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Statement of Enviromental Effects – Childcare Centre Extension

Client: GHQS Pty Ltd
Site Address: 39 Saleyards, Mudgee, NSW 2850

20 September 2024

Our Reference: 41821-PR01_A

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DISCLAIMER

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Report Title:	Statement of Environmental Effects
Project Name:	Proposed Childcare Centre Alterations and Additions
Project Location:	39 Saleyards Lane, Mudgee, NSW 2850
Client:	GHQS Pty Ltd
Project Number:	41821
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1.0 INTRODUCTION

1.1 Background

Barnson Pty Ltd has been engaged by GHQS Pty Ltd to prepare information in support of a Development Application (DA) for alterations and additions to an existing Childcare Centre building at Lot 30 DP 1267151, commonly known as 39 Saleyards Lane, Mudgee, NSW 2850.

The existing site is located on the south-western side of Saleyards Lane and has an area of approximately 1,907m^2. The site contains an existing childcare centre with landscaping and hardstand areas.

The project will consist of minor demolition of parts of the existing building, and car park, and the construction of an extension to the Childcare building, with new car parking, landscaped areas, and access points. It is noted that consolidation of neighbouring lots is to take place to support the extension.

The subject site is zoned R1 General Residential pursuant to the provisions under the *Mid-Western Regional Local Environmental Plan 2012* (the LEP). The proposed development is defined as 'Centre based child-care facility', which is permissible with consent in the R1 Zone.

This application consists of:

- Planning portal lodgement;
- One (1) PDF of this written statement, including plans.

1.2 Proponent

The proponent for the DA is GHQS Pty Ltd

1.3 Consultant

Barnson Pty Ltd

Seb Minehan

Riverview Business Park

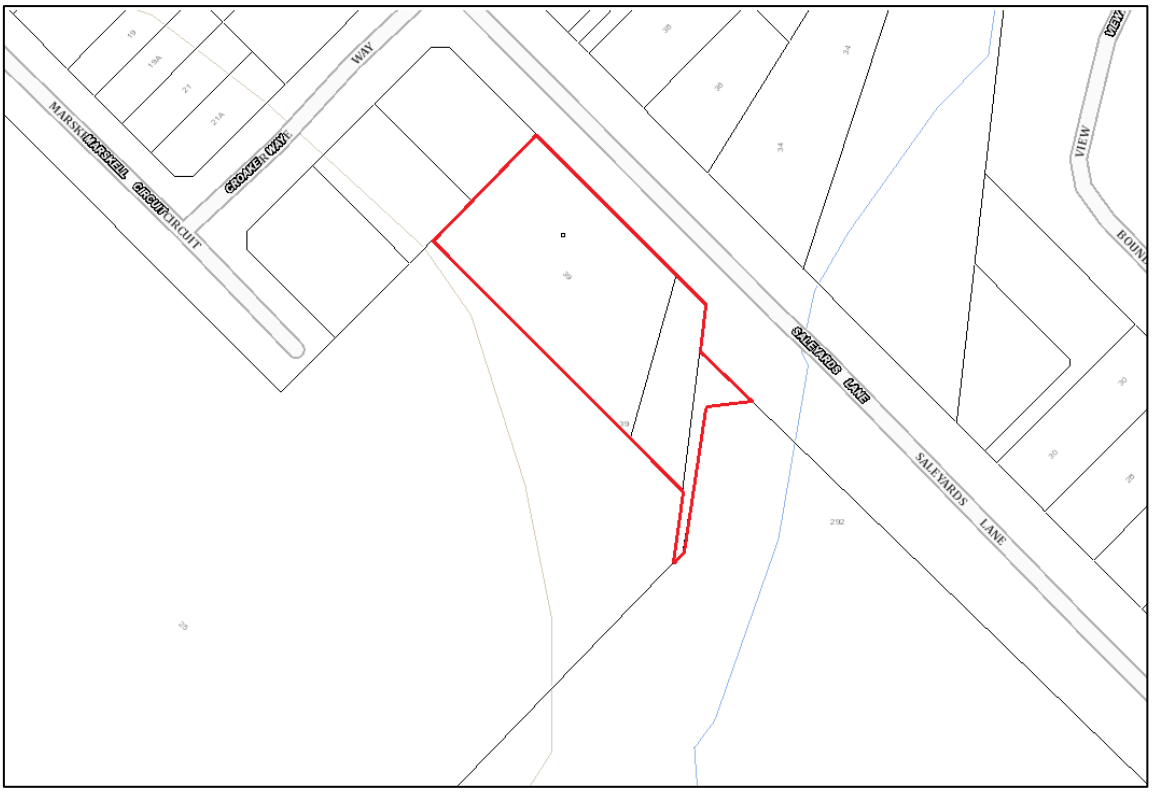
Unit 1, 36 Darling Street

Dubbo NSW 2830

2.0 EXISTING ENVIROMENT

2.1 Location and Title

The subject site consists of Lot 30 DP 1267151, part of Lot 29 DP 1307255, and Lot 20 DP 1305817, commonly known as 33-39 Saleyards Lane. The site is located approximately 1.7km west of the Mudgee CBD. Refer to Figure 1 below.

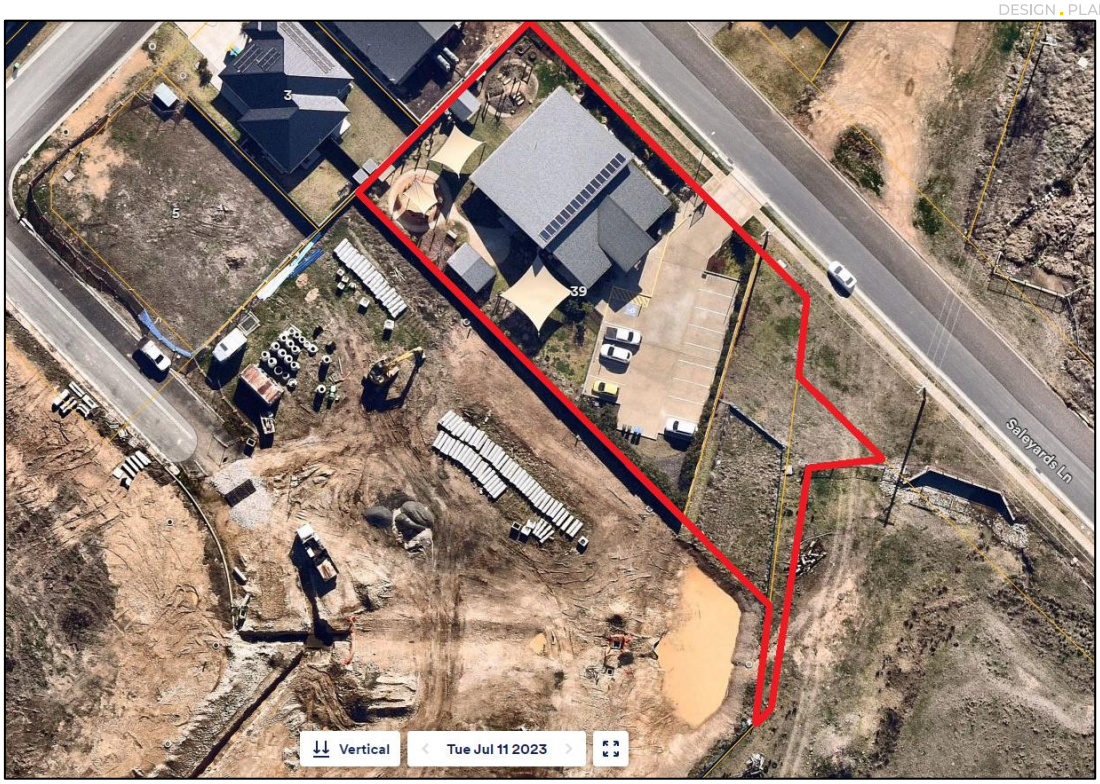


Source: (NSW Government Spatial Services, 2024)

Figure 1 – Site Location

The proposed site area is approximately 2,566m^2, (refer to Deposited Plan in Appendix A). The site is currently host to the existing Gowrie Childcare Centre, and neighbouring vacant land which is part of a separate application for proposed consolidation.

Please refer to Figure 2 and Plates 1 & 2 for photos of the site and the locality.



Source: (NSW Government Spatial Services, 2024)

Figure 2 – Site Aerial

Plate 1 - View of existing access to the site from Saleyards Lane.

Plate 2 - View of rear area of the site.

2.2 Land Use

The subject site is located within an establishing industrial area north-west of Mudgee. This locality is a growth area with land used for residential uses. The site is currently home to the existing childcare centre.

2.3 Topography

The subject site is relatively flat throughout. The site has a natural fall towards the north-east with the surrounding locality generally falling towards a natural unnamed waterway.

2.4 Flora and Fauna

The site is devoid of any significant vegetation. In its current state, there is little chance the locality would have potential to support significant flora or fauna species.

2.5 Noise Environment

Measurements of background noise levels were undertaken by Muller Acoustic Consulting. To quantify the existing background noise environment of the area, unattended noise monitoring was conducted at a location representative of the ambient environment surrounding the project site. The measurements were carried out using one Svantek 977 noise analyser from Thursday 27 June 2024 to Friday 5 July 2024. Observations on-site identified the surrounding locality was typical of a rural (-residential) environment, with road traffic noise and wildlife noise audible. Please refer to Figure 3 for the summary for the monitored background noise.

Table C1 Background Noise Monitoring Summary – Location L1[1]

Date	Measured Background Noise Level (LA90) dB ABL[2]			Measured Ambient Noise Level dB LAeq(period)		
	Day	Evening	Night	Day	Evening	Night
Thursday 27 June 2024	N/A[3]	33	25	N/A[3]	44	42
Friday 28 June 2024	33	35	26	50	44	39
Saturday 29 June 2024	35	28	N/A[3]	48	43	N/A[3]
Sunday 30 June 2024	31	28	25	43	40	41
Monday 01 July 2024	38	32	30	53	41	42
Tuesday 02 July 2024	43	37	33	53	45	42
Wednesday 03 July 2024	43	34	31	49	43	40
Thursday 04 July 2024	42	33	29	51	42	40
Location L1 – RBL / Leq Overall	**38**	**33**	**29**	**50**	**43**	**41**

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 2: Assessment background level (ABL) – the single-figure background level representing each assessment period day, evening, and night as per NPI Fact Sheet A.

Note 3: Extraneous noise excluded.

Note: Excludes periods of wind or rain affected data. Meteorological data obtained from the Bureau of Meteorology weather station Mudgee Airport AWS 32.6°S 149.6°E 471m AMSL.

Figure 3 - Background Noise Monitoring Summary

Please also refer to the Acoustic Report in Appendix B.

2.6 Natural Hazards

The subject site is not mapped as being flood prone or bushfire prone pursuant the provisions under the *Mid-Western Regional Local Environmental Plan 2013* (the LEP) or the NSW Planning Portal.

2.7 Services

Services including electricity, water, sewer, and telecommunications infrastructure are available to the site.

2.8 Access and Traffic

The subject site will be located on the southern side of Saleyards Lane, which is a bitumen sealed road improved with kerb and guttering. New access crossovers and on-site manoeuvrability/hardstand areas shall be constructed to support the proposed development.

2.9 Heritage

The subject site has not been listed as containing a heritage item under Schedule 5 of the *Mid-Western Regional Local Environmental Plan 2013* (the LEP).

Following an online search on the *Aboriginal Heritage Information Management System* (AHIMS), it was concluded that there are no Aboriginal items nor places known within a 200m radius of the subject site.

Please refer to Appendix C for the AHIMS Report.

3.0 PROPOSED DEVELOPMENT

The proposal is for the part demolition and alterations and additions to a childcare centre building and site, being Lot 30 DP 1267151, Lot 29 DP 1307255, and Lot 20 DP 1305817 commonly known as 33-39 Saleyards Lane, Mudgee, NSW 2850.

The proposed development is for the expanded and continued use of the site as a Childcare. The Mudgee area expects a steady increase in children's numbers for upcoming years. The redevelopment will enable a better working environment for teachers and children. The number of existing placements was for 56 children, while the proposed will support up to 88 Children.

Details of the proposed development are as follows:

- Demolition:
    - Minor demolition of windows, store, kitchen, laundry, and staff room.
    - Existing concrete carpark.
    - Existing 5,000L rainwater tank to be relocated.
- Construction:
    - Proposed new floor areas:
        - Ancillary: 151.29m^2
        - Classroom: 207.50m^2
        - Verandah: 60.04m^2
    - New rooms including:
        - Classroom 3;
        - Two (2) cot rooms;
        - Two (2) infant rooms;
        - Kitchen and pantry
        - Childrens amenities
        - Two (2) store room
        - Butlers pantry
        - Laundry
        - Verandah
    - 3600mm x 6000mm external storage shed & 2700mm x 4000mm storage shed;
    - 5000L slimeline rainwater tank;
    - Proposed 1800mm (h) black powder coated tubular steel vehicle access gate;
    - 1800mm (h) black powder coated tublar steel palisade security fencing with 10mm thick perspex sheeting;
    - proposed 'jh - matrix' cladding with paint finish to match existing;
    - proposed 'lysaght - custom orb' vertical cladding with 'colorbond' finish to match existing;
    - 90sq timber post with select paint finish;
    - proposed 'lysaght - custom orb' roof sheeting with 'colorbond' finish to match existing;
    - proposed 'lysaght' barge capping with 'colorbond' finish to match existing;
    - proposed 1800mm (h) face brickwork & black powdercoated tubular steel palisade security fence;
    - proposed signage to 'Mid-western Regional Council' DCP requirements;
    - Twenty-two car spaces including one (1) accessible located on the southern side of Saleyards Lane, and the north-eastern side of the childcare. Entry and exit provided via sperate crossovers.
        - The existing car park provided fourteen (14) car spaces with one (1) accessible accessed via one crossover from Saleyards Lane;

- new crossover's to support entry and exit from saleyards lane;
- Landscaping including;
  - Trees;
    - Lagerstroemia indica `Twilight` (Twilight Crape Myrtle)
    - Tristaniopsis laurina `DOW10` (Luscious Water Gum)
  - Shrubs;
    - Lomandra fluviatilis 'ABU7' (Shara Mat Rush)
    - Pittosporum tenuifolium `Silver Sheen` (Silver Sheen Tawhiwhi)
    - Rosmarinus officinalis `Tuscan Blue` (Tuscan Blue Rosemary)
    - Salvia microphylla `Hot Lips` (Hot Lips Graham Sage)
    - Syzygium australe `Pinnacle` (Pinnacle Lilly Pilly)
    - Syzygium australe `Up and Away` (Up and Away Lilly Pilly)
    - Westringia fruticosa `WES04` (Grey Box? Coast Rosemary)

Refer to Development Plans in Appendix D, Landscape Design in Appendix E and Preliminary Civil Drawings in Appendix F.

4.0 LAND ZONING

The subject site is zoned R1 General Residential pursuant to *Mid-Western Local Environmental Plan 2012* (the LEP). The proposed development consists of alterations and additions to an existing centre-based childcare facility, which is permissible with consent in the R1 Zone. The definition for centre-based childcare facilities under the LEP is provided below:

"…means

(a) A building or place used for the education and care of children that provides any one or more of the following –

(i) Long day care,

(ii) Occasional child care,

(iii) Out-of-school-hours care (including vacation care),

(iv) Preschool care, or

(b) An approved family per day care venue (within the meaning of the Children (Education and Care Services) National Law (NSW)),

But does not include –

(c) a building or place used for home-based child care or school-based child care, or

(d) an office of a family day care service (within the meanings of the Children (Education and Care Services) National Law (NSW)), or

(e) a babysitting, playgroup or child-minding service that is organised informally by the parents of the children concerned, or

(f) a child-minding service that is provided in connection with a recreational or commercial facility (such as a gymnasium) to care for children while the children's parents are using the facility, or

(g) a service that is concerned primarily with providing lessons or coaching in, or providing for participation in, a cultural, recreational, religious or sporting activity, or providing private tutoring, or

(h) a child-minding service that is provided by or in a health services facility, but only if the service is established, registered or licensed as part of the institution operating in the facility."

The permissibility of the proposed development is assessed in terms of the heads of consideration in Section 4.15 of the *Environmental Planning and Assessment Act 1979*, which incorporates consideration of the LEP, and the objectives and permissible uses outlined in the R1 General Residential Zone, as outlined in Section 5 of this report.

5.0 PLANNING CONSIDERATION

5.1 Biodiversity Conservation Act 2016

5.1.1 Is the development likely to significantly affect threatened species?

Clause 7.2 of the *Biodiversity Conservation Act 2016* (BC Act) identifies the following circumstances where a development is likely to significantly affect threatened species:

(a) Is it likely to significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3, or
(b) The development exceeds the biodiversity offsets scheme threshold if the biodiversity offsets scheme applies to the impacts of the development on biodiversity values, or
(c) It is carried out in a declared area of outstanding biodiversity value.

Each of these is addressed below.

5.1.1.1 Section 7.3 Test

To determine whether a development is likely to significantly affect threatened species or ecological communities, or their habitats, the following is to be taken into account in accordance with Section 7.3 of the BC Act:

(a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,
(b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:
  (i) Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or
  (ii) Is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,
(c) In relation to the habitat of a threatened species or ecological community:
  (i) The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and
  (ii) Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and
  (iii) The importance of the habitat to be removed, modified or fragmentated or isolated to the long-term survival of the species or ecological community in the locality,
(d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),
(e) Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.

Comment: The site is located within an emerging residential area in Mudgee. The site has minimal onsite vegetation and is not considered an endangered or threatened species, nor do they support any ecological communities or their habitats. There is an existing childcare centre located onsite.

Therefore, the proposed development is not likely to significantly affect threatened species or ecological communities, or their habitats.

5.1.1.2 Section 7.4 Test

Section 7.4 of the BC Act states:

(1) *Proposed development exceeds the biodiversity offsets scheme threshold for the purposes of this Part if it is development of an extent or kind that the regulations declare to be development that exceeds the threshold.*

(2) *In determining whether proposed development exceeds the biodiversity offsets threshold for the purposes of this Part, any part of the proposed development that involves the clearing of native vegetation on category 1-exempt land (within the meaning of Part 5A of the Local Land Services Act 2013) is to be disregarded.*

Comment: The subject site is cleared and proposed development shall not exceed the biodiversity offsets scheme threshold for the purposes of this part.

5.1.1.3 Declared Area of Outstanding Biodiversity Value

The site is not mapped on the Biodiversity Value Map as being land with a high biodiversity value as defined by the BC Act.

5.1.2 Biodiversity Development Assessment Report

As outlined in Section 5.1.1, the proposed development is not likely to significantly affect threatened species as defined by Section 7.2 of the BC Act. Therefore, a Biodiversity Development Assessment Report is not required to accompany the application for development consent.

5.2 Fisheries Management Act 1994

5.2.1 Applicability

The Fisheries Management Act 1994 (FM Act) applies to:

(a) *In relation to all waters that are within the limits of the State, and*

(b) *Except for purposes relating to a fishery, or a part of a fishery, that is to be managed in accordance with the law of the Commonwealth pursuant to an arrangement under Division 3 of Part 5 and except for purposes prescribed by paragraph (d)- in relation to any waters of the sea not within the limits of the State that are on the landward side of waters adjacent to the State that are within the Australian Fishing zone, and*

(c) *For purposes relating to a fishery, or a part of a fishery, that is managed in accordance with the law of the State pursuant to an arrangement under Division 3 of Part 5- in relation to any waters to which the legislative powers of the State extend with respect to that fishery, whether pursuant to Section 5 of the Coastal Waters (State Powers) Act 1980 of the Commonwealth or otherwise, and*

(d) *For purposes relating to recreational fishing activities engaged in otherwise than by use of a foreign boat (other than recreational activities prohibited or regulated under a plan of management determined under section 17 of the Commonwealth Act)- in relation to any waters to which the legislative powers of the State extend with respect to such activities*

Comment: The Fisheries Management Act 1994 does not apply to the subject proposal.

5.2.2 Is the development likely to significantly affect threatened species, population, or ecological community?

Section 221VZ of the FM Act requires the following matters to be taken into consideration to determine whether a proposed development or activity is likely to significantly affect threatened species, populations, or ecological communities (unless it is carried out in critical habitat):

(a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,

(b) In the case of an endangered population, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction,

(c) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:

(i) Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

(ii) Is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,

(d) In relation to the habitat of a threatened species, population or ecological community:

(i) The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and

(ii) Whether an area of habitat is likely to become fragmentated or isolated from other areas of habitat as a result of the proposed development or activity, and

(iii) The importance of the habitat to be removed, modified, fragmentated or isolated to the long-term survival of the threatened species, population or ecological community in the locality,

(e) Whether the proposed development or activity is likely to have an adverse effect on any critical habitat (either directly or indirectly),

(f) Whether the proposed development or activity is consistent with a Priorities Action Statement,

(g) Whether the proposed development constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.

The assessment guidelines under section 220ZZA apply to the determination of whether any such proposed development or activity is likely to significantly affect threatened species.

Comment: The Fisheries Management Act 1994 does not apply to the subject proposal.

5.3 Environmental Planning & Assessment Act 1979

5.3.1 Evaluation

Section 4.15 of the EP&A Act (as amended) requires the Council to consider various matters in regard to the determination of the Development Application.

In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:

a) The provisions of:
   i. any environmental planning instrument, and
   ii. any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and
   iii. any development control plan, and
   iv. any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and
   v. the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and
   vi. any coastal zone management plan (within the meaning of the Coastal Protection Act 1979), that apply to the land to which the development application relates,
b) The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality;
c) The suitability of the site for the development,
d) Any submissions made in accordance with this act or the regulations,
e) The public interest.

The proposed development has been designed with consideration to the following matters, as outlined below.

5.4 Child Care Planning Guideline – Delivering Quality Child Care for NSW 2021

This Guideline establishes the assessment framework to deliver consistent planning outcomes and design quality for centre-based childcare facilities in NSW.

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 (the Education SEPP) determines that a consent authority must take into consideration this Guideline when assessing a development application (DA) for a centre-based childcare facility ('childcare facility').

Please refer below requirements:

- Minimum of 3.25m² of unencumbered indoor space per child required.

Comment: There are 88 children proposed, thus 88 x 3.25 = 286m^2 required. The development has 315.6m^2 indoor space proposed, therefore this standard is satisfied.

- Minimum 7.0m² per child of unencumbered outdoor space required (88 x 7 = 616m² required).

Comment: The development has 837m^2 proposed, therefore this standard is satisfied.

- Minimum of 0.3m^3 of external storage space per child required (88 x 0.3 = 26.4m^3 required).

Comment: The proposal allows for 34.8m^3, therefore this standard is satisfied.

- Minimum of 0.2m² per child of internal storage space. (88 x 0.2 = 17.6m² required).

Comment: The proposal allows for 33m^3, therefore this standard is satisfied.

- Laundry and hygiene facilities are a key consideration for education and care service premises. The type of laundry facilities provided must be appropriate to the age of children accommodated.

Comment: A laundry room has been depicted on the relevant floor plan.

- Toilets are to comply with the Childcare Planning Guideline.

Comment: The toilets are designed suitably and comply in that:

  - The cubicles have solid walls, however no doors to provide dignity while ensuring supervision is possible.
  - The proposed windows are located in sections of the walls that make sure views from the visitors, the public and neighbouring properties is limited.
  - Handwashing facilities suitable for children in children amenities, while adult bathrooms have adults facilities.
  - All children facilities have direct access from both indoor and outdoor play areas.

- Nappy Change Facilities to be provided in accordance with the guideline.

Comment: To be provided in Children's amenities and detailed at Construction Certificate stage.

- Providing the correct balance of sunlight and shade to play areas is important for the health and wellbeing of children and staff. Combining built and natural shade will often be the best option.

Comment: Shade sails have been provided in the outdoor play area, and trees have been included in the landscaping plan, thus providing suitable built and natural shade areas.

Please refer to Appendix G for the Childcare Planning Guideline.

5.5 Environmental Planning Instruments

5.5.1 State Environmental Planning Policies (SEPP)

While a number of SEPPs apply to the subject land and development thereon, there is unlikely to be any significant implications in terms of the requirements of the SEPPs on the proposed development. The following SEPPs are considered:

5.2.1.2 SEPP (Resilience and Hazards) 2021

Clause 4.6(1) of *State Environmental Planning Policy (Resilience and Hazards) 2021* requires Council to consider the following before granting consent to a DA:

(a) It has considered whether the land is contaminated, and
(b) If the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and
(c) If the land required remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

Comment: As part of this Development Application, Barnson Pty Ltd has undertaken a Preliminary Site Investigation (PSI). The initial desktop assessment confirmed that the potential for contamination due to historical saleyard activities, drainage across the site, disposal of waste, and demolition waste or unclassified fill.

A site investigation and confirmatory sampling conducted revealed no evidence of significant contamination. The concentrations of all contaminants investigated were below screening criteria in all surface soil samples collected from the subject site. The screening criteria used in the evaluation of the contaminant concentrations were appropriately conservative and suitable for assessment of the continued use of the site for educational purposes. As such, based on the findings of the desktop review and site investigation it is concluded that the contamination identified at the subject site represents no potential risk to human health and the environment and the site is suitable

for the proposed development. Please refer to Appendix H for the Preliminary Site Investigation Report.

5.2.1.3 State Environmental Planning Policy (Transport and Infrastructure) 2021

Chapter 3 *Educational Establishments and Childcare Facilities of SEPP* (Transport and Infrastructure) 2021 applies to the subject application. The SEPP aims to streamline the planning system for education and childcare facilities.

Clause 3.23 states that:

Before determining a development application for development for the purpose of a centre-based child-care facility, the consent authority must take into consideration any applicable provisions of the Child Care Planning Guideline, in relation to the proposed development.

Comment: The proposed design takes into consideration and is generally compliant with Parts 3 & 4 Matters of Consideration and Design Criteria and the following key principles of the Childcare Planning Guidelines:

- Principle 1 – Context

The proposal involves alterations and additions of an existing Childcare Facility. The proposal shall be in keeping with the locality and is considered an appropriate scale for the surrounding residential context.

- Principle 2 – Built Form

The proposal is appropriate in terms of scale and bulk and fits well on the site. The building can comply with relevant provision under the National Construction Code (BCA). The facilities of the site have been designed to be accessible by people with differing needs and capabilities.

- Principle 3 – Adaptive Learning Spaces

The proposal caters for different age groups and different modes of learning, with a variety of spaces.

- Principle 4 – Sustainability

The design of the proposed development adopts sustainable design principles. The proposal will provide a positive social and economic benefit for the local community by providing additional jobs and creating an overall improved facility.

- Principle 5 – Landscape

The proposal includes high quality facilities and attractive spaces for use by kids and staff. This will provide kids with an enhanced learning and play environment.

- Principle 6 – Amenity

The proposed building shall have high quality external finishes that are considered aesthetically pleasing and provide a visually pleasing building for the area. The building is an appropriate scale and form for the locality and residential context.

- Principle 7 – Safety

Crime prevention is carried out on site to ensure a high level of safety and security for kids and staff. The proposed development works will increase passive surveillance with internal boundary treatments. In addition, open spaces are available on the site to provide passive recreation.

5.2.1.4 SEPP (Industry and Employment) 2021

It is proposed to install identification signage on the northern and eastern elevation thus SEPP (Industry and Employment) 2021 is addressed below:

The aims and objectives of SEPP (Industry and Employment) 2021 are set out in Clause 3.1(1)(a) as follows:

(1) This policy aims:

(a) To ensure that signage (including advertising):

(i) Is compatible with the desired amenity and visual character of an area, and

(ii) Provides effective communication in suitable locations, and

(iii) Is of high quality design and finish,

Clause 3.6 states that:

A consent authority must not grant development consent to an application to display signage unless the consent authority is satisfied-

(a) That the signage is consistent with the objectives of this Chapter as set out in Section 3.1(1)(a), and

(b) That the signage the subject of the application satisfies the assessment criteria specified in Schedule 5.

Comment: The proposed new signage shall generally meet the aims and objectives of the SEPP (Industry and Employment) as set out in Clause 3.1(1)(a). The proposed signage location shall be suitably located to provide effective communication to vehicles and people in the surrounding streetscape. The proposed signage will be of high-quality design, having been designed to integrate with the existing locality and employ quality finishes.

The proposed signage has been addressed against the criteria set out in Schedule 5 of SEPP (Industry and Employment), as follows:

1. *Character of the area*

The proposed wall signage shall provide appropriate identification for vehicles and pedestrians within proximity of the development.

2. *Special Areas*

The subject site is not located within any special areas that are sensitive to alterations of visual quality.

3. *Views and Vistas*

The locality of the proposed signage should not obstruct any significant views or vistas. It will be appropriately integrated within the context of the site, and it is not expected to dominate the skyline, being consistent with existing signage in the locality.

4. *Streetscape, setting or landscape*

The signage is in scale with the associated building size and other signage in proximity. It is well integrated within the building and the context of the site and does not protrude beyond the site's property boundary.

5. *Site and building*

The sign shall be appropriately located on the western elevation of the proposed new development and is to be positioned for the primary approach of vehicles and pedestrians.

6. *Associated devices and logos with advertisements and advertising structures*

The sign shall be appropriately designed to ensure that any safety measures are an integral part of the design.

7. *Illumination*

The proposed sign will not be illuminated.

8. *Safety*

The proposed signage shall not reduce the safety of the public road/s and is appropriately located on-site to be visible for vehicles in the locality.

As the sign will be appropriately located and unobtrusive, the proposal will not obscure any significant sightlines from public areas.

The assessment above has shown that the proposed sign complies with all criteria set out by Schedule 5. There is no impediment under SEPP (Industry and Employment) to the Council approving the signage. Refer to signage details in Appendix D.

5.3 Mid-Western Regional Local Environmental Plan 2022

5.3.1 Land Use Table

The subject site is zoned R1 – General Residential pursuant to the *Mid-Western Regional Local Environmental Plan 2012* (the LEP). The objectives of the R1 Zone are as follows:

- *To provide for the housing needs of the community.*
- *To provide for a variety of housing types and densities.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*

Comment: The proposed development is for alterations and additions to the existing Gowrie Child-Care Centre, which is consistent with the zone objectives as it provides facilities and/or services to meet the day to day needs of residents in the Mudgee locality. It is also permissible with consent in the R1 zone.

5.3.2 Clause 4.3 Height of Buildings

Clause 4.3 'Height of Buildings' of the LEP states the following:

(1) The objectives of this clause are as follows –

(a) To protect the amenity of places, with particular regard to visual bulk, scale, overshadowing, privacy, and views.

(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

Comment: The proposed subject site is located within an area that has a maximum building height requirement of 8.5m. The proposed new development is to have a maximum height of 5.28m which is in character with the Saleyard Lane locality and is well below the maximum required.

5.3.3 Clause 6.3 Earthworks

Clause 6.3 of the LEP requires the consent authority to consider the following matters before granting consent for earthworks:

(a) The likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality of the development,
(b) The effect of the development on the likely future use or redevelopment of the land,

(c) The quality of the fill or the soil to be excavated or both,
(d) The effect of the development on the existing and likely amenity of adjoining properties,
(e) The source of any fill material and the destination of any excavated material,
(f) The likelihood of disturbing relics,
(g) The proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,
(h) Any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

Comment: The development is not expected to result in the disruption of or cause detrimental effects on the existing drainage patterns or soil stability.

The development is not expected to impact on any watercourse, drinking water catchment or environmentally sensitive area.

It is recommended that appropriate erosion and sediment control measures be installed and maintained during the construction period.

5.3.4 Clause 6.4 Groundwater Vulnerability

The subject site is mapped as being groundwater vulnerable. Clause 6.4 of the LEP requires council to consider the following matters prior to determining a DA that is located on groundwater vulnerable land.

(a) The likelihood of groundwater contamination from the development (including from any on-site storage or disposal of solid or liquid waste and chemicals),
(b) Any adverse impacts the development may have on groundwater dependent ecosystems,
(c) The cumulative impact the development may have on groundwater (including impacts on nearby groundwater extraction for a potable water supply or stock water supply),
(d) Any appropriate measures proposed to avoid, minimise, or mitigate the impacts of the development.

Comment: All waste from the construction of the proposed development shall be stored in waste storage bins appropriate to the waste type generated and will be periodically collected and disposed of by licensed contractors.

Once completed, the proposed development will be connected to the reticulated sewerage system, thus not requiring any on-site effluent disposal. Additionally, once completed, the proposed development is unlikely to necessitate the storage or disposal of any solid or liquid waste chemicals or the extraction of any groundwater.

5.3.5 Clause 6.9 Essential Services

Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the proposed development are available or that adequate arrangements have been made to make them available when required:

(a) The supply of water,
(b) The supply of electricity,
(c) The disposal and management of sewerage,
(d) Stormwater drainage or on-site detention conservation, and
(e) Suitable road access.

Comment: The proposed development will be serviced by essential services including electricity, telecommunications and reticulated water and sewer. Suitable vehicular access is to be provided onto Saleyards Lane from two separate crossovers.

Please refer to Appendix F for the preliminary civil plan; further information will be provided for stormwater design at the Construction Certificate stage.

5.4 Draft Environmental Planning Instruments

No draft Environmental Planning Instruments are applicable to the subject site or development.

5.5 Mid-Western Regional Council Development Control Plan 2013

5.5.1 Introduction

The Mid-Western Regional Council Development Control Plan 2013 (DCP) outlines the detailed requirements for development in the LGA. Each of the sections of the DCP relevant to the proposed development are addressed below.

5.5.2 Residential Development & Subdivision

The DCP is the key non-statutory instrument that set's prescriptive controls and performance objectives for development however the DCP has no specific development controls for *Child Care Facility* development other than a prescribed rate for the provision of car parking.

The relevant provisions of the DCP are identified and addressed below:

Table 1 – Section 4.4 Signs		
Deemed to Satisfy DCP Control	Comment	Compliance
General Requirements	Full details of signage are provided on the plans in Appendix D in accordance with this section.	✓
Types	2 x Wall Sign is proposed comprised of individual letters attached to the north façade & eastern facade identifying the building as *"Gowrie Preschool"* 1 x directional sign on Fence façade on northern elevation to provide identification for vehicles accessing the property.	✓
Residential Areas	The development is occurring within an area predominantly used for residential purposes, as such it is considered that the application of the signage standards as applicable to Residential Areas is appropriate in this instance.	✓
The sign shall only display the name and nature of the business, including address, hours of business, telephone number and the like;	The proposed signage will only display the name of the business "Gowrie Preschool".	✓
The sign shall not be larger than one metre long and 300mmhigh;	Noted, the proposed signage will adhere to Mid-Western DCP Requirements	✓
The sign shall not be erected higher than one metre above ground level;	A slight departure requested given the nature of the development. The existing preschool utilised two (2) fascia signs located on the northern elevation towards the road, and the eastern elevation towards the car park. A part of this development includes providing updated signage in these locations. The departure is deemed justified given the fact the signage locations have been existing for an extended period of time and have not impacted the locality in a negative way and new improved signage adds to the amenity of the area.	

<table>
<tr><th colspan="3">Table 2 – Section 5.1 Car parking</th></tr>
<tr><th>Deemed to Satisfy DCP Control</th><th>Comment</th><th>Compliance</th></tr>
<tr><td>Child Care Centre = 1 space per 4 children</td><td>The proposed Car Parking rate required is one space per 4 children. As such the development requires 88 (children) ÷ 4 = 22 car spaces.
A total of 22 car spaces, including 1 accessible car parking space, are proposed which satisfies this requirement.</td><td>✓</td></tr>
<tr><td>Landscaping
a) Parking facility design shall consider the likely visual impact of the parking facility in the locality and provide an integrated landscape design addressing amenity impacts.
b) A landscaping plan including details of species selection of mature shade trees, species condition, size of beds, understorey and ground cover planting, irrigation provision shall be submitted to Council for approval.
c) Landscaping shall be provided to separate pedestrian and vehicle conflict points where possible.
d) Landscaping provision for sun control (shading) shall be provided at the rate of 1 shade tree for every 6 car parking spaces.</td><td>A formal Landscaping Plan has been prepared for the proposed development, including the front setback and car parking area, in accordance with these requirements, refer to Appendix E. Please refer below for the proposed plant schedule:
<table>
<tr><th colspan="6">Plant Schedule</th></tr>
<tr><th>Symbol</th><th>Plant Code</th><th>Botanical Name</th><th>Common Name</th><th>LAFX Remarks</th><th>Count</th></tr>
<tr><td>Trees</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>LAG TWI</td><td>Lagerstroemia indica `Twilight`</td><td>Twilight Crape Myrtle</td><td>H:2.5m W:2.5m</td><td>1</td></tr>
<tr><td></td><td>TRI LUS</td><td>Tristaniopsis laurina `DOW10`</td><td>Luscious Water Gum</td><td>H:8m W:5m</td><td>2</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>3</td></tr>
<tr><td>Shrubs</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>LOM FLU</td><td>Lomandra fluviatilis `ABU7`</td><td>Shara Mat Rush</td><td>H:0.5m W:0.5m</td><td>101</td></tr>
<tr><td></td><td>PIT SIL</td><td>Pittosporum tenuifolium `Silver Sheen`</td><td>Silver Sheen Tawhiwhi</td><td></td><td>67</td></tr>
<tr><td></td><td>ROS TUS</td><td>Rosmarinus officinalis `Tuscan Blue`</td><td>Tuscan Blue Rosemary</td><td>H:1m W:1m</td><td>66</td></tr>
<tr><td></td><td>SAL HOT</td><td>Salvia microphylla `Hot Lips`</td><td>Hot Lips Graham Sage</td><td>H:0.9m W:0.9m</td><td>7</td></tr>
<tr><td></td><td>SYZ PIN</td><td>Syzygium australe `Pinnacle`</td><td>Pinnacle Lilly Pilly</td><td>H:6m W:1.5m</td><td>21</td></tr>
<tr><td></td><td>SYZ YWU</td><td>Syzygium australe `Up and Away`</td><td>Up and Away Lilly Pilly</td><td>H:4m W:1m</td><td>72</td></tr>
<tr><td></td><td>WES GRB</td><td>Westringia fruticosa `WES04`</td><td>Grey Box? Coast Rosemary</td><td>H:0.4M W:0.4M</td><td>37</td></tr>
</table>
</td><td>✓</td></tr>
</table>

Table 2 – Section 5.1 Car parking		
Deemed to Satisfy DCP Control	**Comment**	**Compliance**
e) Existing trees on site are to be retained where possible.	Some existing trees are to be removed, please refer to the demolition plan within Architectural Plans in Appendix D.	
Note: Design and layout including manoeuvring, provisions of accessible spaces and access reference should be made to AS 2890.1 Parking Facilities	The proposed car park design and layout is generally in accordance with AS 2890.1.	✓

Table 3 – Section 5.3 Stormwater Management	
DCP Control	Comment
5.3 Stormwater Management	A *"Proposed Stormwater Plan"* has been prepared in accordance with the Council's requirements, refer to Appendix F.

Table 4 – Section 5.4 Environmental Controls	
5.4 Environmental Controls	
Protection of Aboriginal Archaeological Items	Given that an Aboriginal Heritage Information Management System (AHIMS) search, (refer Appendix C), has not found any record of Aboriginal Sites or Places on or within 200m of the site the likelihood of any cultural or aboriginal relics being discovered during excavation/construction is considered to be minimal.

