) Policy 2008.	**Not applicable.** However, it is noted the use complies with the City Plan and EPA noise criteria.
PO2 Heavy vehicle parking: a) has a direct nexus with a home based business or rural use carried out on the site; and b) does not adversely affect the amenity of neighbouring properties. **Editor's note—**A heavy vehicle is a vehicle with more than 4.5 tonnes gross vehicle mass.	**AO2.1** Not more than one heavy vehicle is parked on the site.	**Not applicable**
	AO2.2 While on-site, vehicles: a) are not left idling for more than 5 minutes at any one time; and b) do not have a refrigeration unit running.	**Not applicable**
Roadside stall		
PO3 Roadside stalls are small in scale and do not impact negatively upon the amenity, character or safety of the locality and the safety and efficiency of roads.	**AO3.1** Any structure used for the sale of goods or produce is limited to 20m^2 gross floor area.	**Not applicable**
	AO3.2 Access to the structure is via the primary property access point.	**Not applicable**
	AO3.3 Produce or goods sold is grown, made or produced on the land on which the road side stall is erected.	**Not applicable**

Appendix 7 – Code Assessment –100 Mount Low Parkway

Sales office		
PO4 The use does not adversely impact on the amenity of the surrounding land uses and local character.	**AO4** Development of the sales office is in place for no more than two years.	**Not applicable**
Animal keeping and cropping		
PO6 Animal keeping and cropping do not adversely impact on the amenity of the surrounding residential land uses and local character.	**AO6.1** Non-residential buildings, animal enclosures, storage facilities and waste disposal areas are set back 50m from any dwelling on an adjoining or nearby site.	**Not applicable**
	AO6.2 The height of non-residential buildings or facilities does not exceed 2 storeys or 8.5m above ground level, whichever is the lesser.	**Not applicable.** However, it is noted the building is single storey and less than 8.4m above ground level.
	AO6.3 Cropping does not involve chemical spraying unless a 40m wide vegetated buffer is provided on the site between the crops which are being sprayed and adjoining land.	**Not applicable**
For assessable development – where a non-residential or tourist accommodation use		
PO7 Non-residential uses established only where: a) compatible with local character and amenity b) limited in scale and supporting the day-to-day needs of the local community; and c) not more appropriately located in another zone.	No acceptable outcome is nominated. **Editor's note—**Applicants should have regard to Economic impact assessment planning scheme policy no. SC6.5 for guidance on how to demonstrate compliance with this performance outcome.	**Complies**. The proposed childcare centre design is compatible with the local rural residential local character, noting that the centre is proposed fronting a major intersection in the locality. The proposed centre is an essential service and there is demonstrated need for additional childcare places now and in the future in the Mount Low catchment. The centre is located specifically to service the residents of Mount Low. There is no available commercially zoned land within the catchment and this site has been selected as a suitable given its prominent position on the corner of two major local roads, meaning also that only two direct neighbours adjoin the land (that are already affected by local traffic noise).

Appendix 7 – Code Assessment –100 Mount Low Parkway

PO8 Tourism accommodation within Balgal Beach and the Magnetic Island townships is compatible with the village character of these communities.	No acceptable outcome is nominated.	Not applicable
Built form		
PO9 Development is consistent with the height and scale of surrounding buildings and includes features that contribute to an attractive streetscape.	No acceptable outcome is nominated.	Complies The proposed childcare centre will be one storey and of a house-compatible form with attractive building design and landscaping features to compliment the Mount Low Parkway streetscape. The building and car park will be appropriately set back to not detract from the current streetscape.
Amenity		
PO10 Development minimises impacts on surrounding land and provides for an appropriate level of amenity within the site, having regard to: a) noise; b) hours of operation; c) traffic; d) visual impact; e) odour and emissions; f) lighting; g) privacy; and h) outlook.	No acceptable outcome is nominated.	Complies The proposal includes consideration of the surrounding land and amenity as follows: a) noise – noise impact will be attenuated by acoustic barriers; b) hours of operation – are standard for childcare centres, being: • Mon-Fri 6am to 7pm • Sat-Sun 7am to 7pm c) traffic – vehicle access and car parking has been designed to ensure compliance. Traffic generated by the development will encompass a large number of joint trips and will not be a noticeable addition to the road network; d) visual impact – as noted, the centre will be designed to complement the surrounding visual amenity and be well landscaped; e) odour and emissions – not applicable;

Appendix 7 – Code Assessment –100 Mount Low Parkway

		f) lighting – will be designed to avoid amenity impact; g) privacy – 1.8m to 2.0m fencing is proposed around all shared boundaries so privacy of neighbours (and children) is maintained; and h) outlook – not applicable.
PO11 Landscaping is provided to contribute positively to the city image, particularly along major roads.	No acceptable outcome is nominated.	Complies Generous landscaping will be provided on boundaries fronting both Shoalmarra Drive and Mount Low Parkway. The landscaping proposed will be an improvement to the current nature-strip landscaping (bounding Shoalmarra Drive), which is not currently maintained.
PO12 Development does not compromise the ongoing productive use of nearby rural land.	No acceptable outcome is nominated.	Not applicable – the closest rural land is located well to the south in Jensen and Bohle Plains and this use will not impact on any current productive use of that land.
PO13 Development for the purposes of a sensitive use within 500m of land included in the High impact industry zone or Special purpose zone, or within 250m of land in the Medium impact industry zone: a) achieves indoor noise levels consistent with the objectives set out in the Environmental Protection (Noise) Policy 2008; b) achieves air quality levels consistent with the objectives set out in the Environmental Protection (Air) Policy 2008 and the relevant national standard; and c) does not experience offensive odours.	No acceptable outcome is nominated.	Not applicable – the development is a sensitive use but is not within 500m of a high impact or special purpose zone, or within 250m of medium impact industry zone.
Protection of natural values		
PO14 The site layout, size and design responds sensitively to on-site and	No acceptable outcome is nominated.	Complies The proposal complies or can be conditioned to comply with relevant aspects of this Planning

surrounding topography, drainage patterns and ecological values by: a) minimising earthworks; b) maximising retention of natural drainage patterns; c) ensuring existing drainage capacity is not reduced; d) maximising the retention of existing vegetation; e) providing buffers to protect the ecological functions of waterways; and f) protecting environmental values and water quality objectives of receiving waters. Editor's note—The environmental values and water quality objectives are established under the Environmental Protection Policy (2009). For Townsville, they are specified in the Ross River Basin Environmental Values and Water Quality Objectives 2012 and Black River Basin Environmental Values and Water Quality Objectives (2012).		Outcome, particularly at the Operational Works phase. PO14 (e) and (f) are not applicable.

Appendix 7 – Code Assessment –100 Mount Low Parkway

6.2.4 Rural residential zone code

6.2.4.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment.
When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

6.2.4.2 Purpose

1. The purpose of the Rural residential zone code is to provide for residential development on large lots where the intensity of residential development is dispersed.
2. The particular purpose of the code is to:
    a) provide for semi-rural lifestyles in which the primary use is dwelling houses on large lots which may have limited access to infrastructure and services;
    b) provide for some subordinate, and generally domestic scale, rural activities and home based business to occur;
    c) ensure development maintains the character and amenity of the rural residential locality; and
    d) ensure any intensification of impacts on nearby ecological values or natural resources is avoided.
3. The purpose of the zone will be achieved through the following overall outcomes:
    a) residential development occurs in the form of dwelling houses, to the general exclusion of other more intensive residential uses;
    b) reconfiguration creates large lots which support a semi-rural lifestyle and avoid intensification of impacts on on-site and on nearby ecological values, natural resources or rural activities;
    c) lot sizes are sufficient to ensure the protection of environmental values and water quality objectives;
    d) further expansion of existing rural residential areas does not occur beyond those areas zoned for this purpose;
    e) home businesses occur to an extent that does not unduly diminish the semi-rural residential amenity, having regard to noise, odour, dust, traffic and other impacts;
    f) roadside stalls and other sales of produce produced on the site are of a limited scale that is consistent with the semi-rural lifestyle;
    g) non-residential uses occur within the zone where they primarily support the day-to-day needs of the immediate residential community and do not unreasonably detract from the residential amenity of the area;
    h) development is buffered from nearby rural land such that the productive use of the rural land is not constrained;
    i) residential development is protected from the impacts of nearby industrial activities, transport corridors and infrastructure installations and major facilities such as Department of Defence landholdings;
    j) the natural bushland setting and village character of Balgal Beach and the Magnetic Island townships are maintained. Tourism accommodation in these communities is of a house compatible scale; and
    k) development does not diminish water quality and does not intensify impacts on other environmental values including remaining areas of ecological significance within the zone.

Appendix 7 – Code Assessment –100 Mount Low Parkway

8.2.1 - Airport Environs Overlay Code

Table 8.2.1.3 - Accepted development subject to requirements and assessable development (Part)		
Performance outcomes	Acceptable outcomes	Comment
For assessable development		
Operational airspace (overlay map OM-01.1)		
PO1 Development does not involve permanent or temporary physical obstructions that will adversely affect the airport's operational airspace area identified on overlay map OM-01.1. Editor's note—The *Defence (Areas Control) Regulation* (DACR) is a Commonwealth regulation under the *Defence Act 1903*. Development in the area covered by this regulation which exceeds certain heights will require a separate assessment process under Regulation 8 of the DACR by the Department of Defence. The Department of Defence also requires that all tall structures (30m high within 30km of the airport and 45m high elsewhere) are registered by forwarding "as constructed" information to Airservices Australia at the following email address: vod@airservices.com.	AO1.1 Development involving a permanent or temporary building, structure or landscaping does not enter operational airspace areas identified on overlay map OM-01.1. Editor's note-Alternative heights which enter the operational airspace areas may be possible. In particular, building heights which meet the acceptable outcomes for a particular zone or precinct under this planning scheme. However, applicants should note the requirement for assessment under the Defence (Areas Control) Regulation (DACR) for development which exceed AO1 above.	Complies Site is within OM-01.1 mapping – airspace more than 90m above ground level. The building is single storey, as is the existing improvements on site.
	AO1.2 Development on land within the area identified on overlay map OM-01.1 as operational airspace areas does not involve transient intrusions within the operational airspace.	Not applicable
PO2 Emissions do not significantly affect air turbulence, visibility or aircraft engine operation in the airport's operational airspace area identified on overlay map OM-01.1.	AO2 Development does not generate: (a) a gaseous plume with a velocity exceeding 4.3m per second; or (b) smoke, dust, ash or steam that will penetrate operational airspace areas identified on overlay map OM-01.1.	Not applicable

Appendix 7 – Code Assessment –100 Mount Low Parkway

Table 8.2.1.3 - Accepted development subject to requirements and assessable development (Part)		
Performance outcomes	Acceptable outcomes	Comment
For accepted development subject to requirements and assessable development		
Wildlife hazard buffer zones (overlay map OM-01.2)		
PO3 Development does not attract a significant number of flying vertebrates, such as birds and bats, into areas identified on overlay map OM-01.2.	AO3.1 Within 13km of airport runways, development does not involve a putrescible waste disposal facility.	Not applicable
	AO3.2 Within 8km of airport runways, development does not involve: (a) aquaculture; or (b) food handling or processing of an industrial nature; or (c) stock handling or slaughtering; or (d) pig production; or (e) fruit production; or (f) turf production; or (g) the keeping or protection of wildlife outside enclosures.	Not applicable
	AO3.3 Within 3km of airport runways, development does not involve: (a) the keeping, handling or racing of horses; or (b) outdoor dining, food handling or food consumption.	Not applicable

8.2.1.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Airport environs overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

8.2.1.2 Purpose

1. The purpose of the Airport environs overlay code is to ensure the safe and efficient operations of the airport, RAAF base and aviation facilities are protected.
2. The purpose of the code will be achieved through the following overall outcomes:
   a) development avoids adversely affecting the safety and efficiency of an airport's operational airspace or the functioning of aviation facilities;
   b) large increases in the numbers of people adversely affected by significant aircraft noise are avoided; and
   c) development does not increase the risk to public safety near airport runways.