Table 4 – Section 5.4 Environmental Controls	
	However, should any Aboriginal or cultural relics be discovered on the site during excavation/construction, that work will cease, and the relevant authorities are contacted.
Riparian and drainage line Environments	The development does not require a Controlled Activities Approval/Integrated development pursuant to Clause 41 of the *Water Management Act 2018* given the fact the property is owned by a Public Authority (Mid-Western Regional Council). The subject site is not burdened by any drainage lines, streams, creeks or rivers
Pollution and Waste Management	General and non-recyclable waste is to be disposed of in waste storage bins whilst paper, metal, glass and green waste is to be disposed of in recycling and green waste bins that will be collected by a private contractor. Once completed the proposed development will be connected to the reticulated sewerage system, thus not requiring any on-site effluent disposal. Additionally, once completed the proposed development will not necessitate the storage or disposal of any solid or liquid waste chemicals or the extraction of any groundwater. Whilst stormwater design will incorporate pollution control measures to ensure pollutants do not enter the stormwater system.
Threatened Species and Vegetation Management	A review of the NSW Office of Environment and Heritage website has revealed that the site is not known to be within an area accommodating any endangered or threatened flora or fauna or critical habitats. Furthermore, the site is largely devoid of vegetation due to past disturbance and clearing of the land, vegetation on the site is limited to trees on the northern, eastern and southern boundaries of the site, which have been planted. Some shall be removed as part of the extension; however, additional landscaping is proposed as part of the application. As such, given the modified state of the land and given that the proposed development is not proposing the removal of any trees it is unlikely that the habitats for any protected, vulnerable or endangered native species will be adversely impacted upon.

5.6 Any Planning Agreement entered into

No Planning Agreements entered into are known to exist in relation to the development or site.

5.7 Any Matters Prescribed by the Regulations

For the purposes of Section 4.15(1)(a)(iv) of the EP&A Act, Clause 61 of the *Environmental Planning and Assessment Regulations 2021* (EP&A Regulations) specifies the additional matters a consent authority must take into consideration when a determining a DA.

5.7.1 Introduction

For the purposes Section 4.15(1)(a)(iv) of the EP&A Act, Clause 61 of the *Environmental Planning and Assessment Regulations 2021* (EP&A Regulations) specifies the additional matters a consent authority must take into consideration when a determining a DA. The following matter is relevant to the site and development.

5.7.2 Demolition Works

In relation to demolition works, the provisions of AS2601 need to be considered. In this regard, all proposed demolition will be carried out in accordance with Australian Standard AS2601: the Demolition of Structures. It is recommended that any asbestos containing materials (unlikely due to age of building) be considered as part of addressing the abovementioned standard.

5.8 Any Likely Impacts of the Development

5.8.1 Context & Setting

The proposed development is to be carried out on land within an existing urban area. The current pattern of development is that of residential and some commercial development on local roads, with all appropriate services and utilities.

The amenity of the area is expected to be upgraded with the addition of a new building to support the preschool.

A slight increase in traffic is expected from the development. However, the volume of traffic generated would not have a significant adverse impact on local roads and road safety.

5.8.2 Access, Transport & Traffic

The subject site is located on the southern side of Saleyards Lane, which is a bitumen sealed, two-way street. Access to the site is proposed via two (2) crossovers. One (1) crossover exists and shall be utilised for the entrance only, while a new one shall be constructed to the east for a separate exit. The carpark will be one-way and proposed concrete, and utilised by staff, and occasionally parents.

Cars should effectively enter and exit the site with no likely significant impacts or risk to drivers or others in the surrounding vicinity. There are sufficient sighting distances for people utilising the car park and those utilising the road network.

In this regard, it is considered that the car parking provided on the site for staff and parents is considerably adequate for the new development. Suitable pedestrian access is also available to and from the site.

5.8.3 Utilities

All services including reticulated water supply, sewerage, stormwater management, electricity, and telecommunication infrastructure are available to the site. New connections shall be established to support the proposed development consistent with existing uses in the area.

5.8.4 Air & Microclimate

Temporary and localised air quality impacts including dust could arise during the earthworks and construction of the proposed development.

Alleviation measures proposed to mitigate any potential impacts in this regard include the following:

- Dust generation during demolition/ construction shall be controlled using regular control measures such as on-site watering or damp cloth fences or other measures as required by AS 2601;
- All vehicles transporting loose materials and travelling on public roads must be secured (i.e. closed tail gate and covered) to minimise dust generation; and
- Spraying of paint and other materials with the potential to become air borne particulates must only be undertaken in light wind conditions.

5.8.5 Noise & Vibration

The proposed construction works shall generate some noise impacts in the locality. The likelihood of noise becoming offensive can be minimised by adopting good work practice and adhering to construction hours as required by Council. Being located outside the town centre of Mudgee, and away from sensitive receptors, there is less chance of the proposed development causing noise impact.

Muller Acoustic Consulting completed a Noise Assessment to quantify emissions from the proposed modification to the existing child care centre (provided in Appendix B). The Noise Assessment has quantified potential emissions associated with the proposed modifications to the child care centre as well as the noise intrusion from surrounding noise sources to the child care centre.

The results of the Noise Assessment demonstrate that noise emissions from the operation would satisfy the relevant trigger levels at all assessed receivers once noise controls for the project are implemented:

- The project is constructed as per the site design and plans, which includes the barrier attenuation provided by the project buildings orientation;
- Construction of an impervious barrier surrounding the project boundary. It is noted that the existing current Colorbond fencing along the boundary is sufficient, therefore only sections of the fence need to be replaced or extended.
- the mechanical plant for the CCC is yet to be finalised. Therefore, the modelling assumes seven 15Kw AC units to account for the classrooms and admin spaces. The AC units are assumed to be located on rooftop of the building over each served area.

Modelled noise emissions from construction activities identify that predicted noise emissions will remain below the applicable construction management levels at all receivers taking into account the standard mitigation measures.

5.8.6 Waste

Any waste generated during the construction period would be removed to an approved landfill site as required by Council. Construction waste would be collected in bins located on-site and emptied on a regular basis.

Operational waste shall be of a domestic nature and can be collected and disposed of via existing garbage collection services.

5.8.7 Construction

A site establishment area will be set up on the subject site to ensure site safety and to reduce any environmental impacts. Erosion and sediment control measures shall be carried out on the site during development works.

5.8.8 Safety, Security & Crime Prevention

The proposed development has been designed to ensure that essential safety, security, and crime prevention measures are in place during construction and operation. The development shall be afforded with landscaping, fencing, and passive surveillance to detract any break-ins or vandalism on the site. it is considered that the proposed industrial development shall adequately provide safety and security for the proposed ongoing operations that would be carried out on the site.

5.8.9 Social & Economic Impacts in the Locality

The development is conveniently located within an established industrial area in the Mudgee region. The proposal provides employment opportunities both during construction and operation stages.

5.8.10 Other

There are no other issues such as flooding, flora/fauna, bushfire, or heritage that would significantly impact upon the development.

5.9 Suitability of the Site for the Proposed Development

The suitability of the site for the proposed development has been addressed in the above sections of this report. There are no prohibitive constraints posed by adjacent developments. There does not appear to be any zoning, planning, or environmental matters that should hinder the proposed development of the site. In this regard, it can be concluded that the proposal fits into the locality and the site attributes are conducive for the development.

5.10 The Public Interest

The proposal is considered to have a positive impact on the local environment, and it is in the public interest for the development to proceed, in the enhancement of the locality and to provide for growth of the Mudgee community.

6 CONCLUSION

It is recommended that the proposed alterations and additions to the existing childcare at Lot 20 DP 1305817, Lot 29 DP 1307255, and Lot 30 DP 1267151, commonly known as 33-39 Saleyards Lane, Mudgee, NSW, 2850 be supported on the following grounds:

- The proposal is considered acceptable in terms of the provisions of Section 4.15 of the *Environmental Planning and Assessment Act 1979*;
- The proposal is permissible with consent and consistent with the relevant development standards and provisions of the *Mid-Western Regional Local Environmental Plan 2012*;
- The proposal complies with the relevant provisions of the *Mid-Western Regional Development Control Plan 2013*;
- The proposed development is not anticipated to generate any adverse impacts in the locality;
- The proposed development is considered suitable for the site and its surrounds; and
- The proposed development shall provide a positive economic benefit for the area.

7 REFERENCES

The following key references were utilised as part of this assessment:

- *AHIMS*
- *Mid-Western Development Control Plan 2013*
- *Mid-Western Regional Local Environmental Plan 2012*
- *NSW Government Spatial Services 2021*
- *State Environmental Planning Policy (Industry and Employment) 2021*

barnson.

APPENDIX A

DP

M.G.A. COORDINATE SCHEDULE

MARK	MGA COORDINATES EASTING	MGA COORDINATES NORTHING	CLASS	PU	METHOD	STATE
SSM 65206	741147.752	6391569.713	C	0.02	SCIMS	FOUND
PM 77332	740786.269	6392186.460	C	0.02	SCIMS	FOUND
SSM 77192	741318.989	6391916.306	C	0.02	SCIMS	FOUND
SSM 191019	741053.938	6391924.418	D	N/A	CAD TRAV	FOUND
SSM 211136	741268.277	6391718.067	D	N/A	CAD TRAV	PLACED
SSM 211137	740949.630	6392048.779	D	N/A	CAD TRAV	PLACED
SSM 211138	740880.088	6391982.455	D	N/A	CAD TRAV	PLACED
DATE OF SCIMS COORDINATES 11th FEBRUARY 2020					MGA ZONE: 55	
MGA DATUM: GDA 2020		COMBINED SCALE FACTOR : 1.000240				

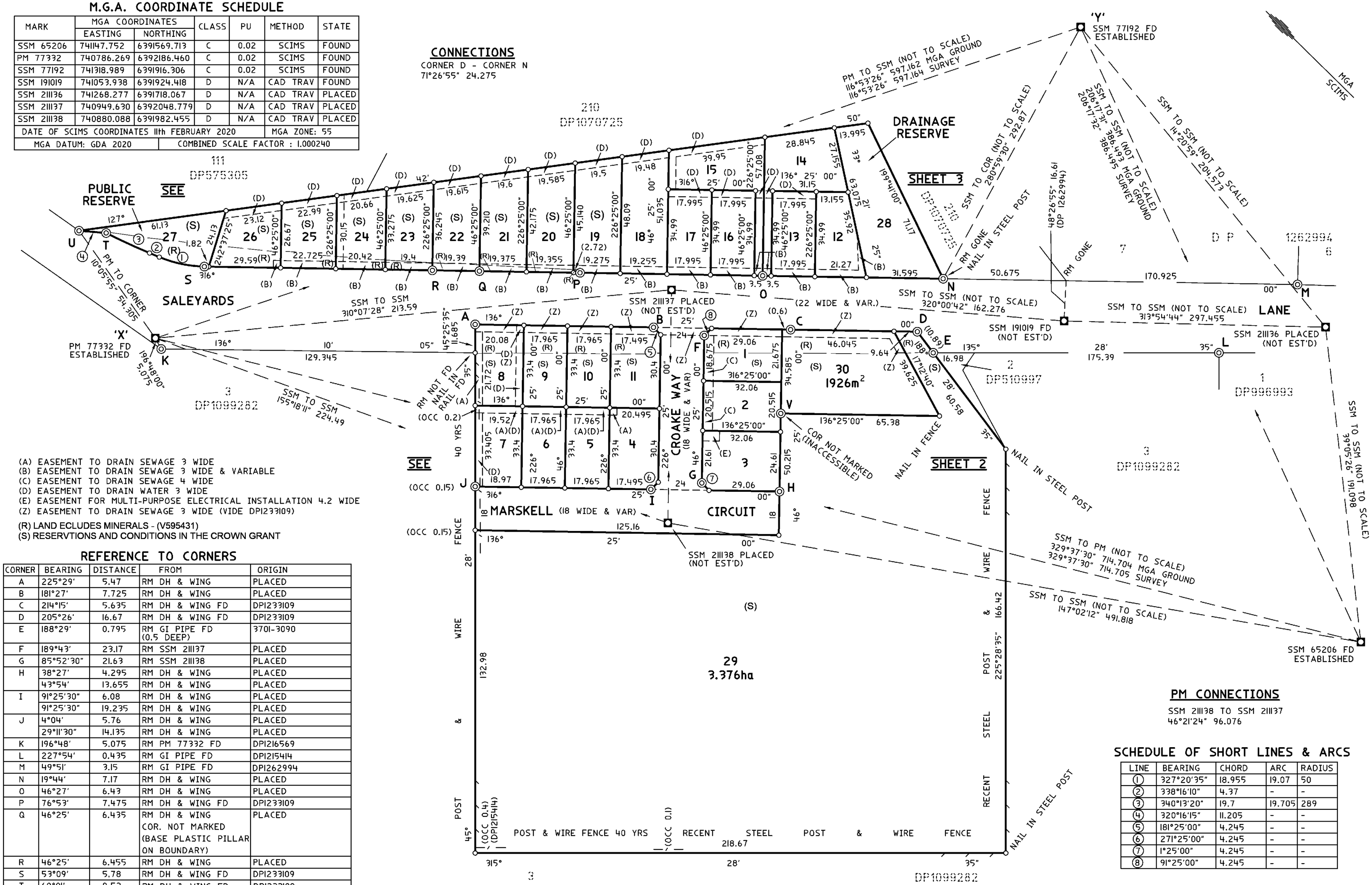
CONNECTIONS
CORNER D - CORNER N
71°26'55" 24.275

(A) EASEMENT TO DRAIN SEWAGE 3 WIDE
(B) EASEMENT TO DRAIN SEWAGE 3 WIDE & VARIABLE
(C) EASEMENT TO DRAIN SEWAGE 4 WIDE
(D) EASEMENT TO DRAIN WATER 3 WIDE
(E) EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 WIDE
(Z) EASEMENT TO DRAIN SEWAGE 3 WIDE (VIDE DP1233109)

(R) LAND ECLUDES MINERALS - (V595431)
(S) RESERVTIONS AND CONDITIONS IN THE CROWN GRANT

REFERENCE TO CORNERS

CORNER	BEARING	DISTANCE	FROM	ORIGIN
A	225°29'	5.47	RM DH & WING	PLACED
B	181°27'	7.725	RM DH & WING	PLACED
C	214°15'	5.635	RM DH & WING FD	DP1233109
D	205°26'	16.67	RM DH & WING FD	DP1233109
E	188°29'	0.795	RM GI PIPE FD (0.5 DEEP)	3701-3090
F	189°43'	23.17	RM SSM 211137	PLACED
G	85°52'30"	21.63	RM SSM 211138	PLACED
H	38°27'	4.295	RM DH & WING	PLACED
	43°54'	13.655	RM DH & WING	PLACED
I	91°25'30"	6.08	RM DH & WING	PLACED
	91°25'30"	19.235	RM DH & WING	PLACED
J	4°04'	5.76	RM DH & WING	PLACED
	29°11'30"	14.135	RM DH & WING	PLACED
K	196°48'	5.075	RM PM 77332 FD	DP1216569
L	227°54'	0.435	RM GI PIPE FD	DP1215414
M	49°51'	3.15	RM GI PIPE FD	DP1262994
N	19°44'	7.17	RM DH & WING	PLACED
O	46°27'	6.43	RM DH & WING	PLACED
P	76°53'	7.475	RM DH & WING FD	DP1233109
Q	46°25'	6.435	RM DH & WING COR. NOT MARKED (BASE PLASTIC PILLAR ON BOUNDARY)	PLACED
R	46°25'	6.455	RM DH & WING	PLACED
S	53°09'	5.78	RM DH & WING FD	DP1233109
T	69°01'	8.53	RM DH & WING FD	DP1233109
U	65°28'	0.47	RM GI PIPE FD (0.5 DEEP)	DP534336
V	69°00'	0.055	RM DH & WING IN WALL	PLACED



PM CONNECTIONS

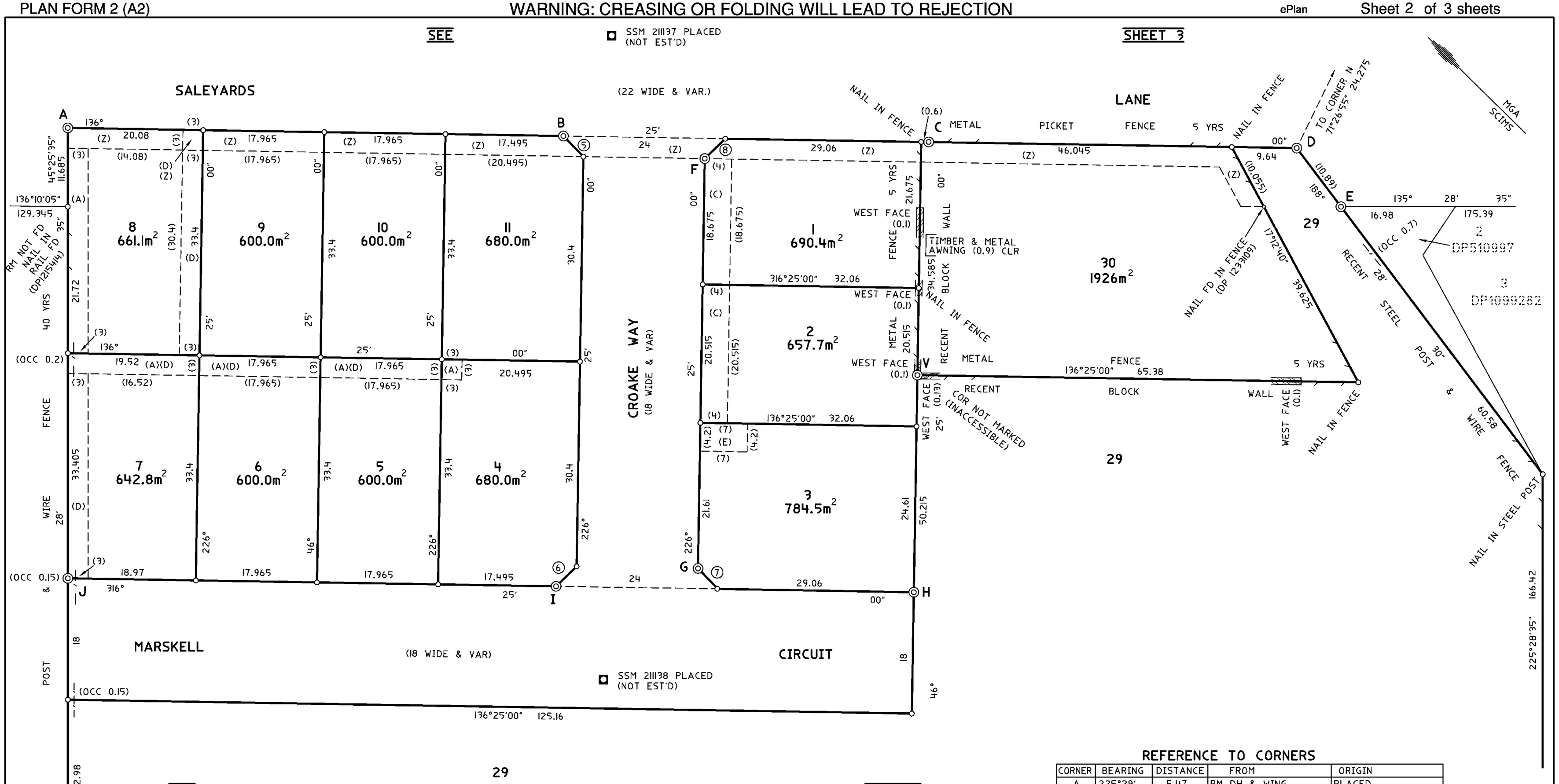
SSM 211138 TO SSM 211137
46°21'24" 96.076

SCHEDULE OF SHORT LINES & ARCS

LINE	BEARING	CHORD	ARC	RADIUS
(1)	327°20'35"	18.955	19.07	50
(2)	338°16'10"	4.37	-	-
(3)	340°13'20"	19.7	19.705	289
(4)	320°16'15"	11.205	-	-
(5)	181°25'00"	4.245	-	-
(6)	271°25'00"	4.245	-	-
(7)	1°25'00"	4.245	-	-
(8)	91°25'00"	4.245	-	-

Surveyor: DANIEL KURZAWA Date of Survey: 26th FEBRUARY 2020 Surveyor's Reference: 9-361	PLAN OF SUBDIVISION OF LOT 2 IN DP534336, LOTS 1 & 2 IN DP1215414, AND LOTS 1, 2 & 3 IN DP1233109	LGA: MID-WESTERN REGIONAL Locality: MUDGEE Subdivision No: SC006/2021 Lengths are in metres. Reduction Ratio 1 : 1000	Registered 10.9.2020	DP1267151

10 20 30 40 50 60 70 80 90 100 Table of mm



SCHEDULE OF SHORT LINES

LINE	BEARING	DISTANCE
⑤	181°25'00"	4.245
⑥	271°25'00"	4.245
⑦	1°25'00"	4.245
⑧	91°25'00"	4.245

REFERENCE TO CORNERS

CORNER	BEARING	DISTANCE	FROM	ORIGIN
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(C) EASEMENT TO DRAIN SEWAGE 4 WIDE
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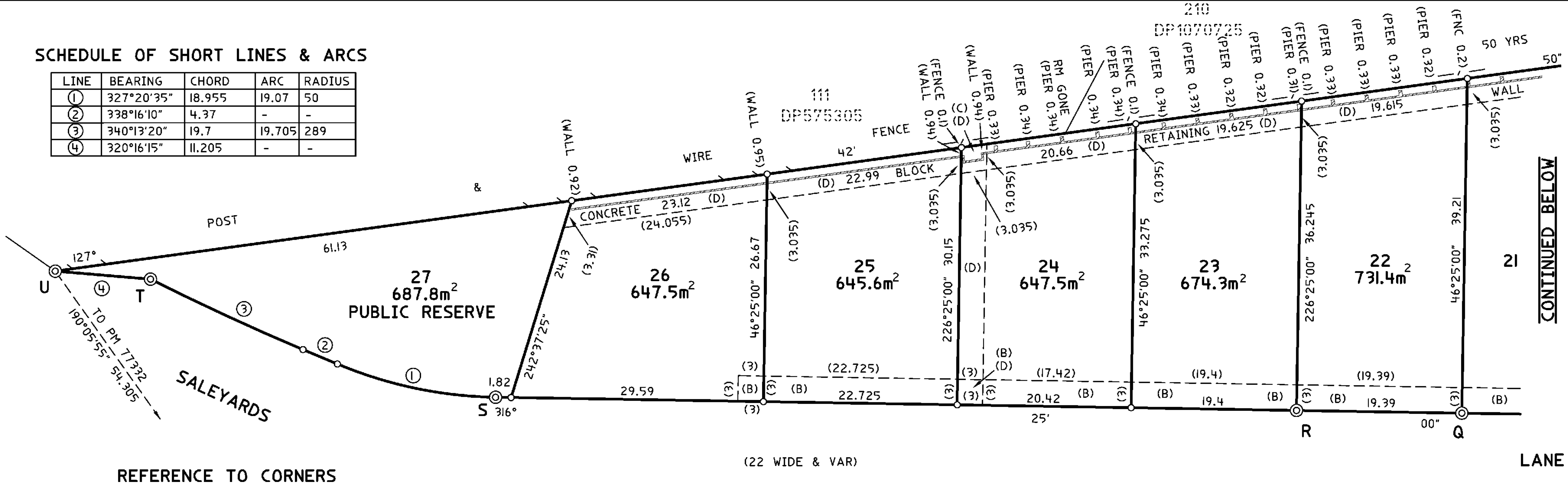

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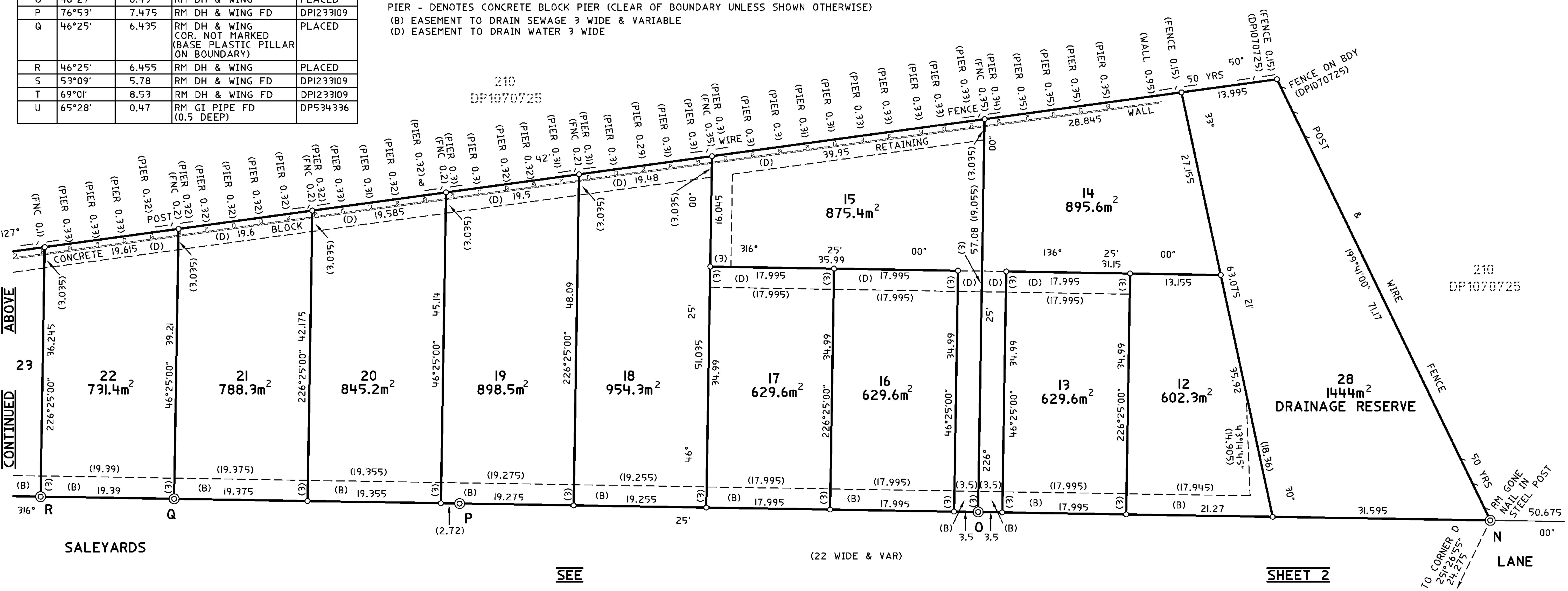
T	69°01'	8.53	RM DH & WING FD	DP1233109
U	65°28'	0.47	RM GI PIPE FD (0.5 DEEP)	DP534336

PIER - DENOTES CONCRETE BLOCK PIER (CLEAR OF BOUNDARY UNLESS SHOWN OTHERWISE)
(B) EASEMENT TO DRAIN SEWAGE 3 WIDE & VARIABLE
(D) EASEMENT TO DRAIN WATER 3 WIDE



SEE SHEET 2

Surveyor: DANIEL KURZAWA Date of Survey: 26th FEBRUARY 2020 Surveyor's Reference: 9-361	PLAN OF SUBDIVISION OF LOT 2 IN DP534336, LOTS 1 & 2 IN DP1215414, AND LOTS 1, 2 & 3 IN DP1233109	LGA: MID-WESTERN REGIONAL Locality: MUDGEE Subdivision No: SC006/2021 Lengths are in metres. Reduction Ratio 1 : 400	Registered 10.9.2020	DP1267151

ePlan

PLAN FORM 6 (2019)	**DEPOSITED PLAN ADMINISTRATION SHEET**	Sheet 1 of 4 sheet(s)

Office Use Only

Registered: 10.9.2020

Title System: TORRENS

Office Use Only

DP1267151

PLAN OF SUBDIVISION OF LOT 2 IN DP534336, LOTS 1 & 2 IN DP1215414, AND LOTS 1, 2 & 3 IN DP1233109

LGA: MID-WESTERN REGIONAL

Locality: MUDGEE

Parish: MUDGEE

County: WELLINGTON

Survey Certificate

I, DANIEL KURZAWA

of O'RYAN GEOSPATIAL PTY LTD

a surveyor registered under the *Surveying and Spatial Information Act 2002*, certify that:

*(a) The land shown in the plan was surveyed in accordance with the *Surveying and Spatial Information Regulation 2017*, is accurate and the survey was completed on 26/02/2020, or

~~*(b) The part of the land shown in the plan (*being/*excluding ** .....~~
~~.....)~~
~~was surveyed in accordance with the *Surveying and Spatial Information Regulation 2017*, the part surveyed is accurate and the survey was completed on,..... the part not surveyed was compiled in accordance with that Regulation, or~~

~~*(c) The land shown in this plan was compiled in accordance with the *Surveying and Spatial Information Regulation 2017*.~~

Datum Line: 'X' – 'Y'

Type: *Urban/~~*Rural~~

The terrain is ~~*Level, Undulating / *Steep Mountainous.~~

Signature: [redacted] ated: 06/08/2020

Surveyor Identification No: 8678
Surveyor registered under
the *Surveying and Spatial Information Act 2002*

*Strike out inappropriate words.

**Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.

~~Crown Lands NSW/Western Lands Office Approval~~

~~I, ...(Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.~~

~~Signature: .....~~

~~Date: .....~~

~~File Number: .....~~

~~Office: .....~~

Subdivision Certificate

I, LINDSAY DUNSTAN

*Authorised Person/~~*General Manager/*Accredited Certifier,~~ certify that the provisions of s.6.15 of the *Environmental Planning and Assessment Act 1979* have been satisfied in relatio[redacted] new road or reserve set out herein.

Signature: .....

Accreditation number: .....

Consent Authority: MID-WESTERN REGIONAL COUNCIL

Date of endorsement: 6 AUGUST 2020

Subdivision Certificate number: SC006/2021

File number: DA 0248/2014

Plans used in the preparation of survey/~~compilation.~~

CP 3701-3090 DP 534336 DP 575305
DP 1070725 DP 1215414
DP 1216569 DP 1233109 DP 1262994

Statements of intention to dedicate public roads, create public reserves and drainage reserves, acquire/resume land.

IT IS INTENDED TO DEDICATE CROAKE WAY AND MARSKELL CIRCUIT TO THE PUBLIC AS PUBLIC ROAD, SUBJECT TO THE EASEMENT TO DRAIN SEWAGE 3 WIDE CREATED BY DP1233109.

IT IS INTENDED TO CREATE LOT 27 AS A PUBLIC RESERVE, AND LOT 28 AS A DRAINAGE RESERVE.

Surveyor's Reference: 9-361

Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A

ePlan

PLAN FORM 6A (2019) **DEPOSITED PLAN ADMINISTRATION SHEET** Sheet 2 of 4 sheet(s)

Office Use Only

Registered: 10.9.2020

Office Use Only

DP1267151

PLAN OF SUBDIVISION OF LOT 2 IN DP534336, LOTS 1 & 2 IN DP1215414, AND LOTS 1, 2 & 3 IN DP1233109

Subdivision Certificate number: SC006/2021

Date of Endorsement: 6 AUGUST 2020

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2017*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919, AS AMENDED, IT IS INTENDED:
TO CREATE:

1. EASEMENT TO DRAIN SEWAGE 3 WIDE (A)
2. EASEMENT TO DRAIN SEWAGE 3 WIDE & VARIABLE (B)
3. EASEMENT TO DRAIN SEWAGE 4 WIDE (C)
4. EASEMENT TO DRAIN WATER 3 WIDE (D)
5. EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 WIDE (E)
6. RESTRICTION ON THE USE OF LAND
7. POSITIVE COVENANT

SCHEDULE OF STREET ADDRESSES

LOT NUMBER	STREET NO.	STREET NAME	STREET TYPE	LOCALITY
1	43	SALEYARDS	LANE	MUDGEE
2	3	CROAKE	WAY	MUDGEE
3	5	CROAKE	WAY	MUDGEE
4	21	MARSKELL	CIRCUIT	MUDGEE
5	19	MARSKELL	CIRCUIT	MUDGEE
6	17	MARSKELL	CIRCUIT	MUDGEE
7	15	MARSKELL	CIRCUIT	MUDGEE
8	51	SALEYARDS	LANE	MUDGEE
9	49	SALEYARDS	LANE	MUDGEE
10	47	SALEYARDS	LANE	MUDGEE
11	45	SALEYARDS	LANE	MUDGEE
12	36	SALEYARDS	LANE	MUDGEE

[redacted]

If space is insufficient use additional annexure sheet

Surveyor's Reference: 9-361

ePlan

PLAN FORM 6A (2019) **DEPOSITED PLAN ADMINISTRATION SHEET** Sheet 3 of 4 sheet(s)

Office Use Only

Registered: 10.9.2020

Office Use Only

DP1267151

PLAN OF SUBDIVISION OF LOT 2 IN DP534336, LOTS 1 & 2 IN DP1215414, AND LOTS 1, 2 & 3 IN DP1233109

Subdivision Certificate number: SC.006/2021

Date of Endorsement: 6 AUGUST 2020

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- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

SCHEDULE OF STREET ADDRESSES

LOT NUMBER	STREET NO.	STREET NAME	STREET TYPE	LOCALITY
13	38	SALEYARDS	LANE	MUDGEE
14	40	SALEYARDS	LANE	MUDGEE
15	42	SALEYARDS	LANE	MUDGEE
16	44	SALEYARDS	LANE	MUDGEE
17	46	SALEYARDS	LANE	MUDGEE
18	48	SALEYARDS	LANE	MUDGEE
19	50	SALEYARDS	LANE	MUDGEE
20	52	SALEYARDS	LANE	MUDGEE
21	54	SALEYARDS	LANE	MUDGEE
22	56	SALEYARDS	LANE	MUDGEE
23	58	SALEYARDS	LANE	MUDGEE
24	60	SALEYARDS	LANE	MUDGEE
25	62	SALEYARDS	LANE	MUDGEE
26	64	SALEYARDS	LANE	MUDGEE
27	66	SALEYARDS	LANE	MUDGEE
28	34	SALEYARDS	LANE	MUDGEE
29	N/A	N/A	N/A	MUDGEE
30	39	SALEYARDS	LANE	MUDGEE

[redacted]

If space is insufficient use additional annexure sheet

Surveyor's Reference: 9-361

ePlan

PLAN FORM 6A (2019) **DEPOSITED PLAN ADMINISTRATION SHEET** Sheet 4 of 4 sheet(s)

Office Use Only

Registered: 10.9.2020

Office Use Only

DP1267151

PLAN OF SUBDIVISION OF LOT 2 IN DP534336, LOTS 1 & 2 IN DP1215414, AND LOTS 1, 2 & 3 IN DP1233109

Subdivision Certificate number: SC 006/2021

Date of Endorsement: 6 AUGUST 2020

This sheet is for the provision of the following information as required:

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- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

The Common Seal of Mid-Western Regional Council was affixed in accordance with a resolution of Council in the presence of the following Authorised Officers

MID-WESTERN REGIONAL COUNCIL Common Seal

[redacted]

Signature of Authorised Officer

Bradley Allan Cam

Name of Authorised Officer

General Manager

Office held

[redacted]

Signature of Authorised Officer

DESMOND KENNEDY

Name of Authorised Officer

MAYOR

Office held

[redacted]

Surveyor's Reference: 9-361

Form 1

OFFICE USE ONLY.

D.P. 510997

PLAN OF

Land to be acquired for Cudgegong Shire Saleyards & part of road to be closed. Bk. 2676 No. 264

~~Mun.~~/Shire/~~City~~ Cudgegong

Town or Locality Mudgee

Parish Mudgee

County Wellington Scale 2 chains to an inch

Registered: 15/9/1964

C.A.: No. 3/64 of 26-3-64

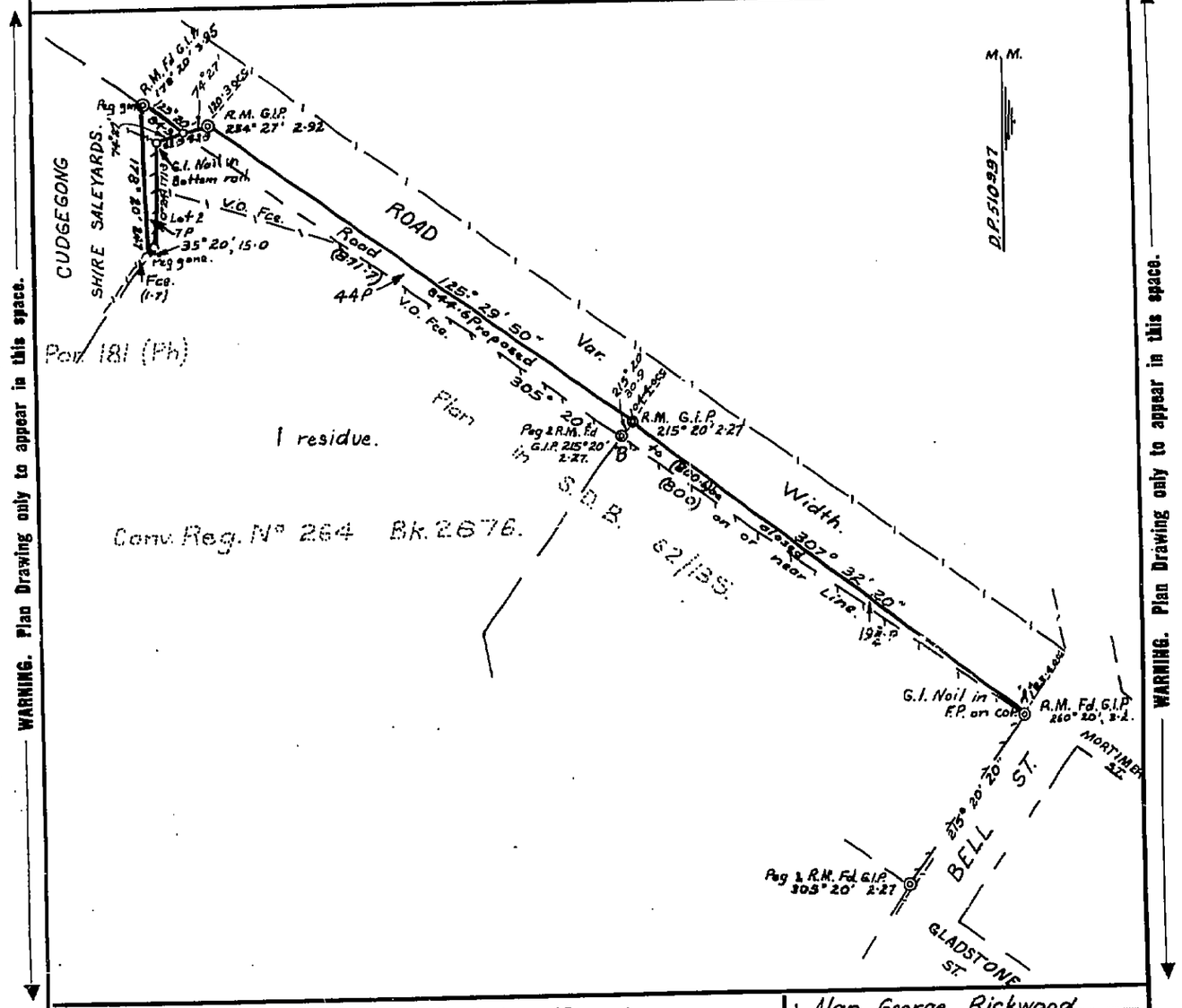
Title System: Old System

Purpose: Subdivision

Ref. Map: Parish

Last Plan: do.

WARNING. Plan Drawing only to appear in this space.



WARNING. Plan Drawing only to appear in this space.

Signatures, Seals and Statements of Dedications and Easements.

It is intended to close part of "Road Var. Width" as shown in plan.

I, Alan George Rickwood of 102 Mortimer St., Mudgee

a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan

is accurate and has been made *(1) by me (2) ~~under my immediate supervision~~ in accordance with the Survey Practice Regulations, 1933, and was completed on †23rd March 1964

Signature

Surveyor registered under Surveyors Act, 1929, as amended.

Datum Line of Azimuth. A-B

Approved by Council. I hereby certify that the requirements of the Local Government Act, 1919 (other than the requirements for registration of plans), have been complied with by the applicant in relation to the proposed subdivision and/or new roads set out hereon.

Subdivision No. 3/64 Date 26/3/64

Council Clerk Ishut A. Sadgrove

M.P.D.

* Strike out either (1) or (2). † Insert date of survey.

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 510997

LINKS	METRES
1.7'	0.342
2.27	0.457
2.92	0.587
3.2	0.644
3.95	0.795
15	3.018
30.9	6.216
42.9	8.630
53.9	10.843
84.5	16.999
120.3	24.201
123.4	24.824
800	160.934
800.6	161.055
844.6	169.906
871.7	175.358

AC	RD	P	SQ M
-	-	19 3/4	499.5

I, Jack Hayward Watson, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 23rd day of March, 1976.

Jack Watson

barnson.

APPENDIX B

Acoustic Report

Noise Assessment

Proposed Modifications to Approved Childcare Centre
39 Saleyards Lane
Mudgee, NSW

Prepared for: Barnson Pty Ltd
August 2024
MAC242183-01RP1V2

Muller Acoustic Consulting

Document Information

Noise Assessment

Proposed Modifications to Approved Childcare Centre

39 Saleyards Lane

Mudgee, NSW

Prepared for: Barnson Pty Ltd

Unit 4, 108-110 Market St

Mudgee, NSW 2850

Prepared by: Muller Acoustic Consulting Pty Ltd

PO Box 678, Kotara NSW 2289

ABN: 36 602 225 132

P: +61 2 4920 1833

www.mulleracoustic.com

DOCUMENT ID	DATE	PREPARED	SIGNED	REVIEWED	SIGNED
MAC242183-01RP1V2	28 August 2024	Nicholas Shipman	[redacted]	Oliver Muller	[redacted]

CONTENTS

1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by the Barnson Pty Ltd (Barnson) to prepare a Noise Assessment (NA) to quantify emissions from the proposed modifications to the approved Childcare Centre (CCC) to be to be established at 39 Saleyards Lane, Mudgee, NSW. The NA has quantified potential emissions associated with the proposed CCC as well as the noise intrusion from surrounding noise sources to the CCC spaces.

This assessment has been undertaken in accordance with the following documents:

- NSW Department of Environment and Climate Change (DECC), NSW Interim Construction Noise Guideline (ICNG), July 2009;
- NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI), 2017;
- NSW Environment Protection Authority (EPA's), Approved Methods for the measurement and analysis of environmental noise in NSW, 2022;
- Standards Australia AS 1055:2018 - Acoustics - Description and measurement of environmental noise - General Procedures; and
- Association of Australian Acoustical Consultants (AAAC), Guideline for Childcare Centre Acoustic Assessment (GCCCAA).

A glossary of terms, definitions and abbreviations used in this report is provided in **Appendix A**.

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2 Project Description

2.1 Background

The alterations and modifications of the CCC is to be established at 39 Saleyards Lane, Mudgee, NSW, which is located in a low-density residential area approximately 2km northwest from the town centre of Mudgee. The project site is bound by future residential lots and newly built residential receivers. The ambient noise environment surrounding the project site is dominated by residential traffic along Saleyards Lane and ambient environmental noise such as birds and insects. The existing CCC currently has the approval for operation.

The project proposes the modification to the approved CCC to allow for a total of 87 children to attend the centre and will also include construction to extend the existing CCC building. The modified CCC will provide the following childcare spaces and facilities:

- two baby rooms accommodating up to 24 babies;
- one toddler room accommodating up to 21 toddlers;
- two preschool rooms accommodating up to 42 preschool children;
- two outdoor play areas;
- admin offices, staff rooms, water closets with amenities; and
- associated car parking.

Site plans are provided in **Appendix B**. The CCC is proposed to operate from 7am to 6pm Monday to Friday. It is noted that hours of operation are not proposed to be changed as part of the modification to the project.

2.1.1 Receiver Review

A review of residential receivers in close proximity to the project has been completed and are summarised in **Table 1. Figure 1** provides a locality plan showing the position of these receivers in relation to the project.

Table 1 Receiver Locations

Receiver	Receiver Type	Receiver Height	MGA55 Coordinates	
			Easting	Northing
FR01	Future Residential	1.5m	740970	6391941
FR02	Future Residential	1.5m	740958	6391953
FR03	Future Residential	1.5m	740951	6391962
FR04	Future Residential	1.5m	741017	6391989
R01	Residential	1.5m	740977	6392032
R02	Residential	1.5m	740988	6392019
R03	Residential	1.5m	741001	6392005
R04	Residential	1.5m	741068	6391955
R05	Residential	1.5m	740933	6391973
R06	Residential	1.5m	740936	6391982
R07	Residential	1.5m	740944	6391989
R08	Residential	1.5m	740951	6391995
R09	Residential	1.5m	740959	6392002

The CCC receivers for both external play areas and internal occupied rooms are presented in **Table 2**.

Table 2 On-site Receiver Locations

Receptors	Type	Height Above Ground Level	MGA55 Coordinates	
			Easting	Northing
Cots Room 01	Internal Sleep Area	0.6m	740976	6391963
Cots Room 02	Internal Sleep Area	0.6m	740971	6391959
Infants Room 01	Internal Play Area	0.6m	740983	6391956
Infants Room 02	Internal Play Area	0.6m	740977	6391952
Classroom 01	Internal Play Area	0.6m	740976	6391984
Classroom 02	Internal Play Area	0.6m	740970	6391978
Classroom 03	Internal Play Area	0.6m	740962	6391971
Outdoor (Infants) Play Area 01	External Play Area	0.6m	740992	6391940
Outdoor Play Area 02	External Play Area	0.6m	740958	6391987

FIGURE 1

LOCALITY PLAN

MAC242183-01V1

Gowrie CCC

Mudgee, NSW

KEY

- Attended Location
- Unattended Location
- Receiver Locations
- Site Boundary

0 5 10 15 20 25 m

N

MAC
Muller Acoustic Consulting

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3 Noise Policy and Guidelines

3.1 Noise Policy for Industry

The EPA released the Noise Policy for Industry (NPI) in October 2017 which provides a process for establishing noise criteria for consents and licenses enabling the EPA to regulate noise emissions from scheduled premises under the Protection of the Environment Operations Act 1997. The objectives of the NPI are to:

- provide noise criteria that is used to assess the change in both short term and long-term noise levels;
- provide a clear and consistent framework for assessing environmental noise impacts from industrial premises and industrial development proposals;
- promote the use of best-practice noise mitigation measures that are feasible and reasonable where potential impacts have been identified; and
- support a process to guide the determination of achievable noise limits for planning approvals and/or licences, considering the matters that must be considered under the relevant legislation (such as the economic and social benefits and impacts of industrial development).

The policy sets out a process for industrial noise management involving the following key steps:

1. Determine the Project Noise Trigger Levels (PNTLs) (ie criteria) for a development. These are the levels (criteria), above which noise management measures are required to be considered. They are derived by considering two factors: shorter-term intrusiveness due to changes in the noise environment; and maintaining the noise amenity of an area.
2. Predict or measure the noise levels produced by the development with regard to the presence of annoying noise characteristics and meteorological effects such as temperature inversions and wind.
3. Compare the predicted or measured noise level with the PNTL, assessing impacts and the need for noise mitigation and management measures.
4. Consider residual noise impacts - that is, where noise levels exceed the PNTLs after the application of feasible and reasonable noise mitigation measures. This may involve balancing economic, social and environmental costs and benefits from the proposed development against the noise impacts, including consultation with the affected community where impacts are expected to be significant.

5. Set statutory compliance levels that reflect the best achievable and agreed noise limits for the development.

6. Monitor and report environmental noise levels from the development.

3.1.1 Project Noise Trigger Levels (PNTL)

The policy sets out the procedure to determine the PNTLs relevant to an industrial development. The PNTL is the lower (ie, the more stringent) of the **Project Intrusiveness Noise Level** (PINL) and **Project Amenity Noise Level** (PANL) determined in accordance with Section 2.3 and Section 2.4 of the NPI.

3.1.2 Rating Background Level (RBL)

The Rating Background Level (RBL) is a determined parameter from noise monitoring and is used for assessment purposes. As per the NPI, the RBL is an overall single figure background level representing each assessment period (day, evening and night) over the noise monitoring period. The measured RBLs relevant to the project are contained in **Section 4**.

3.1.3 Project Intrusiveness Noise Level (PINL)

The PINL ($LA_{eq(15min)}$) is the RBL + 5dB and seeks to limit the degree of change a new noise source introduces to an existing environment. Hence, when assessing intrusiveness, background noise levels need to be measured.

Background noise levels need to be determined before intrusive noise can be assessed. The NPI states that background noise levels to be measured are those that are present at the time of the noise assessment and without the subject development operating. For the assessment of modifications to existing premises, the noise from the existing premises should be excluded from background noise measurements. It is note that the exception is where the premises has been operating for a significant period of time and is considered a normal part of the acoustic environment; it may be included in the background noise assessment under the following circumstances:

- the development must have been operating for a period in excess of 10 years in the assessment period/s being considered and is considered a normal part of the acoustic environment; and
- the development must be operating in accordance with noise limits and requirements imposed in a consent or licence and/or be applying best practice.

Where a project intrusiveness noise level has been derived in this way, the derived level applies for a period of 10 years to avoid continuous incremental increases in intrusiveness noise levels. This approach is consistent with the purpose of the intrusiveness noise level to limit significant change in the acoustic environment. The purpose of the Project Amenity Noise Level is to moderate against background noise creep.

3.1.4 Project Amenity Noise Level (PANL)

The PANL is relevant to a specific land use or locality. To limit continuing increases in intrusiveness levels, the ambient noise level within an area from all combined industrial sources should remain below the recommended Amenity Noise Levels specified in Table 2.2 (of the NPI). The NPI defines two categories of Amenity Noise Levels:

- **Amenity Noise Levels (ANL)** – are determined considering all current and future industrial noise within a receiver area; and
- **Project Amenity Noise Level (PANL)** – is the recommended level for a receiver area, specifically focusing the project being assessed.

Additionally, Section 2.4 of the NPI states: "to ensure that industrial noise levels (existing plus new) remain within the recommended Amenity Noise Levels for an area, a Project Amenity Noise Level applies for each new source of industrial noise as follows":

PANL for new industrial developments = recommended **ANL** minus 5dBA.

The following exceptions apply when deriving the PANL:

- areas with high traffic noise levels;
- proposed developments in major industrial clusters;
- existing industrial noise and cumulative industrial noise effects; and
- greenfield sites.

The NPI states with respect to high traffic noise areas:

The level of transport noise, road traffic noise in particular, may be high enough to make noise from an industrial source effectively inaudible, even though the LAeq noise level from that industrial noise source may exceed the Project Amenity Noise Level. In such cases the Project Amenity Noise Level may be derived from the LAeq, period(traffic) minus 15 dB(A).

Where relevant this assessment has considered influences of traffic with respect to Amenity Noise Levels (ie areas where existing traffic noise levels are 10dB greater than the recommended ANL).

The recommended Amenity Noise Levels as per Table 2.2 of the NPI are reproduced in **Table 3**.

Table 3 Amenity Noise Levels

Receiver Type	Noise Amenity Area	Time of day[1]	Recommended Amenity Noise Level dB LAeq(period)
Residential	Rural	Day	50
		Evening	45
		Night	40
	Suburban	Day	55
		Evening	45
		Night	40
	Urban	Day	60
		Evening	50
		Night	45
Hotels, motels, caretakers' quarters, holiday accommodation, permanent resident caravan parks.	See column 4	See column 4	5dB above the recommended Amenity Noise Level for a residence for the relevant noise amenity area and time of day
School Classroom	All	Noisiest 1-hour period when in use	35 (internal) 45 (external)
Hospital ward			
- internal	All	Noisiest 1-hour	35
- external	All	Noisiest 1-hour	50
Place of worship - internal	All	When in use	40
Passive Recreation	All	When in use	50
Active Recreation	All	When in use	55
Commercial premises	All	When in use	65
Industrial	All	When in use	70

Notes: The recommended Amenity Noise Levels refer only to noise from industrial noise sources. However, they refer to noise from all such sources at the receiver location, and not only noise due to a specific project under consideration. The levels represent outdoor levels except where otherwise stated.

Types of receivers are defined as rural residential; suburban residential; urban residential; industrial interface; commercial; industrial – see Table 2.3 and Section 2.7 of the NPI.

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

3.2 The AAAC Guideline

The Guideline for Childcare Centre Acoustic Assessment (GCCCAA) been prepared by the AAAC. The document provides criteria for the assessment of noise intrusion into and noise emissions from CCCs and also provides recommendations for treatment to minimise noise upon surrounding receptors. The guideline aligns with the NPI for establishing criteria for CCCs with respect to the following noise sources:

- mechanical plant (air conditioning condensers and mechanical ventilation);
- on-site traffic, deliveries and ingress and egress of vehicles;
- on-site drop off/collection areas of children; and
- noise emissions from children at play.

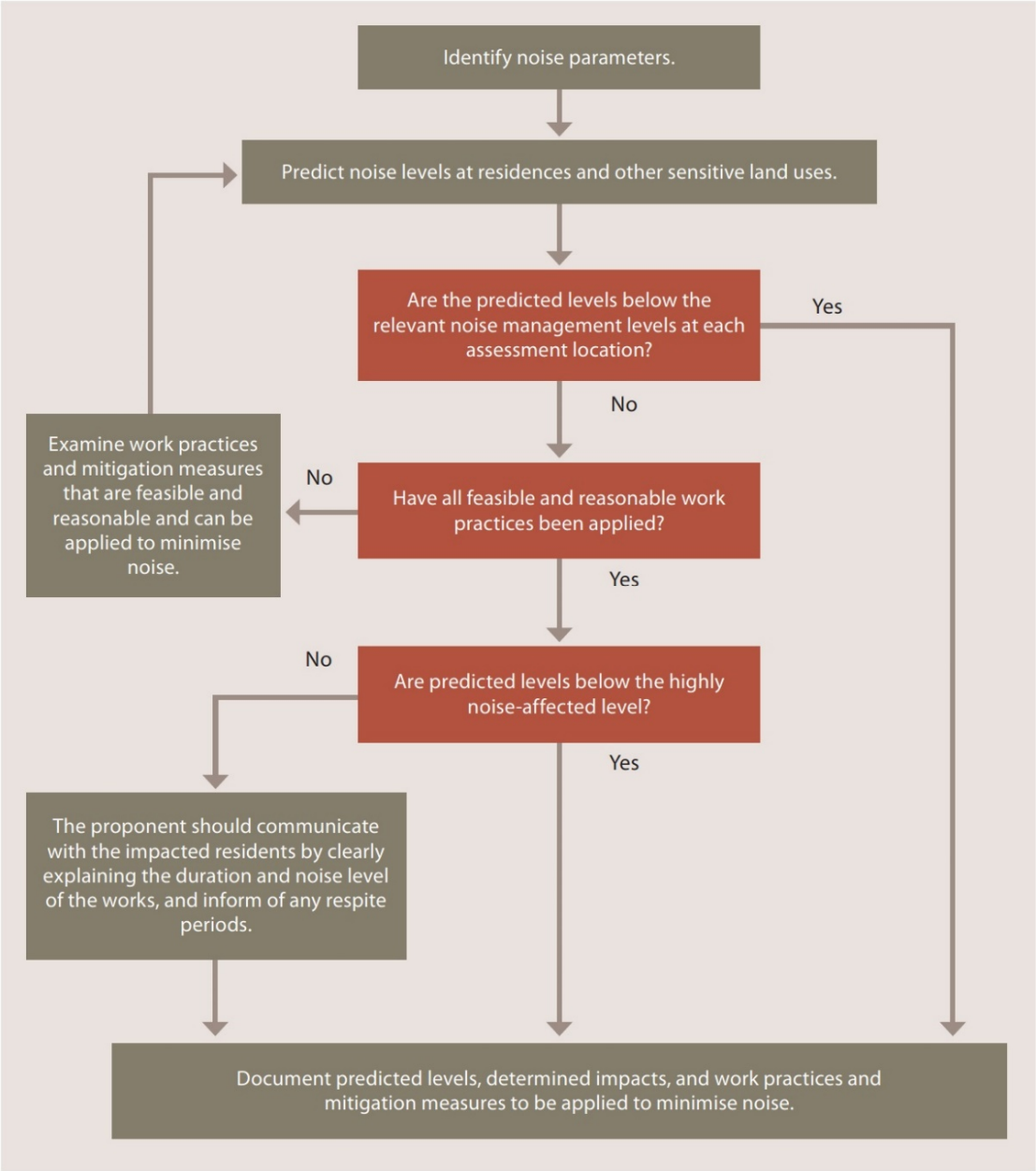
3.3 Interim Construction Noise Guideline

The ICNG sets out procedures to identify and address the impacts of construction noise on residences and other sensitive land uses. This section provides a summary of noise objectives that are applicable to the assessment. The ICNG provides two methodologies for the assessment of construction noise emissions:

- quantitative, which is suited to major construction projects with typical durations of more than three weeks; and
- qualitative, which is suited to short term infrastructure maintenance (< three weeks).

The qualitative assessment methodology is a more simplified approach that relies on noise management strategies. This NA has adopted a quantitative assessment approach which is summarised in **Figure 2.** The quantitative approach includes identification of potentially affected receivers, derivation of the construction noise management levels, quantification of potential noise impact at receivers via predictive modelling and, provides management and mitigation recommendations.

Figure 2 Quantitative Assessment Processes for Assessing and Managing Construction Noise



Source: Department of Environment and Climate Change, 2009.

3.3.1 Standard Hours for Construction

Table 4 presents the ICNG recommended standard hours for construction works.

Table 4 Recommended Standard Hours for Construction

Daytime	Construction Hours
Monday to Friday	7am to 6pm
Saturdays	8am to 1pm
Sundays or Public Holidays	No construction

These recommended hours do not apply in the event of direction from police, or other relevant authorities, for safety reasons or where required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm. Construction activities are anticipated to be undertaken during standard construction hours.

3.3.2 Construction Noise Management Levels

Section 4 of the ICNG details the quantitative assessment method involving predicting noise levels and comparing them with the Noise Management Level (NML) and are important indicators of the potential level of construction noise impact. **Table 5** reproduces the ICNG Noise Management Level (NML) for residential receivers. The NML is determined by adding 10dB (standard hours) or 5dB for Out of Hours (OOH) to the Rating Background Level (RBL) for each specific assessment period.

Table 5 Noise Management Levels		
Time of Day	Management Level LAeq(15min)[1]	How to Apply
Recommended standard hours: Monday to Friday 7am to 6pm Saturday 8am to 1pm No work on Sundays or public holidays.	Noise affected RBL + 10dB	The noise affected level represents the point above which there may be some community reaction to noise. Where the predicted or measured LAeq(15min) is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. The proponent should also inform all potentially impacted residents of the nature of work to be carried out, the expected noise levels and duration, as well as contact details.
	Highly Noise Affected 75dBA (HNA)	The highly noise affected level represents the point above which there may be strong community reaction to noise. Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account times identified by the community when they are less sensitive to noise such as before and after school for work near schools, or mid-morning or mid-afternoon for work near residences; and if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
Outside recommended standard hours.	Noise affected RBL + 5dB	A strong justification would typically be required for work outside the recommended standard hours. The proponent should apply all feasible and reasonable work practices to meet the noise affected level. Where all feasible and reasonable practices have been applied and noise is more than 5dBA above the noise affected level, the proponent should negotiate with the community. For guidance on negotiating agreements see Section 7.2.2 of the ICNG.

Note 1: The Rating Background Level (RBL) is an overall single figure background level representing each assessment period over the whole monitoring period. The RBL is used to determine the construction noise management levels for noise assessment purposes and is the median of the ABL's.

3.3.3 Minimising Construction Noise

The ICNG outlines noise management and mitigation measures to minimise the noise impacts from construction activities on nearby sensitive receivers. Adopting the standard mitigation measures may result in an attenuation of up to 10dBA where space requirements place limitations on the attenuation options. Examples of standard mitigation measures are reproduced in **Table 6**, which may be adopted for the operation.

Table 6 Standard Mitigation Measures

	Action Required	Details
Management Measures	Implement community consultation or notification measures	Notification detailing work activities, dates, and hours, impacts and mitigation measures, indication of work schedule over the night-time period, any operational noise benefits from the works (where applicable) and contact telephone number. Notification should be a minimum of 7 calendar days prior to the start of works. For projects other than maintenance works more advanced consultation or notification may be required. Please contact Roads and Maritime Communication and Stakeholder Engagement for guidance: - website (If required); - contact telephone number for community; - email distribution list (if required); and/or - community drop-in session (if required by approval conditions).
	Site Inductions	All employees, contractors and subcontractors are to receive an environmental induction. The induction must at least include: - all relevant project specific and standard noise and vibration mitigation measures; - relevant licence and approval conditions; - permissible hours of work; - any limitations on noise generating activities; - location of nearest sensitive receivers; - construction employee parking areas; - designated loading/unloading areas and procedures; - site opening/closing times (including deliveries); and - environmental incident procedures.
Site Controls	Minimise disturbance arising from delivery of goods to construction sites	Loading and unloading of materials/deliveries is to occur as far as possible from sensitive receivers. Select site access points and roads as far as possible away from sensitive receivers. Dedicated loading/unloading areas to be shielded if close to sensitive receivers. Delivery vehicles to be fitted with straps rather than chains for unloading, wherever possible. Avoid or minimise these out of hours movements where possible.
Path Controls	Shield stationary noise sources	Stationary noise sources should be enclosed or shielded whilst ensuring that the occupational health and safety of workers is maintained. Appendix D of AS2436:2010 lists materials suitable for shielding.
	Shield sensitive receivers from noise activities	Use structures to shield residential receivers from noise such as site shed placement; earth bunds; fencing; erection of operational stage noise barriers (where practicable) and consideration of site topography when situating plant.

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4 Existing Environment

4.1 Unattended Noise Monitoring

To quantify the existing background noise environment of the area, unattended noise monitoring was conducted at one location representative of the ambient environment surrounding the project site. The selected monitoring location is shown in **Figure 1** and is considered representative of surrounding residential receivers as per Fact Sheet B1.1 of the NPI.

The unattended noise survey was conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, "Acoustics – Description and Measurement of Environmental Noise".

The measurements were carried out using one Svantek 977 noise analyser from Thursday 27 June 2024 to Friday 5 July 2024. All acoustic instrumentation used carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022) and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed ±0.5dBA.

Observations on-site identified the surrounding locality was typical of a rural environment, with road traffic noise and wildlife noise audible.

Data affected by adverse meteorological conditions have been excluded from the results in accordance with methodologies provided in Fact Sheet A4 of the NPI. Residential receivers situated in the surrounding area have been classified under the EPA's rural amenity category. This criteria is used in conjunction with the intrusiveness criteria to determine the limiting criteria. The summary results of long-term unattended noise monitoring are provided in **Table 7**. The measured daily ABLs for the background monitoring are provided in **Table C1** in **Appendix C** along with the daily noise monitoring charts.

Table 7 Background Noise Monitoring Summary

Location	Measured background noise level, RBL, dBA			Measured L_{Aeq}, dBA		
	Day 7am to 6pm	Evening 6pm to 10pm	Night 10pm to 6am	Day 7am to 6pm	Evening 6pm to 10pm	Night 10pm to 6am
L1	38	33	29	50	43	41

Note: Excludes periods of wind or rain affected data. Meteorological data obtained from the Bureau of Meteorology weather station Mudgee Airport AWS 32.6°S 149.6°E 471m AMSL.

4.2 Attended Noise Monitoring

To supplement the unattended noise assessment and to quantify the changes in ambient noise in the community surrounding the operation, one 15 minute attended measurement was completed.

The attended noise survey was conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, "Acoustics – Description and Measurement of Environmental Noise".

All acoustic instrumentation used carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022) and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed ±0.5dBA.

The attended noise monitoring was conducted using one Svantek 971 noise analyser at the site (see **Figure 1**) on Friday 5 July 2024 to quantify ambient background noise levels.

The attended measurement was completed during calm and clear meteorological conditions and confirmed that traffic and ambient environmental noise dominated the surrounding environment. The results of the short-term noise measurement and observations are summarised in **Table 8**.

Table 8 Operator-Attended Noise Survey Results

Date/ Time (hrs)	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
	L_{Amax}	L_{Aeq}	L_{A90}		
05/07/2024 11:49	72	52	43	WD: SE WS: 4.0m/s Rain: Nil	Traffic 42-59 Insects <37 Birds 40-52 Aircraft 40-72 Wind in trees <38 Construction 42-44

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5 Assessment Criteria

5.1 Operational Noise Criteria

5.1.1 Intrusiveness Noise Levels

The PINL are presented in **Table 9** and have been determined based on the RBL +5dBA and only apply to residential receivers.

Table 9 Project Intrusiveness Noise Levels

Location	Receiver Type	Period[1]	Measured RBL dB L_{A90}	Adopted RBL dB L_{A90}	PINL dB $L_{Aeq(15min)}$
L1	Residential	Day	38	38	43
		Evening	33	33	38[2]
		Night	29	30[2]	35[2]

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 2: As per NPI guidance, minimum assumed RBLs and project intrusive noise levels have been adopted for evening and night periods.

5.1.2 Amenity Noise Levels and Project Amenity Noise Levels

The PANL for residential receivers affected by the project are presented in **Table 10.**

Table 10 Amenity Noise Levels and Project Amenity Noise Levels

Receiver Type	Noise Amenity Area	Assessment Period[1]	NPI Recommended ANL dB $L_{Aeq(period)}$	ANL dB $L_{Aeq(period)}$[2]	PANL dB $L_{Aeq(15min)}$
Residential	Rural	Day	50	53	53
		Evening	45	48	48
		Night	40	43	43

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 2: Includes a +3dB adjustment to the amenity period level to convert to a 15-minute assessment period as per Section 2.2 of the NPI.

5.1.3 Project Noise Trigger Levels

The PNTL are the lower of either the PINL or the PANL. **Table 11** presents the derivation of the PNTLs in accordance with the methodologies outlined in the NPI.

Table 11 Project Noise Trigger Levels

Receiver Type	Noise Amenity Area	Assessment Period[1]	PINL dB $L_{Aeq(15min)}$	PANL dB $L_{Aeq(15min)}$	PNTL dB $L_{Aeq(15min)}$
Residential	Rural	Day	43	53	43
		Evening	38	48	38
		Night	35	43	35

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5.2 Noise Intrusion Criteria to Childcare Centres

The GCCCAA provides recommendations for external noise impact upon children in Childcare Centres. The relevant criteria for noise intrusion to the CCC is reproduced below:

- the $LA_{eq(1\text{-}hour)}$ intrusive noise level from road, rail or industry at any location within an outdoor play area should not exceed 55dBA; and
- the $LA_{eq(1\text{-}hour)}$ intrusive noise level from road, rail or industry within the indoor play or sleeping areas should not exceed 40dBA.

5.3 Noise Emission Criteria from Childcare Centres

The GCCCAA recommends a base criterion of 45dB $LA_{eq(15min)}$ for the assessment of outdoor play where the background noise level is less than 40dBA, however, where the background noise level is greater than 40dBA, the GCCCAA states:

> *The contributed Leq,15min noise level emitted from an outdoor play and internal activity areas shall not exceed the background noise level by more than 5 or 10 dB at the assessment location, depending on the usage of the outdoor play area. AAAC members regard that a total time limit of approximately 2 hours outdoor play per morning and afternoon period should allow an emergence above the background of 10 dB (ie background +10 dB if outdoor play is limited to 2 hours in the morning and 2 hours in the afternoon).*

The project adopted the base criterion of 45dB $LA_{eq(15min)}$ for the assessment of outdoor play due to the RBL remaining below 40dBA for the daytime period and is presented in **Table 12**.

Table 12 CCC Noise Emission Criteria

Location	Period	Activity	Criteria
Location A	Day (7:00am-6:00pm)	Outdoor Play	45dB $LA_{eq(15min)}$
	Day (7:00am-6:00pm)	All Other Activities	45dB $LA_{eq(15min)}$

5.4 Construction Noise Criteria

The relevant Noise Management Levels (NMLs) for standard construction hours are presented in **Table 13**.

Table 13 Construction Noise Management Levels

Catchment (No) Receiver ID	Assessment Period[1]	Adopted RBL dB LA_{90}	NML dB $LA_{eq(15min)}$
Residential Premises	When in use	38	48

Note 1: Refer to Table 4 for Standard Recommended Hours for Construction.

6 Modelling Methodology

A computer model was developed to quantify project noise emissions to neighbouring receivers using DGMR (iNoise, Version 2024) noise modelling software. iNoise is an intuitive and quality assured software for industrial noise calculations in the environment. 3D noise modelling is considered industry best practice for assessing noise emissions from projects.

The model incorporated a three-dimensional digital terrain map giving all relevant topographic information used in the modelling process. Additionally, the model uses relevant noise source data, ground type, attenuation from barrier or buildings and atmospheric information to predict noise levels at the nearest potentially affected receivers. Where relevant, modifying factors in accordance with Fact Sheet C of the NPI have been applied to calculations.

The model calculation method used to predict noise levels was in accordance with ISO 9613:1 and ISO 9613:2 including corrections for meteorological conditions using CONCAWE[1]. The ISO 9613 standards are the most used noise prediction method worldwide. Many countries refer to ISO 9613 in their noise legislation. However, the ISO 9613 standard does not contain guidelines for quality assured software implementation, which leads to differences between applications in calculated results. In 2015 this changed with the release of ISO/TR 17534-3. This quality standard gives clear recommendations for interpreting the ISO 9613 method. iNoise fully supports these recommendations. The models and results for the 19 test cases are included in the software.

[1] Report no. 4/18, "the propagation of noise from petroleum and petrochemical complexes to neighbouring communities", Prepared by C.J. Manning, M.Sc., M.I.O.A. Acoustic Technology Limited (Ref.AT 931), CONCAWE, Den Haag May 1981

6.1 Sound Power Levels

Table 14 presents the sound power level for each noise source modelled in this assessment. It is noted that operational sound power levels were sourced from manufacturer's specifications or from in-field measurements at similar project sites. Sound powers for children at play activities were sourced from the Guideline for Childcare Centre Acoustic Assessment.

Table 14 Acoustically Significant Sources - Sound Power Levels dBA (re 10^{-12} Watts)

Item and number modelled per 15 minutes	Sound Power Level dB LA_{eq}	Total Sound Power Level dB $LA_{eq(15min)}$	Source Height[1]
CCC Operational Sources			
15Kw AC plant (x7)	71	79	1.5m
Toilet Extraction Fan (x3)	70	74	0.5m
Kitchen Extraction Fan (x1)	73	73	0.5m
Car enters, park, start up, idle and drive off – External (x11)[2]	73	83	0.5m
CCC Outdoor Play Sources			
Child aged 0-2 years vocal effort (x24)	68	82	0.6m
Child aged 2-3 years vocal effort (x21)	75	88	0.6m
Child aged 3-6 years vocal effort (x42)	77	93	0.6m
Construction			
Combined Construction Fleet	108		1.5m

Note 1: Height above the relative ground or building below source.

Note 2: Includes a duration adjustment assuming vehicles operate for three (3) minutes continuously within a period of 15-minutes.

6.2 Noise Attenuation Assumptions, Controls and Recommendations

The noise model adopted the following assumptions, controls and recommendations:

- the project is constructed as per the site design and plans, which includes the barrier attenuation provided by the project buildings orientation;
- construction of an impervious barrier surrounding the project boundary (see **Figure 3**). The barrier should be constructed to an RL of 1.8m above the relative ground level of the site and consist of materials with a surface density of at least 10kg/m^2, and not contain any gaps (ie lapped and capped timber, Colorbond or equivalent). It is noted that the existing current Colorbond fencing along the boundary as shown in **Figure 3** is sufficient, therefore only sections of the fence need to be replaced or extended; and
- the mechanical plant for the CCC is yet to be finalised. Therefore, the modelling assumes seven 15Kw AC units to account for the classrooms and admin spaces The AC units are assumed to be located on rooftop of the building over each served area.

FIGURE 3

MITIGATION MEASURES

MAC242183-01V1

Gowrie CCC

Mudgee, NSW

KEY

- 1.8m Barrier
- Project Boundary
- Outdoor Play Areas
- Proposed Building
- Receiver Locations

0 5 10 15 20 25 m

N

MAC
Muller Acoustic Consulting

7 Noise Assessment Results

7.1 Operational Noise Assessment

Noise predictions from all operational sources have been quantified at surrounding residential receivers to the project site and are presented in **Table 15**.

Table 15 Noise Predictions – All Receivers

Receiver	Predicted Noise Level dB $LA_{eq(15min)}$	PNTL dB $LA_{eq(15min)}$	Compliant
	Day	Day	
FR01	37	43	✓
FR02	40	43	✓
FR03	38	43	✓
FR04	39	43	✓
R01	32	43	✓
R02	33	43	✓
R03	37	43	✓
R04	35	43	✓
R05	34	43	✓
R06	35	43	✓
R07	34	43	✓
R08	33	43	✓
R09	32	43	✓

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

The results of the predictive noise modelling demonstrate the noise emissions from the project site satisfy the GCCCAA criteria from operational sources.

7.2 Childcare Centre Noise Assessment Results

7.2.1 Noise Intrusion Results - Outdoor Play Area

Table 16 presents the noise intrusion from the measured ambient noise levels comprising of traffic noise levels impacting on the CCC external play spaces. The results demonstrate compliance with the criteria outlined in the GCCCAA.

Table 16 External Play Area Noise Results

Receiver	Measured Ambient Noise Level dB $LA_{eq(1hr)}$	Criteria	Compliant
	Traffic	dB $LA_{eq(1hr)}$	
Outdoor (Infants) Play Area 01	50	55	✓
Outdoor Play Area 02	50	55	✓

7.2.2 Noise Intrusion Results – Internal Play Spaces

Table 17 presents the predicted internal CCC noise levels (assuming that rooms have an external façade) from the existing ambient noise levels. The predicted internal results show compliance with the criteria in the GCCCAA assuming a 20dB loss for the installed windows when closed.

Table 17 Internal Cumulative Noise Results

Receiver	Predicted noise level dB $LA_{eq(1hr)}$		Internal Criteria	Compliant
	Ambient Noise Level	Internal	dB $LA_{eq(1hr)}$	
Cots Room 01	50	<35[1]	40	✓
Cots Room 02	50	<35[1]	40	✓
Infants Room 01	50	<35[1]	40	✓
Infants Room 02	50	<35[1]	40	✓
Classroom 01	50	<35[1]	40	✓
Classroom 02	50	<35[1]	40	✓
Classroom 03	50	<35[1]	40	✓

Note 1: Includes 20dB attenuation for a closed window.

7.2.3 Noise Emission Results – Outdoor play

Table 18 presents the noise emission results for children at play ($LA_{eq(15min)}$) in the outdoor play area of the CCC. The predicted results show compliance with the criteria in the GCCCAA.

Table 18 Noise Emissions Results – CCC Outdoor Play

Receiver	Predicted Noise Level dB LAeq(15min)	Emission Criteria dB LAeq(15min)	Compliant
FR01	31	45	✓
FR02	34	45	✓
FR03	41	45	✓
FR04	31	45	✓
R01	34	45	✓
R02	35	45	✓
R03	34	45	✓
R04	25	45	✓
R05	40	45	✓
R06	42	45	✓
R07	44	45	✓
R08	44	45	✓
R09	44	45	✓

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

7.3 Construction Noise Assessment

Table 19 presents the results of modelled construction noise emissions taking into account the additional 10dB attenuation provided by standard mitigation measures. Predictions identify that emissions from construction would remain below the Construction NMLs at all the assessed existing receivers with the inclusion of standard mitigation measures.

Table 19 Construction Noise Levels – All Receivers

Receiver	Period[1]	Predicted Noise Level dB $L_{Aeq(15min)}$	Management Level dB $L_{Aeq(15min)}$	Compliant
R01	Day	28	48	✓
R02	Day	30	48	✓
R03	Day	34	48	✓
R04	Day	45	48	✓
R05	Day	33	48	✓
R06	Day	32	48	✓
R07	Day	32	48	✓
R08	Day	31	48	✓
R09	Day	30	48	✓

Note: Future residential lots are not currently approved hence will not be present during construction.

Note 1: See Table 4 for Recommended Standard Hours for Construction.

8 Discussion and Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Assessment (NA) to quantify emissions from the Proposed Modification to the approved Childcare Centre to be established at 39 Saleyards Road, Mudgee, NSW. The Noise Assessment has quantified potential emissions associated with the proposed modifications to the CCC as well as the noise intrusion from surrounding noise sources to the CCC.

The results of the Noise Assessment demonstrate that noise emissions from the operation would satisfy the relevant trigger levels at all assessed receivers once noise controls for the project are implemented (see Section 6.2):

- the project is constructed as per the site design and plans, which includes the barrier attenuation provided by the project buildings orientation;
- construction of an impervious barrier surrounding the project boundary (see Figure 3). The barrier should be constructed to an RL of 1.8m above the relative ground level of the site and consist of materials with a surface density of at least 10kg/m^2, and not contain any gaps (ie lapped and capped timber, Colorbond or equivalent). It is noted that the existing current Colorbond fencing along the boundary as shown in Figure 3 is sufficient, therefore only sections of the fence need to be replaced or extended; and
- the mechanical plant for the CCC is yet to be finalised. Therefore, the modelling assumes seven 15Kw AC units to account for the classrooms and admin spaces The AC units are assumed to be located on rooftop of the building over each served area.

Modelled noise emissions from construction activities identify that predicted noise emissions will remain below the applicable construction management levels at all receivers taking into account the standard mitigation measures (see Table 6).

In summary, the Noise Assessment supports the Development Application for the project incorporating the recommendations and controls outlined in this report.

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Appendix A – Glossary of Terms

A number of technical terms have been used in this report and are explained in **Table A1**.

Table A1 Glossary of Acoustical Terms

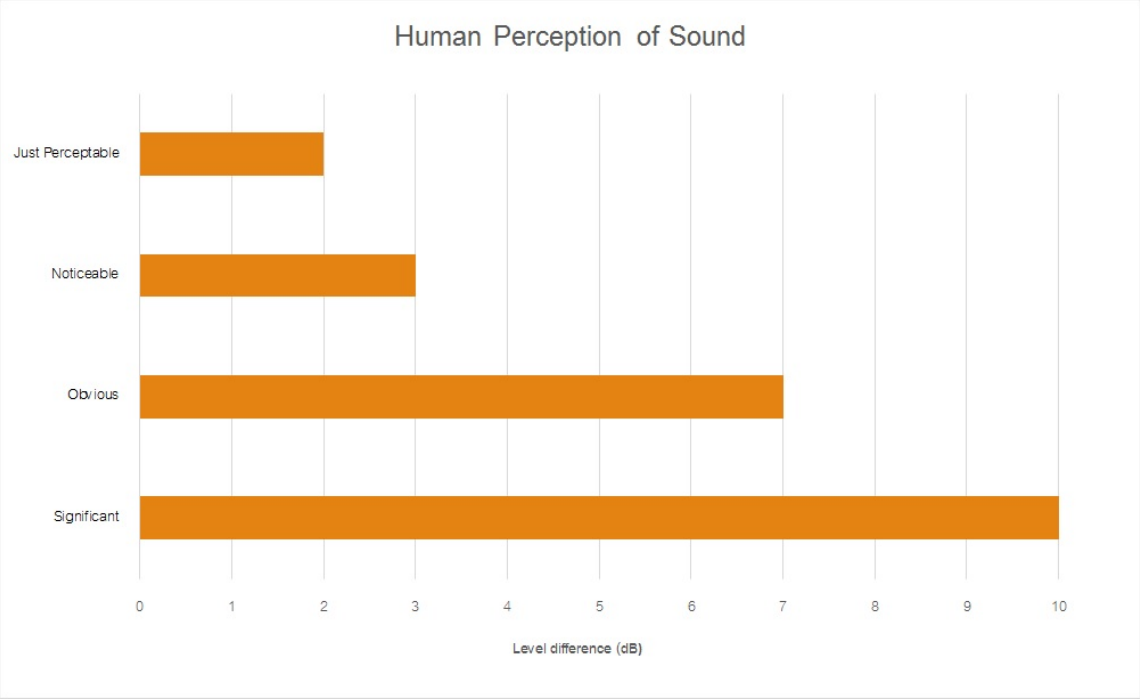
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels.
Ambient Noise	The total noise associated with a given environment. Typically, a composite of sounds from all sources located both near and far where no particular sound is dominant.
A Weighting	A standard weighting of the audible frequencies designed to reflect the response of the human ear to sound.
Background Noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is usually represented by the LA90 descriptor
dBA	Noise is measured in units called decibels (dB). There are several scales for describing noise, the most common being the 'A-weighted' scale. This attempts to closely approximate the frequency response of the human ear.
dB(Z), dB(L)	Decibels Z-weighted or decibels Linear (unweighted).
Extraneous Noise	Sound resulting from activities that are not typical of the area.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A sound level which is exceeded 10% of the time.
LA90	Commonly referred to as the background noise, this is the level exceeded 90% of the time.
LAeq	Represents the average noise energy or equivalent sound pressure level over a given period.
LAmax	The maximum sound pressure level received at the microphone during a measuring interval.
Masking	The phenomenon of one sound interfering with the perception of another sound. For example, the interference of traffic noise with use of a public telephone on a busy street.
RBL	The Rating Background Level (RBL) as defined in the NPI, is an overall single figure representing the background level for each assessment period over the whole monitoring period. The RBL, as defined is the median of ABL values over the whole monitoring period.
Sound power level (Lw or SWL)	This is a measure of the total power radiated by a source in the form of sound and is given by 10.log10 (W/Wo). Where W is the sound power in watts to the reference level of 10^{-12} watts.
Sound pressure level (Lp or SPL)	the level of sound pressure; as measured at a distance by a standard sound level meter. This differs from Lw in that it is the sound level at a receiver position as opposed to the sound 'intensity' of the source.