8.2.6 – Flood Hazard Overlay Code – Development constraints mapping OM6.1 to OM 6.2 – Low and medium hazard area

Table 8.2.6.3(a)-Accepted development subject to requirements and assessable development (Part)		
Performance outcomes	**Acceptable outcomes**	**Comment**
For accepted development subject to requirements and assessable development		
PO1 Development in medium and high hazard areas is designed and located to minimise susceptibility to and potential impacts of flooding. **Editor's note—**The *Building Regulation 2006* may also establish requirements with which development will need to comply. The defined flood event is identified in this planning scheme as the 1% annual exceedance probability (AEP) flood and is mapped as the combined extent of the high and medium flood hazard areas identified on overlay map OM-06.1 and 06.2. Other than in the medium hazard — further investigation area, council will be able to make available the height of the flood level for any particular location upon request. Applicants must be aware that in some areas storm tide hazard areas will also co-exist with flood hazard areas. In these instances, the floor levels and other design responses will need to be sufficient to comply with this code, the Coastal environment overlay code and the *Building Regulation 2006*.	**AO1.1** Where the development is located within an area shown on overlay map OM-06.1 or 06.2 as medium hazard — further investigation area, new buildings containing habitable rooms: (a) are sited on a part of the site which is outside the medium hazard — further investigation area; or (b) are sited on the highest part of the site. OR **AO1.2** Where development is located within another hazard area shown on overlay map OM-06.1 or 06.2: (a) floor levels of all habitable rooms are a minimum of 300mm above the defined flood level; (b) floor levels of all non-habitable rooms (other than class 10 buildings) are above the defined flood event; (c) parking spaces associated with non-residential development are located outside the high hazard areas identified on overlay map OM-06.1 or 06.2; and **Editor's note—**Class 10 buildings are identified under the Building Code of Australia and includes carports and outbuildings. (a) underground parking is designed to prevent the intrusion of flood waters by the incorporation of a bund or similar barrier with a minimum height of 300mm above the defined flood level.	The site is impacted by *low* flood hazard mapping. The application is supported by an Engineering Report prepared by Northern Consulting Engineers (**NCE**) which determines the proposed development is expected to have a negligible impact on the existing network or flooding conditions and no mitigation measures are necessary. Notably, the development does not contain habitable rooms.

PO2 Development in high hazard areas does not significantly impede the flow of flood waters through the site or worsen flood flows external to the site.	AO2.1 Development in high hazard areas do not involve: (a) filling with a height greater than 150mm; or (b) block or solid walls or solid fences; or (c) garden beds or other structures with a height more than 150mm; or (d) the planting of dense shrub hedges.	Not applicable
Table 8.2.6.3(a)-Self-assessable and assessable development (Part)		
Performance outcomes	Acceptable outcomes	Comment
For assessable development		
PO3 Development does not intensify use in high hazard areas, in order to avoid risks to people and property. Editor's note—High hazard areas are those likely to experience deep and/or fast moving water in a defined flood event.	AO3.1 New buildings are located outside high hazard areas identified on overlay map OM-06.1 or 06.2.	N/a – the site is not in high hazard area
	AO3.2 New lots or roads are not created within high hazard areas identified on overlay map OM-06.1 or 06.2.	N/a – the site is not in high hazard area
	AO3.3 Sites for non-permanent accommodation such as tents, cabins or caravans (whether intended for short or long-term accommodation) are located outside the high hazard areas identified on overlay map OM-06.1 or 06.2.	N/a – the site is not in high hazard area
PO4 Siting and layout of development maintains the safety of people and property in medium hazard areas. Editor's note—The *Building Regulation 2006* establishes requirements with which development will need to comply. The defined flood event is identified in this planning scheme as the 1% annual exceedance probability (AEP) flood and is mapped as the combined extent of the high and medium flood hazard areas identified on overlay map OM-06.1 and 06.2. Other than in the medium hazard — further investigation area, council will be able to make available the height of the flood level for any particular location upon request.	On existing lots AO4.1 Floor levels for residential buildings are 300mm above the defined flood level. Editor's note—In medium hazard — further investigation area, a flood assessment in accordance with the Flood hazard planning scheme policy no. SC6.7 may be needed to establish the defined flood level.	Not applicable
	AO4.2 Floor levels of non-residential buildings (other than class 10 buildings) are above the defined flood level. Editor's note—Class 10 buildings are identified under the *Building Code of Australia* and includes carports and outbuildings.	Please refer to NCE report and statement.

Applicants must be aware that in some areas storm tide hazard areas will also co-exist with flood hazard areas. In these instances, the floor levels and other design responses will need to be sufficient to comply with this code, the Coastal environment overlay code and the *Building Regulation 2006*.	AO4.3 Underground parking is designed to prevent the intrusion of flood waters by the incorporation of a bund or similar barrier with a minimum height of 300mm above the defined flood level.	Not applicable
	AO4.4 Development for non-permanent accommodation such as tents, cabins or caravans (whether intended for short or long-term accommodation) are located outside the medium hazard areas identified on overlay map OM-06.1 or 06.2.	Not applicable
	Where reconfiguring a lot AO4.5 Where reconfiguring a lot, new lots contain designated building envelopes (whether or not for residential purposes) outside the medium hazard areas identified on overlay map OM-06.1 or 06.2 and those building envelopes are of a sufficient size to accommodate buildings associated with the development.	Not applicable
	AO4.6 In new subdivisions, arterial, sub-arterial or major collector roads are located above the 2% AEP flood level.	Not applicable
	AO4.7 Reconfiguration of lots does not involve cul-de-sacs or dead end streets within medium hazard areas identified on overlay map OM-06.1 or 06.2.	Not applicable
PO5 Signage is provided within high and medium hazard areas to alert residents and visitors to the flood hazard.	AO5 Signage is provided on-site (regardless of whether land will be public or private ownership) to indicate depth at key hazard points, such as at floodway crossings, entrances to low-lying reserves or parking areas.	Not applicable
PO6 Development within high and medium hazard areas ensures any changes to the depth, duration, velocity of flood waters are contained within the site. **Editor's note—**Impacts on a range of floods may need to be assessed and in most instances can be evaluated by	No acceptable outcome is nominated.	Not applicable

analysing the minor drainage system capacity event and the defined flood event for the catchment wide critical duration, unless the site is located in an area noted in the Flood hazard planning scheme policy SC6.7.		
PO7 Development within high and medium hazard areas does not directly, indirectly or cumulatively worsen flood characteristics outside the development site, having regard to: (a) increased scour and erosion; or (b) loss of flood storage; or (c) loss of or changes to flow paths; or (d) flow acceleration or retardation; or (e) reduction in flood warning times. Editor's note—To adequately assess the impacts of development on flooding regimes, applicants may need to have a hydrological and hydraulic assessment carried out by a suitably qualified and experienced hydrologist or engineer.	No acceptable outcome is nominated.	Not applicable
PO8 Facilities with a role in emergency management and vulnerable community services are able to function effectively during and immediately after flood events. Editor's note—This provision applies to high, medium and low flood hazard areas.	AO8 The development is provided with the level of flood immunity set out in Table 8.2.6.3(b).	Not applicable
PO9 Public safety and the environment are not adversely affected by the detrimental impacts of flooding on hazardous materials manufactured or stored in bulk.	AO9.2 Within the low or medium flood hazard area identified on overlay map OM-06.1 or 06.2, structures used for the manufacture or storage of hazardous materials in bulk are designed to prevent the intrusion of flood waters up to at least a 0.2% AEP flood event.	Not applicable
Table 8.2.6.3(b)-Flood immunity for community services and facilities		
Development	Level of flood immunity – annual exceedance probability	
Development involving: (a) emergency services; (b) hospitals and associated facilities; (c) major electricity infrastructure.	0.2% AEP flood event	Not applicable

Development involving: (a) emergency/evacuation shelters; (b) the storage of valuable records or items of historic/cultural significance (e.g. libraries, galleries); (c) aeronautical facilities; (d) telecommunication facilities; (e) substations; (f) water treatment plants; (g) regional fuel storage; (h) food storage warehouse; (i) retirement facility and residential care facility.	0.5% AEP flood event	Not applicable
Sewerage treatment plants (requiring licensing as an environmentally relevant activity).	1% AEP flood event	Not applicable

8.2.6.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Flood hazard overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

8.2.6.2 Purpose

1. The purpose of the Flood hazard overlay code is to manage development outcomes in flood hazard areas so that risk to life, property, community, economic activity and the environment during future flood events is minimised, and to ensure that development does not increase the potential for flood damage on-site or to other property.
2. The purpose of the code will be achieved through the following overall outcomes:
   a) development is compatible with the nature of the flood hazard except where there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal;
   b) where development is not compatible with the nature of the flood hazard and there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal:
      i. development minimises as far as practicable the adverse impacts from the hazard; and
      ii. does not result in unacceptable risk to people or property;
   c) wherever practicable, facilities with a role in emergency management and vulnerable community services are located and designed to function effectively during and immediately after flood hazard event;
   d) development maintains the safety of people and minimises the potential damage to property from flood events on the development site; and
   e) development does not result in adverse impacts on people's safety, the environment or the capacity to use land within the floodplain.

Note—To avoid any doubt, the term medium hazard area used in this code includes areas shown on the overlay maps as medium hazard – further investigation areas.

Editor's note—Areas shown on the overlay maps as medium hazard — further investigation areas are based on Queensland Reconstruction Authority mapping. Limited information is available on flood characteristics in these areas. Further investigation may be required as a result. Flood hazard planning scheme policy no. SC6.7 will provide applicants with guidance in meeting the requirements of this code in these and other identified hazard areas.

Mr Bruce Somerville
100 Mount Low Parkway
Mount, QLD 4818

Dear Mr Somerville

RE: Consent Form to connect sewer line from 100 Mount Low Parkway, Mount Low, Qld 4818 to sewer manhole at the rear of 102 Mount Low Parkway, Mount Low, Qld 4818

As the owner of 102 Mount Low Parkway, Mount Low, Qld, I/we hereby consent to you (or your nominee) connecting a sewer line to the sewer manhole on our property as part of your development as shown on the attachment marked 'X'.

All costs associated with the works will be borne by you (or your nominee) and all areas affected by the installation are to be made good by you (or your nominee).

Please let us know if there are any further documents you (or your nominee) or Council may require to effect the connection.

Yours sincerely,

CONSENT

As owner of 102 Mount Low Parkway, Mount Low, Qld 4818, I hereby provide consent to the works outlined in this letter on the terms and conditions also outlined in this letter, on this:
~~14th~~ day of December, 2023

Signed: _____

Name: JEANE BORER


Dataset: Australia Latest
20.74 m
20.74 m
3 m
metromap

NORTHERN CONSULTING engineers

CIVIL & STRUCTURAL ENGINEERS

SITE BASED STORMWATER MANAGEMENT PLAN

PROPOSED CHILDCARE AT
100 MOUNT LOW PARKWAY, MOUNT LOW

FOR
ML PARKWAY PTY LTD

JOB No: **MJ2544**

Doc Ref: **MJ2544-SBSMP**

Phone: 07 4725 5550
Fax: 07 4725 5850
Email: mail@nceng.com.au
50 Punari Street Currajong Qld 4812
Milton Messer & Associates Pty Ltd
ACN 100 817 356 ABN 34 100 817 356

DOCUMENT CONTROL

Rev	Author	Reviewed	Approved		Date	Issued To:	Purpose
A	Irem Guney	John Single	John Single (RPEQ 24378)		29/03/2023	ML Parkway	Support MCU Application

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICIES

APPENDIX A

Proposed Site Plan Project No 240012, Drawing No SD0-00 A, SD0-01 B, SD1-01 A, SD1-03 A, SD3-01 A by Elia Architecture

APPENDIX B

Redline Concept Mark-ups prepared by NCE

1.0 INTRODUCTION

1.1 Background

Northern Consulting Engineers (NCE) have been commissioned by ML Parkway Pty Ltd to prepare a Site Based Stormwater Management Plan (SBSMP) for a proposed childcare at 100 Mount Low Parkway, Mount Low. The works proposed are on land described as Lot 15 on RP 739317.

The following report has been produced to support a development application for Material Change of Use (MCU). The purpose of this report is to demonstrate how the proposed development can be achieved by addressing:

- Identification of the lawful point of discharge (LPOD);
- Extent of any necessary excavation and/or fill required to achieve the flood immunity;
- Existing and proposed overland flow paths of the site;
- Identify a conceptual stormwater system to pick up run-off and upstream catchment flows and convey to a LPOD;
- Assessment of post-development site discharge and demonstrate that the proposed development will not result in any adverse impact on Council's infrastructure; and
- Assessment of quality treatment in accordance with the State Planning Policy (SPP), including preparation of MUSIC model.

The information provided in this report is based on the following layout plan and documents which are provided as appendices to this report;

- Proposed Site Plan Project No 240012, Drawing No SD0-00 A, SD0-01 B, SD1-01 A, SD1-03 A, SD3-01 A by Elia Architecture (**Appendix A**).
- Redline concept mark-ups prepared by NCE (**Appendix B**).

1.2 Existing Conditions

The site is currently zone 'Rural Residential' and contains a dwelling and a shed with a gravel access road are located on the proposed development area. The majority of the site is generally grassed and flat in nature with a minor slope towards the table drains along Shoalmarra Drive. **Figure 1-1** shows the location of the site in context to the surrounding properties, road reserves, and easements from the Queensland Globe online mapping tool.

There is no underground stormwater infrastructure within the vicinity of the site other that culverts under driveway accesses along Mount Low Parkway (MLP). Therefore, the stormwater drainage network is made up of overland flow with open drains and road side table drains to convey run-off to its ultimate discharge location, Low Drain/Low Creek. This is based on the information given on TCC's interactive mapping tool with an extract provided in **Figure 1-2**.

Figure 1-1 Locality (Queensland Globe online 2024)

Figure 1-2 Existing infrastructure surrounding the site (TownsvilleMAPS Community Mapping)

1.3 Proposed Development

The proposed development is a Childcare Centre which involves a building, outdoor play ground, footpaths, carpark and landscaping areas. Proposed site is fenced along all boundaries and the frontal and northern boundaries surrounding the outdoor play area being 2.0m HT Acoustic Fence. The site is expected to connect to Councils existing sewer network via an extension from the manhole located within the adjacent northern

property. The proposed development is illustrated in **Figure 1-3** with the original drawing provided in **Appendix A.**

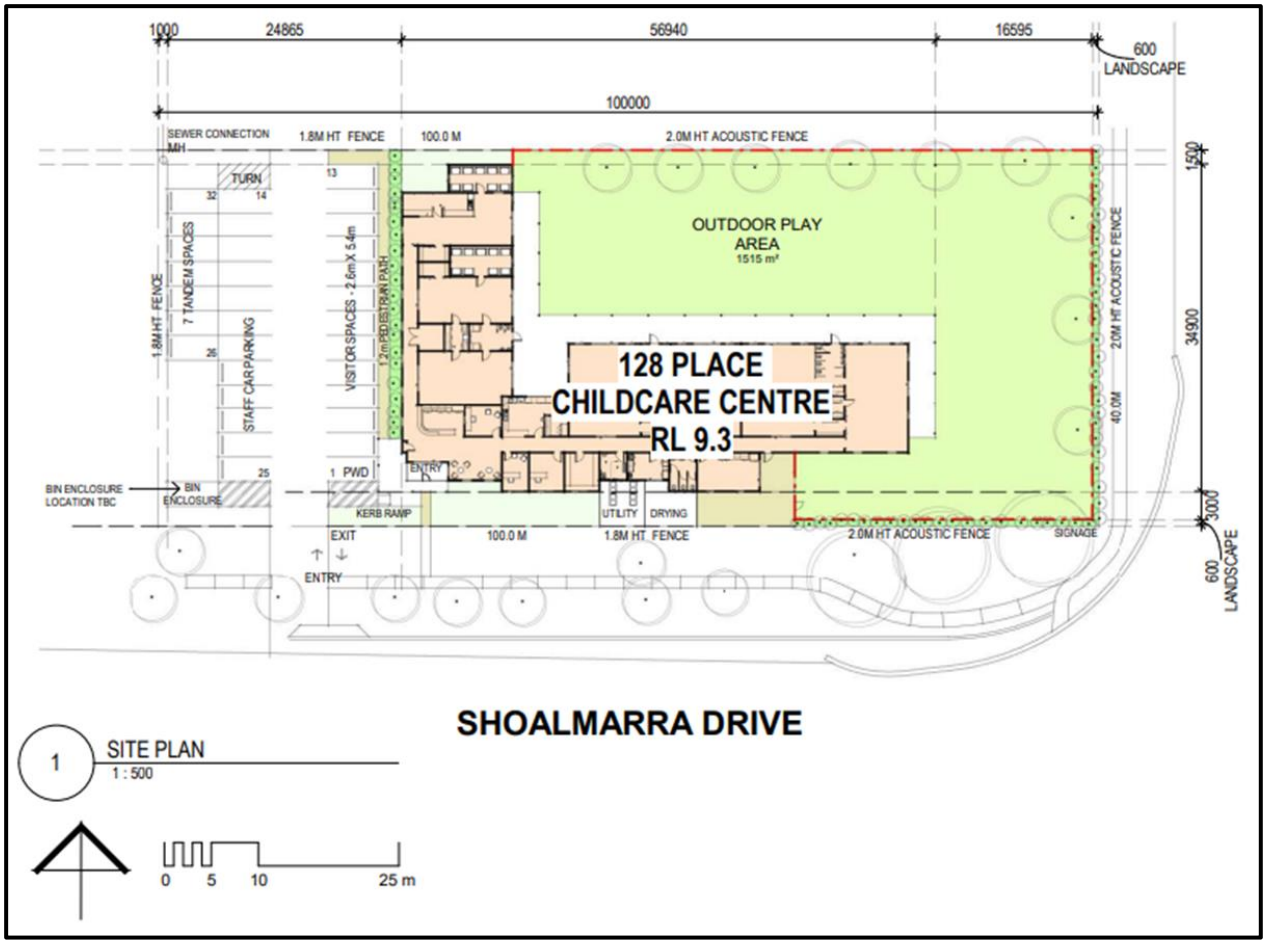


Figure 1-3 Proposed development

An assessment on the potential impacts of the development on the anticipated run-off is provided in **Section 2.0**.

In reference to Townsville Maps Flooding Web Map Service, the site is impacted by the low flood hazard overlay. Further discussion on the flood hazard overlay is provided in **Section 3.0**.

2.0 STORMWATER DRAINAGE

In accordance with the Queensland Urban Drainage Manual (QUDM) test in determining the lawful point of discharge (LPOD), the LPOD for the development has been defined as:

- The road corridors (and table drains) within Mount Low Parkway (MLP) to the east
- The road corridors (and table drains) within Shoalmarra Drive to the south

Although the site is considerably flat, stormwater is anticipated to sheet flow across the site into the LPOD's defined above. Both table drains noted above eventually flow towards the north, ultimately discharging into the nominated drainage reserve (Low Drain).

The development site will maintain the existing LPOD's. The proposed stormwater system involves profiling of a portion of outdoor play area to fall towards the carparks, while the rest of the development is graded to direct water towards Shoalmarra Drive table drain. Roof water is proposed to be collected and conveyed underground prior to discharging directly into the table drain of Shoalmarra Drive. It is anticipated that there's a potential that small portion of the eastern site falls towards MLP that will be considered during the detailed design phase.

It is anticipated that the finished surface levels (FSL) of the development will require minor earthworks to achieve the proposed stormwater management concept provided in **Appendix B**. The critical time of concentration is anticipated to change due to an increase in the impervious area.

Due to the change in impervious area, an assessment of the pre- and post-development run-off has been undertaken for all events up to the 1% AEP (Q100) event, resulting in detention/storage which is outlined in **Section 2.1**.

2.1 Quantity

The development site is currently zoned Rural Residential land use. Areas in rural residential zone are specified as having a fraction impervious of 0.60 as per the Townsville City Plan. The proposed development will result in a fraction imperviousness of 0.90. The 0.90 post-development value is based on the outdoor play area being constructed of an impervious finish which is considered to be a conservative assumption should grassed areas be provided. **Error! Reference source not found.** illustrates the imperviousness of the proposed development.

Overall, the proposed development exceeds the allowable site coverage, therefore; the development will require a stormwater mitigation assessment to demonstrate non-worsening. The Rational Method has been applied for the run-off calculations of the pre-development and post-development scenarios across events up to the 1% AEP (ARI 100-yr) in accordance with the QUDM (Queensland Urban Design Manual).

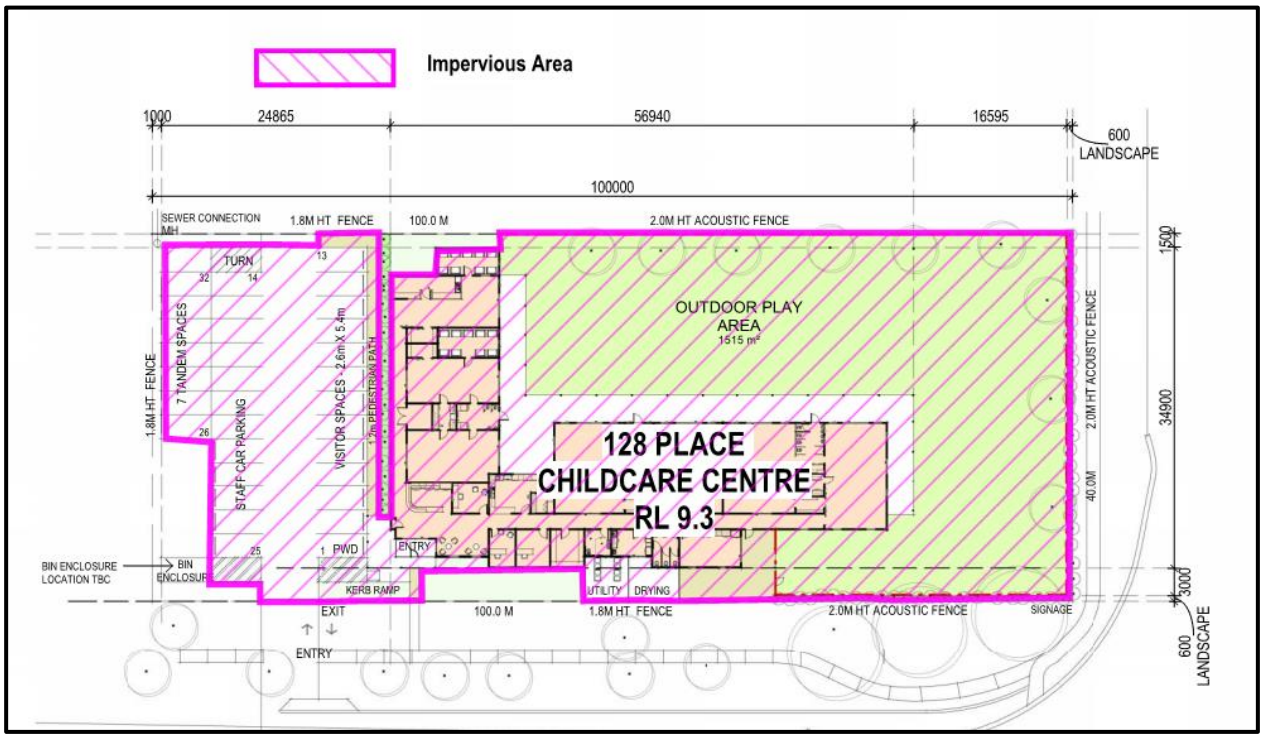


Figure 2-1 Pre-developed and post-developed impervious area

2.1.1 Rational Method

The contributing catchment is defined as 0.4ha which is the entire lot area. The change in impervious area associated with the entire site is approximately 30% (60% to 90%). The critical time of concentration (tc) for pre-development is applied as 10 minutes whilst the time of concentration for post-development scenario is 8 minutes. IFD's were sort from the BOM website. A summary of the calculation parameters for pre- and post-development are given below in Error! Reference source not found. and Error! Reference source not found. respectively