Table A2 provides a list of common noise sources and their typical sound level.

Table A2 Common Noise Sources and Their Typical Sound Pressure Levels (SPL), dBA

Source	Typical Sound Pressure Level
Threshold of pain	140
Jet engine	130
Hydraulic hammer	120
Chainsaw	110
Industrial workshop	100
Lawnmower (operator position)	90
Heavy traffic (footpath)	80
Elevated speech	70
Typical conversation	60
Ambient suburban environment	40
Ambient rural environment	30
Bedroom (night with windows closed)	20
Threshold of hearing	0

Figure A1 – Human Perception of Sound



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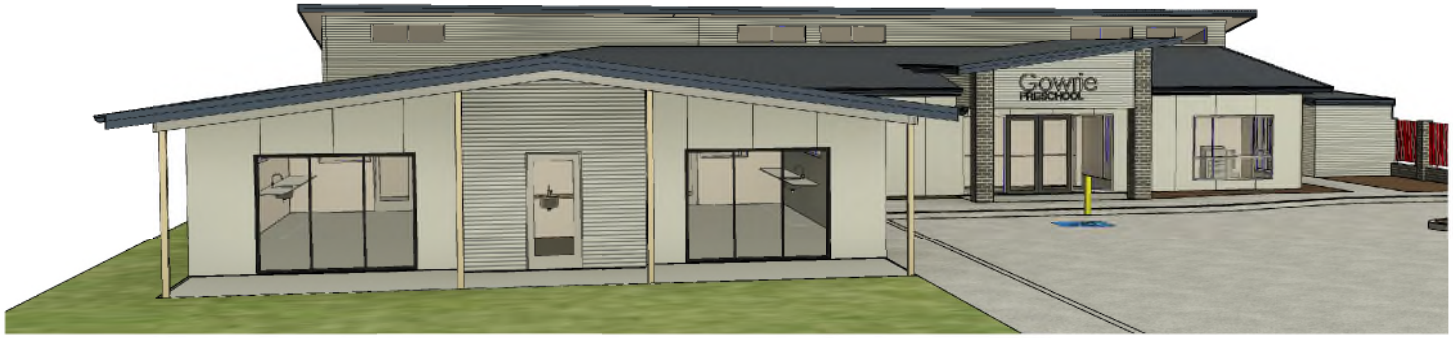
Appendix B – Site Plans



LOCALITY PLAN.

saleyards lane, mudgee — lot 30 & 29, dp1267151 & lot 2 , dp510997

DRAWING SCHEDULE.

A 00	COVER SHEET	REV B	DATED 20.02.2023
A 01	EXISTING SITE PLAN	REV B	DATED 20.02.2023
A 02	PROPOSED SITE PLAN	REV D	DATED 20.02.2023
A 03	EXISTING FLOOR PLAN & DEMOLITION	REV A	DATED 27.06.2023
A 04	PROPOSED FLOOR PLAN	REV C	DATED 20.02.2023
A 05	ELEVATIONS	REV C	DATED 20.02.2023

EXTENSION TO GOWRIE CHILDCARE CENTRE

39 SALEYARDS LANE, MUDGEE

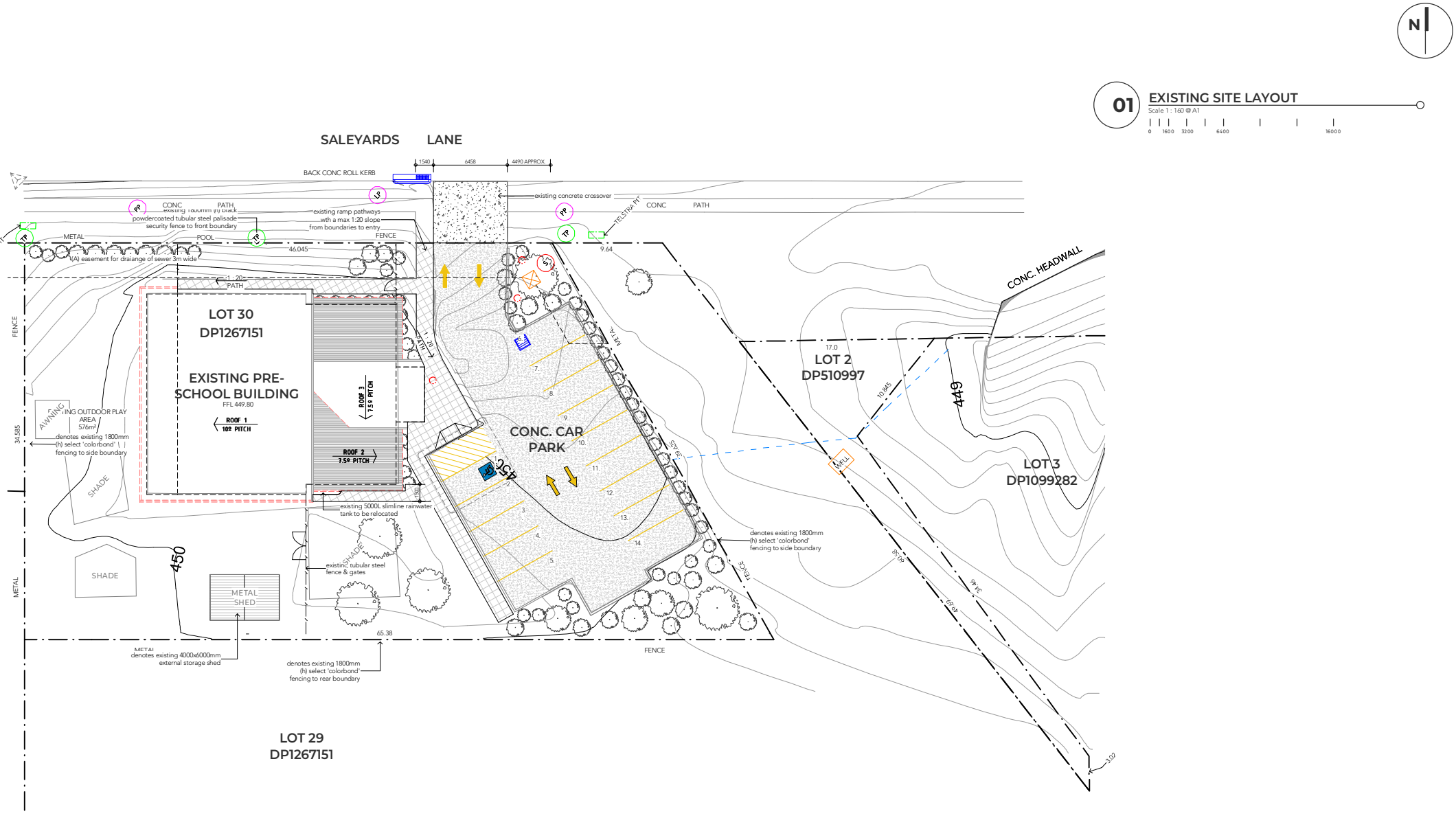
barnson.
DESIGN . PLAN . MANAGE

Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE
Client.
GHQS PTY LTD

Drawing Title.
COVER SHEET

Scale.	As indicated @ A1	Drawn.	CM
Sheet.	01 of 06	Checked.	KG
Project No.	41821	Revision.	B

Drawing No.
41821-
A00



PRELIMINARY

barnson.
DESIGN . PLAN . MANAGE

BARNSON PTY LTD
address. Unit 1, 36 Darling Street
Dubbo NSW 2830
phone. 1300 BARNSON (1300 227 676)
email. generalenquiry@barnson.com.au
web. barnson.com.au

Rev.	Date.	Amendment.
A	27.06.2023	PRELIMINARY
B	20.02.2023	SURVEY IMPORT & FLOOR PLAN AMENDMENT

Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LTD

Drawing Title.
EXISTING SITE PLAN

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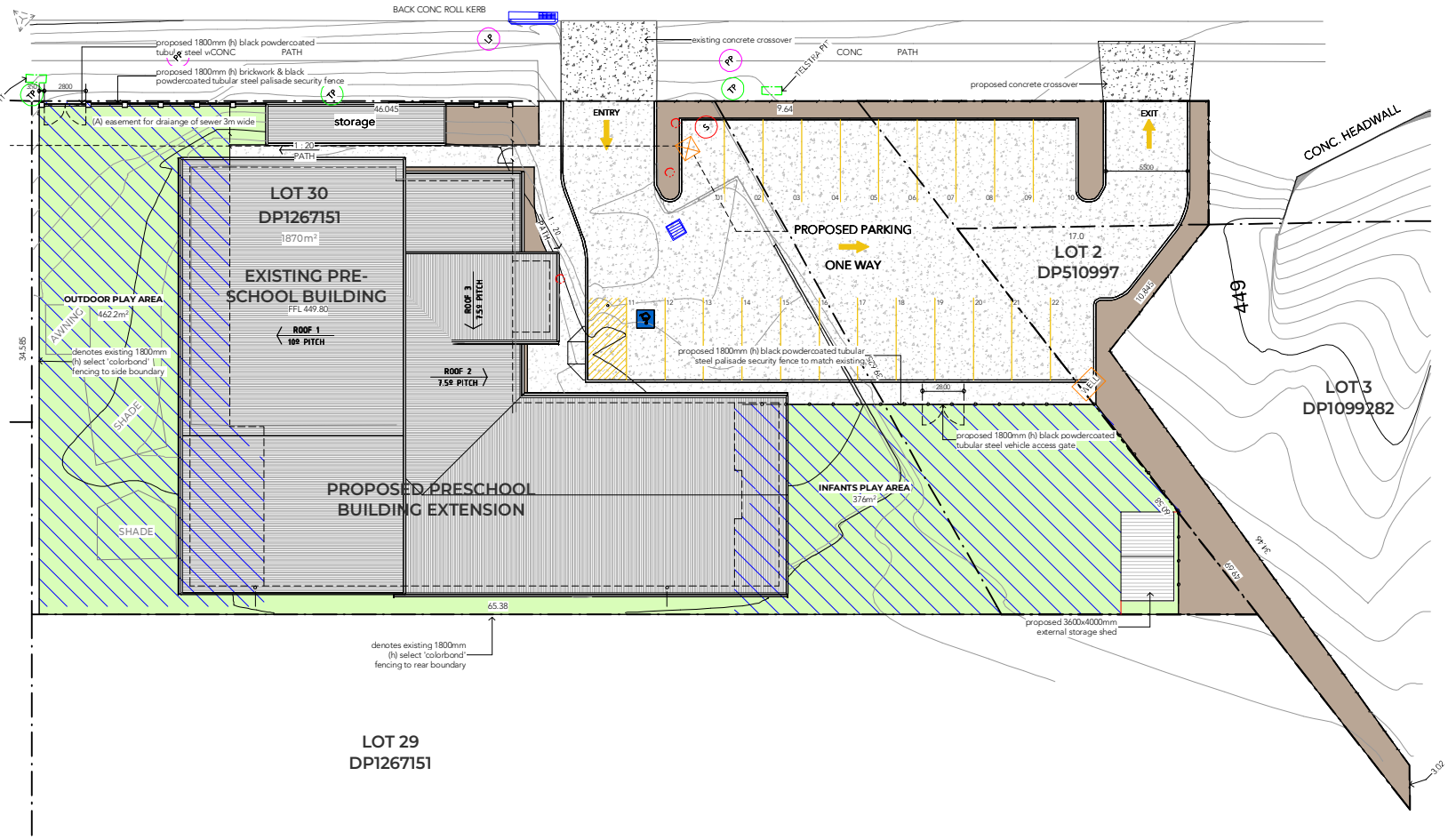
Sheet.	01 of 04	Checked.	KG
Project No.	41821	Revision.	B

Drawing No.
41821-A01



02 PROPOSED SITE LAYOUT

Scale 1 : 160 @ A1

0 1600 3200 6400 16000

PROPOSED SITE LEGEND

- new asphaltic concrete carpark area for more information refer to civil engineer's design
- new concrete footpaths for more information refer to civil engineer's design
- proposed grassed area for more information refer to landscape architect's design
- proposed landscaping area for more information refer to landscape architect's design
- carpark markings - arrows to be applied using paint in accordance with Mid-Western Regional Council Development Control Plan & AS2890.6-2009
- proposed 1800mm (h) tubular steel palisade security gence to match existing
- new concrete kerb & gutter for more information refer to civil engineer's design

UNENCUMBERED OUTDOOR CALCULATIONS.

The following calculations have been determined in accordance with *chapter 4, part 4.3, clause 108* of the *education & care services national regulations*.

outdoor play area	– 462.2m²
infants play area	– 376.6m²
total unencumbered outdoor area	**– 808.8m²**
allowable space per child in care	– 7.00m²
853/7.00m²	**– 115children (88 proposed)**

The above calculations & adjoining plan have been prepared by Kirk Gleeson, *a building practioner* referred to in *chapter 1, clause 4* of the *education & care services national regulations* & accredited under building designers accreditation & training p/l, accreditation no. 6289

PRELIMINARY

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Rev.	Date.	Amendment.
A	27.06.2023	PRELIMINARY
B	13.07.2023	CLIENT REQUESTED AMENDMENTS
C	31.10.2023	PARKING AMENDMENT
D	20.02.2023	SURVEY IMPORT & FLOOR PLAN AMENDMENT

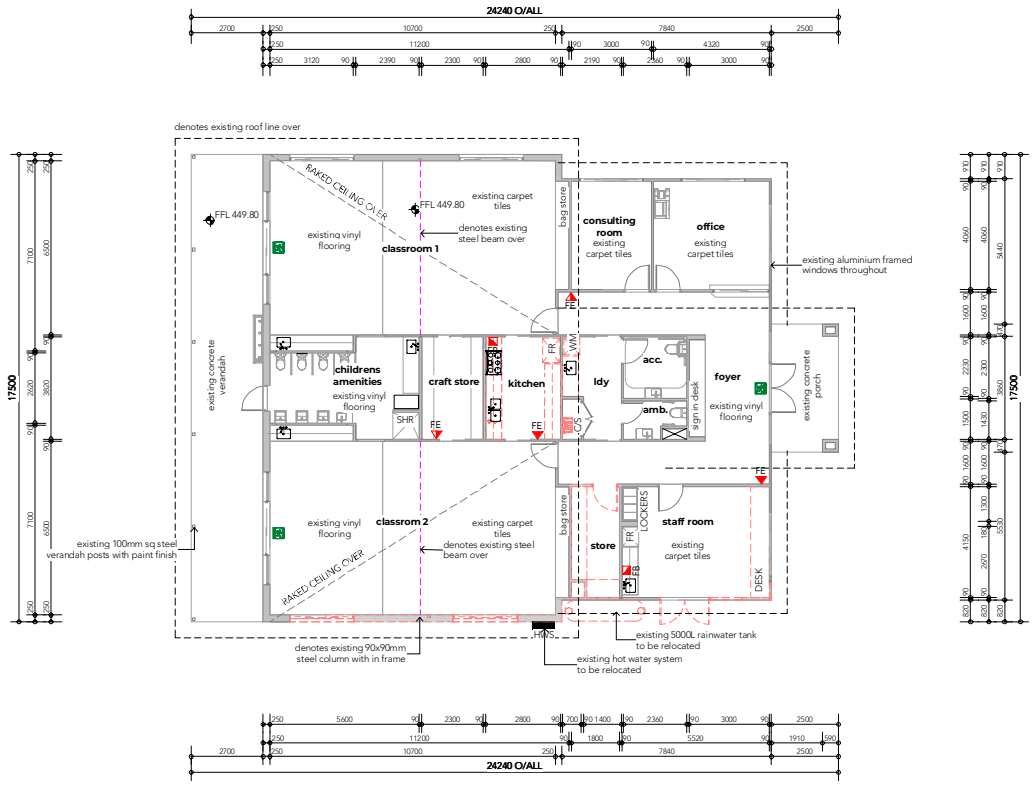
Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LTD

Drawing Title.
PROPOSED SITE PLAN

Scale. As indicated @ A1
Sheet. 02 of 04
Project No. 41821
Drawn. CM
Checked. KG
Revision. D

Drawing No.
41821-A02



PRELIMINARY

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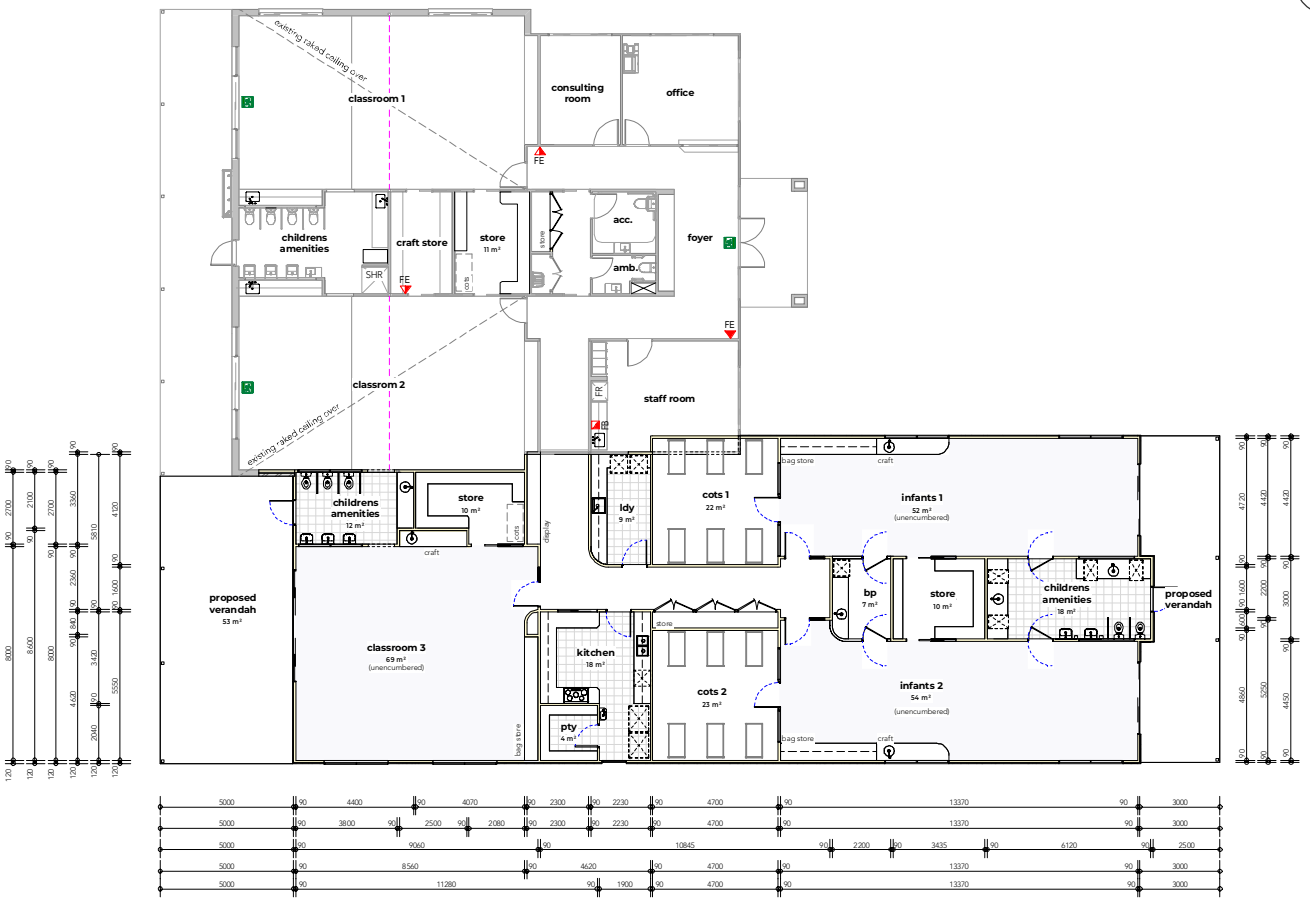
Rev.	Date.	Amendment.
A	27.06.2023	PRELIMINARY

Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE
Client.
GHQS PTY LTD

Drawing Title.
EXISTING FLOOR PLAN & DEMOLITION
Scale. As indicated @ A1
Sheet. 03 of 04
Project No. 41821
Drawn. CM
Checked. KG
Revision. A

Drawing No.
41821-A03



04 FLOOR PLAN - GENERAL ARRANGEMENT

Scale 1 : 100 @ A1

0 1000 2000 4000 10000

EXISTING FLOOR AREA

existing ancillary	160.60 m²
existing classroom	154.02 m²
existing verandah & porch	61.65 m²
TOTAL	**376.28 m²**

PROPOSED FLOOR AREA

proposed ancillary	171.48 m²
proposed classroom	201.97 m²
proposed verandah	89.85 m²
TOTAL	**463.29 m²**
OVERALL TOTAL	**790.50m²**

UNENCUMBERED INDOOR SPACE CALCULATIONS.

The following calculations have been determined in accordance with *chapter 4, part 4.3, clause 107* of the *education & care services national regulations*.

infants 1

total unencumbered floor area	– 51.6m²
allowable space per child in care	– 3.25m²
47.2/3.25m²	**– 15 children (12 proposed)**

infants 2

total unencumbered floor area	– 53.9m²
allowable space per child in care	– 3.25m²
49.5/3.25m²	**– 16 children (12 proposed)**

classroom 1

total unencumbered floor area	– 68.4m²
allowable space per child in care	– 3.25m²
68.4/3.25m²	**– 21 children**

classroom 2

total unencumbered floor area	– 68.4m²
allowable space per child in care	– 3.25m²
68.4/3.25m²	**– 21 children**

classroom 3

total unencumbered floor area	– 68.5m²
allowable space per child in care	– 3.25m²
68.5/3.25m²	**– 21 children**

The above calculations & adjoining plan have been prepared by Kirk Gleeson, a *building practioner* referred to in *chapter 1, clause 4* of the *education & care services national regulations* & accredited under building designers accreditation & training p/l, accreditation no. *6289*

LEGEND

PRELIMINARY

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B	13.07.2023	CLIENT REQUESTED AMENDMENTS
C	20.02.2023	SURVEY IMPORT & FLOOR PLAN AMENDMENT

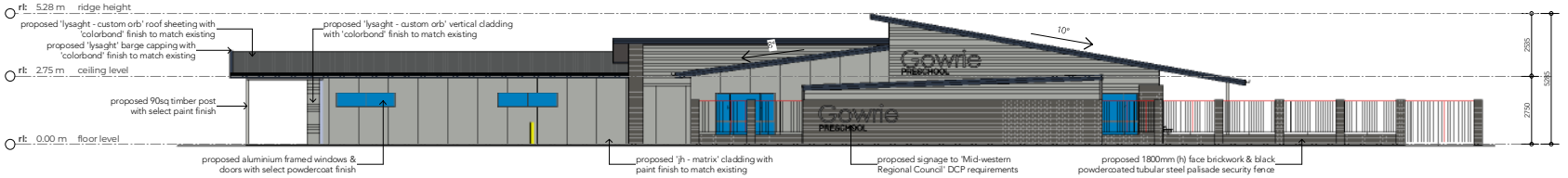
Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LTD

Drawing Title.
PROPOSED FLOOR PLAN

Scale. As indicated @ A1
Sheet. 04 of 04
Project No. 41821
Drawn. CM
Checked. KG
Revision. C

Drawing No.
41821-A04



05 ELEVATION. NORTH FACADE

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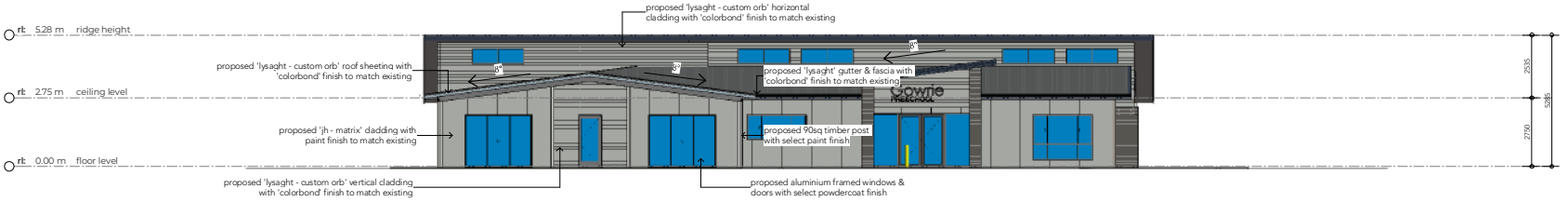
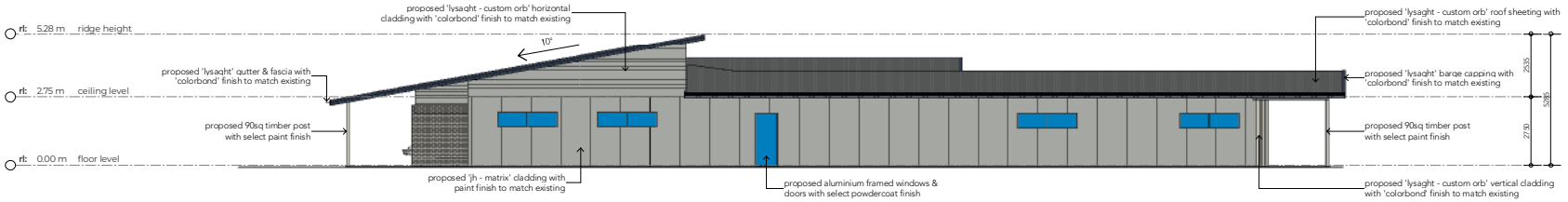


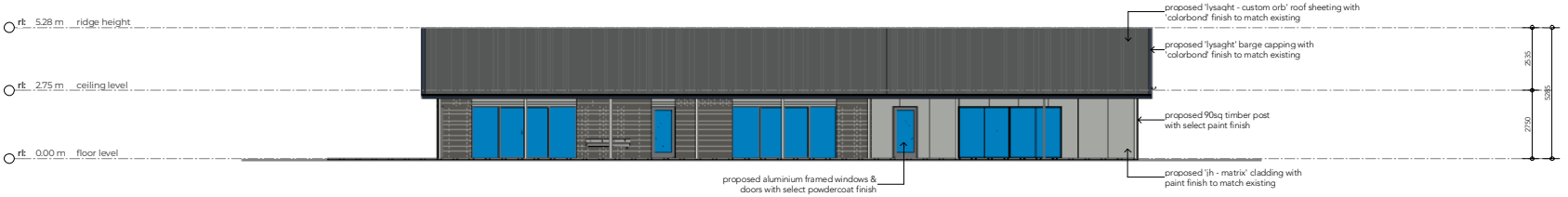
06 ELEVATION. EAST FACADE

Scale 1 : 100 @ A1



07 ELEVATION. SOUTH FACADE

Scale 1 : 100 @ A1



08 ELEVATION. WEST FACADE

Scale 1 : 100 @ A1

LEGEND

PRELIMINARY

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Rev.	Date.	Amendment.
A	27.06.2023	PRELIMINARY
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C	20.02.2023	SURVEY IMPORT & FLOOR PLAN AMENDMENT

Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LTD

Drawing Title.
ELEVATIONS

Scale.	1 : 100 @ A1	Drawn.	CM
Sheet.	06 of 06	Checked.	KG
Project No.	41821	Revision.	C

Drawing No.
41821-A05

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Appendix C – Unattended Noise Monitoring Charts

Table C1 Background Noise Monitoring Summary – Location L1[1]						
Date	Measured Background Noise Level (LA90) dB ABL[2]			Measured Ambient Noise Level dB LAeq(period)		
	Day	Evening	Night	Day	Evening	Night
Thursday 27 June 2024	N/A[3]	33	25	N/A[3]	44	42
Friday 28 June 2024	33	35	26	50	44	39
Saturday 29 June 2024	35	28	N/A[3]	48	43	N/A[3]
Sunday 30 June 2024	31	28	25	43	40	41
Monday 01 July 2024	38	32	30	53	41	42
Tuesday 02 July 2024	43	37	33	53	45	42
Wednesday 03 July 2024	43	34	31	49	43	40
Thursday 04 July 2024	42	33	29	51	42	40
Location L1 – RBL / Leq Overall	**38**	**33**	**29**	**50**	**43**	**41**

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

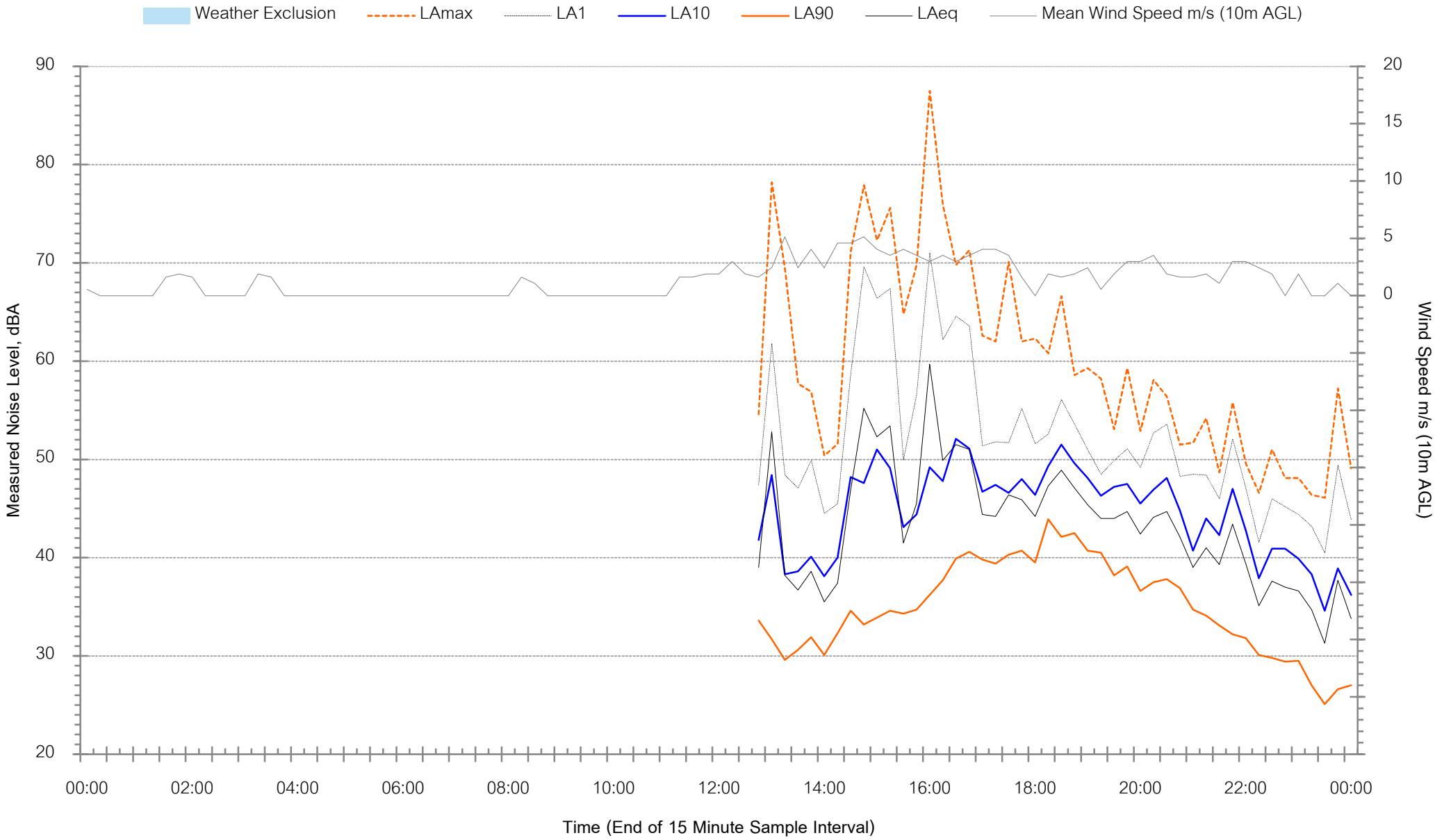
Note 2: Assessment background level (ABL) – the single-figure background level representing each assessment period day, evening, and night as per NPI Fact Sheet A.

Note 3: Extraneous noise excluded.

Note: Excludes periods of wind or rain affected data. Meteorological data obtained from the Bureau of Meteorology weather station Mudgee Airport AWS 32.6°S 149.6°E 471m AMSL.