Table 2-1 Pre-Development Rational Method Calculations

PRE-DEVELOPMENT				
Catchment Details				
Area (m²)	Area (ha)	Impervious Area (%)	C10	tc (min)
4000	0.400	0.60	0.82	10

C1	C2	C5	C10	C20	C50	C100
0.656	0.697	0.779	0.82	0.861	0.943	0.984

I1	I2	I5	I10	I20	I50	I100	
91.1	115	144	166	188	217	238	**mm/hr**

Q1	Q2	Q5	Q10	Q20	Q50	Q100	
0.066	0.089	0.125	0.151	0.180	0.227	0.260	**m3/s**

Table 2-2 Post-Development Rational Method Calculations

POST-DEVELOPMENT				
Catchment Details				
Area (m²)	Area (ha)	Impervious Area (%)	C10	tc (min)
4000	0.400	0.90	0.88	8

C1	C2	C5	C10	C20	C50	C100
0.70	0.75	0.84	0.88	0.92	1.01	1.06

I1	I2	I5	I10	I20	I50	I100	
97.9	124	155	179	204	235	258	**mm/hr**

Q1	Q2	Q5	Q10	Q20	Q50	Q100	
0.077	0.103	0.144	0.175	0.209	0.264	0.303	**m3/s**

Individual triangular hydrographs were developed for each event in order to assess the change in peak run-off and associated mitigation requirements, refer below **Figure 2-2**.

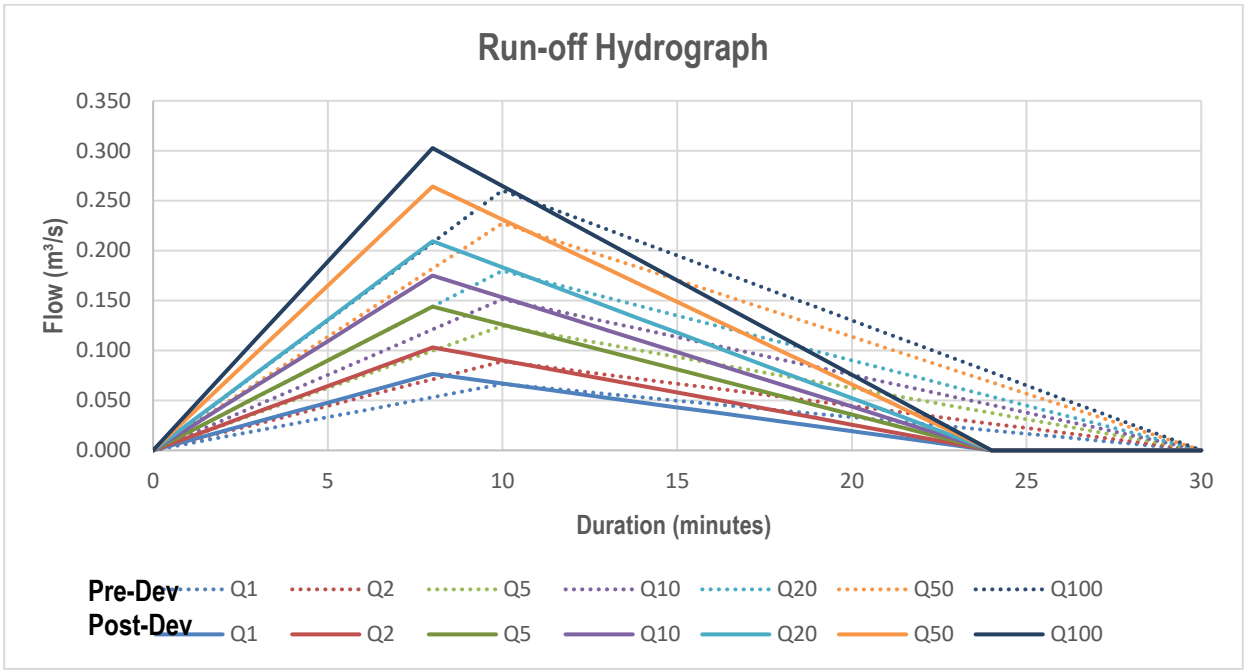


Figure 2-2 Run-off Hydrograph - events from Q1 to Q100

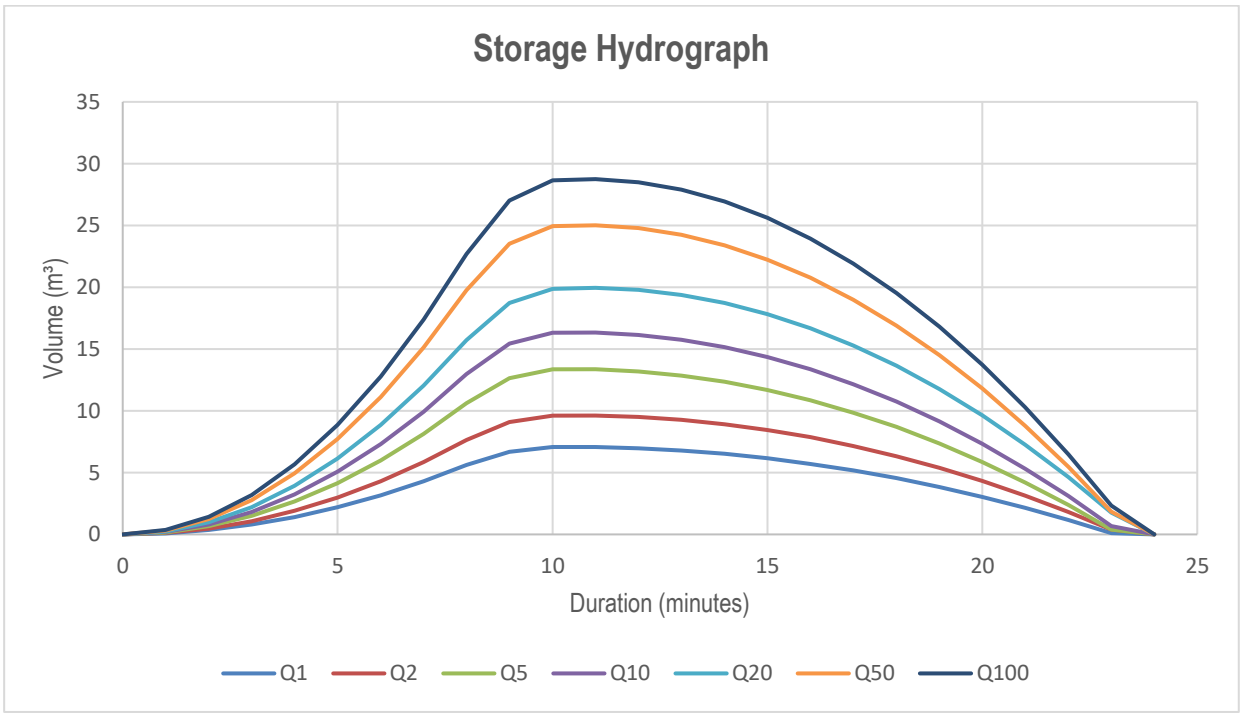


Figure 2-3 Storage Hydrograph

The stormwater detention volume to mitigate post-developed run-off has been determined using the Mass Flow Equation as outlined in QUDM 5.6.2, and the results are illustrated graphically in **Figure 2-3** and tabulated in

Table 2-3. The required detention volume is calculated as 29m³. It is proposed that this volume is provided within the carpark area as surface detention.

Table 2-3 - Peak Flow and Detention Volume

Event	Pre-Development Flow (L/s)	Post-Development Flow (L/s)	Difference (L/s)	Detention Volume (m^3)
Q1	0.066	0.077	0.010	7
Q2	0.089	0.103	0.014	10
Q5	0.125	0.144	0.019	13
Q10	0.151	0.175	0.024	16
Q20	0.180	0.209	0.030	20
Q50	0.227	0.264	0.037	25
Q100	0.260	0.303	0.043	29

2.2 Quality

All stormwater treatment trains have been modelled with the aid of MUSIC version 6.3.0. The catchments have been modelled in accordance with the following:

- "MUSIC Modelling Guidelines November 2018 – Consultation Draft", Water by Design (2018);
- Townsville Aero, 6 Minute Time Step From 3/03/1953 To 31/03/2010;
- Water by Design MUSIC Modelling Guidelines Source Nodes (Split) utilising modified percent impervious area & pollutant concentration;
- No drainage routing between nodes;
- Water by Design MUSIC Modelling Guidelines Recommended MUSIC Rainfall-Run-off Parameters SEQ for commercial land uses.

2.2.1 Stormwater Quality Objectives

The design intent for the system is to meet the current TCC Planning Scheme water quality targets, namely:

- 80% TSS Reduction
- 65% TP Reduction
- 40% TN Reduction
- 90% Gross Pollutants Reduction

In the event that the above targets are not achievable, the design intent is to ensure that the post development water quality discharging the site is equal to or better than the pre-development quality. Also as highlighted in the TCC Pre-Lodgement Meeting Minutes, it is noted that the State Planning Policy (SPP) 2017 allows for consideration of an alternative locally appropriate solution off-site that achieves an equivalent or improved water quality outcome to the relevant stormwater management design objectives in Table B (Appendix 2). Therefore, an off-site solution is considered that ensures treatment targets is met before water reaches to the Low Drain.

2.2.2 MUSIC Modelling

Pollutant loads for the development have been modelled primarily using “split” land use and references the MUSIC Modelling Guidelines November 2018 for the pollutant parameters for “Commercial” surface types. The pollutant generation parameters adopted are shown in **Figure 2-4** with **Figure 2-5** depicting the rainfall-run-off parameters.