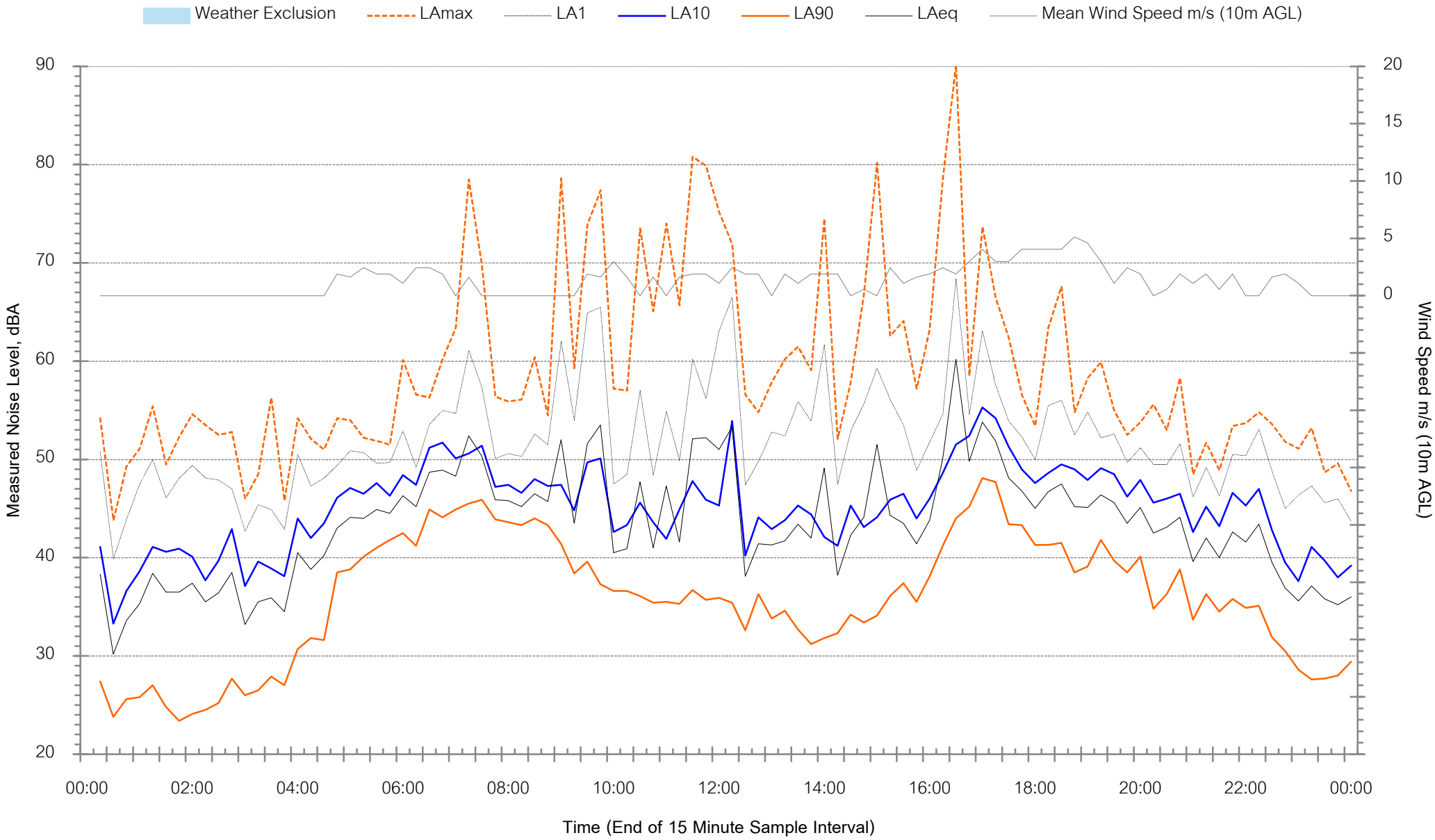
Background Noise Levels

Gowrie CCC, Mudgee NSW - Thursday 27 June 2024



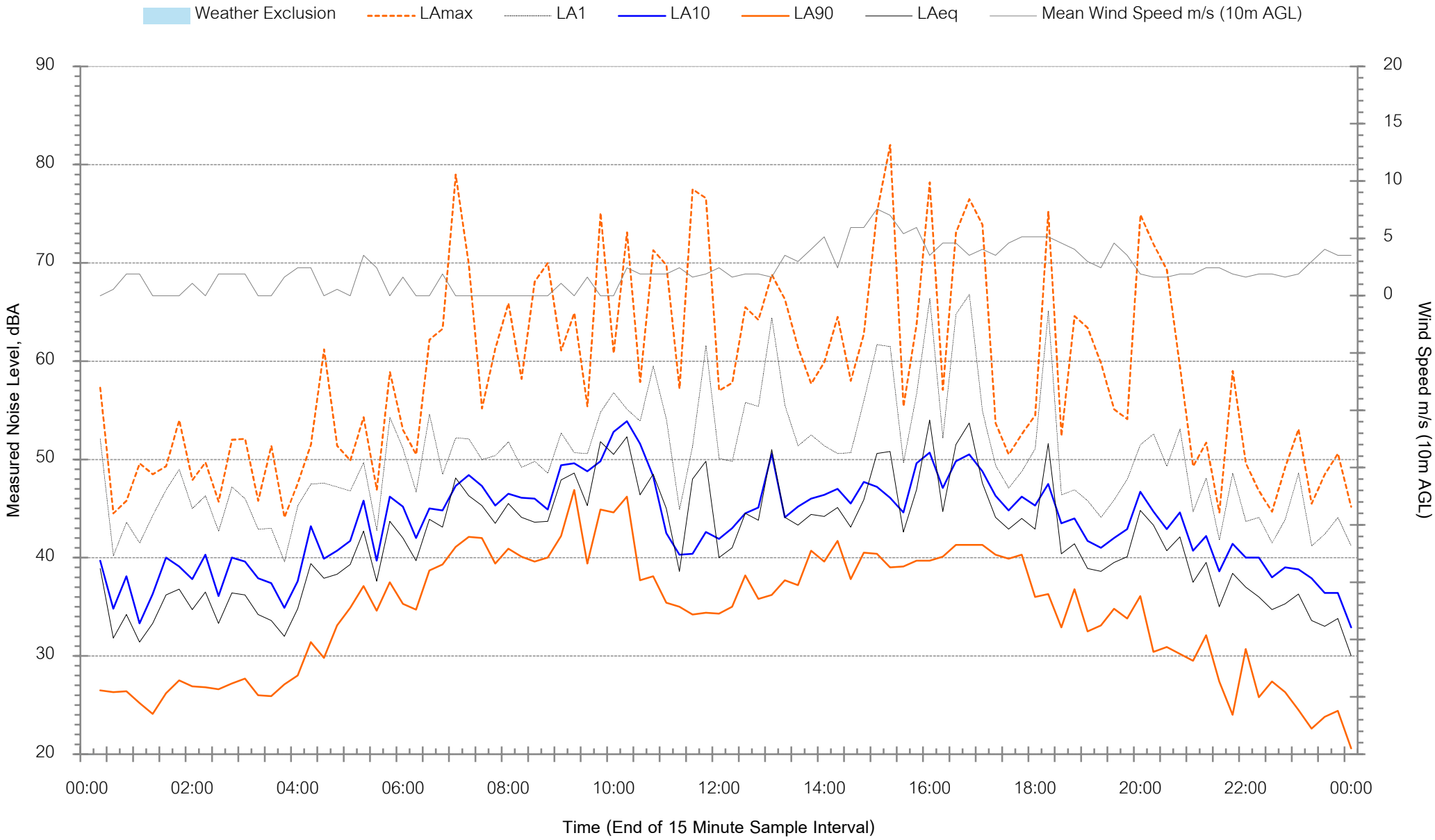
Background Noise Levels

Gowrie CCC, Mudgee NSW - Friday 28 June 2024



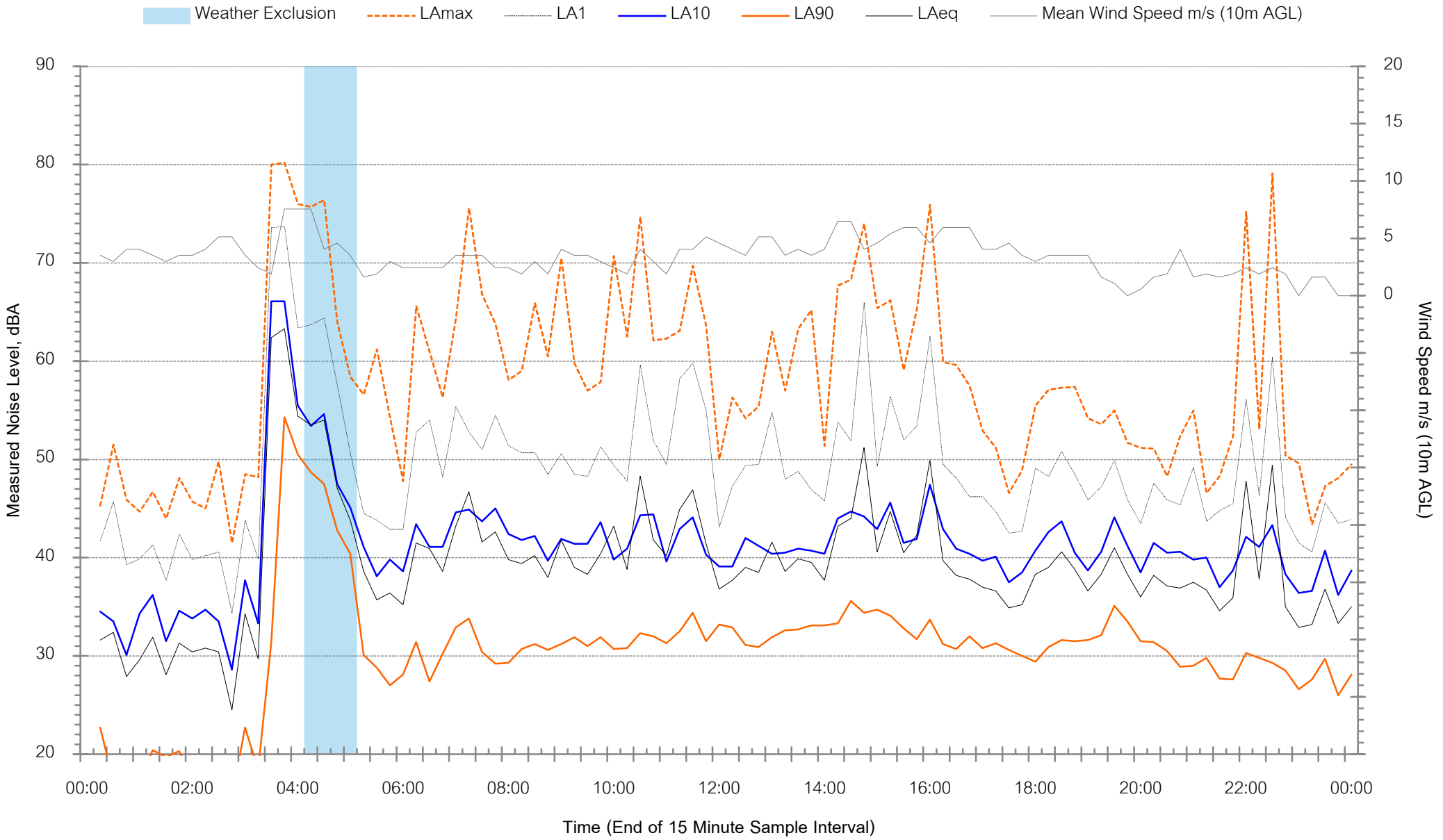
Background Noise Levels

Gowrie CCC, Mudgee NSW - Saturday 29 June 2024



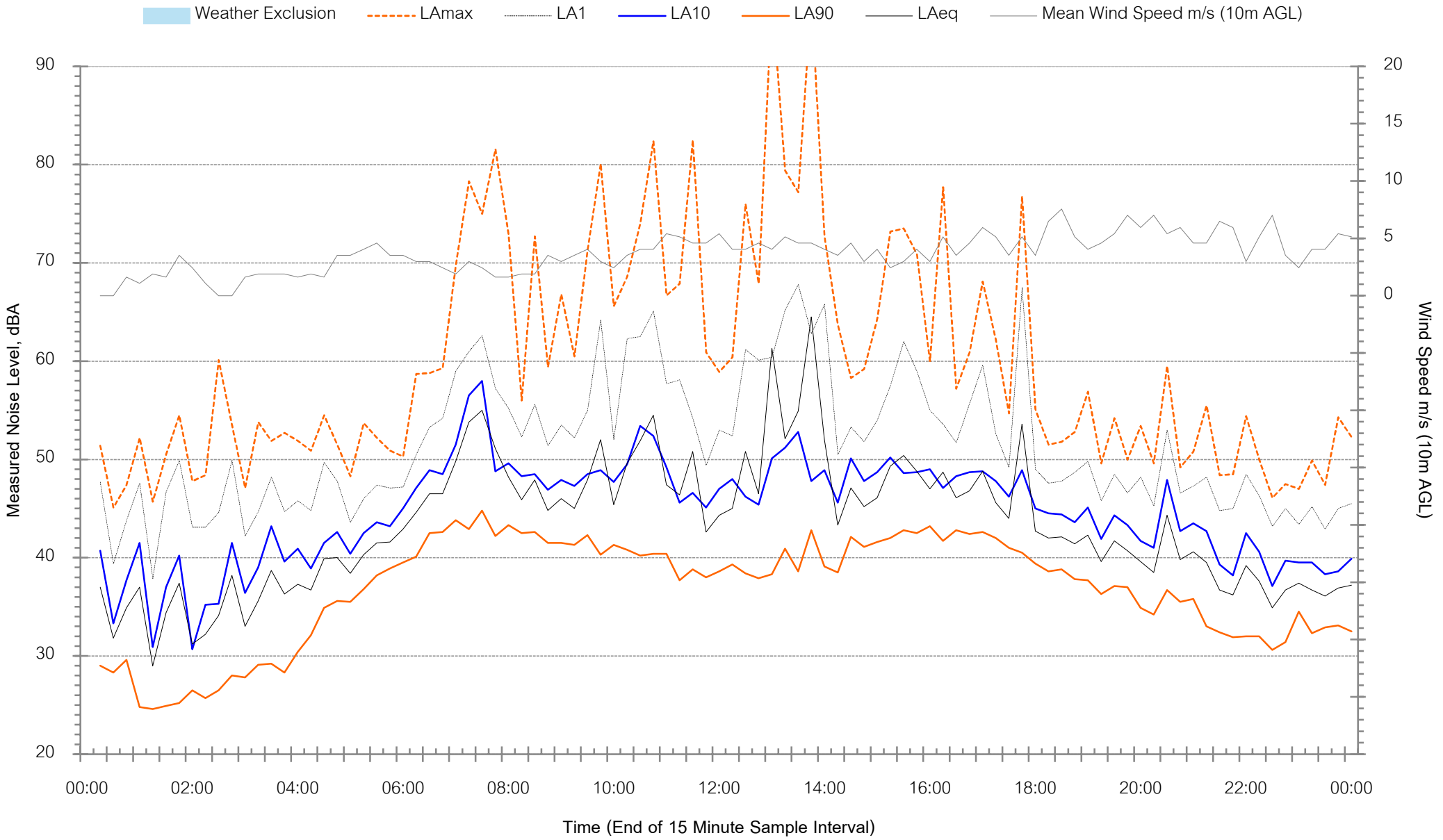
Background Noise Levels

Gowrie CCC, Mudgee NSW - Sunday 30 June 2024



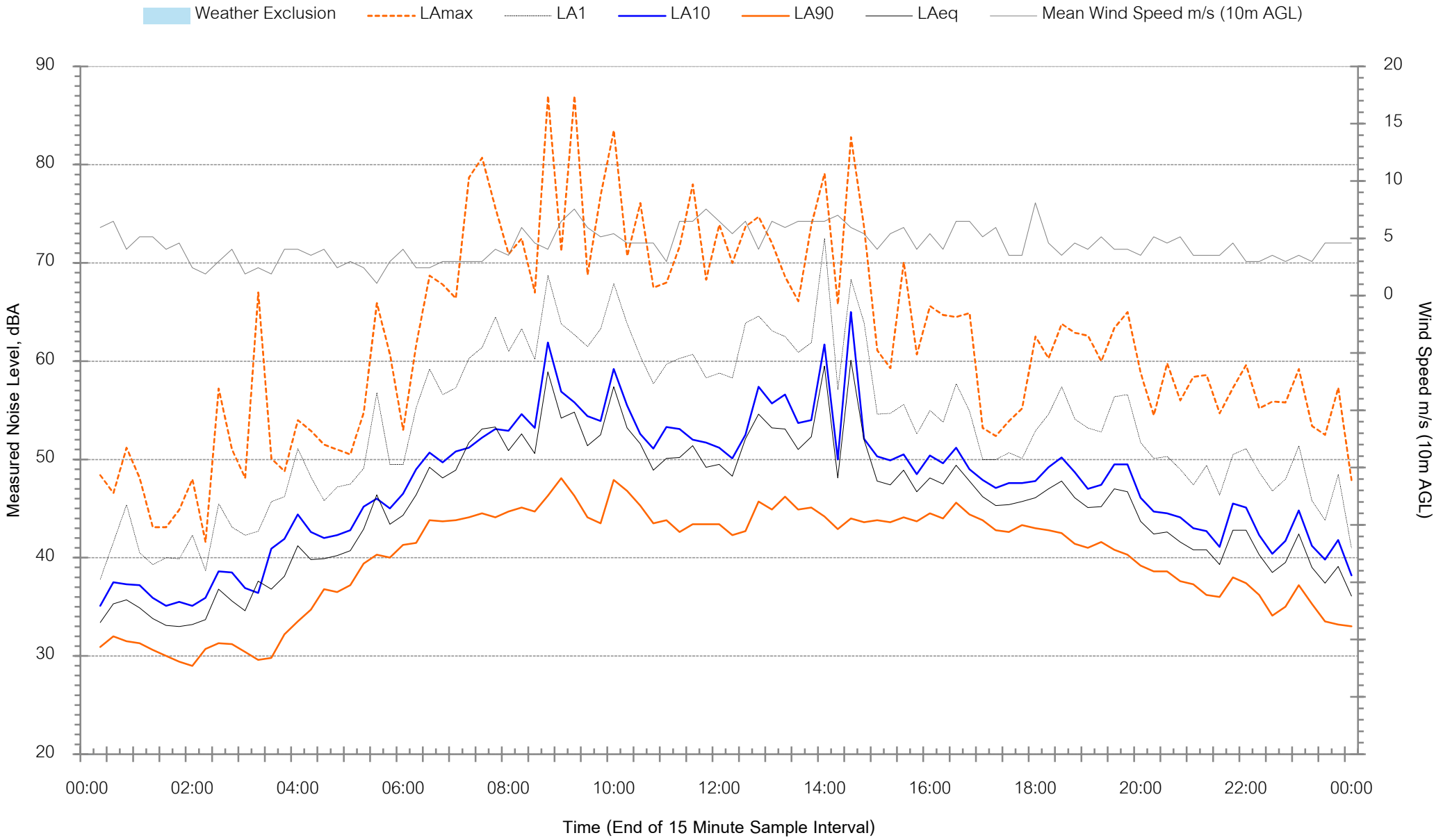
Background Noise Levels

Gowrie CCC, Mudgee NSW - Monday 1 July 2024



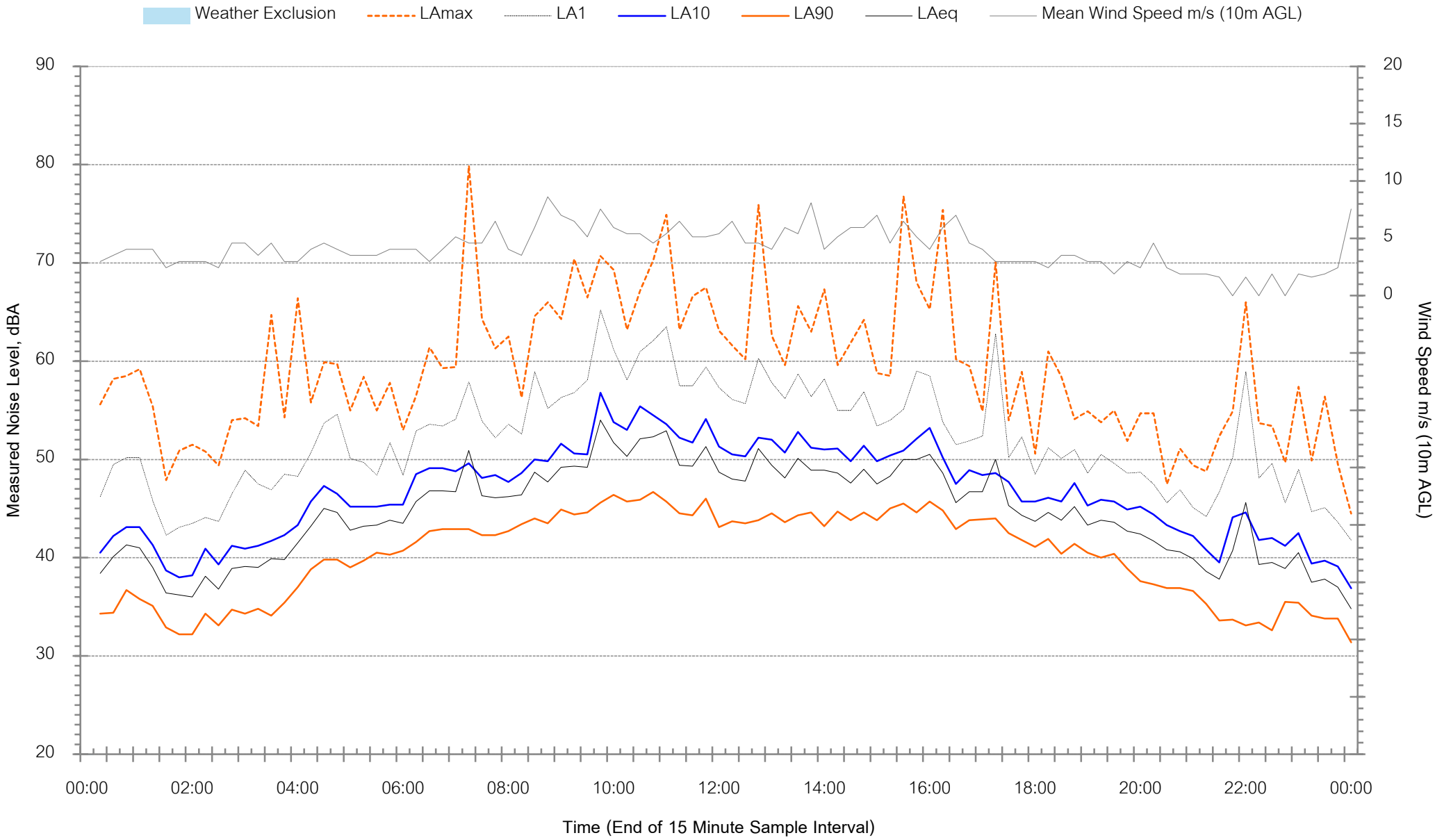
Background Noise Levels

Gowrie CCC, Mudgee NSW - Tuesday 2 July 2024



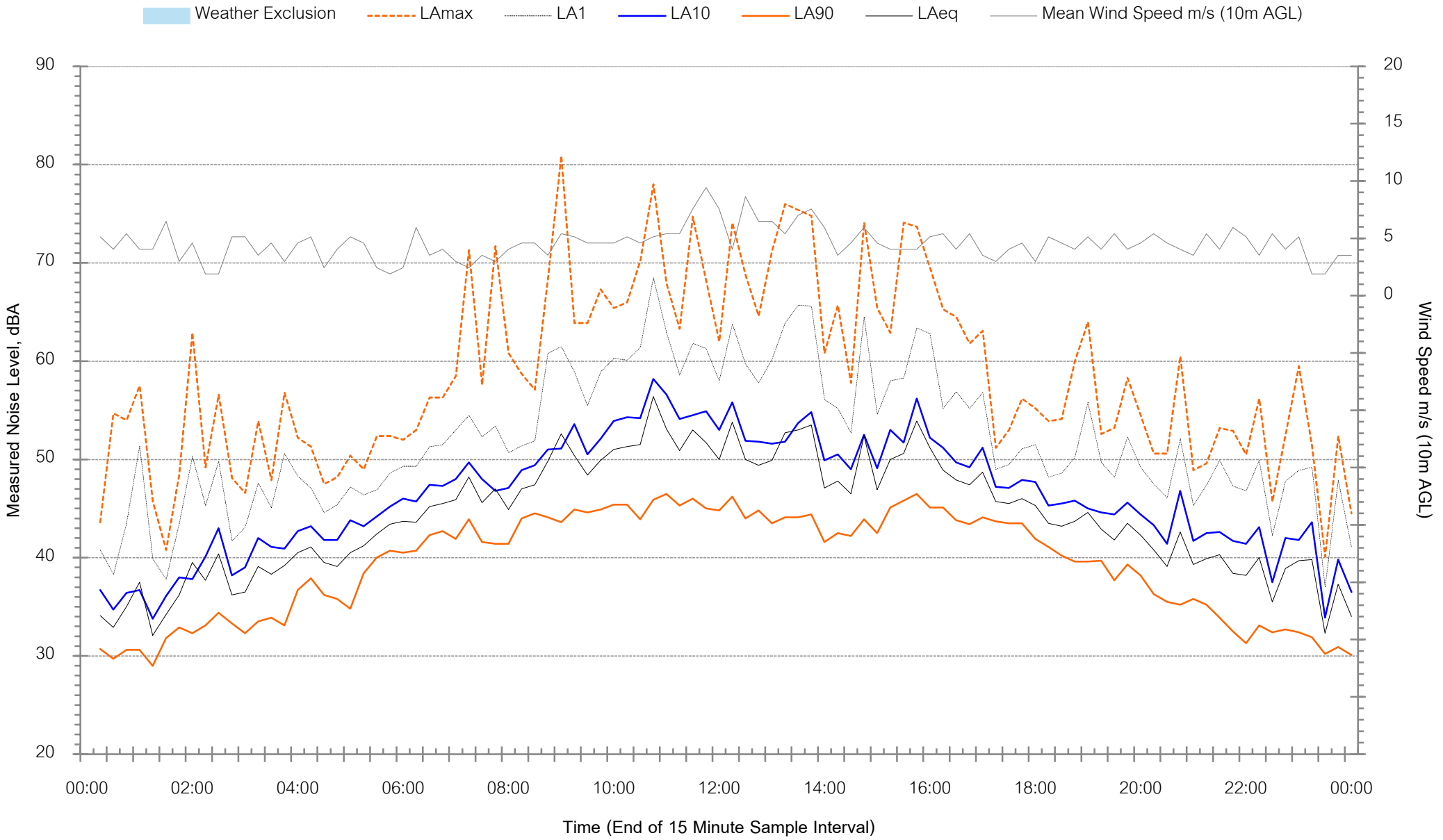
Background Noise Levels

Gowrie CCC, Mudgee NSW - Wednesday 3 July 2024



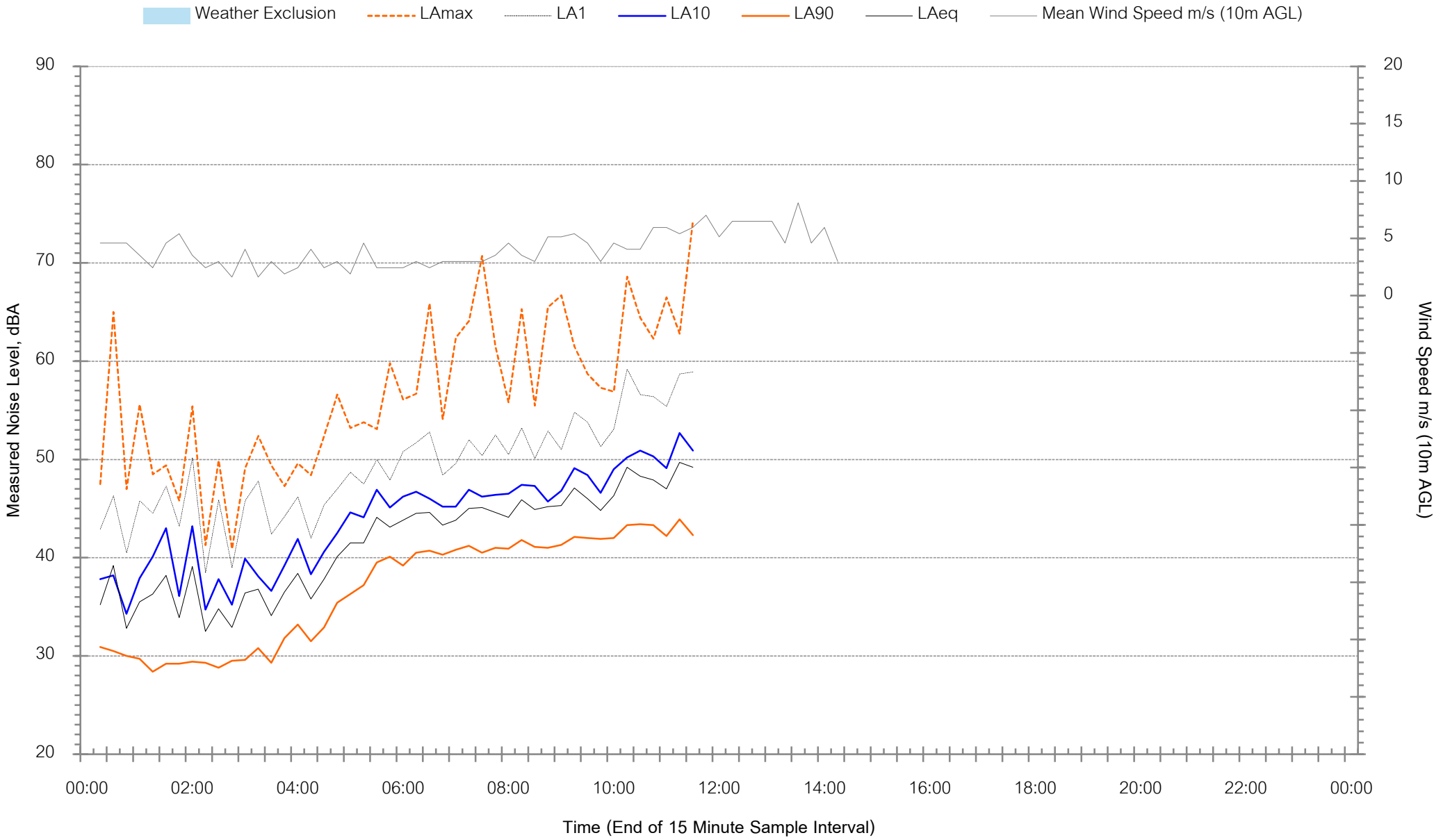
Background Noise Levels

Gowrie CCC, Mudgee NSW - Thursday 4 July 2024



Background Noise Levels

Gowrie CCC, Mudgee NSW - Friday 5 July 2024



Muller Acoustic Consulting Pty Ltd
PO Box 678, Kotara NSW 2289
ABN: 36 602 225 132
Ph: +61 2 4920 1833
www.mulleracoustic.com

MAC
Muller Acoustic Consulting

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APPENDIX C

AHIMS

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : 945

Client Service ID : 932480

Barnson

Date: 19 September 2024

Unit 1/36 Darling Street
Dubbo New South Wales 2830

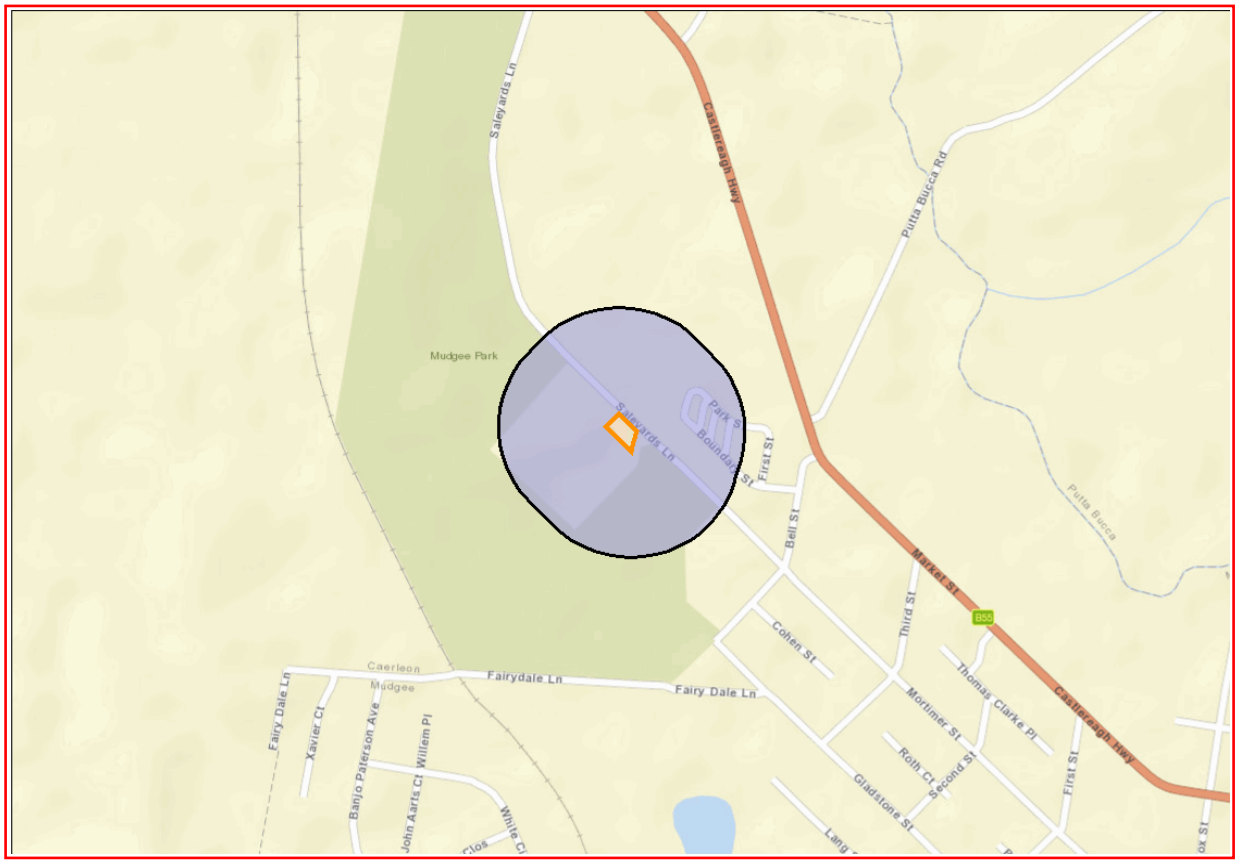
Attention: Sebastian Minehan

Email: sminehan@barnson.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 30, DP:DP1267151, Section : - with a Buffer of 200 meters, conducted by Sebastian Minehan on 19 September 2024.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	**Aboriginal sites are recorded in or near the above location.**
0	**Aboriginal places have been declared in or near the above location. ***

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Level 6, 10 Valentine Ave, Parramatta 2150
Locked Bag 5020 Parramatta NSW 2124
Tel: (02) 9585 6345

ABN 34 945 244 274
Email: ahims@environment.nsw.gov.au
Web: www.heritage.nsw.gov.au

barnson.

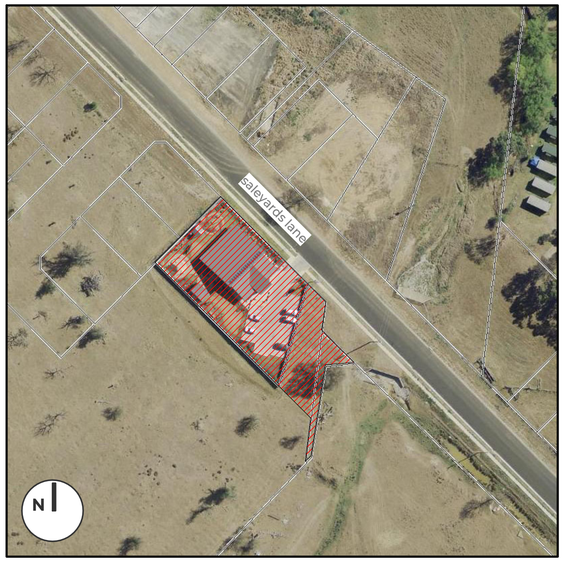
APPENDIX D

Development Plans

EXTENSION TO GOWRIE CHILDCARE CENTRE

39 SALEYARDS LANE, MUDGEE

LOCALITY PLAN.



saleyards lane, mudgee

lot 30 & 29, dp1267151 & lot 2, dp510997

DRAWING SCHEDULE.

A 00	COVER SHEET	REV B	DATED 18.09.2024
A 01	EXISTING SITE PLAN	REV B	DATED 18.09.2024
A 02	PROPOSED SITE PLAN	REV B	DATED 18.09.2024
A 03	EXISTING FLOOR PLAN & DEMOLITION	REV A	DATED 17.07.2024
A 04	PROPOSED FLOOR PLAN	REV B	DATED 18.09.2024
A 05	ELEVATIONS	REV A	DATED 17.07.2024
A 06	SECTIONS	REV A	DATED 17.07.2024
A 07	SHADE SAIL LAYOUT	REV A	DATED 18.09.2024

PROJECT DESCRIPTION.

For the purpose of the Building Code of Australia, Vol. 1, 2022, the development may be described as follows:

classification - NCC 'part A6'
The building has been classified as a 'Class 9b' building - pre-school

rise in stories - NCC 'part C2D3'
The building has a rise in stories of one.

effective height - NCC 'schedule 1 definitions'
The building has an effective height of zero, ie less than 25.0m.

type of construction required - NCC 'part A6, part C2D2 - table C2D2'
Class 9b building - Type 'C' construction. The building has been deemed 'conditioned' excluding the toilets & airlocks.

climate zone - NCC 'schedule 1 definitions'
The building is located within climate zone 4.

GENERAL NOTES.

In addition to the National Construction Code series, Building Code of Australia Vol. 1, 2022, the Plumbing Code of Australia, 2022 & the building regulations applicable to the state of New South Wales, the following applicable Australian Standards & codes of practice are to be adhered to through the documentation & construction works;

AS1668 – Mechanical ventilation & air conditioning in Buildings
AS3000 – Electrical installations; buildings, structures & premises (known as the saa wiring rules)
AS1428.1 – General requirements for access – buildings
AS2890.6 – Off-street parking; mandatory requirements
AS1680.0 – Interior lighting - safe movement
Children (Education & Care Services) Regulation 2011

These drawings shall be read in conjunction with all architectural & other consultants drawings & specifications & with such other written instructions as may be issued during the course of the contract. All discrepancies shall be referred to 'Barnson Pty Ltd' for a decision before proceeding with the work.

All dimensions are in millimetres unless stated otherwise & levels are expressed in metres. Figured dimensions are to be taken in preference to scaled dimensions unless otherwise stated. All dimensions are nominal, and those relevant to setting out & off-site work shall be verified by the contractor before construction & fabrication.

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Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LTD

Drawing Title.
COVER SHEET

Scale. As indicated @ A1
Sheet. 01 of 08
Project No. 41821

Drawn. CM
Checked.
Revision. B

Drawing No.
41821-A00

01 EXISTING SITE LAYOUT

Scale 1 : 150 @ A1

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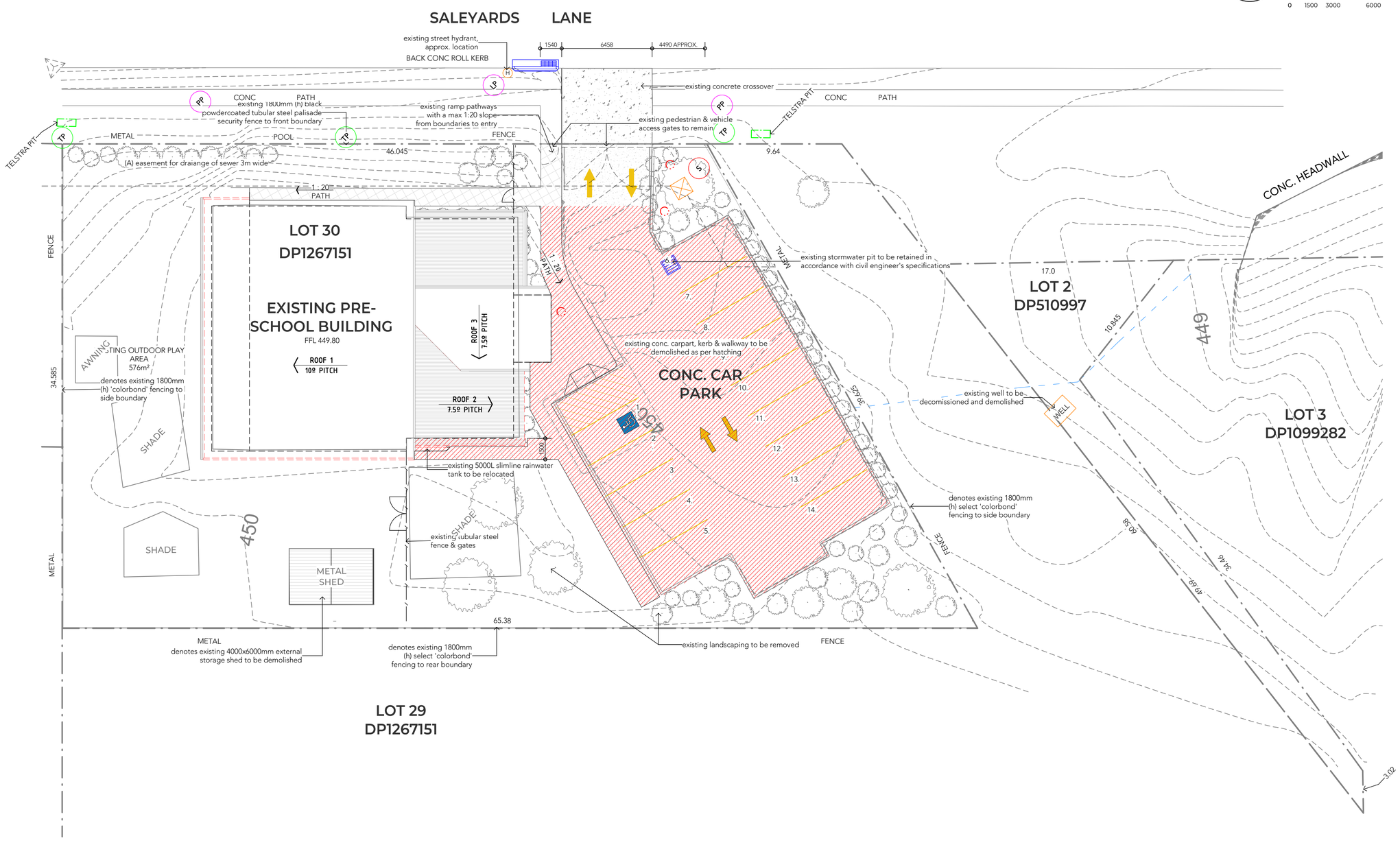

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web. barnson.com.au

Rev.	Date.	Amendment.
A	17.07.2024	ISSUED FOR DA
B	18.09.2024	REVISED AS PER PRE-LODGEMENT ADVICE

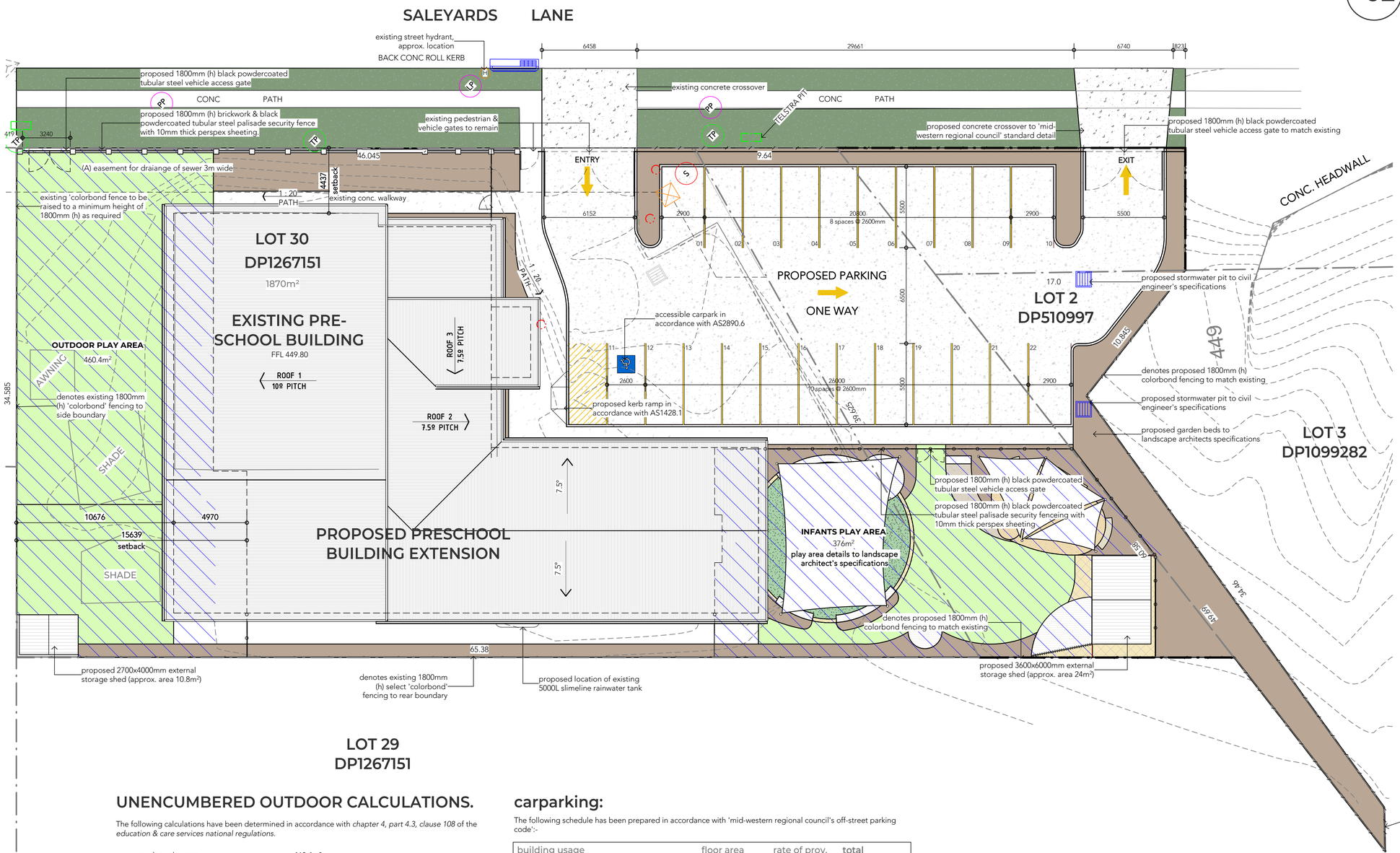
Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LTD

Drawing Title.
EXISTING SITE PLAN

Scale. 1 : 150 @ A1
Sheet. 02 of 08
Project No. 41821
Drawn. CM
Checked.
Revision. B

Drawing No.
41821-A01



LOT 29
DP1267151

UNENCUMBERED OUTDOOR CALCULATIONS.