Below is the modelling concept adopted:

- The modelling has been assessed for post development.
- The developed assessment has been considered as only one (1) catchment area. The zone has been assessed as Commercial and based only on the area that shall be developed using a “split” catchment method.
- The MUSIC nodes include run-off from roof and outdoor playground and car park and the footpaths which are defined as 100% impervious and the landscaping area defined as 0% impervious. The run-off from the outdoor play ground and the landscaping areas will overland sheet flow towards the existing table drain along the Shoalmarra Drive that will eventually meet with Low Drain ~350m west of the site, which will act as swales for treatment purposes. **Table 2-4** depicts the source nodes and the imperviousness adopted in the assessment.
- The open drain has been modelled as a swale, which will provide treatment for the site. Full swale dimensions can be seen in **Table 2-5**.
- Exfiltration rate of 0 mm/hr which are lower than the values nominated in ARR 2019 recommendations.

Table 2-4 Music Source Nodes

Node Name	Zoning/Surface Type	Surface Area (ha)	Impervious (%)	Buffer Area (%)
Childcare Building (Roof)	Commercial	0.124	100	-
Outdoor Play Ground	Commercial	0.152	100	-
Footpath/Ramp/Veranda	Commercial	0.012	100	-
Carpark	Commercial	0.076	100	-
Landscaping	Commercial	0.037	0	-

The MUSIC model setup described above and the proposed indicative treatment train layout is depicted in **Figure 2-6.**

TABLE 3.9 POLLUTANT EXPORT PARAMETERS FOR SPLIT CATCHMENT LAND USE (LOG^{10} VALUES)

FLOW TYPE	SURFACE TYPE	TSS LOG^{10} VALUES		TP LOG^{10} VALUES		TN LOG^{10} VALUES	
		MEAN	ST. DEV	MEAN	ST. DEV	MEAN	ST. DEV
URBAN RESIDENTIAL							
Baseflow parameters	Roof	N/A	N/A	N/A	N/A	N/A	N/A
	Roads	1.00	0.34	-0.97	0.31	0.20	0.20
	Ground level	1.00	0.34	-0.97	0.31	0.20	0.20
Stormflow parameters	Roof	1.30	0.39	-0.89	0.31	0.26	0.23
	Roads	2.43	0.39	-0.30	0.31	0.26	0.23
	Ground level	2.18	0.39	-0.47	0.31	0.26	0.23
INDUSTRIAL							
Baseflow parameters	Roof	N/A	N/A	N/A	N/A	N/A	N/A
	Roads	0.78	0.45	-1.11	0.48	0.14	0.20
	Ground level	0.78	0.45	-1.11	0.48	0.14	0.20
Stormflow parameters	Roof	1.30	0.44	-0.89	0.36	0.25	0.32
	Roads	2.43	0.44	-0.30	0.36	0.25	0.32
	Ground level	1.92	0.44	-0.59	0.36	0.25	0.32
COMMERCIAL							
Baseflow parameters	Roof	N/A	N/A	N/A	N/A	N/A	N/A
	Roads	0.78	0.39	-0.60	0.50	0.32	0.30
	Ground level	0.78	0.39	-0.60	0.50	0.32	0.30
Stormflow parameters	Roof	1.30	0.38	-0.89	0.34	0.37	0.34
	Roads	2.43	0.38	-0.30	0.34	0.37	0.34
	Ground level	2.16	0.38	-0.39	0.34	0.37	0.34

Figure 2-4 MUSIC recommended rainfall run-off parameters SEQ extracted from MUSIC Modelling Guidelines November 2018

PARAMETER	LAND USE			
	URBAN RESIDENTIAL	COMMERCIAL AND INDUSTRIAL	RURAL RESIDENTIAL	FORESTED
RAINFALL THRESHOLD (MM)	1	1	1	1
SOIL STORAGE CAPACITY (MM)	500*	18	98	120
INITIAL STORAGE (% CAPACITY)	10	10	10	10
FIELD CAPACITY (MM)	200	80	80	80
INFILTRATION CAPACITY COEFFICIENT A	211	243	84	200
INFILTRATION CAPACITY COEFFICIENT B	5.0	0.6	3.3	1.0
INITIAL DEPTH (MM)	50	50	50	50
DAILY RECHARGE RATE (%)	28	0	100	25
DAILY BASEFLOW RATE (%)	27	31	22	3
DAILY DEEP SEEPAGE RATE (%)	0	0	0	0

Figure 2-5 MUSIC recommended rainfall run-off parameters SEQ extracted from MUSIC Modelling Guidelines November 2018

Table 2-5 Treatment Dimensions in MUSIC

Node Name	Length (m)	Bed Slope (%)	Base Width (m)	Top Width (m)	Depth (m)	Vegetation Height (m)
Table Drain (Shoalmarra Drive)	200	0.2	0.6	6.0	0.5	0.15

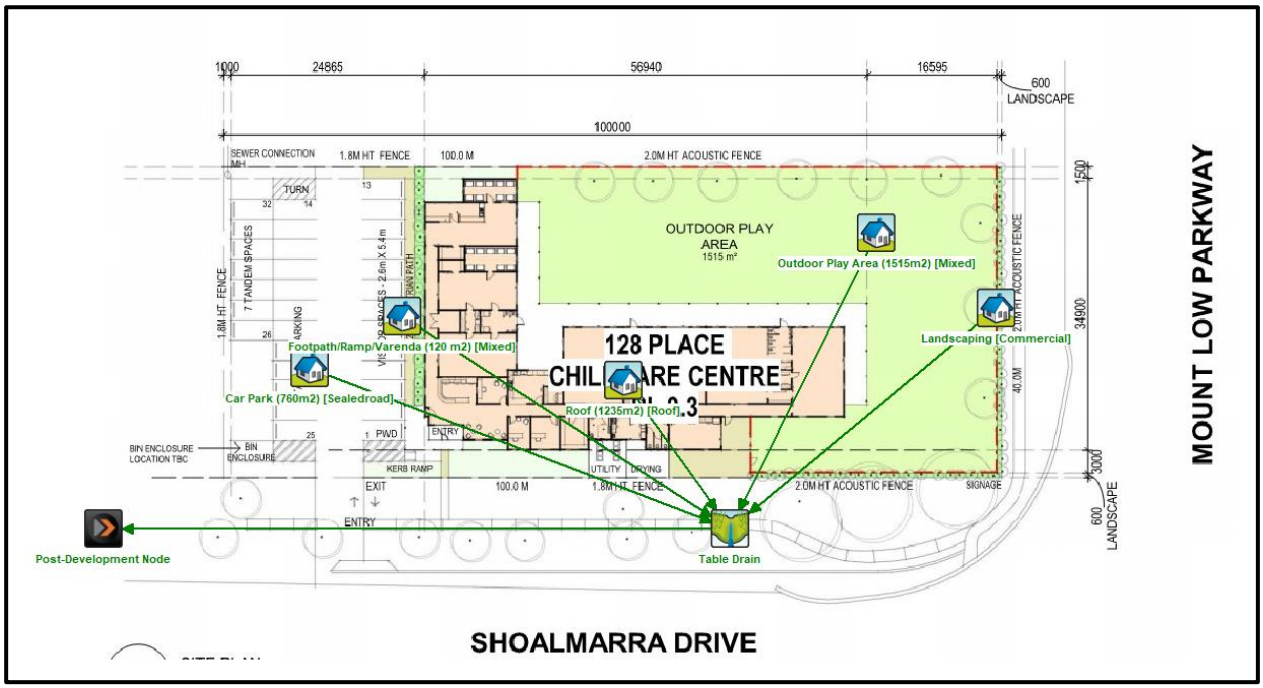


Figure 2-6 MUSIC Post-Development Model Treatment Site Layout

Table 2-6 summarises the results of the assessment. It is evident that the water quality leaving the site post development meets the quality objectives set by TCC. Therefore, compliance with stormwater quality requirements is achieved with the proposed stormwater treatment train of swales. As seen on the results, 200m length of existing table drain achieves the quality requirements. In other saying, the required quality treatment will be achieved before the water reaches Low Drain ~350m west of site.

Table 2-6 Music Treatment Train Effectiveness

Description	Sources	Residual Load	% Reduction	TCC Treatment %
Flow (ML/yr)	3.72	3.73	-0.3	
Total Suspended Solids (kg/yr)	702	54	92	80
Total Phosphorus (kg/yr)	1.7	4.92E-01	71	65
Total Nitrogen (kg/yr)	11.9	6.98	41	40
Gross Pollutants (kg/yr)	66.9	0.00E+00	100	90

3.0 FLOOD ASSESSMENT

Figure 3-1 shows flooding extent of the proposed development site, in which the site is flood free.

The flood level for the site is defined as 8.81m AHD and in accordance with Council's planning scheme, the finished floor level (FFL) of the building is required to be at or above the flood level. In addition to this requirement for minimum FFL, the National Construction Code (NCC) requires the FFL to be a minimum of 150mm above the natural surface. Therefore, based on a preliminary assessment of design surface levels over the site, and the potential for sewer connection to Council's existing infrastructure, a minimum FFL of 9.11m AHD is proposed for the Building, which complies with the various minimum FFL criteria.

In summary, the proposed development is not anticipated to change the flooding characteristics of the site and/or surrounding area.