The following calculations have been determined in accordance with *chapter 4, part 4.3, clause 108* of the *education & care services national regulations.*

outdoor play area	= 460.4m²
infants play area	= 376.6m²
total unencumbered outdoor area	**= 837m²**
allowable space per child in care	= 7.00m²
853/7.00m²	= **119 children (88 proposed)**

The above calculations & adjoining plan have been prepared by Kirk Gleeson, a *building practioner* referred to in *chapter 1, clause 4* of the *education & care services national regulations* & accredited under building designers accreditation & training p/l, accreditation no. 6289

carparking:

The following schedule has been prepared in accordance with 'mid-western regional council's off-street parking code':-

building usage	floor area	rate of prov.	total
preschool	-	1 per 4 children	22
total number of carparks required			22
total number of carparks provided			**22**

02

PROPOSED SITE LAYOUT

Scale 1 : 150 @ A1

0 1500 3000 6000 15000

PROPOSED SITE LEGEND

- new asphaltic concrete carpark area for more information refer to civil engineer's design
- new concrete footpaths for more information refer to civil engineer's design
- proposed grassed area for more information refer to landscape architect's design
- proposed landscaping area for more information refer to landscape architect's design
- carpark markings - arrows to be applied using paint in accordance with Mid-Western Regional Council Development Control Plan & AS2890.6-2009
- proposed 1800mm (h) tubular steel palisade security gence to match existing
- new concrete kerb & gutter for more information refer to civil engineer's design

SITE NOTES.

GENERAL

This plan is prepared from a combination of field survey & existing records for the purpose of designing new constructions on the land & should not be used for any other purpose. The title boundaries as shown hereon were not marked at the time of survey & have been determined by plan dimensions only & not by field survey.

Services shown hereon have been located where possible by field survey. If not able to be so located services have been plotted from the records of relevant authorities where available & have been noted accordingly on this plan. Where such records either do not exist or are inadequate a notation has been made hereon.

Contractors must verify all dimensions & existing levels on site prior to commencement of work.

Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services & detailed locations of all services, including;
- notify a.G.L.
- obtain telstra's "duty of care" document regarding working in the vicinity of telstra plant.
- verify co-axial/optic fibre cable location

Subsequent registered or other surveys in this area may affect the boundary definition shown on this plan. Any differences so caused to the boundary definition shown on this plan are beyond the control of Barnson Pty Ltd who can accept no responsibility for such differences.

All work to be undertaken in accordance with the details shown on the drawings, the specifications & the directions of the superintendent. Contractors must verify all dimensions & existing levels on site prior to commencement of work.

Where new works abut existing the contractor shall ensure that a smooth even profile free from abrupt changes is obtained.

The contractor shall arrange all survey setout to be carried out by a registered surveyor.

DRAINAGE

Stormwater shall be prevented from entering doorways & other openings in buildings. Where these are lower than adjacent ground surfaces, grated drains shall be designed & placed across ramps or entrances to intercept any flow, which would otherwise drain into the building in accordance with *AS/NZS 3500.3, P5.3.1.4 - Stormwater drainage*

Site drainage is to be constructed according to *AS/NZS 3500.3 - Stormwater drainage.*

The contractor shall provide all temporary diversion drains & mounds to ensure that at all time exposed surfaces are free draining & where necessary excavate sumps & provide pumping equipment to drain exposed areas.

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DESIGN . PLAN . MANAGE

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phone. 1300 BARNSON (1300 227 676)
email. generalenquiry@barnson.com.au
web. barnson.com.au

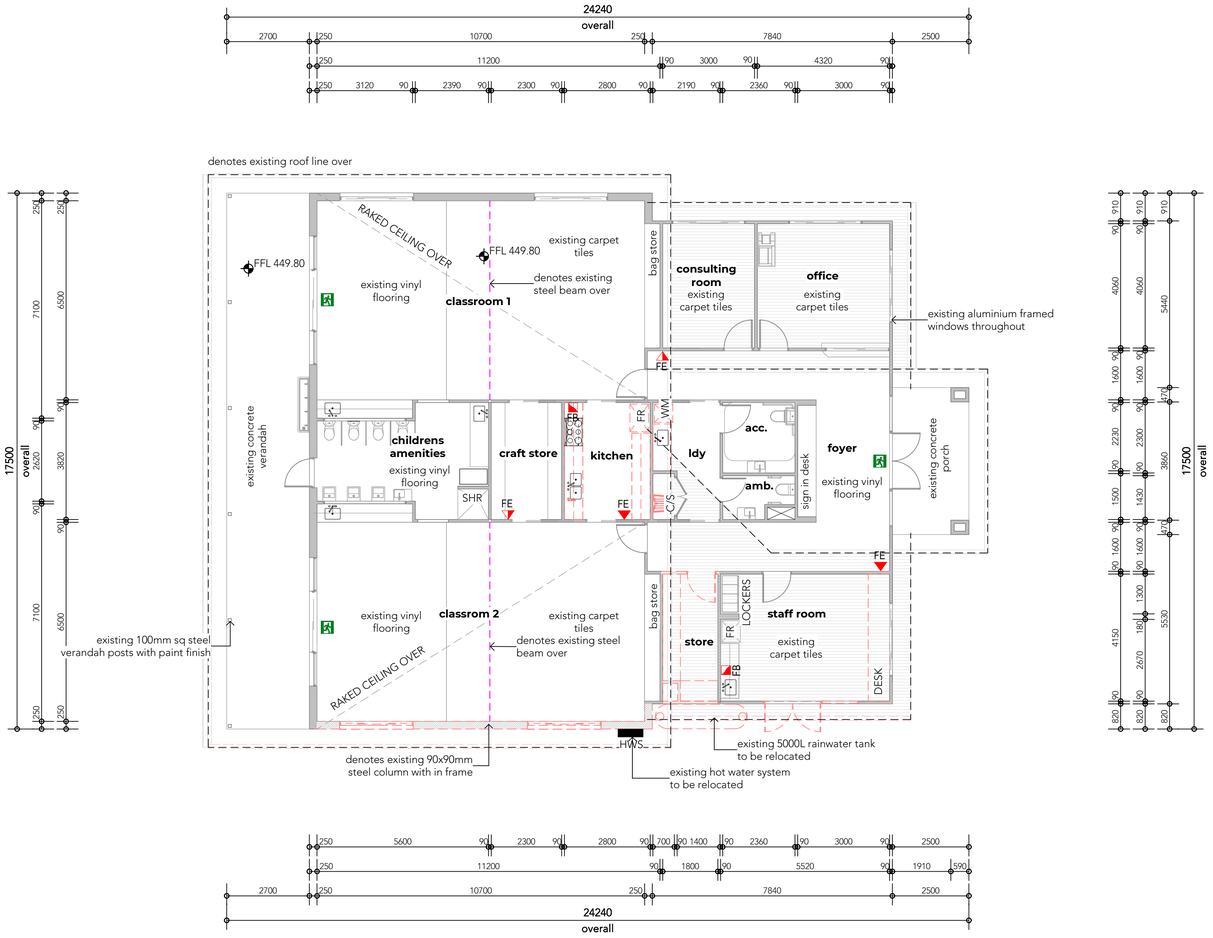
Rev.	Date.	Amendment.
A	17.07.2024	ISSUED FOR DA
B	18.09.2024	REVISED AS PER PRE-LODGEMENT ADVICE

Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE
Client.
GHQS PTY LTD

Drawing Title.
PROPOSED SITE PLAN

Scale. As indicated @ A1
Sheet. 03 of 08
Project No. 41821
Drawn. CM
Checked.
Revision. B

Drawing No.
41821-A02



03 EXISTING FLOOR PLAN & DEMOLITION

Scale 1 : 100 @ A1

0 1000 2000 4000 10000

denotes existing elements to be demolished, make good to existing surfaces

denotes existing walls to be demolished, make good to existing surfaces

denotes existing doors to be demolished, make good to existing surfaces

denotes existing windows to be demolished, make good to existing surfaces

DEMOLITION NOTES.

The precautions & procedures to be taken before & during the demolitions works shall be in accordance with the building regulations applicable to the state of New South Wales & the following Australian standards & codes of practice.

a. *'AS 2601-2001 - demolition of structures'* & the following additional requirements:
b. *AS 2436 - 1981 guide to noise control*
c. *O.H&S - code of practice for demolition-1991 no. 14*
d. *O.H&S - asbestos regulations - 2003*

The relevant statutory authorities shall be notified in advance & their approvals or services, if necessary shall be obtained.

Security fencing shall be provided around the perimeter of the demolition site & any additional precautionary measures taken, as my be necessary to prevent unauthorised entry to the site at all times during the demolition & construction period.

The erection of hoardings, outriggers & scaffolding shall be constructed in accordance with the requirements of the relevant authorities & the applicable Australian standards.

All electrical, gas, water, sewer & other service lines not required in the demolition process shall be shut off, capped or disconnected at or outside the building line, before the demolition works commences. Any service retained for demolition will be adequately protected.

All protection works to the adjoining properties (as required) will be in place before demolition works.

Demolition & removal of the building shall be undertaken in a careful & proper manner & with a minimum disturbance to the adjoining buildings & to the public & occupants.

All practible precautions shall be taken to avoid danger from collapse of a building when any part of a framed member is removed.

No wall, chimney or other structure shall be left free standing & unattended without temporary bracing or supports in such a condition that it may collapse due to wind or vibration.

Procedures & method of demolition will be adequate to prevent injury to persons & avoid damage to neighbouring buildings.

No combustible material & rubbish will be left on site as to cause a fire hazard.

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Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LTD

Drawing Title.
EXISTING FLOOR PLAN & DEMOLITION

Scale. As indicated @ A1
Sheet. 04 of 08
Project No. 41821
Drawn. CM
Checked.
Revision. A

Drawing No.
41821-A03

04 FLOOR PLAN - GENERAL ARRANGEMENT

Scale 1 : 100 @ A1

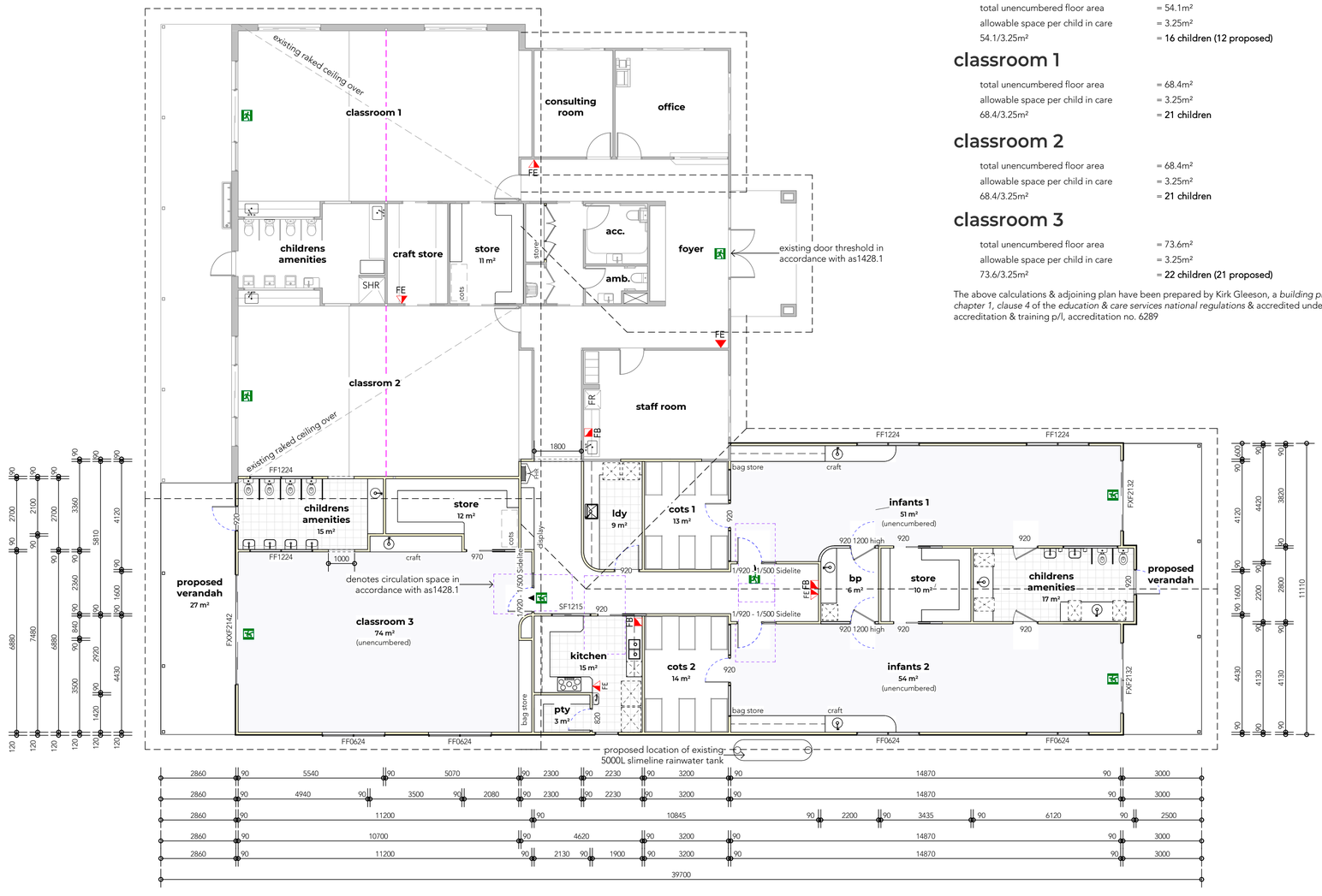
0 1000 2000 4000 10000

EXISTING FLOOR AREA

existing ancillary	160.60 m²
existing classroom	154.02 m²
existing verandah & porch	61.65 m²
TOTAL	**376.28 m²**

PROPOSED FLOOR AREA

proposed ancillary	151.29 m²
proposed classroom	207.50 m²
proposed verandah	60.04 m²
TOTAL	**418.83 m²**
OVERALL TOTAL	**790.50m²**



UNENCUMBERED INDOOR SPACE CALCULATIONS.

The following calculations have been determined in accordance with *chapter 4, part 4.3, clause 107* of the *education & care services national regulations*.

infants 1

total unencumbered floor area	= 51.1m²
allowable space per child in care	= 3.25m²
51.1/3.25m²	= **15 children (12 proposed)**

infants 2

total unencumbered floor area	= 54.1m²
allowable space per child in care	= 3.25m²
54.1/3.25m²	= **16 children (12 proposed)**

classroom 1

total unencumbered floor area	= 68.4m²
allowable space per child in care	= 3.25m²
68.4/3.25m²	= **21 children**

classroom 2

total unencumbered floor area	= 68.4m²
allowable space per child in care	= 3.25m²
68.4/3.25m²	= **21 children**

classroom 3

total unencumbered floor area	= 73.6m²
allowable space per child in care	= 3.25m²
73.6/3.25m²	= **22 children (21 proposed)**

The above calculations & adjoining plan have been prepared by Kirk Gleeson, a *building practioner* referred to in *chapter 1, clause 4* of the *education & care services national regulations* & accredited under building designers accreditation & training p/l, accreditation no. 6289

LEGEND.

- FB — fire blanket
- FE — fire extinguisher A:B(E) powder type
- FE — fire extinguisher CO2 type
- wall mounted emergency exit light
- ceiling mounted directional emergency exit light
- FHR — fire hose reel w/ cabinet
- MSB — main switch board

FIRE NOTES.

fire safety measures

Essential fire safety measures as shown on adjacent plan are as follows:-

Fire extinguisher type powder a:b(e)	- 4
Fire extinguisher type C02	- 1
Fire blanket	- 2

fire services

Portable fire extinguishers & fire blankets to cover class a-e fire risk to be provided in accordance with *'Part E1D14' of the NCC, Vol. 1, 2022,* & selected, located & distributed in accordance with *sections 1, 2, 3 & 4 of 'AS2444'*.

For all portable extinguisher types *'AS2444-2001'* allows higher mounting if the unit is likely to be dislodged - refer to the *NCC, Vol. 1, 2022 & 'AS2444-2001'* for details.

Fire extinguishers & fire blankets shall be clearly identified with the appropriate location sign as per *'AS2444-2001'*.

During construction, not less than one fire extinguisher to suit class A, B or C fires is required to be located adjacent to each exit in accordance with the *NCC, Vol. 1, Part E1D16.*

fire hazard properties

New floor material & coverings to have a max. Critical radiant flux to comply with *'Part S7C3' of 'Specification 7' of the NCC, Vol. 1, 2022.* Must also have a max. Smoke development rate of 750 percent- minutes as specified in *'Specification 17' of the NCC, Vol. 1, 2022.* Specified materials are to be confirmed with manufacturer for compliance in this regard.

New wall & ceiling lining materials are to comply with *Table S7C4 of 'Specification 7, S7C4' of the NCC, Vol. 1, 2022.*

New materials & assemblies other than floor materials, floor coverings & wall & ceiling linings are to comply with the fire hazard properties as specified in *'Specification 7, Part S7C7' of the NCC, Vol. 1, 2022.*

emergency lighting

Emergency lighting to be installed along the path of travel to the exits of the building in accordance with *Part E4D2 of the NCC Vol. 1.*

Illuminated exit signs must comply with *AS2293.1-2018* or for a photoluminescent exit sign, *Specification 25 of the NCC, Vol. 1* & be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.

LEGEND

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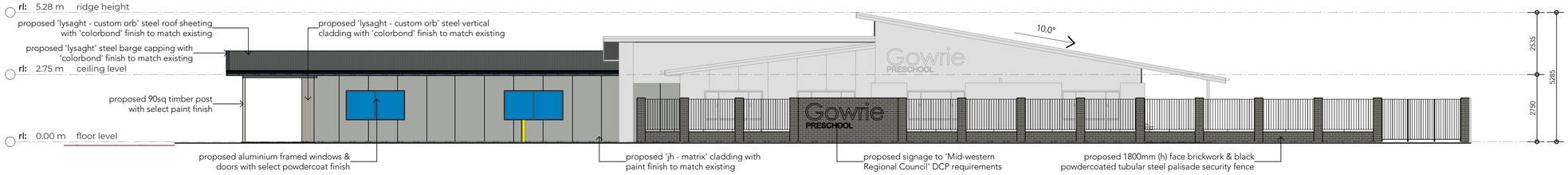
Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LTD

Drawing Title.
PROPOSED FLOOR PLAN

Scale. As indicated @ A1
Sheet. 05 of 08
Project No. 41821
Drawn. CM
Checked.
Revision. B

Drawing No.
41821-A04



05 ELEVATION. NORTH FACADE

Scale 1 : 100 @ A1

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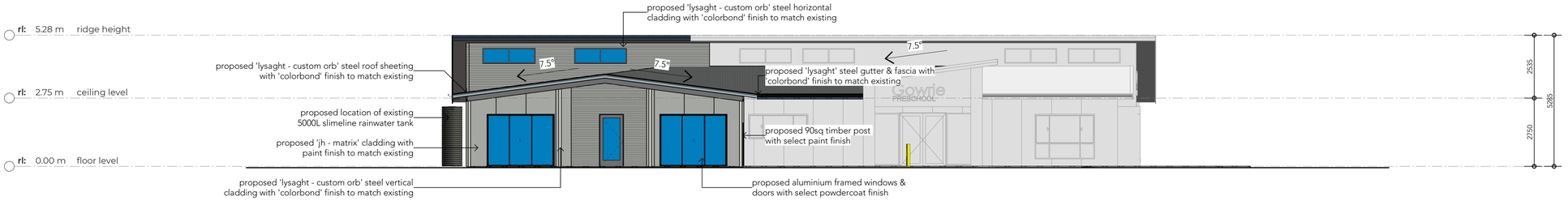
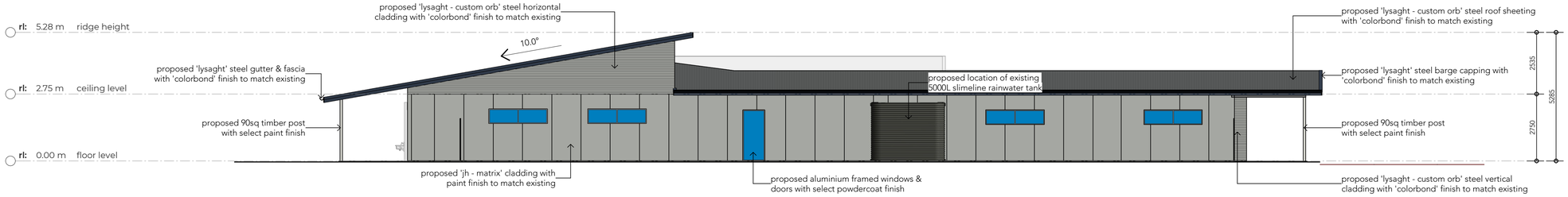


06 ELEVATION. EAST FACADE

Scale 1 : 100 @ A1



07 ELEVATION. SOUTH FACADE

Scale 1 : 100 @ A1

08 ELEVATION. WEST FACADE

Scale 1 : 100 @ A1

LEGEND

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Site Address.
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Client.
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Drawing Title.
ELEVATIONS

Scale. 1 : 100 @ A1
Sheet. 06 of 08
Project No. 41821

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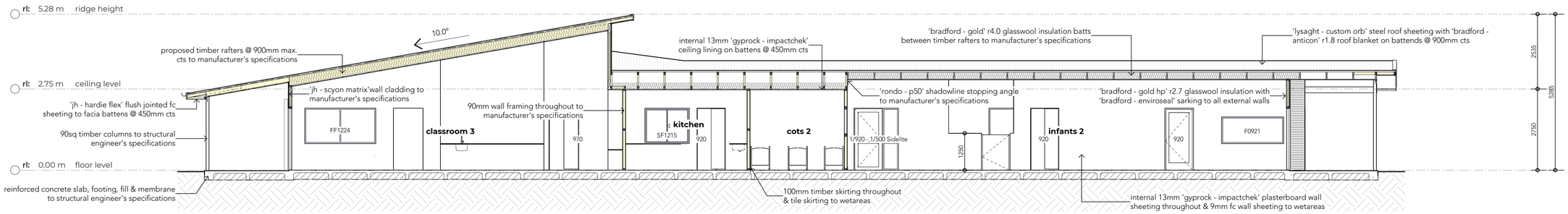
Revision. A

Drawing No.
41821-A05



09 SECTION. Section 1

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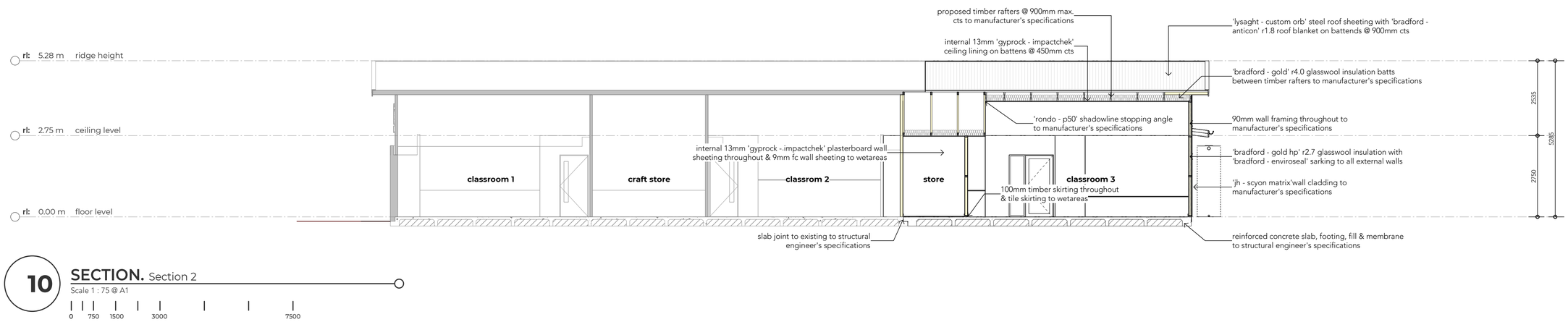

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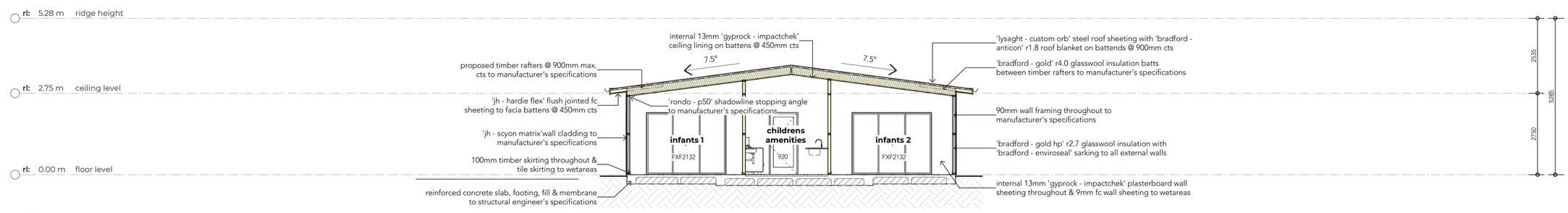

11 SECTION. Section 3

Scale 1 : 75 @ A1

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Site Address.
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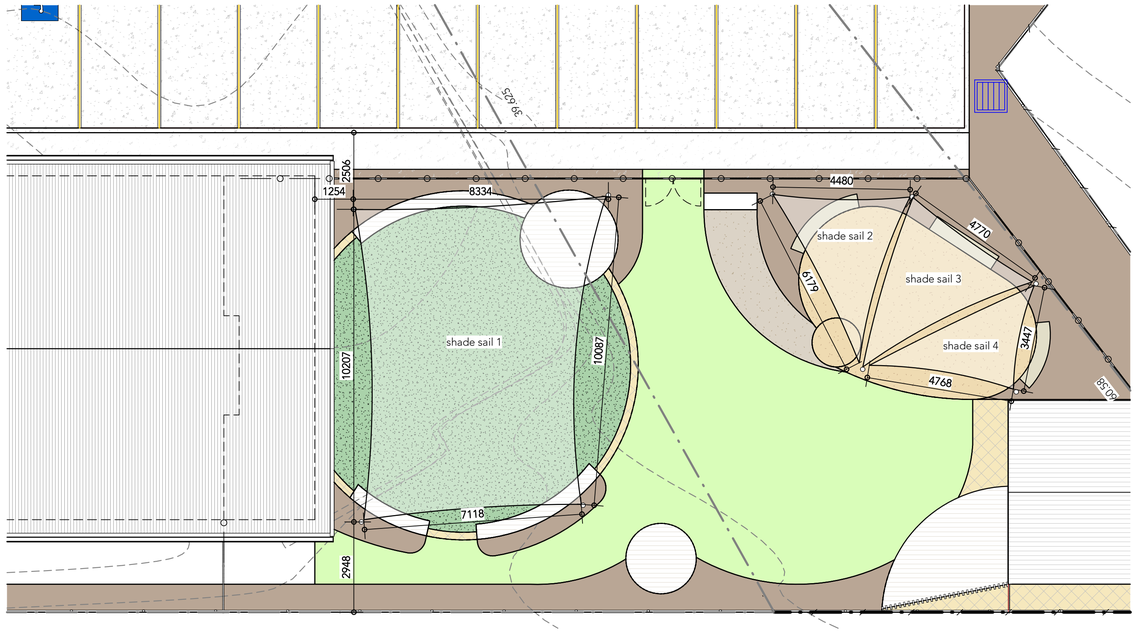
Drawing Title.
SECTIONS

Scale.	1 : 75 @ A1	Drawn.	CM
Sheet.	07 of 08	Checked.	
Project No.	41821	Revision.	A

Drawing No.
41821-A06



12 PROPOSED SHADE SAIL LAYOUT

Scale 1 : 100 @ A1

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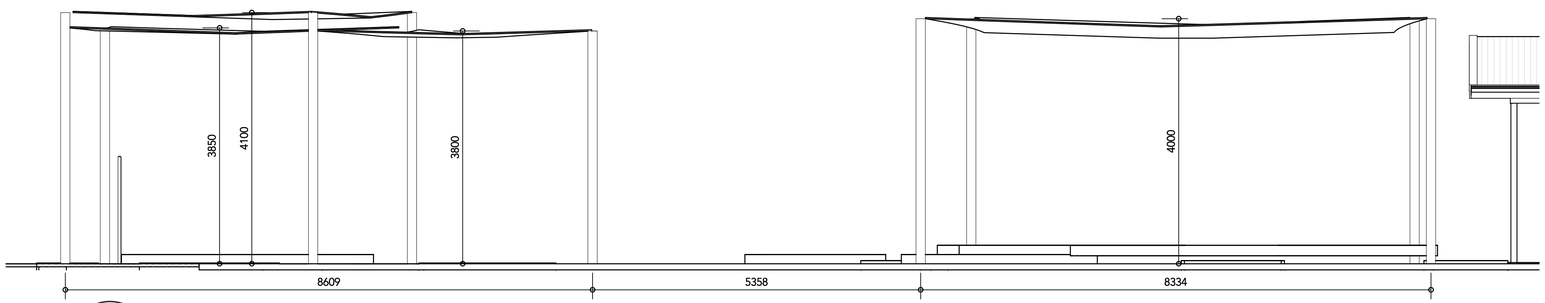

14 ELEVATION. PROPOSED SHADE SAILS

Scale 1 : 50 @ A1

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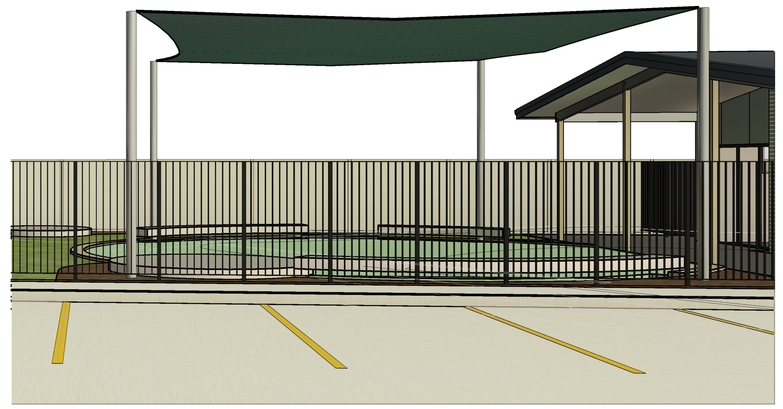
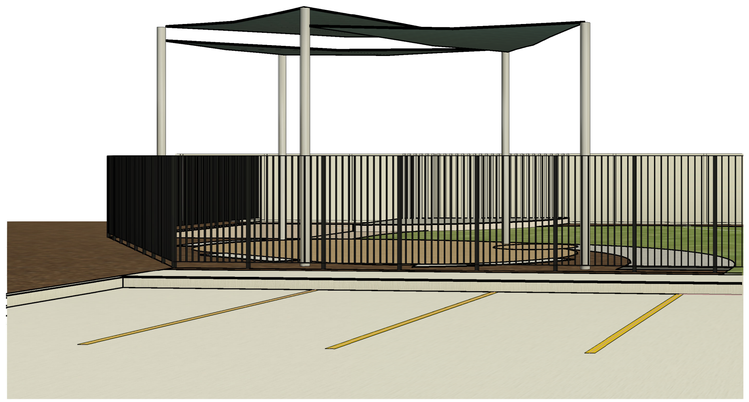


13 3D SHADE SAIL 1

Scale @ A1



15 3D SHADE SAIL 2-4

Scale @ A1

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Project.
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address.
39 SALEYARDS LANE, MUDGEE

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Drawing Title.
SHADE SAIL LAYOUT

Scale. As indicated @ A1
Sheet. 08 of 08
Project No. 41821
Drawn. CM
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Revision. A

Drawing No.
41821-A07

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APPENDIX E

Landscape Plans

DRAFT ONLY - NOT TO BE CONSTRUCTED

PROPOSED LANDSCAPING
GOWRIE CHILDCARE

39 SALEYARDS LANE, MUDGEE

DRAWING SCHEDULE.

LA 00	COVER SHEET	REV B	DATED 16.09.2024
LA 01	OVERALL LANDSCAPE PLAN	REV B	DATED 16.09.2024
LA 02	OUTDOOR PLAYSPACE	REV B	DATED 16.09.2024

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DESIGN . PLAN . MANAGE

Project.
PROPOSED LANDSCAPING
GOWRIE CHILDCARE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LYD

Drawing Title.
COVER SHEET

Scale. @ A1
Sheet. 01 of 03
Project No. 41821

Drawn. BP
Checked. CM
Revision. B

Drawing No.
41821-
LA00

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02 OVERALL LANDSCAPE PLAN

Scale 1 : 150 @ A1

0 1500 3000 6000 15000

N

Plant Schedule					
Symbol	Plant Code	Botanical Name	Common Name	LAFX Remarks	Count
Trees					
	LAG TWI	Lagerstroemia indica `Twilight`	Twilight Crape Myrtle	H:2.5m W:2.5m	1
	TRI LUS	Tristaniopsis laurina `DOW10`	Luscious Water Gum	H:8m W:5m	2
					3
Shrubs					
	LOM FLU	Lomandra fluviatilis `ABU7`	Shara Mat Rush	H:0.5m W:0.5m	101
	PIT SIL	Pittosporum tenuifolium `Silver Sheen`	Silver Sheen Tawhiwhi		67
	ROS TUS	Rosmarinus officinalis `Tuscan Blue`	Tuscan Blue Rosemary	H:1m W:1m	66
	SAL HOT	Salvia microphylla `Hot Lips`	Hot Lips Graham Sage	H:0.9m W:0.9m	7
	SYZ PIN	Syzygium australe `Pinnacle`	Pinnacle Lilly Pilly	H:6m W:1.5m	21
	SYZ YWU	Syzygium australe `Up and Away`	Up and Away Lilly Pilly	H:4m W:1m	72
	WES GRB	Westringia fruticosa `WES04`	Grey Box? Coast Rosemary	H:0.4M W:0.4M	37
					371

EXISTING SITE LEGEND.

- excluded works area
- existing boundary
- existing fence line
- underground stormwater
- underground sewer
- underground telecommunications line
- overhead electrical lines
- underground water lines

PROPOSED SOFTSCAPE LEGEND.

- proposed garden area
- proposed irrigated kikuyu turf area
- proposed synthetic grassed softfall area

PROPOSED HARDSCAPE LEGEND.

- new concrete footpaths for more information refer to civil engineer's design
- proposed natural sandstone pavement
- proposed crushed granite
- proposed creek bed - pressed river pebble
- proposed curved bench seating
- proposed timber decking
- proposed sandstone log seating
- proposed wet sand play area
- proposed dry sand play area
- proposed shade cloth - by others
- proposed water pump station
- proposed granite boulder
- proposed feature timber post screen

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Project.
PROPOSED LANDSCAPING
GOWRIE CHILDCARE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LYD

Drawing Title.
OVERALL LANDSCAPE PLAN

Scale. As indicated @ A1
Sheet. 02 of 03
Project No. 41821
Drawn. BP
Checked. CM
Revision. B

Drawing No.
41821-
LA01

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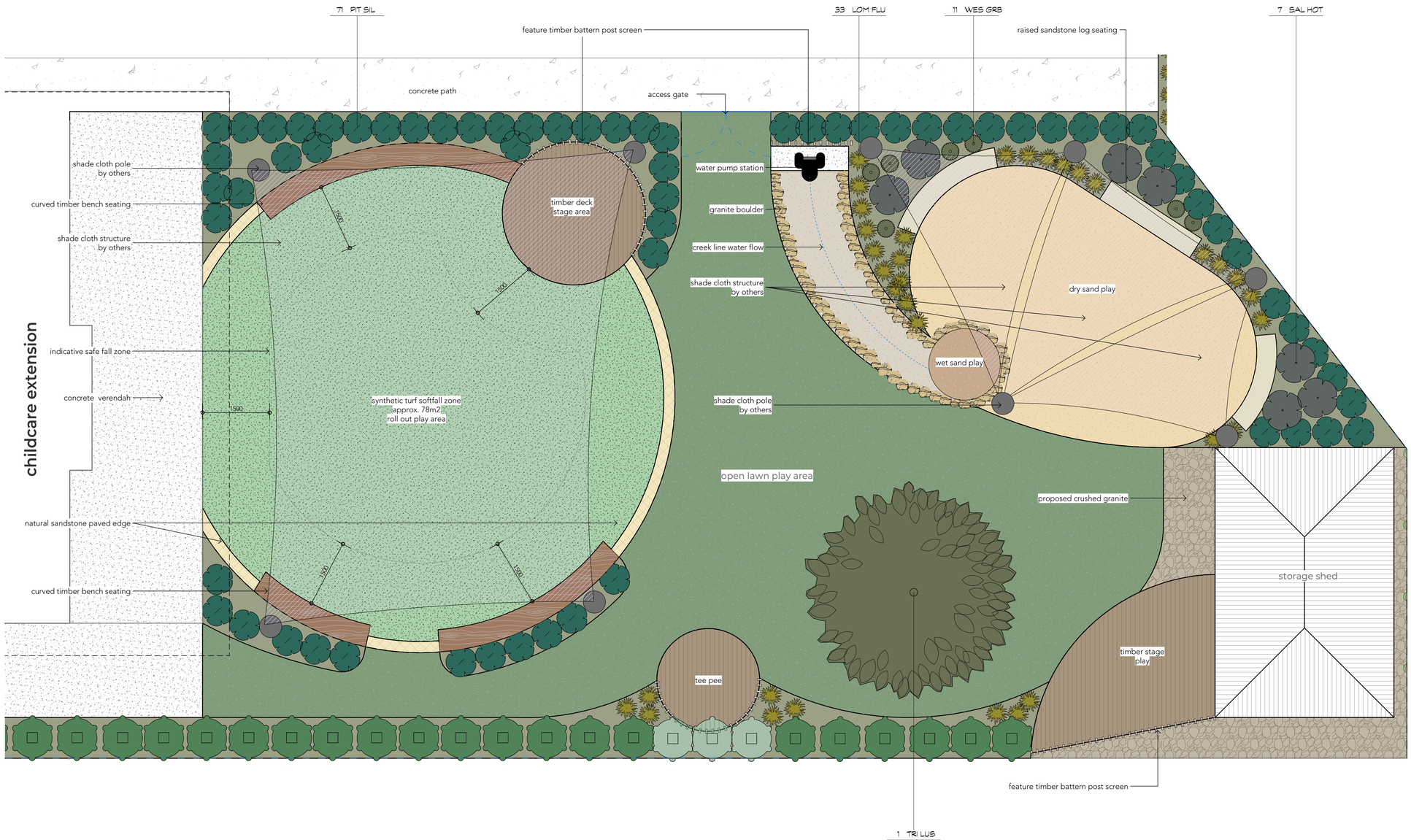

PROPOSED SOFTSCAPE LEGEND.

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- proposed dry sand play area
- proposed shade cloth - by others
- proposed water pump station
- proposed granite boulder
- proposed feature timber battern post screen

02 OUTDOOR PLAYSPACE

Scale 1 : 50 @ A1

0 500 1000 2000 5000

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B	16.09.2024	REVISED FOR DA

Project.
PROPOSED LANDSCAPING
GOWRIE CHILDCARE
Site Address.
39 SALEYARDS LANE, MUDGEE

Client.
GHQS PTY LYD

Drawing Title.
OUTDOOR PLAYSPACE

Scale. As indicated @ A1
Sheet. 03 of 03
Project No. 41821

Drawn. BP
Checked. CM
Revision. B

Drawing No.
41821-
LA02

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APPENDIX F

Civil Plans

Civil Design Documentation

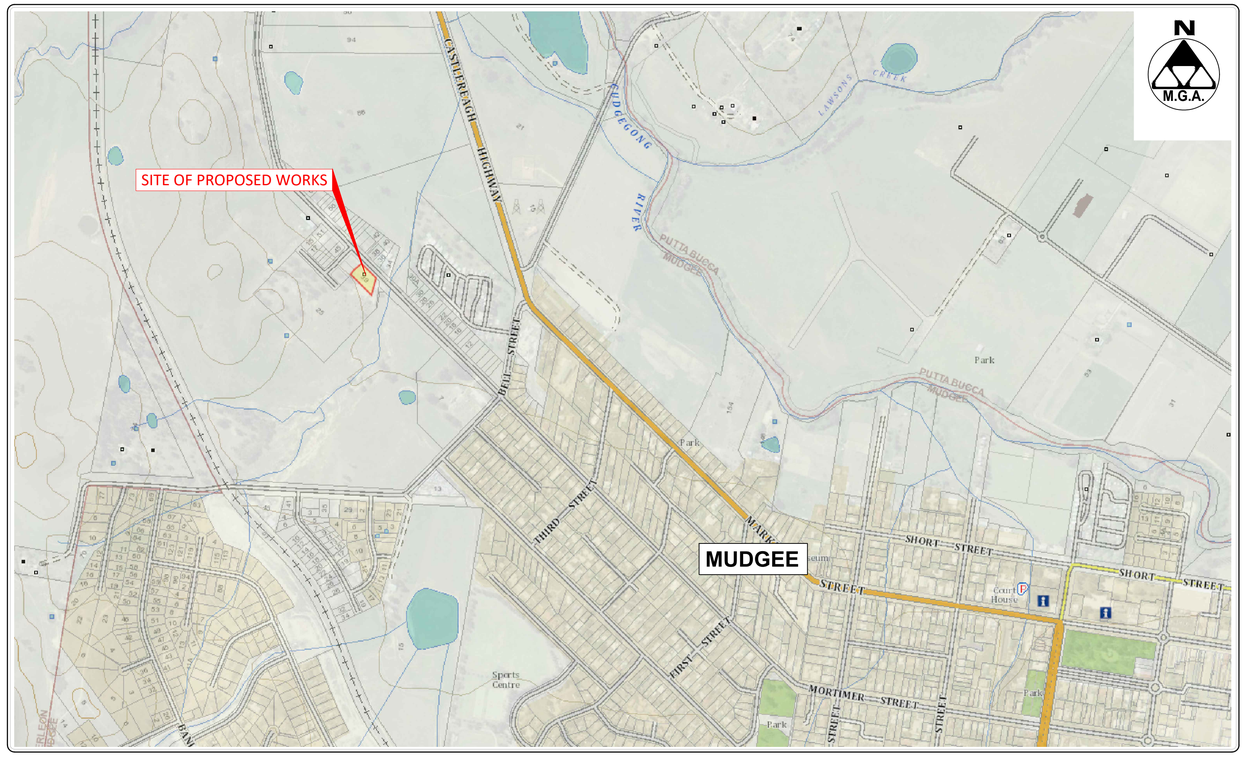
Proposed Extension to Gowrie Childcare Centre

Lot 30 in DP 1267157

39 Salesyards Lane, MUDGEE, NSW, 2850

SCHEDULE OF DRAWINGS

SHEET No.	DESCRIPTION
41821-C00	COVER SHEET AND DRAWING SCHEDULE
41821-C01	EXISTING SITE PLAN
41821-C02	PROPOSED SITE PLAN
41821-C10	PROPOSED STORMWATER MANAGEMENT PLAN
41821-C11	GENERAL NOTES & TYPICAL DETAILS - STORMWATER MANAGEMENT DESIGN
41821-C20	PROPOSED SEWER & SEWER SERVICES PLAN
41821-C21	GENERAL NOTES & TYPICAL DETAILS - WATER & SEWER SERVICES DESIGN
41821-C30	PROPOSED CUT & FILL PLAN



LOCALITY PLAN
NOT TO REDUCTION RATIO

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A	04-07-2024	ISSUED FOR DA
B	28-08-2024	CUT & FILL PLAN ADDED

Project
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address
39 SALEYARDS LANE
MUDGEE NSW 2850
Client
GHQS PTY LTD

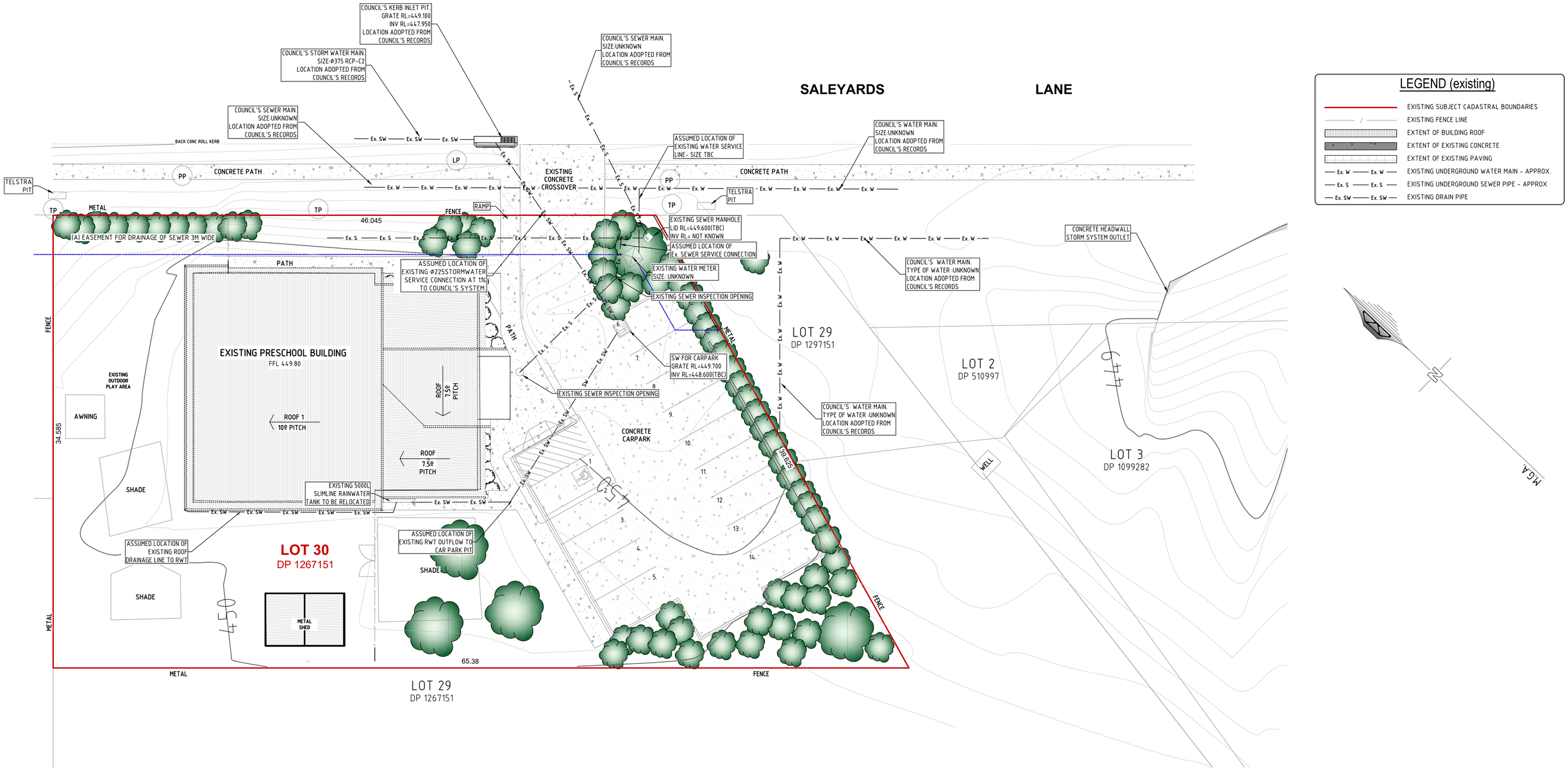
Drawing Title
CIVIL ENGINEERING COVER SHEET

Design ST
Drawn JS
Check DOS

Original Sheet Size A1
Revision B

Certification

Project No 41821
Drawing No C00



EXISTING SITE PLAN

REDUCTION RATIO 1:150 @ A1
1:300 @ A3

SCALE 1:150(A1)

0 1 2 4 6 8 10

0 1 2 4 6 8 10

SCALE 1:300(A3)

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Project
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address
39 SALEYARDS LANE
MUDGEE NSW 2850
Client
GHQS PTY LTD

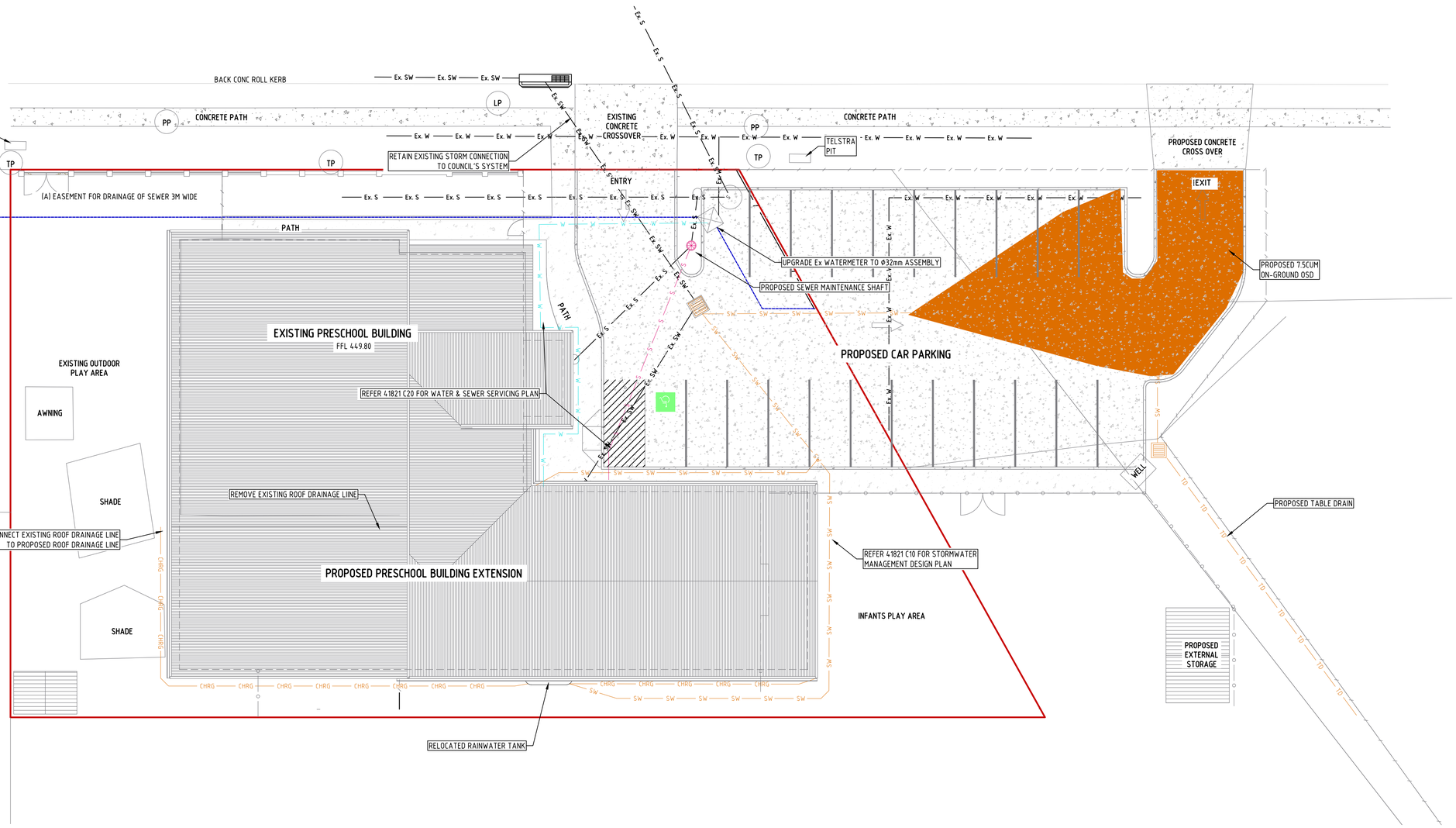
Drawing Title
EXISTING SITE PLAN

Design ST
Drawn JS
Check DOS

Original Sheet Size A1
Revision A

Certification

Project No 41821
Drawing No C01



LEGEND (existing)

- EXISTING SUBJECT CADASTRAL BOUNDARIES
- EXISTING & PROPOSED FENCE LINE
- EXTENT OF BUILDING ROOF
- EXTENT OF EXISTING CONCRETE
- EXTENT OF EXISTING PAVING
- Ex. W — EXISTING UNDERGROUND WATER MAIN - APPROX.
- Ex. S — EXISTING UNDERGROUND SEWER PIPE - APPROX
- Ex. SW — EXISTING DRAIN PIPE

LEGEND (proposed)

- EXTENT OF PROPOSED ROOF
- PROPOSED CONCRETE
- CHRG — PROPOSED CHARGED ROOF LINE
- SW — PROPOSED UNDERGROUND STORMWATER PIPE
- PI — PROPOSED GRATED STORMWATER PIT (WITH SPEL STORMSACK IN HARDSTAND AREAS)
- KO — PROPOSED KERB ONLY
- S — PROPOSED SEWER PIPE (Ø AS SHOWN)
- W — PROPOSED WATER RETICULATION MAIN
- SMS — PROPOSED SEWER MAINTENANCE SHAFT

PROPOSED SITE PLAN

REDUCTION RATIO 1:150 @ A1
1:300 @ A3

SCALE 1:150(A1)

0 1 2 4 6 8 10

0 1 2 4 6 8 10

SCALE 1:300(A3)

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MUDGEE NSW 2850
Client
GHQS PTY LTD

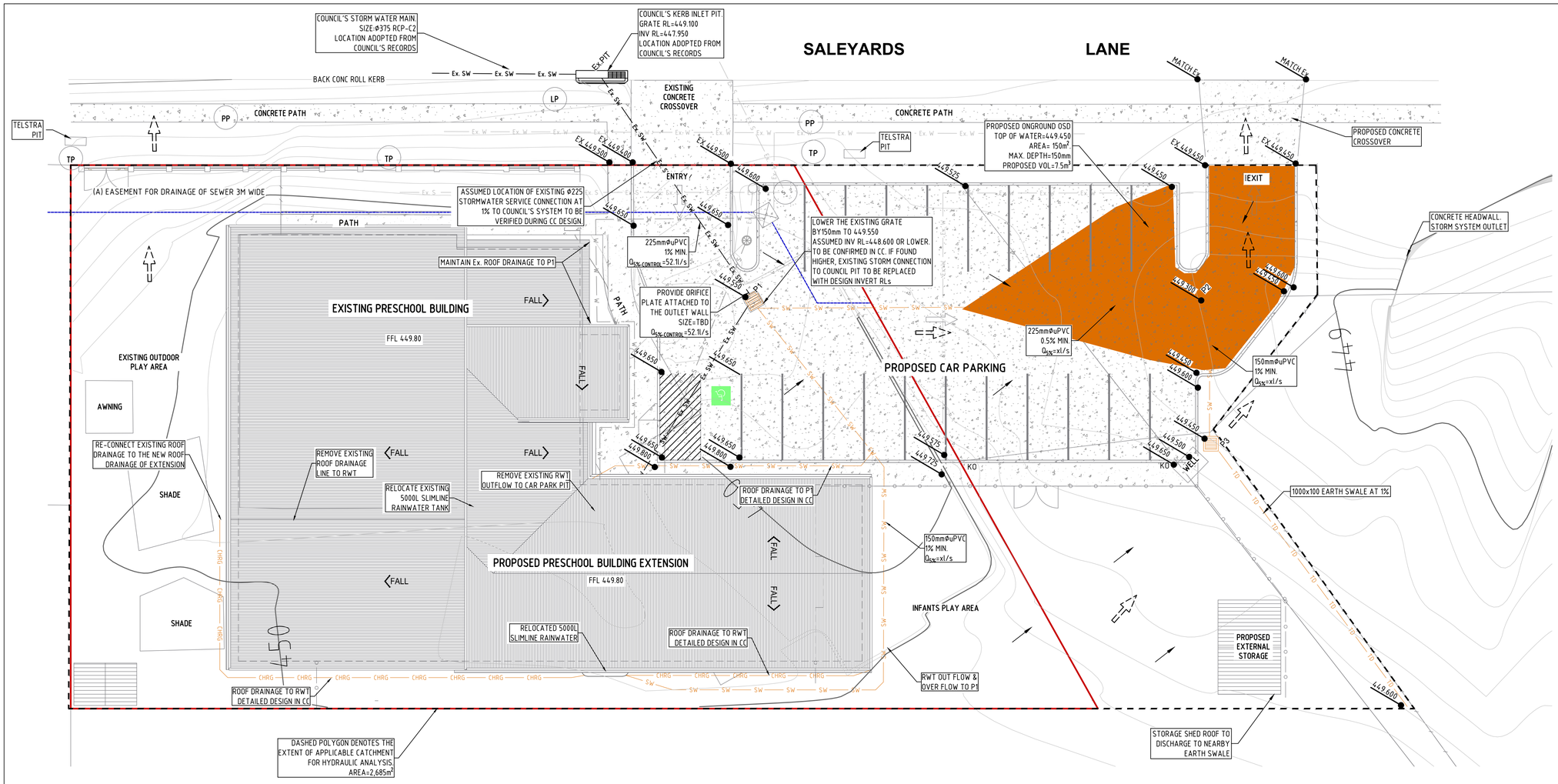
Drawing Title
PROPOSED SITE PLAN

Design ST
Drawn JS
Check DOS

Original Sheet Size A1
Revision A

Certification

Project No 41821
Drawing No C02



LEGEND (existing)

- EXISTING SUBJECT CADASTRAL BOUNDARIES
- EXISTING & PROPOSED FENCE LINE
- EXTENT OF BUILDING ROOF
- EXTENT OF EXISTING CONCRETE
- EXTENT OF EXISTING PAVING
- Ex. W — Ex. W — EXISTING UNDERGROUND WATER MAIN - APPROX.
- Ex. S — Ex. S — EXISTING UNDERGROUND SEWER PIPE - APPROX
- Ex. SW — Ex. SW — EXISTING DRAIN PIPE

LEGEND (proposed)

- EXTENT OF PROPOSED ROOF
- PROPOSED CONCRETE
- PROPOSED PLAY AREAS
- SW — SW — PROPOSED UNDERGROUND STORMWATER PIPE
- P1 — PROPOSED GRATED STORMWATER PIT (WITH SPEL STORMSACK IN HARDSTAND AREAS)
- PROPOSED SURFACE FALL DIRECTION
- PROPOSED MAJOR FLOW PATH, MIN 1:200
- EX 449.250 — PROPOSED/EXISTING GROUND LEVEL
- 150mmΦuPVC 1% MIN. Q5%=14l/s — PIPE SIZE & MATERIAL GRADIENT 5% AEP FLOW
- FALL — ROOF - DIRECTION OF FALL
- KO — PROPOSED KERB ONLY
- S — S — PROPOSED SEWER PIPE (Ø AS SHOWN)
- W — PROPOSED WATER RETICULATION MAIN
- SMS — PROPOSED SEWER MAINTENANCE SHAFT

STORMWATER PIT SCHEDULE

MARK	TOP R.L.	DEPTH (mm)	IL INLET	IL OUTLET	LxB	LID TYPE
EX.PIT	449.100	1250	448.400	447.950	EXISTING	KIP
PIT P1	449.550	1050	448.625	448.600	600x600	HD GRATED (GALV)- SPELL STORMSACK
PIT P2	449.350	650	448.800	448.775	600x600	HD GRATED (GALV)- SPELL STORMSACK
PIT P3	449.450	550	-	448.900	600x600	MD GRATED (GALV)

PROPOSED STORMWATER MANAGEMENT PLAN

REDUCTION RATIO 1:150 @ A1
1:300 @ A3

SCALE 1:150(A1)

0 1 2 4 6 8 10

0 1 2 4 6 8 10

SCALE 1:300(A3)

HYDRAULIC CALCULATIONS

1. PRE & POST DEVELOPMENT ANALYSIS
   DESIGN CALCULATIONS AS PER AS3500.3-2021
   A) PRE-DEVELOPED:
   - -TOTAL APPLICABLE CATCHMENT AREA (A) = 2,685 sq.m
   - -RAINFALL INTENSITY (I) = 147 mm/hr (5min 5% AEP)
   - -Cr = RUNOFF COEFFICIENT FOR ROOF AREA = 1.0
   - -Ar = TOTAL ROOF AREA= 430sq.m
   - -Ci = RUNOFF COEFFICIENT FOR UNROOFED IMPERVIOUS AREA = 0.9
   - -Ai = TOTAL UNROOFED IMPERVIOUS AREA= 535 sq.m
   - -Cp = RUNOFF COEFFICIENT FOR PERVIOUS AREA = 0.3
   - -Ap = TOTAL PERVIOUS GRASS AREA = 1,720 sq.m
   - -TOTAL FLOW Q_{PRE} = (Cr Ar + Ci Ai + Cp Ap). I / 3600 = 58.3 l/s

   B) POST-DEVELOPED FLOW TO PIT :
   - -TOTAL APPLICABLE CATCHMENT AREA (A) = 2,685 sq.m
   - -RAINFALL INTENSITY (I) = 147mm/hr (5min 5% AEP)
   - -Cr = RUNOFF COEFFICIENT FOR ROOF AREA = 1.0
   - -Ar = TOTAL ROOF AREA= 920 sq.m
   - -Ci = RUNOFF COEFFICIENT FOR DRIVEWAY IMPERVIOUS AREA = 0.9
   - -Ai = TOTAL UNROOFED CONCRETE AREA= 775 sq.m
   - -Cp = RUNOFF COEFFICIENT FOR PERVIOUS AREA = 0.3
   - -Ap = TOTAL PERVIOUS GRASS AREA = 990 sq.m
   - -TOTAL FLOW Q_{POST} = (Cr Ar + Ci Ai + Cp Ap). I / 3600) = 78.2 l/s

2. CONTROLLED FLOW FROM RWT & OSD
   A) REQUIRED VOLUME OSD = (78.2-58.3)x5x60/1000=5.97CUM
   B) PROPOSED CAR PARK OSD VOLUME = 7.5 m^3
   C) OSD-BY-PASS= 6.1 l/S

DESIGN NOTE:
5% AEP, 5 MIN. INTERVAL
RAINFALL INTENSITY =147mm/hr

SUBMISSION FOR DA

barnson. DESIGN . PLAN . MANAGE

BARNSON PTY LTD

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Rev	Date	Description
A	04-07-2024	ISSUED FOR DA

Project
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address
39 SALEYARDS LANE
MUDGEE NSW 2850
Client
GHQS PTY LTD

Drawing Title
PROPOSED STORMWATER MANAGEMENT PLAN

Design ST
Drawn JS
Check DOS

Original Sheet Size A1
Revision A

Certification

Project No 41821
Drawing No C10

SITEWORKS NOTES

1. ORIGIN OF LEVELS :- AHD
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
3. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS, THE SPECIFICATIONS AND THE DIRECTIONS OF THE SUPERINTENDENT.
4. EXISTING SERVICES HAVE BEEN OBTAINED FROM SURFACE INSPECTION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND THE LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
5. WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
6. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A QUALIFIED SURVEYOR.
7. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOM OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
8. ON COMPLETION OF CONSTRUCTION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS.
9. MAKE SMOOTH TRANSITION TO EXISTING AREAS.
10. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY DIVERSION DRAINS AND MOUNDS TO ENSURE THAT AT ALL TIMES EXPOSED SURFACES ARE FREE DRAINING AND WHERE NECESSARY EXCAVATE SUMPS AND PROVIDE PUMPING EQUIPMENT TO DRAIN EXPOSED AREAS. ALL WORK TO BE UNDERTAKEN WITH ADHERENCE TO THE REQUIREMENTS OF THE SOIL AND WATER MANAGEMENT PLAN.
11. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, STRUCTURAL, HYDRAULIC AND MECHANICAL DRAWINGS AND SPECIFICATIONS.

SURVEY NOTES

1. CONTOURS SHOWN DEPICT THE TOPOGRAPHY. EXCEPT AT SPOT LEVELS SHOWN THEY DO NOT REPRESENT THE EXACT LEVEL AT ANY PARTICULAR POINT.
2. SERVICES SHOWN HEREON HAVE BEEN DETERMINED FROM VISUAL EVIDENCE AND ARE INDICATIVE ONLY. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE THE RELEVANT AUTHORITY SHOULD BE CONTACTED TO ESTABLISH DETAILED LOCATION AND DEPTH.

PIPE TRENCH - FILL NOTES:

1. BEDDING SAND

   BEDDING SAND SHALL BE GRANULAR MATERIAL HAVING A LOW PERMEABILITY AND HIGH STABILITY WHEN SATURATED, CONFORMING TO THE GRADING LIMITS FOR BEDDING SAND AS INDICATED IN THE CONTRACT DOCUMENTS. BEDDING SAND SHALL BE COMPACTED TO A DENSITY INDEX OF 95% AS DETERMINED IN ACCORDANCE WITH AS1289.

2. APPROVED IMPORTED GRANULAR FILL

   ONLY IMPORTED GRANULAR FILL MATERIAL APPROVED BY THE SUPERINTENDENT SHALL BE USED. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK TO A DRY DENSITY OF 100% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL AND WITH A MOISTURE CONTENT NO MORE THAN 1% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.

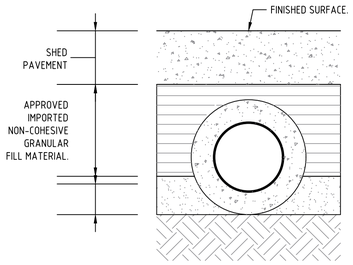
3. ORDINARY EXCAVATED FILL MATERIAL

   ORDINARY EXCAVATED FILL MATERIAL IS EXCAVATED TRENCH MATERIAL THAT IS FREE OF VEGETABLE MATTER, HUMUS, LARGE CLAY LUMPS AND ROCK BOULDERS. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK, TO A DENSITY OF 95% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL WITH A MOISTURE CONTENT OF NOT MORE THAN 1% ABOVE THE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.

STORMWATER NOTES

1. ALL DOWNPIPE LINES SHALL BE SEWER GRADE uPVC WITH SOLVENT WELD JOINTS (U.N.O)
2. EQUIVALENT STRENGTH VCP OR FCP PIPES MAY BE USED.
3. MINIMUM GRADE TO STORMWATER LINES TO BE 0.5% MINIMUM (U.N.O)
4. CONTRACTORS TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
5. ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
6. APPROVED PRECAST PITS MAY BE USED.
7. WHERE TRENCHES ARE IN ROCK, THE PIPE SHALL BE BEDDED ON A MIN. 50mm CONCRETE BED (75mm THICK BED OF 12mm BLUE METAL) UNDER THE BARREL OF THE PIPE. THE PIPE COLLAR AT NO POINT SHALL BEAR THE ROCK. IN OTHER THAN ROCK, PIPES SHALL BE LAID ON A 75mm THICK SAND BED. IN ALL CASES, BACKFILL THE TRENCH WITH THE SAND TO 200mm ABOVE THE PIPE .WHERE THE PIPE IS UNDER PAVEMENTS, BACKFILL REMAINDER OF TRENCH WITH SAND OR APPROVED GRANULAR BACKFILL COMPACTED IN 150mm LAYERS TO 98% MAX. DRY DENSITY.
8. WHERE STORMWATER LINES PASS UNDER FLOOR SLABS, SEWER GRADE RUBBER RING JOINTS ARE TO BE USED.
9. ALL PIPES IN THE ROADWAY AND FOOTPATH AREAS, WHERE THE DEPTH OF PIPE IS LESS THAN 500mm FROM THE FINISHED SURFACE LEVEL ARE TO BE CONCRETE ENCASED.

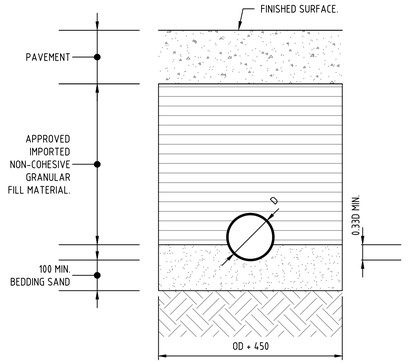
INSPECTION HOLD POINTS
1. INSTALLATION OF SEDIMENT & EROSION CONTROL MEASURES.
2. WATER & SEWER LINE INSTALLATION PRIOR TO BACKFILL.
3. ESTABLISHMENT OF LINE & LEVEL FOR KERB & GUTTER PLACEMENT.
4. ROAD PAVEMENT CONSTRUCTION.
5. ROAD PAVEMENT SURFACING.
6. PRACTICAL COMPLETION.
SERVICES INSTALLATION
1. INSTALLATION OF ALL UUNDERGROUND PIPES BE INSTALLED PRIOR TO INSTALLATION OF ROAD PAVEMENT.



TYPICAL PIPE ENCASEMENT

SCALE 1:10

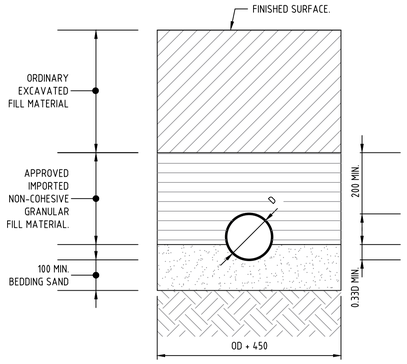
NOTE: PIPE COLLAR IS NOT TO REST ON ORIGINAL MATERIAL



TYPICAL SECTION TRENCH IN ROADWAY

SCALE 1:10

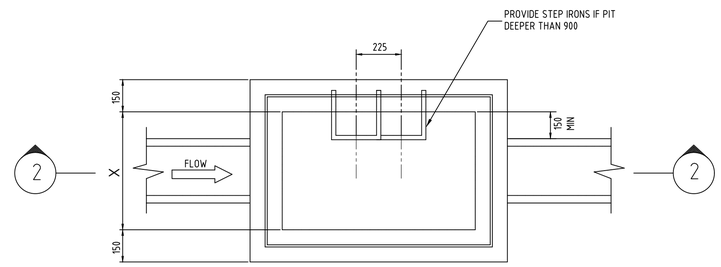
NOTE: PIPE COLLAR IS NOT TO REST ON ORIGINAL MATERIAL



TYPICAL SECTION EARTH FOUNDATION TRENCH

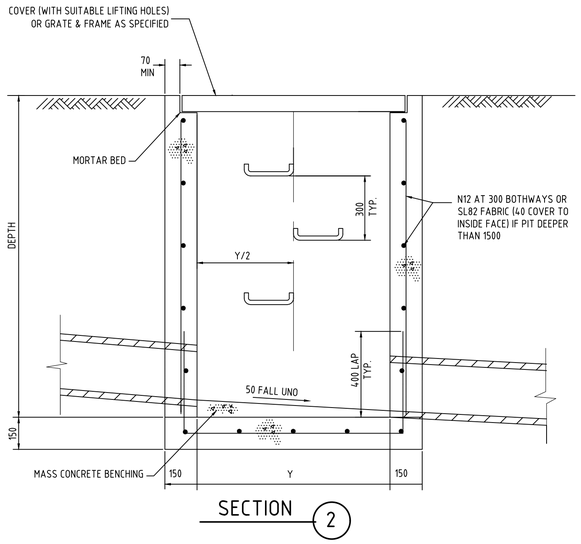
SCALE 1:10

NOTE: PIPE COLLAR IS NOT TO REST ON ORIGINAL MATERIAL

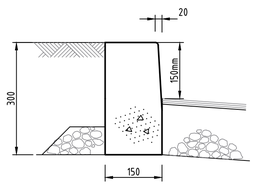


PLAN
GRATED INLET PIT
N.T.S.

PIT DIMENSIONS		
DEPTH	X	Y
D<600	450	450
D<1000	600	600
D<1500	600	900
1500<D<2400	900	900
D>2400	750	1200



SECTION 2



KO KERB ONLY

SCALE 1:10 (A1), 1:20 (A3)

SUBMISSION FOR DA

barnson
DESIGN . PLAN . MANAGE

BARNSON PTY LTD

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Rev	Date	Description
A	04-07-2024	ISSUED FOR DA

Project
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address
39 SALEYARDS LANE
MUDGEE NSW 2850
Client
GHQS PTY LTD

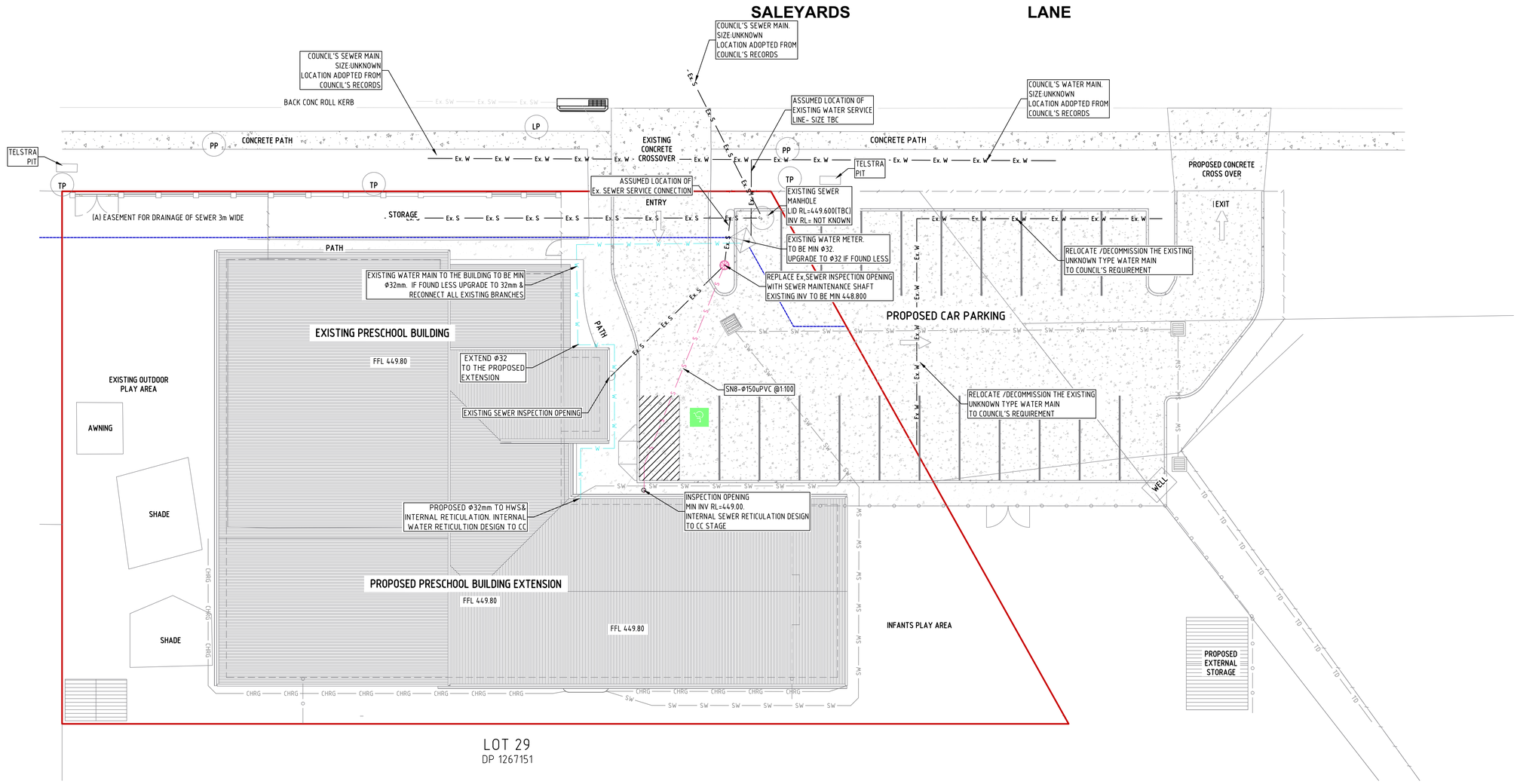
Drawing Title
GENERAL NOTES & TYPICAL DETAILS STORMWATER MANAGEMENT DESIGN

Design ST
Drawn JS
Check DOS

Original Sheet Size A1
Revision A

Certification

Project No 41821
Drawing No C11



PROPOSED WATER & SEWER SERVICES PLAN

REDUCTION RATIO 1:150 @ A1
1:300 @ A3

SCALE 1:150(A1)

0 1 2 4 6 8 10

0 1 2 4 6 8 10

SCALE 1:300(A3)

ISSUED FOR APPROVAL

barnson
DESIGN . PLAN . MANAGE

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Rev	Date	Description
A	04-07-2024	ISSUED FOR DA

Project
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address
39 SALEYARDS LANE
MUDGEE NSW 2850
Client
GHQS PTY LTD

Drawing Title
PROPOSED WATER& SEWER SERVICES PLAN

Design	ST	Original Sheet Size	A1
Drawn	JS		
Check	DOS	Revision	A

Certification

Project No 41821
Drawing No C20

SITEWORKS NOTES:

1. ORIGIN OF LEVELS :- A.H.D.
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
3. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS, THE SPECIFICATIONS AND THE DIRECTIONS OF THE SUPERINTENDENT.
4. EXISTING SERVICES HAVE BEEN OBTAINED FROM SURFACE INSPECTION ONLY. TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPER-INTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
5. WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
6. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A QUALIFIED SURVEYOR.
7. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOM OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
8. ON COMPLETION OF CONSTRUCTION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS. MAKE SMOOTH TRANSITION HAND EXCAVATE IN THESE AREAS.
9. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY DIVERSION DRAINS AND MOUNDS TO ENSURE THAT AT ALL TIMES EXPOSED SURFACES ARE FREE DRAINING AND WHERE NECESSARY EXCAVATE SUMPS AND PROVIDE PUMPING EQUIPMENT TO DRAIN EXPOSED AREAS.
10. ALL WORK TO BE UNDERTAKEN WITH ADHERENCE TO THE REQUIREMENTS OF THE SOIL AND WATER MANAGEMENT PLAN
11. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, STRUCTURAL, HYDRAULIC AND MECHANICAL DRAWINGS AND SPECIFICATIONS.