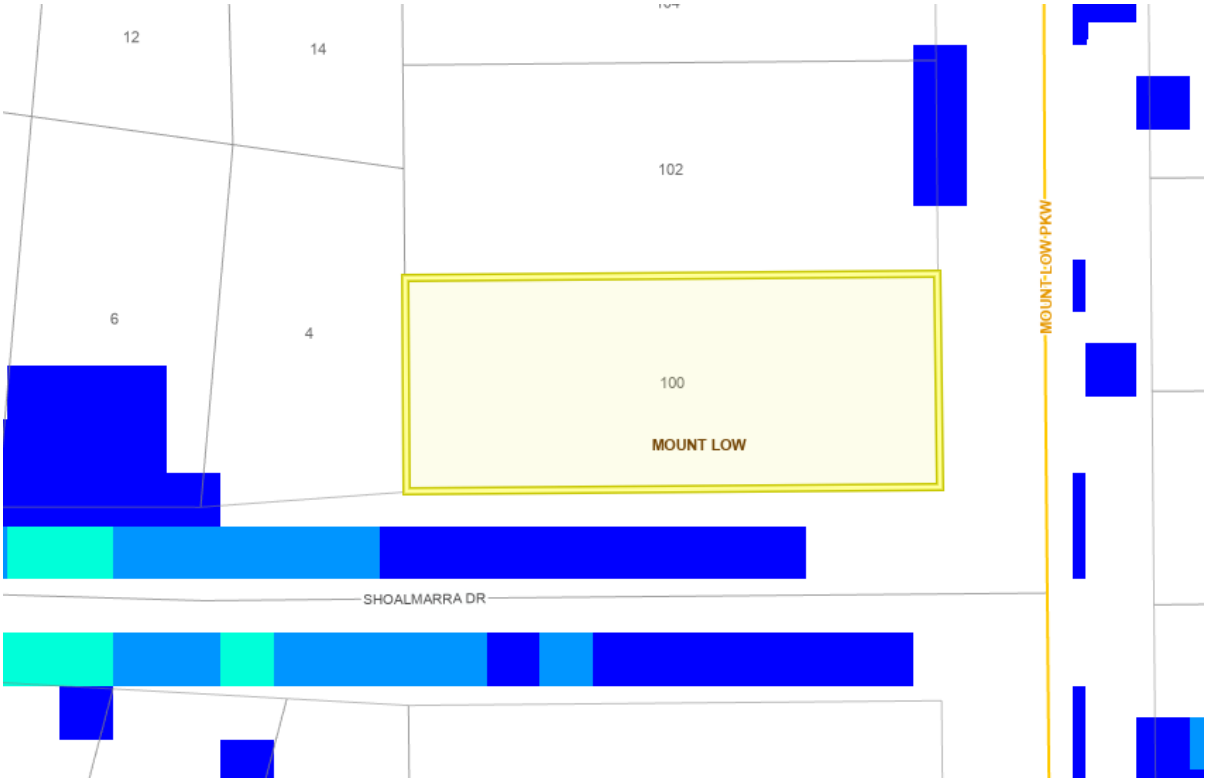


Figure 3-1 TownsvilleMAPS Flooding

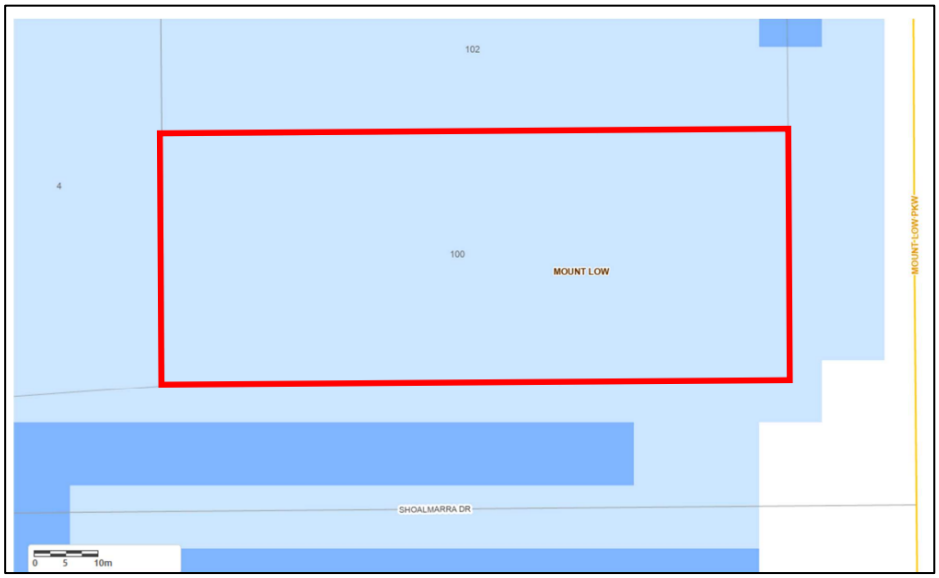


Figure 3-2 Flood hazard overlay

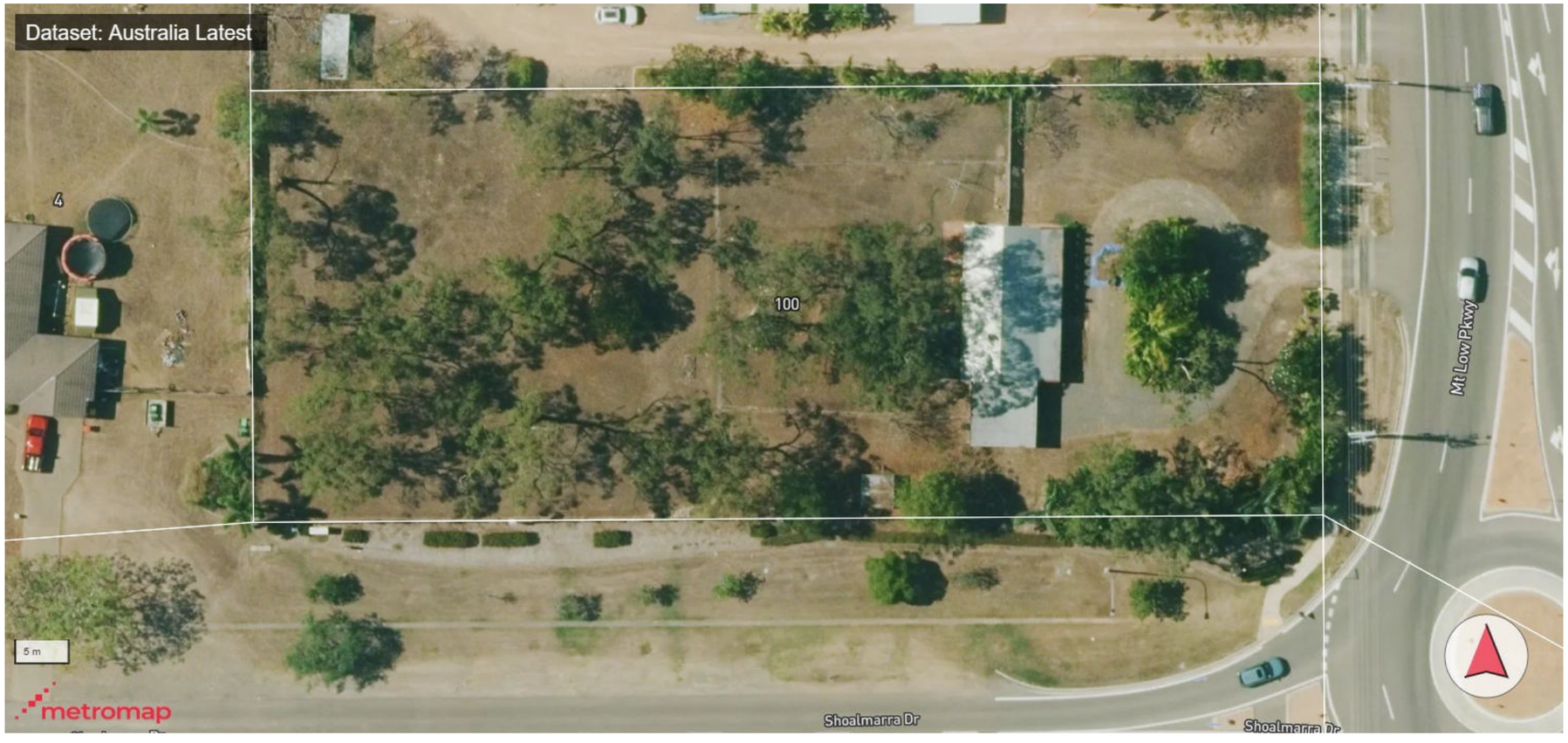
4.0 CONCLUSION

NCE have undertaken a site-based stormwater management assessment associated with the proposed Childcare Centre at 100 Mount Low Parkway, Mount Low. The findings of this assessment are summarised below:

- Under the QUDM tests, the road reserve of Shoalmarra Drive and Mount Low Parkway have been defined as a lawful point of discharge (LPOD) for the site.
- The development will require minor earthworks for reprofiling the site to ensure proposed conceptual stormwater management system is achieved while maintaining the existing LPOD.
- Stormwater mitigation assessment indicated a detention storage of 29m³ which is proposed to be accommodated in the landscaping areas.
- The stormwater quality assessment was undertaken via MUSIC and shows that the quality objectives have been met for all the parameters. Therefore, treatment through swales including 200m length of the existing table drain and the table drain along the Shoalmarra Drive have shown adequate treatment in terms of Townsville City Council accepted treatment criteria.
- A flood assessment has demonstrated that the proposed development is free of inudation and complies with the flood hazard overlay code.

APPENDIX A

Proposed Site Plan Project No 240012, Drawing No SD0-00 A, SD0-01 B, SD1-01 A, SD1-03 A, SD3-01 A by Elia Architecture



RPD

LOT 15 on RP739317
Area 4000m^2

Cnr Mt Low Parkway and Shoalmarra Drive

MOUNT LOW
TOWNSVILLE QLD

100 Mount Low Parkway

PROPOSAL

NEW 128 PLACE CHILDCARE CENTRE

AREAS

CHILDCARE CENTRE - GFA 940m^2

VERANDAH AREAS - 207 m^2

OUTDOOR PLAY - 1555 m^2 (13.7m^2 / CHILD)

CARPARKING

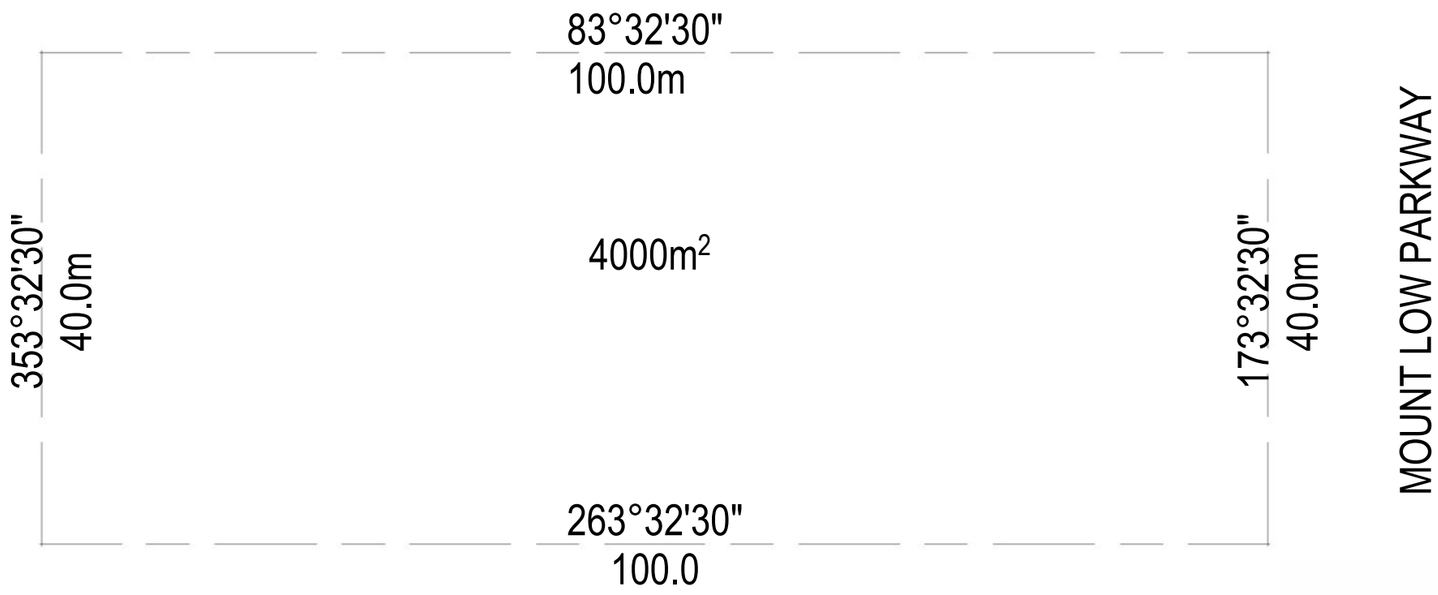
PARKING REQUIRED 1/10 = 12

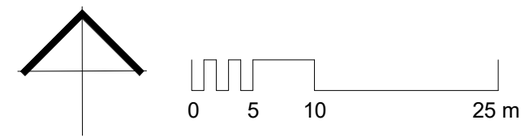
PLUS 1/FTE STAFF = 19

TOTAL REQUIRED = 32 (incl 1 PWD)

EXISTING HOUSE, SHED, DRIVEWAY, TREES TO BE REMOVED

EXISTING SITE PLAN 1:500





elia architecture

MOUNT LOW NORTH CHILDCARE CENTRE **SD0-00 A**

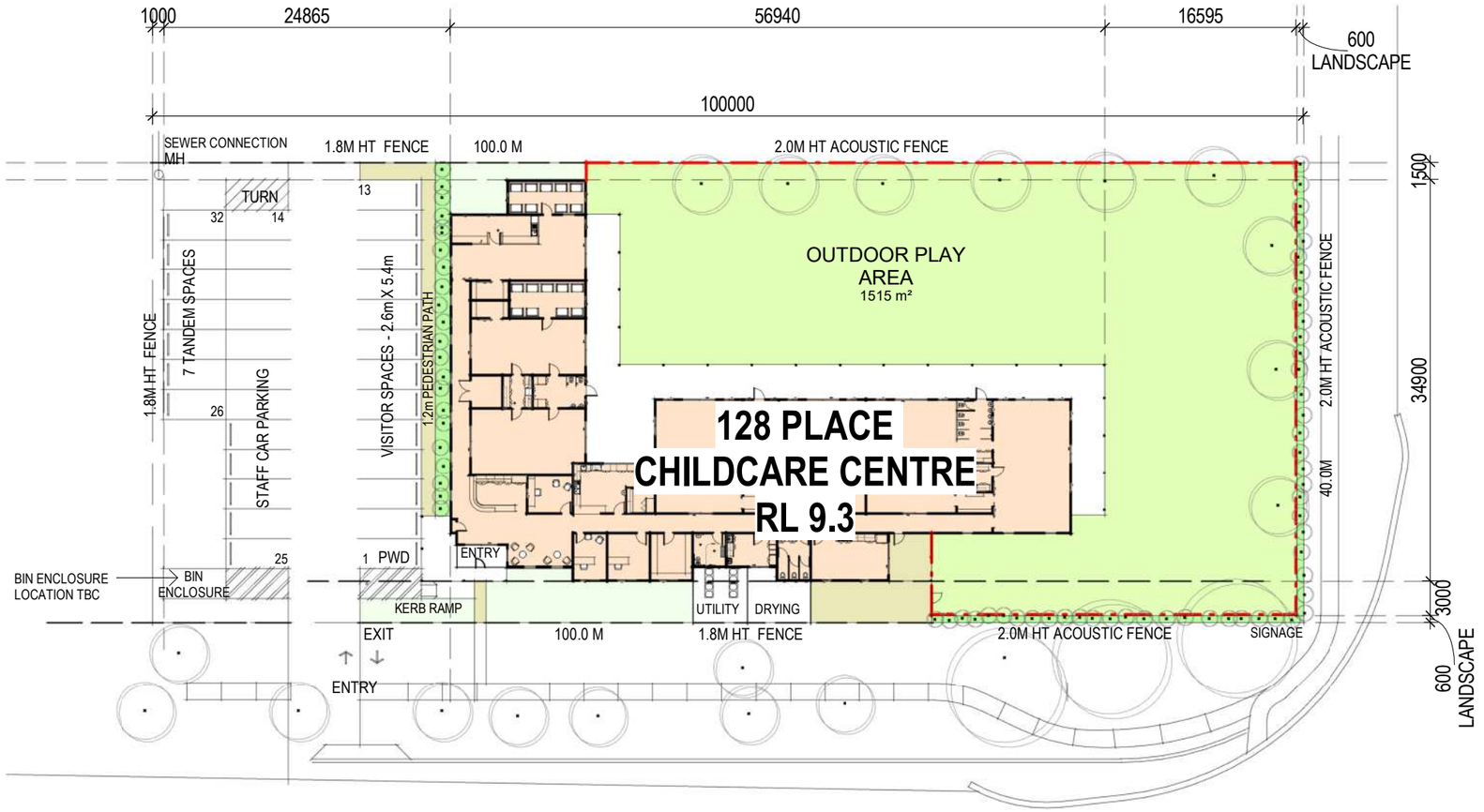
For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

EXISTING SITE PLAN

B240012
1 : 500 @ A3
03/27/24

109 Herries Street, PO Box 547, Toowoomba 4350
P: 07 4632 0200, F: 07 4638 8044, E: tmba@elia.com.au

09/661 Oxley Road, PO Box 380, Corinda 4075
P: 07 3379 7611 E: bris@elia.com.au



MOUNT LOW PARKWAY

SHOALMARRA DRIVE

1 SITE PLAN
1 : 500

0 5 10 25 m

RPD
LOT 15 on RP739317
Cnr Mt Low Parkway and Shoalmarra Drive
MOUNT LOW
TOWNSVILLE QLD

ZONE
Rural Residential

SITE AREA
4000 m²

LOCAL AUTHORITY
TOWNSVILLE CITY COUNCIL

PROPOSAL
NEW 128 PLACE CHILDCARE CENTRE

BUILDING CLASSIFICATION
CLASS 9b TYPE C CONSTRUCTION

GROSS FLOOR AREA (GFA)

TOTAL GFA	**940 m²**
(+ VER, O/D AREA & SECURE PORCH)	

OUTDOOR PLAY AREAS

OUTDOOR PLAY AREA (PROVIDED)	1515 m²
VERANDAH AREA (PROVIDED)	207m²
TOTAL OUTDOOR PLAY AREA PROVIDED (13.4 m² PER CHILD)	1,722 m²

CARPARKING

STAFF REQUIRED	19	CARPARKS
VISITOR REQUIRED	12	CARPARKS
CARPARKING REQUIRED	31	
CARPARKING PROVIDED	32	

Playroom Schedule

Name	Area
NURSERY 2	45 m²
NURSERY 1	47 m²
TODDLER	54 m²
JUNIOR KINDY	73 m²
JUNIOR KINDY	73 m²
KINDERGARTEN	76 m²
SENIOR KINDY	76 m²
Grand total: 7	443 m²

elia architecture

MOUNT LOW NORTH CHILDCARE CENTRE **SD0-01 B**

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

SITE PLAN

B240012
1 : 500 @ A3
01/02/24

109 Herries Street, PO Box 547, Toowoomba 4350
P: 07 4632 0200, F: 07 4638 8044, E: tmba@elia.com.au

09/661 Oxley Road, PO Box 380, Corinda 4075
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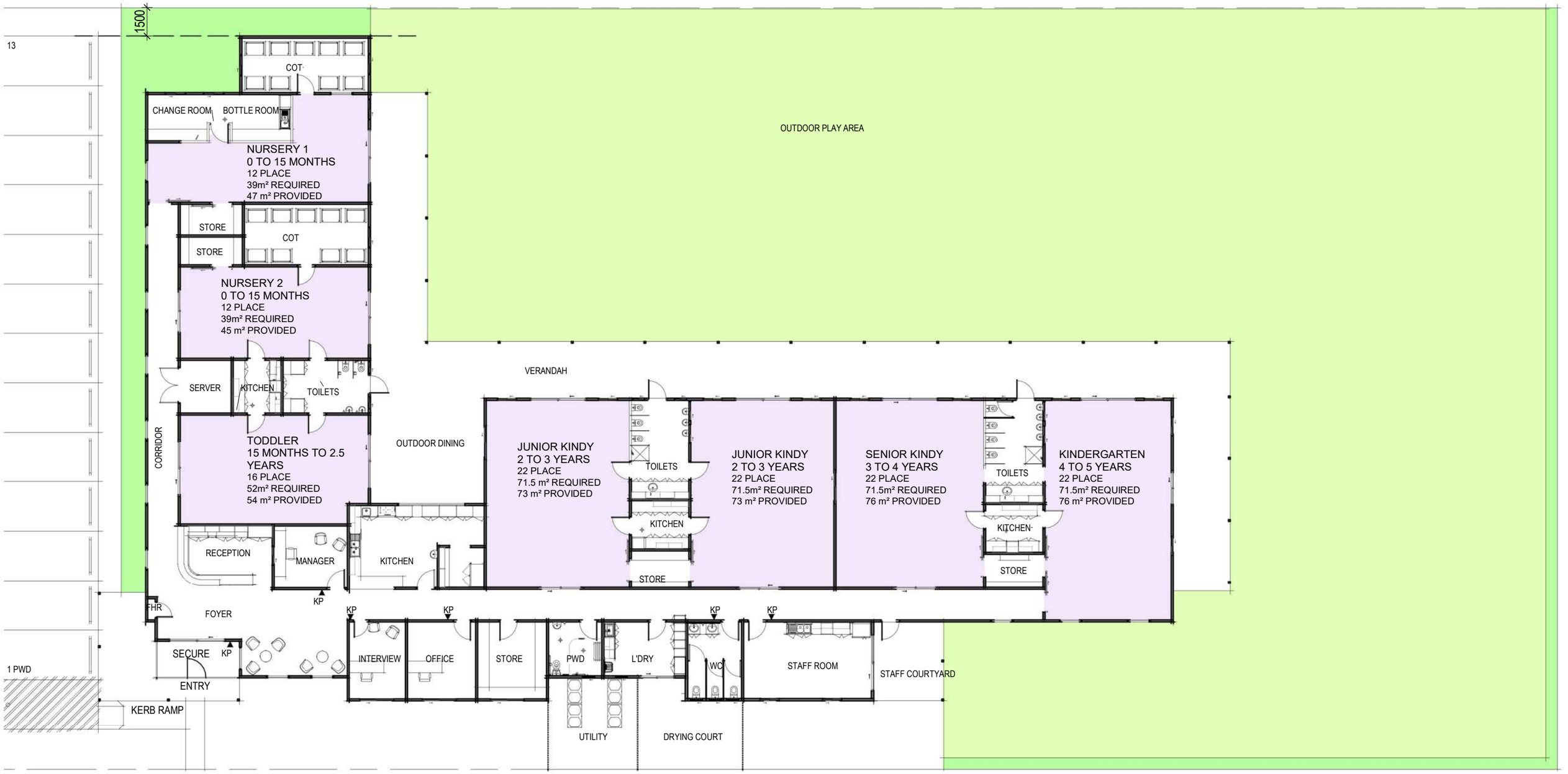


1 GROUND FLOOR PLAN
1 : 200

0 5 10 m

elia architecture

MOUNT LOW NORTH CHILDCARE CENTRE

SD1-01 A

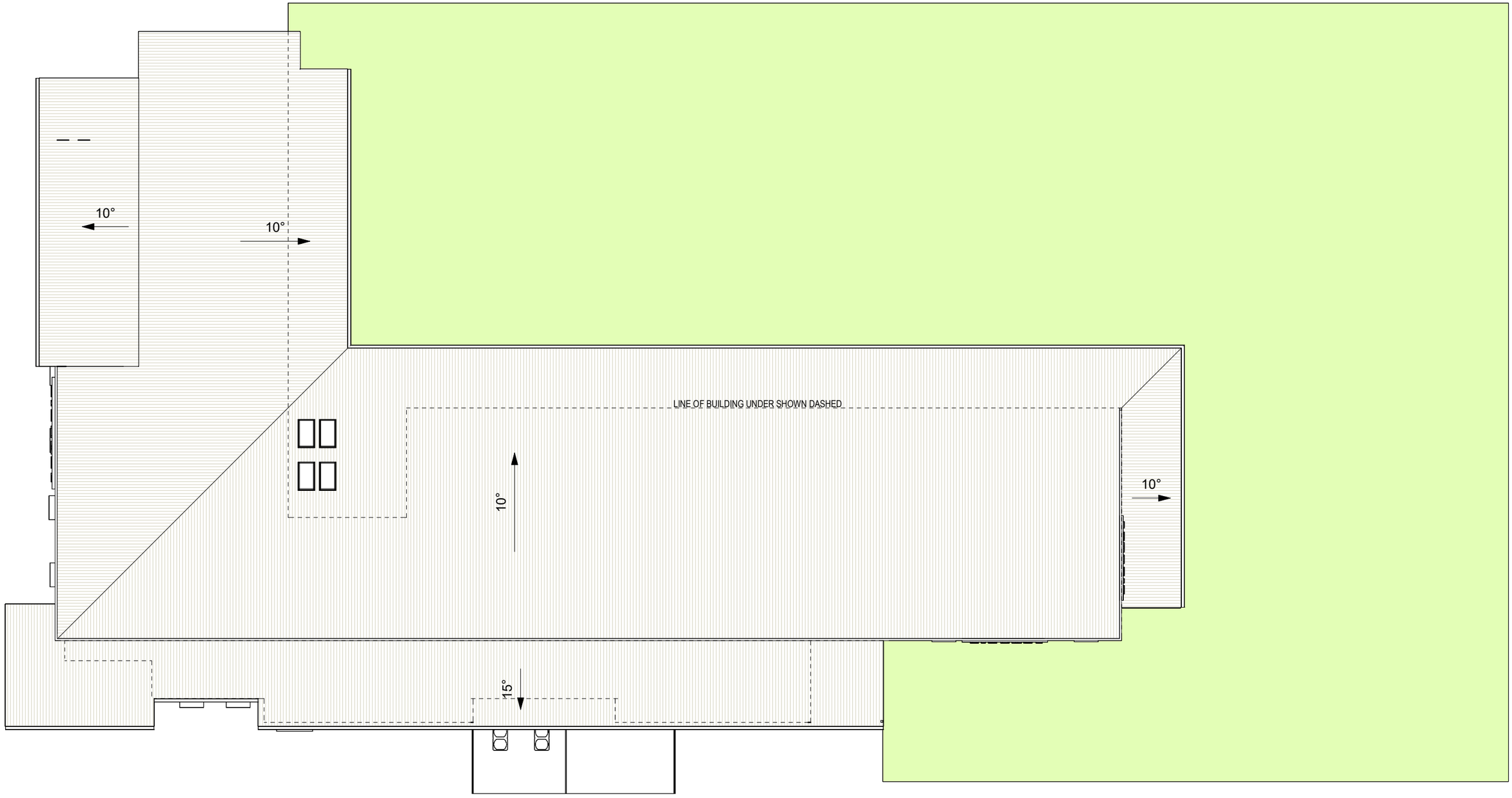
For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

GROUND FLOOR PLAN

B240012
1 : 200 @ A3
21/11/23

109 Herries Street, PO Box 547, Toowoomba 4350
P: 07 4632 0200, F: 07 4638 8044, E: tmba@elia.com.au

09/661 Oxley Road, PO Box 380, Corinda 4075
P: 07 3379 7611 E: bris@elia.com.au



1 ROOF PLAN
1 : 200

0 5 10 m

MOUNT LOW NORTH CHILDCARE CENTRE

SD1-03 A

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

ROOF PLAN

B240012
1 : 200 @ A3
07/13/18

elia architecture
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09/661 Oxley Road, PO Box 380, Corinda 4075
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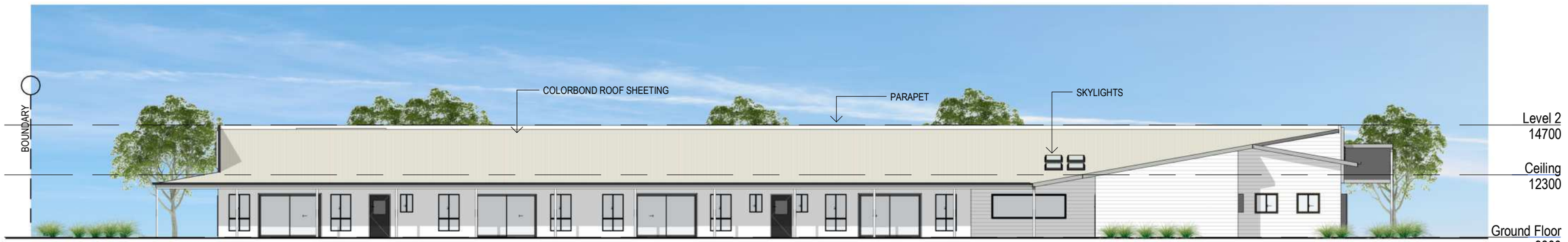
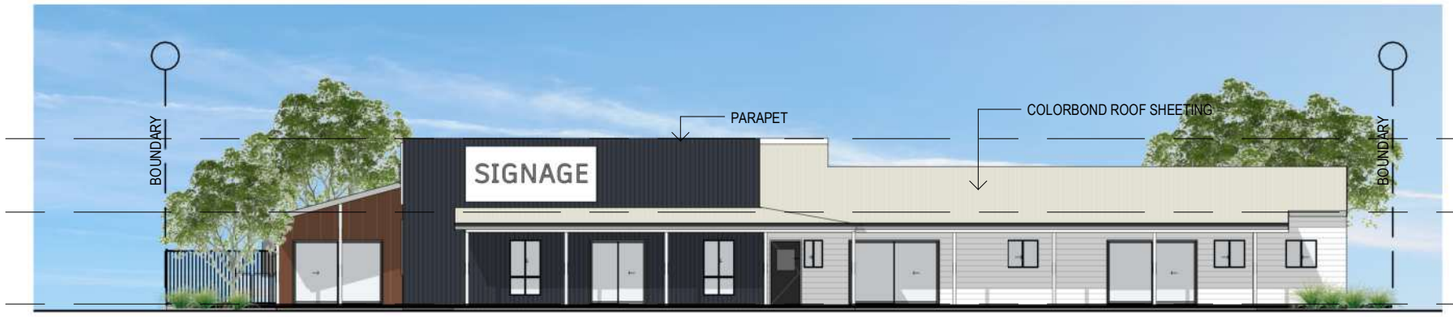
WEST ELEVATION



NORTH ELEVATION



EAST ELEVATION

SOUTH ELEVATION

MOUNT LOW NORTH CHILDCARE CENTRE

SD3-01 A

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

B240012
1 : 200 @ A3
07/13/18

ELEVATIONS

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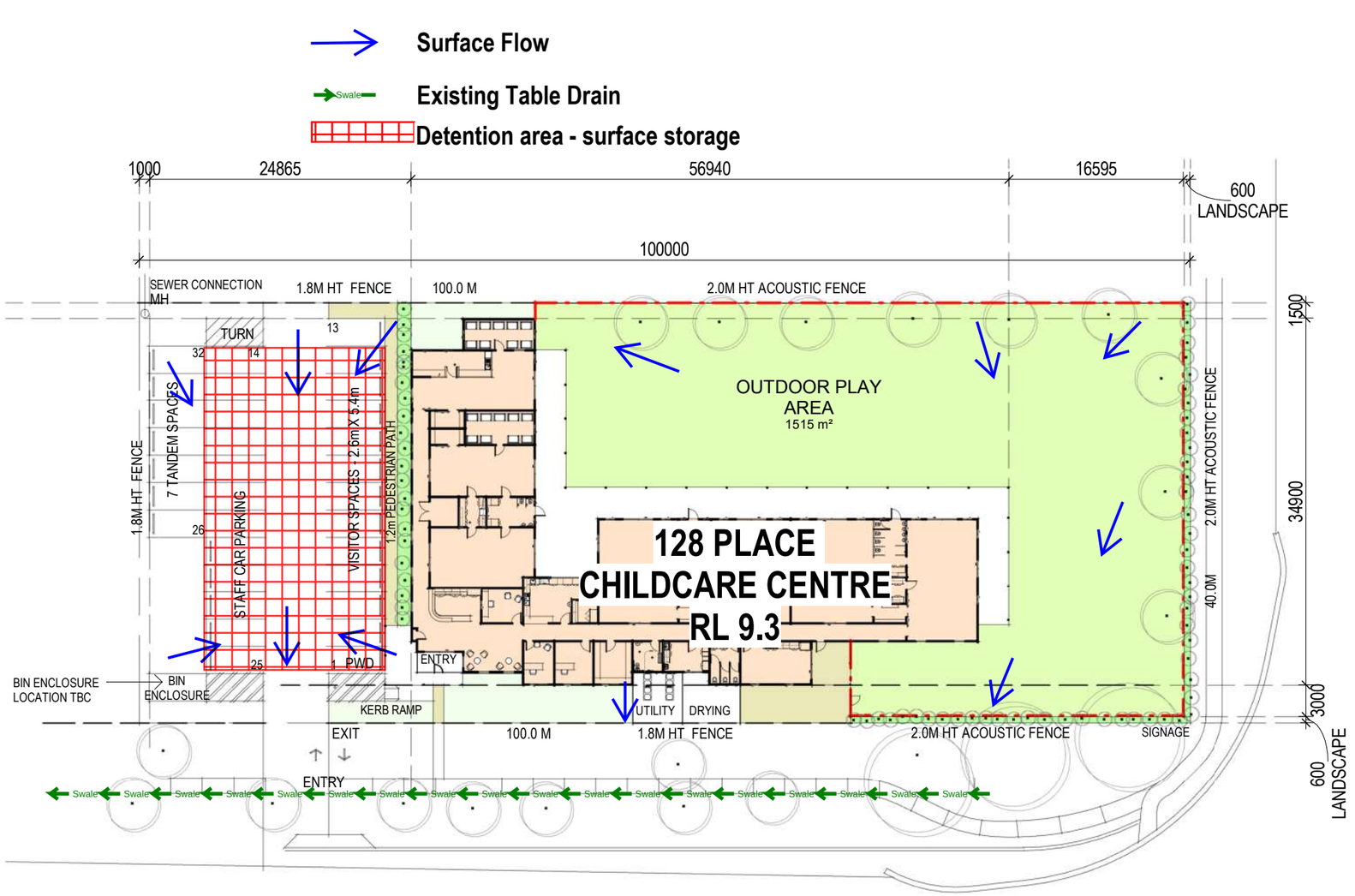
APPENDIX B

Redline Concept Mark-ups prepared by NCE



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MOUNT LOW NORTH CHILDCARE CENTRE **SD0-01 B**

For ML Parkway Pty Ltd
100 MOUNT LOW PARKWAY, MOUNT LOW Q 4818

SITE PLAN

B240012
1 : 500 @ A3
01/02/24

Schedule 5

Authority

To Whom it May Concern

RE: 100 Mount Low Parkway, Mount Low Qld 4818 (described as Lot 15 on RP 739317, Local Government of Townsville City Council, Title Reference 21206217) ('Property')

As the registered owner of the Property, I/we hereby authorise **Parmac Property Investments Pty Ltd ACN 626 744 603** (or related Parmac entity) or its nominee (and any of their Directors) to make to any State Government authority or department, utility or service provider, Council or Court in respect of a proposed project on the Property:

Applications for:

(a) An amendment to the Local Government's existing or proposed city plan as it relates to the Property;

(b) Making a material change of use of the Property;

(c) Making a change application in relation to an existing or obtained development approval;

(d) Carrying out building works;

(e) Carrying out operational works including any applicable roadworks;

(f) Carrying out plumbing works;

(g) Carrying out drainage works;

(h) Reconfiguring the Property (including by way of boundary realignment);

(i) Connections to any necessary services required for the Project including without limitation, electrical, communications, water or sewer services;

(j) Project signage; and

(k) Any other application deemed necessary by **Parmac Property Investments Pty Ltd ACN 626 744 603** or its nominee.

EXECUTED by
BRUCE ANDREW SOMERVILLE
on: 14 / 12 /2023 in the presence of:

Signature of witness

Brendan Keith Gaeta
Solicitor

Full name of witness (print)

Signature of **Bruce Andrew Somerville**

EXECUTED by
ANGELA JAYNE HAMILTON
on: 14 DEC /2023 in the presence of:

Signature of witness

Arthur John Hunt

Full name of witness (print)

JUSTICE OF THE PEACE
Queensland Government
Reg. No.: 558468
DEPT. OF JUSTICE & ATTORNEY-GENERAL

Signature of **Angela Jayne Hamilton**