SEWER MAIN NOTES

1. ALL SEWER MAINS SHALL BE 150Φ CLASS SN8 RRJ UPVC PIPE. ALL GRAVITY LINES TO USE SEWER GRADE FITTINGS WHERE REQUIRED.
2. CONSTRUCTION OF SEWER MAINS AND MANHOLES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE WSA SEWERAGE CODE, WSA-02, 2002.
3. ANY OTHER SERVICES INCLUDING TELSTRA, GAS, POWER, WATER AND STORMWATER MUST BE LOCATED BEFORE WORK COMMENCES.
4. MANHOLES SHALL BE PRECAST CONCRETE FROM A SUPPLIER APPROVED BY COUNCIL AND HAVE STEP IRONS AT 300mm SPACINGS, A ROUND REMOVABLE LIGHT DUTY GATIC COVER (UNO) AND A MINIMUM INTERNAL DIAMETER OF 1020mm.
5. 150mmØ BOUNDARY RISERS SHALL BE PROVIDED TO EACH LOT TO THE REQUIREMENTS OF THE MANAGER, HEALTH & BUILDING.
6. RISERS AND SIDELINES TO BE CONSTRUCTED TO WSA-02 2002.
7. FLOW LINE CHANNELS AND INTERSECTIONS SHALL BE CONSTRUCTED THROUGH MANHOLES AS PER WSA-02 2002.
8. ALL SEWER MAINS TO BE PRESSURE TESTED AS PER WSA-02 2002 AND THE REQUIREMENTS OF COUNCIL.
9. ANY EXTERNAL MANHOLE DROPS TO BE IN ACCORDANCE WITH SEWER CODE OF AUSTRALIA DRAWING No.SEW__1303 MN DROP 460mm
10. THE MINIMUM DEPTH TO TOP OF PIPE SHALL BE 600mm, EXCEPT UNDER ROAD PAVEMENT WHERE MINIMUM COVER TO TOP OF PIPE SHALL BE 800mm MINIMUM UNLESS SHOWN OTHERWISE. PIPES WITH LESS COVER THAN THESE LIMITS TO BE CONCRETE ENCASED, AND DICL UNDER ROADS.
11. GRADES OF GRAVITY MAINS NOT TO BE FLATTER THAN 1 IN 80 (1.25%) FOR 150mm DIAMETER PIPES AS PER DESIGN, UNLESS APPROVED BY COUNCIL.
12. MANHOLES SHALL BE PLACED AT EACH CHANGE IN DIRECTION OR GRADE OF THE PIPE LINE AT INTERVALS ALONG THE LINE NOT EXCEEDING 80m.

BEDDING NOTES:

1. THE MINIMUM DEPTH TO TOP OF PIPE SHALL BE 600mm, EXCEPT UNDER ROAD PAVEMENT WHERE MINIMUM COVER TO TOP OF PIPE SHALL BE 800mm MINIMUM UNLESS SHOWN OTHERWISE. PIPES WITH LESS COVER THAN THESE LIMITS TO BE CONCRETE ENCASED, AND DICL UNDER ROADS.

GENERAL WATER RETICULATION NOTES:

1. ALL PLUMBING WORKS SHALL BE IN ACCORDANCE WITH AS 3500, LOCAL WATER AUTHORITY, THE BUILDING CODE OF AUSTRALIA, & WATER GUIDELINES.
2. LIASE WITH THE LOCAL WATER AUTHORITY AND PLUMBING INDUSTRY COMMISSION AND ALLOW TO PAY ALL REQUIRED FEES/LEVIES ETC. ASSOCIATED WITH THE WORKS.
3. FIXTURES, TAP WARE & FITTINGS SHALL BE SUPPLIED & INSTALLED AS PER ARCHITECTS SELECTION. REFER BUILDING WORKS SPECIFICATION. CONCEAL ALL PIPES WITHIN WALLS. NO SURFACE MOUNTED PIPING IS ACCEPTABLE. INCLUDE RETICULATION OF DOMESTIC HOT AND COLD WATER TO ALL FIXTURES - REFER ARCHITECT'S PLANS.
4. COORDINATE ALL WORKS WITH ALL OTHER SERVICES. CHECK LEVELS OF ALL PIPES PRIOR TO WORKS.
5. THE PLUMBING CONTRACTOR SHALL CARRY OUT ALL EXCAVATION, SHORING AND BACKFILLING. BACK FILL WITH CONSOLIDATED CLASS 2 CRUSHED ROCK WHERE SERVICES ARE BELOW PATHS, ROADS ETC. 98% COMPACTION DRY DENSITY.
6. ALL PIPEWORK SHALL BE CONCEALED WITHIN WALL CAVITIES, DUCTS, VANITIES AND CEILING SPACES. INSTALL PIPEWORK SUCH THAT NO WATER HAMMER OCCURS. SHOULD WATER HAMMER OCCUR RECTIFY AS REQUIRED.
7. PIPING, VALVES LOCATED UNDERGROUND SHALL WHERE REQUIRED BE WRAPPED WITH AN APPROVED MATERIAL.
8. THE PLUMBING CONTRACTOR SHALL SUPPLY AND INSTALL, TEST AND COMMISSION ALL PLUMBING SYSTEMS AS NOTED ON DRAWINGS. ALL WORKS TO BE IN ACCORDANCE WITH AS 3500 RELEVANT PARTS, LOCAL WATER AUTHORITY, FIRE AUTHORITY AND BUILDING CODE OF AUSTRALIA.
9. TESTING OF WATER SERVICES SHALL BE AS PER AS3500.1.2:1998 i.e. AT 1500KPa FOR A PERIOD OF NOT LESS THAN 30 MINUTES. WORKS MUST BE TESTED PRIOR TO CONCEALMENT. TEST SECTIONS OF WORK (STAGES) AS REQUIRED. TESTING OF FIRE SERVICES SHALL BE TO AUTHORITIES REQUIREMENTS INCLUDING FLOW/PRESSURE TESTS, HOSE REELS AND HYDROSTATIC TESTS BY AN INDEPENDENT FIRE TESTER.
10. MATERIALS:
    - WATER SERVICES TO BE POLYETHYLENE PIPE TO AS3500.1, FITTING TO COMPLY WITH AS 1589.
    - FIRE SERVICES SHALL BE COPPER TYPE A TO AS 1432
    - HOT WATER SERVICES SHALL BE LAGGED WITH 19mm ARMAFLEX.
11. PROVIDE CONCRETE THRUST BLOCKS AS PER PIPE MANUFACTURERS REQUIREMENTS AND AS PER AS3500.1.2:1998.
12. VALVES SHALL BE AS FOLLOWS:
    - TEMPERING VALVES RMC OR APPROVED EQUAL.
    - ALL ISOLATING VALVES TO BE BRONZED GATE VALVES WITH NON RISING SPINDLE TYPE.
    - ALL VALVES TO BE FULLY TESTED.
    - PROVIDE CAST IRON VALVE BOXES TO ALL IN GROUND VALVES.
    - PROVIDE ISOLATING VALVES AS REQUIRED BY STANDARDS.
13. PROVIDE VACUUM BREAKERS TO ALL HOSE BIBBS.
14. OTHER REQUIRMENTS: - PRIOR TO COMPLETION OF DEFECTS WARRANTY PERIOD CARRY OUT A MAINTENANCE VISIT AND CHECK THE COMPLETE SYSTEM INCLUDING ALL EQUIPMENT TAPWARE ETC.
15. ALLOW FOR ALL AUTHORITIES CHARGES INCLUDING METERS & INSTALLATION, APPLICATION FEES, CONNECTION AND TAPPING FEES FOR WATER. CLEARLY IDENTIFY IN TENDER WITH DETAILED BREAKDOWN.
16. PROVIDE IDENTIFICATION (LABELS TO ALL PIPING)
17. AVAILABLE WATER PRESSURE & FLOW RATES TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH AS3500.

MAINTENANCE SHAFT NOTES

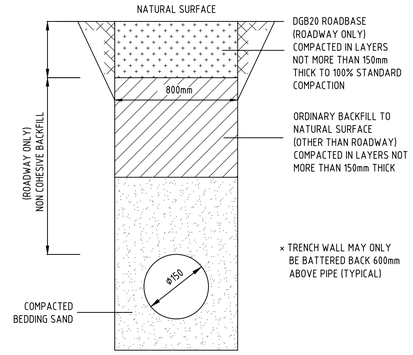
1. ALL DIMENSIONS IN MILLIMETERS
2. ALL CONNECTION TYPES SHOWN ARE APPLICABLE TO VC, PVC (SOLVENT WELD) AND PVC (RUBBER RING) PIPES UNLESS OTHERWISE SHOWN
3. INSTALL BRANCH CONNECTIONS & PROPERTY CONNECTIONS (AS SHOWN) IN RISER SHAFT (DROP JUNCTIONS WHERE SHOWN. MAXIMUM OF 1 RETICULATION INLET OR 2 PROPERTY CONNECTIONS.
4. MS MAY BE MANUFACTURED USING VARIOUS MATERIALS AND JOINTING SYSTEMS AS AUTHORISED BY WATER AGENCY
5. MAXIMUM DEPTH TO INVERT 5000
6. ADJUST MS TO PIPE GRADE BY TILTING MS CHAMBER. MAX. DEVIATION FROM VERTICAL OF THE RISER TO BE 1:10 OR A MAXIMUM OF 300 AT SURFACE.
7. ACCESS COVER, FRAME AND SUPPORT SLAB TO BE AS AUTHORISED BY MWRC

PIPE TRENCH - FILL NOTES:

1. BEDDING SAND
   BEDDING SAND SHALL BE GRANULAR MATERIAL HAVING A LOW PERMEABILITY AND HIGH STABILITY WHEN SATURATED, CONFORMING TO THE GRADING LIMITS FOR BEDDING SAND AS INDICATED IN THE CONTRACT DOCUMENTS. BEDDING SAND SHALL BE COMPACTED TO A DENSITY INDEX OF 95% AS DETERMINED IN ACCORDANCE WITH AS1289.

2. APPROVED IMPORTED GRANULAR FILL
   ONLY IMPORTED GRANULAR FILL MATERIAL APPROVED BY THE SUPERINTENDENT SHALL BE USED. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK TO A DRY DENSITY OF 100% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL AND WITH A MOISTURE CONTENT NO MORE THAN 1% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.

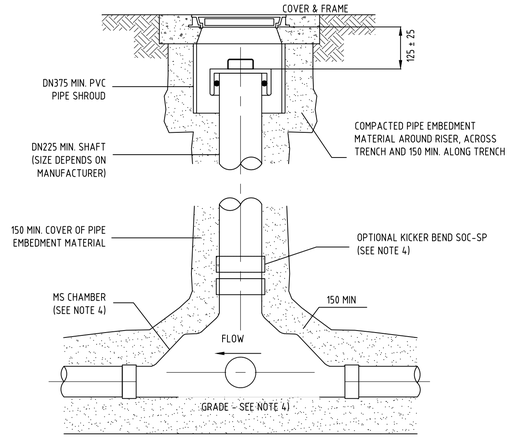
3. ORDINARY EXCAVATED FILL MATERIAL
   ORDINARY EXCAVATED FILL MATERIAL IS EXCAVATED TRENCH MATERIAL THAT IS FREE OF VEGETABLE MATTER, HUMUS, LARGE CLAY LUMPS AND ROCK BOULDERS. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK, TO A DENSITY OF 95% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL WITH A MOISTURE CONTENT OF NOT MORE THAN 1% ABOVE THE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.



TYPICAL SEWER TRENCH SECTION

N.T.S.

× INSTALLATION OF UPVC PIPES SHALL TO CONFORM TO AS2032-1977 "INSTALLATIONOF UPVC PIPE SYSTEMS", AS2566-1998 "BURIED FLEXIBLE PIPELINES", WSA-02 2002 AND MANUFACTURERS INSTRUCTIONS.



TYPICAL JUNCTION MAINTENANCE SHAFT ELEVATION

N.T.S.

SUBMISSION FOR DA

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DESIGN . PLAN . MANAGE

BARNSON PTY LTD

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email generalenquiry@barnson.com.au
web barnson.com.au

Rev	Date	Description
A	04-07-2024	ISSUED FOR DA

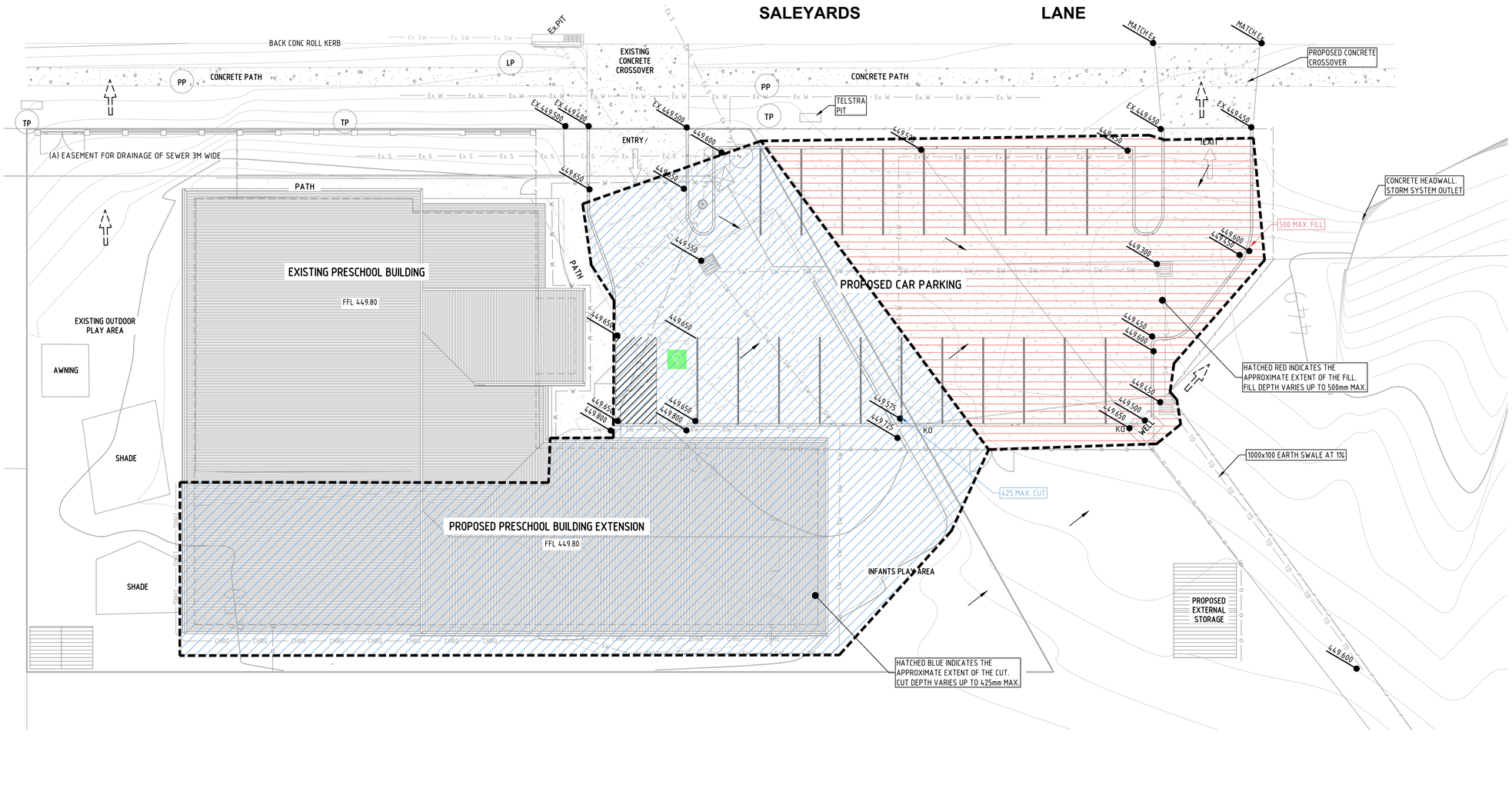
Project
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address
39 SALEYARDS LANE
MUDGEE NSW 2850
Client
GHQS PTY LTD

Drawing Title
GENERAL NOTES & TYPICAL DETAILS WATER & SEWER SERVICES DESIGN

Design	ST	Original Sheet Size	A1
Drawn	JS		
Check	DOS	Revision	A

Certification

Project No 41821
Drawing No C21



LEGEND (existing)

- EXISTING SUBJECT CADASTRAL BOUNDARIES
- EXISTING & PROPOSED FENCE LINE
- EXTENT OF BUILDING ROOF
- EXTENT OF EXISTING CONCRETE
- EXTENT OF EXISTING PAVING
- Ex. W — Ex. W — EXISTING UNDERGROUND WATER MAIN - APPROX.
- Ex. S — Ex. S — EXISTING UNDERGROUND SEWER PIPE - APPROX
- Ex. SW — Ex. SW — EXISTING DRAIN PIPE

LEGEND (proposed)

- EXTENT OF PROPOSED ROOF
- PROPOSED CONCRETE
- PROPOSED PLAY AREAS
- SW — SW — SW — PROPOSED UNDERGROUND STORMWATER PIPE
- P1 — PROPOSED GRATED STORMWATER PIT (WITH SPEL STORMSACK IN HARDSTAND AREAS)
- PROPOSED SURFACE FALL DIRECTION
- EX 449.250 / 449.250 — PROPOSED/EXISTING GROUND LEVEL
- KO — PROPOSED KERB ONLY
- S — S — PROPOSED SEWER PIPE (ø AS SHOWN)
- W — PROPOSED WATER RETICULATION MAIN
- SMS — PROPOSED SEWER MAINTENANCE SHAFT

PROPOSED CUT & FILL PLAN

REDUCTION RATIO 1:150 @ A1
1:300 @ A3

SCALE 1:150(A1)

0 1 2 4 6 8 10

0 1 2 4 6 8 10

SCALE 1:300(A3)

SUBMISSION FOR DA

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Rev	Date	Description
A	28-08-2024	ISSUED FOR DA

Project
EXTENSION TO GOWRIE CHILDCARE CENTRE
Site Address
39 SALEYARDS LANE
MUDGEE NSW 2850
Client
GHQS PTY LTD

Drawing Title
PROPOSED CUT & FILL PLAN

Design	ST	Original Sheet Size	A1
Drawn	JS		
Check	DOS	Revision	A

Certification

Project No 41821
Drawing No C30

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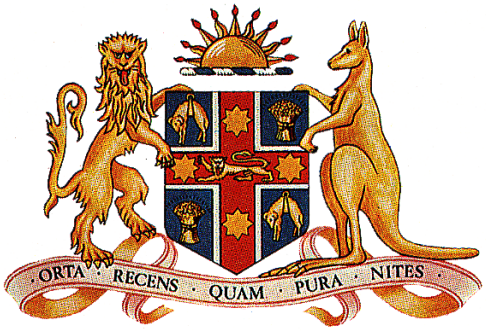
APPENDIX G

Child Care Planning Guidelines



Government Gazette

of the State of

New South Wales

Number 501–Planning and Heritage
Friday, 1 October 2021

The New South Wales Government Gazette is the permanent public record of official NSW Government notices. It also contains local council, non-government and other notices.

Each notice in the Government Gazette has a unique reference number that appears in parentheses at the end of the notice and can be used as a reference for that notice (for example, (n2019-14)).

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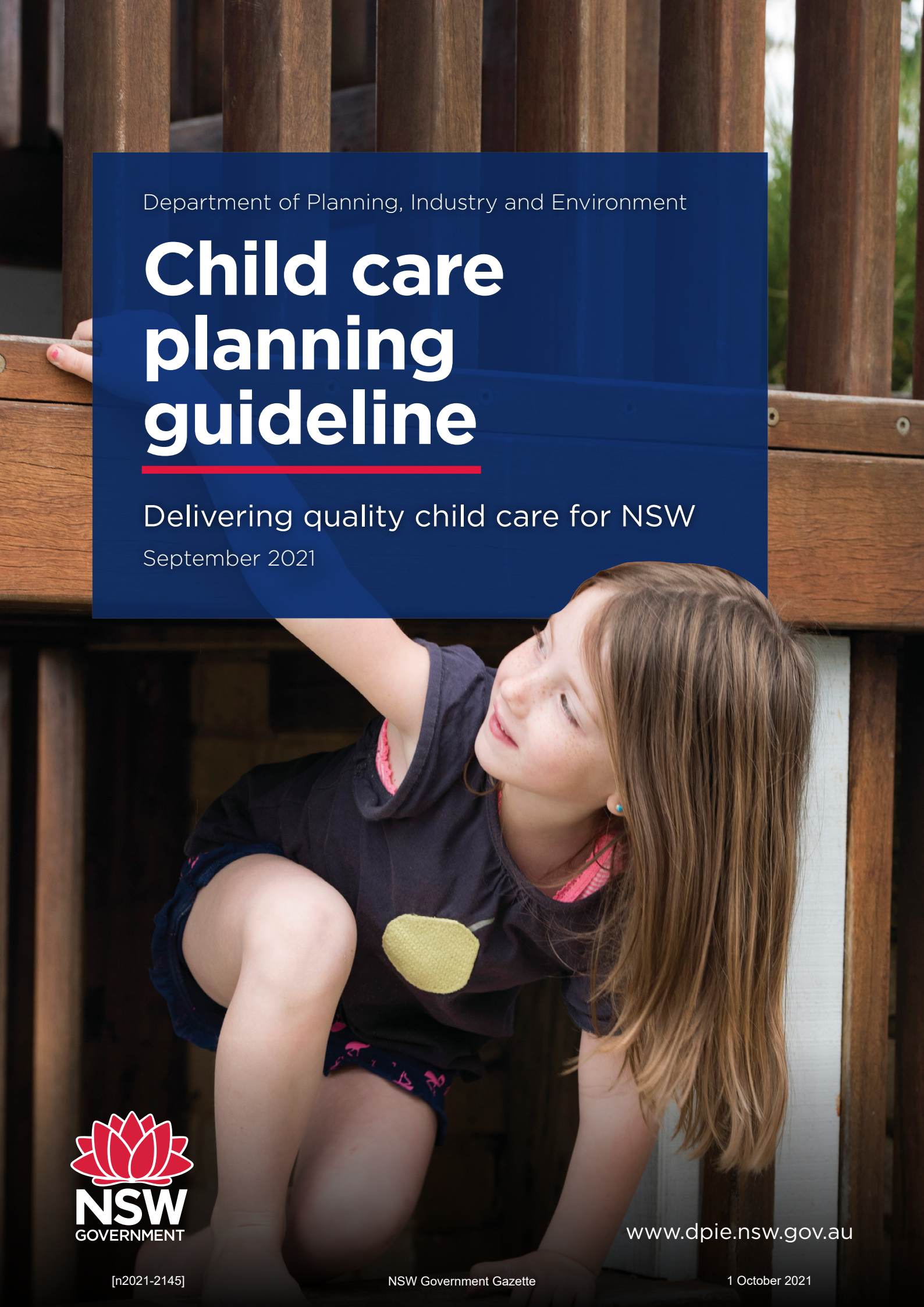
Government Printer



Department of Planning, Industry and Environment

Child care planning guideline

Delivering quality child care for NSW

September 2021

NSW GOVERNMENT

www.dpie.nsw.gov.au

Acknowledgement of country

The Department of Planning, Industry and Environment acknowledges the traditional custodians of the land and pays respect to Elders past, present and future.

We recognise Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to place and their rich contribution to society.

Find out more:
www.dpie.nsw.gov.au

Child care planning guideline -
Delivering quality child care for NSW

First published: 2017

Contents

Photography:
NSW Department of Planning, Industry and Environment

1. Introduction

1.1 About this Guideline

This Guideline establishes the assessment framework to deliver consistent planning outcomes and design quality for centre-based child care facilities in NSW.

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 (the Education SEPP) determines that a consent authority must take into consideration this Guideline when assessing a development application (DA) for a centre-based child care facility ('child care facility').

It also determines this Guideline will take precedence over a Development Control Plan, with some exceptions, where the two overlap in relation to a child care facility.

Child care facilities are essential pieces of economic and social infrastructure that support better labour participation and allow communities to thrive. They bring significant social benefits including support for working families and a focal point for building social connections in communities. However, these facilities can have other impacts on the neighbours and the surrounding environment that need to carefully considered through the design and assessment of the facilities.

This Guideline informs state and local government, industry and the community about how good design can maximise the safety, health and overall care of young children. At the same time, it aims to deliver attractive buildings that are sympathetic to the streetscape and appropriate for the setting while minimising any adverse impacts on surrounding areas. It will help achieve a high level of design that is practical and aligned with the National Quality Framework.

The Guideline will provide a consistent statewide planning and design framework for preparing and considering DAs for child care facilities.

1.2 Who is the Guideline for?

The Guideline is to assist and inform:

- developers, builders, child care providers and other professionals when preparing DAs for child care facilities
- planning professionals in state and local government when assessing development proposals by ensuring they know what defines a quality and compliant child care facility that can achieve subsequent service approval
- the wider community about planning and design considerations for the delivery of quality child care facilities.

1.3 What are the planning objectives?

The planning objectives of this Guideline are to:

- promote high quality planning and design of child care facilities in accordance with the physical requirements of the National Regulations
- ensure that child care facilities are compatible with the existing streetscape, context and neighbouring land uses
- minimise any adverse impacts of development on adjoining properties and the neighbourhood, including the natural and built environment
- deliver greater certainty to applicants, operators and the community by embedding the physical requirements for service approval into the planning requirements for child care facilities.

1.4 Where does this Guideline fit?

The Education SEPP generally provides that Development Control Plans seeking to regulate development for a child care facility will not apply, except for controls relating to building height, rear and side setbacks and car parking rates. For child care facilities in R2 Low Density Residential zones a floor space ratio of 0.5:1 applies, unless the relevant council's Local Environmental Plan or Development Control Plan specify an alternative floor space ratio. The following table helps different users understand how the Guideline fits with the Education SEPP, and how they should apply it.

The Guideline will also assist users whose proposals do not require development consent choose appropriate sites and locations and raise awareness of potential issues and impacts (for example providers seeking to temporarily re-locate after an emergency).

Table 1 - Application of Child Care Planning Guideline

Education SEPP Provision	Applicants	Consent authorities	Regulatory authority: Concurrence / Service Approval
Guideline as a consideration	Use the Guideline when preparing a development application to ensure once built, the development meets the physical requirements for the subsequent service approval application.	Consider Parts 2, 3 and 4 of the Guideline. Review the National Quality Framework Assessment Checklist.	Assess Concurrence request against relevant sections of Part 4 and the National Quality Framework Assessment Checklist
Controls in Development Control Plans	The provisions of the Child Care Planning Guideline will generally take precedence over a Development Control Plan, other than building height, side and rear setbacks and car parking rates. For child care facilities in R2 Low Density Residential zones a floor space ratio of 0.5:1 applies, unless the relevant council's Local Environmental Plan or Development Control Plan specify an alternative floor space ratio. Where there is no Development Control Plan, use all Parts of the Guideline to inform DA preparation.	The provisions of the Child Care Planning Guideline will generally take precedence over a Development Control Plan, other than building height, side and rear setbacks and car parking rates. For child care facilities in R2 Low Density Residential zones a floor space ratio of 0.5:1 applies, unless the relevant council's Local Environmental Plan or Development Control Plan specify an alternative floor space ratio. Where there are no Development Control Plan provisions consider the development application against the matters in the Guideline.	N/A
Concurrence	Complete and submit National Quality Framework Assessment Checklist. Prepare DA in accordance with Part 4 of the Guideline and Regulations 107 and 108 of the National Regulations.	Check National Quality Framework Assessment Checklist to assess need for concurrence. Refer to regulatory authority if insufficient unencumbered indoor or outdoor space provided.	Check National Quality Framework Assessment Checklist to review unencumbered space provisions – indoor and outdoor. Advise consent authority of determination regarding concurrence.

Note: The regulatory authority, as defined in the National Law and Regulations, is the Secretary of the NSW Department of Education.

2. Design quality principles

This Part outlines the design quality principles.

The design quality principles establish the broad design context guide of all new proposals for child care facilities, regardless of whether they are stand alone, part of a mixed-use development, modifications or retrofits of existing buildings or seeking to occupy premises without incurring new building works.

Good design is integral to creating sustainable and liveable communities. There is growing appreciation of the significant role that good design can play in education with increasing evidence that learning outcomes are closely related to the quality of learning environments. Factors such as air quality, ventilation, natural lighting, thermal comfort and acoustic performance have been shown to have a profound impact on learning, engagement, social interactions and competencies. They also contribute to wellbeing through creating a sense of belonging, self-esteem and confidence.

Principle 1 - Context

Good design responds and contributes to its context, including the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Well-designed child care facilities respond to and enhance the qualities and identity of the area including adjacent sites, streetscapes and neighbourhood.

Well-designed child care facilities take advantage of its context by optimising access by walking and public transport, public facilities and centres, respecting local heritage, and being responsive to the demographic, cultural and socio-economic makeup of the facility users and surrounding communities.

Principle 2 - Built form

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the surrounding area.

Good design achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements. Good design also uses a variety of materials, colours and textures.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

Contemporary facility design can be distinctive and unique to support innovative approaches to teaching and learning, while still achieving a visual appearance that is aesthetically pleasing, complements the surrounding areas, and contributes positively to the public realm.

Principle 3 - Adaptive learning spaces

Good facility design delivers high quality learning spaces and achieves a high level of amenity for children and staff, resulting in buildings and associated infrastructure that are fit-for-purpose, enjoyable and easy to use. This is achieved through site layout, building design, and learning spaces' fit-out.

Good design achieves a mix of inclusive learning spaces to cater for all children and different modes of learning. This includes appropriately designed physical spaces offering a variety of settings, technology and opportunities for interaction.

Principle 4 - Sustainability

Sustainable design combines positive environmental, social and economic outcomes.

This includes use of natural cross ventilation, sunlight and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and re-use of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.

Well-designed facilities are durable and embed resource efficiency into building and site design, resulting in less energy and water consumption, less generation of waste and air emissions and reduced operational costs.

Principle 5 - Landscape

Landscape and buildings should operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A contextual fit of well-designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Well-designed landscapes make outdoor spaces assets for learning. This includes designing for diversity in function and use, age-appropriateness and amenity.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks.

Principle 6 - Amenity

Good design positively influences internal and external amenity for children, staff and neighbours. Achieving good amenity contributes to positive learning environments and the well-being of children and staff.

Good amenity combines appropriate and efficient indoor and outdoor learning spaces, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, service areas and ease of access for all age groups and degrees of mobility.

Well-designed child care facilities provide comfortable, diverse and attractive spaces to learn, play and socialise.

Principle 7 - Safety

Well-designed child care facilities optimise the use of the built and natural environment for learning and play, while utilising equipment, vegetation and landscaping that has a low health and safety risk, and can be checked and maintained efficiently and appropriately.

Good child care facility design balances safety and security with the need to create a welcoming and accessible environment. It provides for quality public and private spaces that are inviting, clearly defined and allow controlled access for members of the community. Well-designed child care facilities incorporate passive surveillance and Crime Prevention Through Environmental Design (CPTED).

Well designed vehicular parking and access minimise traffic safety risks on children and staff.

3. Matters for consideration

This Part covers matters for consideration.

The considerations give guidance to applicants on how to design a high quality proposal that takes account of its surroundings and any potential environmental impacts the development may cause and to be mindful of potential impacts that may arise from existing uses and conditions within a locality.

The matters support the design principles and must be considered by the consent authority when assessing a DA for a child care facility. Child care facilities can be developed in a broad range of locations and need to be flexible in how they respond to the requirements and challenges this brings.

3.1 Site selection and location

Not all sites will be suitable for child care facilities. This Guideline aims to help applicants choose a suitable site for a new service or facility. The most important question for each applicant is: Is the neighbourhood a good "fit" for the proposal?

The location and physical context of a child care facility should be safe and healthy for children. There are several environmental hazards to be aware of when locating a new proposal, for example, bush fire and flood prone land, and contaminated land. In addition, local councils may identify areas of significant hazard in their planning instruments and policies.

Child care facilities should also be compatible with the surrounding land uses. The predominant issues will vary depending on the location and setting of the site, the type of development being proposed, and the type of surrounding land use.

Issues will differ depending on how urbanised or how rural the area is. While matters such as fire safety and evacuation may be a priority in a multi-storey building in metropolitan areas, impact on residential amenity may be more significant in suburban areas and potential impacts from agricultural activities such as aerial spraying or odours may be more important in rural areas.

Another important consideration is the location of child care facilities with regard to road safety. Child care facilities should be located where pedestrian and vehicular conflicts are minimised. Appropriately locating child care facilities and pedestrian paths can reduce the likelihood of incidents involving pedestrians and traffic from occurring and can reduce the severity of these incidents.

Road safety and traffic efficiency concerns can arise from child care facilities being located with direct access to roads with higher traffic volumes, higher operating speeds and more heavy vehicles. Where possible, locating child care facilities on sites adjoining and with access to local roads minimises the potential for conflicts between child pedestrians and traffic in the first instance.

Considerations

Objective: To ensure that appropriate zone considerations are assessed when selecting a site.

C1

For proposed developments in or adjacent to a residential zone, particularly if that zone is for low density residential uses consider:

- the acoustic and privacy impacts of the proposed development on the residential properties
- the setbacks and siting of buildings within the residential context
- visual amenity impacts (e.g. additional building bulk and overshadowing, local character)
- traffic and parking impacts of the proposal on residential amenity and road safety

For proposed developments in commercial and industrial zones, consider:

- potential impacts on the health, safety and wellbeing of children, staff and visitors with regard to local environmental or amenity issues such as air or noise pollution and local traffic conditions
- the potential impact of the facility on the viability of existing commercial or industrial uses.

For proposed developments in public or private recreation zones, consider:

- the compatibly of the proposal with the operations and nature of the community or private recreational facilities
- if the existing premises is licensed for alcohol or gambling
- if the use requires permanent or casual occupation of the premises or site
- the availability of on-site parking
- compatibility of proposed hours of operation with surrounding uses, particularly residential uses
- the availability of appropriate and dedicated sanitation facilities for the development.

For proposed developments on school, TAFE or university sites in Special Purpose zones consider:

- the compatibly of the proposal with the operation of the institution and its users
- the proximity of the proposed facility to other uses on the site, including premises licensed for alcohol or gambling
- proximity to sources of noise, such as places of entertainment or mechanical workshops
- proximity to odours, particularly at agricultural institutions
- previous uses of a premises such as scientific, medical or chemical laboratories, storage areas and the like.

Objective: To ensure that the site selected for a proposed child care facility is suitable for the use.

C2

When selecting a site, ensure that:

- the location and surrounding uses are compatible with the proposed development or use
- the site is environmentally safe including risks such as flooding, land slip, bushfires, coastal hazards
- there are no potential environmental contaminants on the land, in the building or the general proximity, and whether hazardous materials remediation is needed
- the characteristics of the site are suitable for the scale and type of development proposed having regard to:
    - length of street frontage, lot configuration, dimensions and overall size
    - number of shared boundaries with residential properties
- the development will not have adverse environmental impacts on the surrounding area, particularly in sensitive environmental or cultural areas
- where the proposal is to occupy or retrofit an existing premises, the interior and exterior spaces are suitable for the proposed use. Where the proposal relates to any heritage item, the development should retain its historic character and conserve significant fabric, setting or layout of the item.
- there are suitable and safe drop off and pick up areas, and off and on street parking
- the characteristics of the fronting road or roads (for example its operating speed, road classification, traffic volume, heavy vehicle volumes, presence of parking lanes) is appropriate and safe for the proposed use
- the site avoids direct access to roads with high traffic volumes, high operating speeds, or with high heavy vehicle volumes, especially where there are limited pedestrian crossing facilities

- it is not located closely to incompatible social activities and uses such as restricted premises, injecting rooms, drug clinics and the like, premises licensed for alcohol or gambling such as hotels, clubs, cellar door premises and sex services premises.

Objective: To ensure that sites for child care facilities are appropriately located.

C3

A child care facility should be located:

- near compatible social uses such as schools and other educational establishments, parks and other public open space, community facilities, places of public worship
- near or within employment areas, town centres, business centres, shops
- with access to public transport including rail, buses, ferries
- in areas with pedestrian connectivity to the local community, businesses, shops, services and the like.

Objective: To ensure that sites for child care facilities do not incur risks from environmental, health or safety hazards.

C4

A child care facility should be located to avoid risks to children, staff or visitors and adverse environmental conditions arising from:

- proximity to:
  - heavy or hazardous industry, waste transfer depots or landfill sites
  - Liquefied Petroleum Gas (LPG) tanks or service stations
  - water cooling and water warming systems
  - odour (and other air pollutant) generating uses and sources or sites which, due to prevailing land use zoning, may in future accommodate noise or odour generating uses
  - extractive industries, intensive agriculture, agricultural spraying activities
- any other identified environmental hazard or risk relevant to the site and/ or existing buildings within the site.

3.2 Local character, streetscape and the public domain interface

A detailed understanding of the overall site context will help create a well-designed and integrated child care facility. Context is the character and setting of the area within which the facility will sit. This character and setting is influenced by environmental, physical, economic and social factors.

Local character is what makes an area distinctive. It is created by the way built and natural elements in both the public realm and private domain interrelate with one another. Built form, bulk, scale and height as well as landscaping and good design all play a part in ensuring the character of an area is maintained while still allowing for new development to occur. Good design in the built environment is informed by and derived from its location, context and social setting.

The key priorities when responding to character and context are:

Communities - understanding social dynamics can help developments reinforce local communities.

Place - drawing inspiration from indigenous character and heritage can strengthen local identity.

Natural resources - maximising use of the intrinsic resources of the site can create more sustainable developments.

Connections - understanding existing street and road linkages can help develop an effective and integrated movement framework.

Feasibility - ensuring schemes are economically viable and deliverable.

Vision - understanding the aspirations of the site within the setting of the wider area.

Streetscape impacts are integral to local character and identity. Streetscape is particularly important in areas with a strong unified, environmental, architectural, design, planting or cultural character such as scenic protection areas, environmental protection areas or heritage and urban conservation areas.

The public domain interface is the transition area between the child care facility, its private or communal space at the street edge and the public domain. The interface contributes to the quality and character of the street.

Key components to consider when designing the interface include entries, fences and walls, changes in level, service locations interactions with outdoor play spaces and the location and size of street facing windows.

New development should also appropriately consider surrounding identified heritage items and identified heritage conservation areas. Local heritage provisions may apply to the proposal.

Consideration of local character

The local character of the surrounding neighbourhood should be considered when designing a child care facility. Child care facilities can have impacts on a local area, including traffic, noise, privacy impacts. These facilities may affect different localities in different ways depending on the existing development types and local character of the area.

Neighbours - Adjoining neighbours and those immediately surrounding the site may experience impacts from a proposed child care facility. Well-designed child care facilities reflect the local character, including adjacent sites and properties. Design should consider elements such as building orientation, building envelope (height and setbacks), floor space ratios, roof facades, construction material, positioning of open play space, if the site is a heritage item or in a heritage conservation area and car parking.

Neighbourhood - Well-designed child care facilities minimise adverse impacts, including on the natural and built neighbourhood. Facilities should reflect the neighbourhood, streetscapes and local character of the area, including nearby heritage items and heritage areas. The contextual fit of well-designed facilities can also be achieved by using landscaping to positively contribute to neighbourhood amenity.

Considerations

Objective: To ensure that the child care facility is compatible with the local character and surrounding streetscape.

C5

The proposed development should:

- contribute to the local area by being designed in such a way to respond to the character of the locality and existing streetscape
- build on the valued characteristics of the neighbourhood and draw from the physical surrounds, history and culture of place
- reflect the predominant form of surrounding land uses, particularly in low density residential areas
- recognise and respond to predominant streetscape qualities, such as building form, scale, materials and colours
- include design and architectural treatments that respond to and integrate with the existing streetscape and local character
- use landscaping to positively contribute to the streetscape and neighbouring and neighbourhood amenity
- integrate car parking into the building and site landscaping design in residential areas
- in R2 Low Density Residential zones, limit outdoor play space to the ground level to reduce impacts on amenity from acoustic fences/barriers onto adjoining residence, except when good design solutions can be achieved.

Objective: To ensure clear delineation between the child care facility and public spaces

C6

Create a threshold with a clear transition between public and private realms, including:

- fencing to ensure safety for children entering and leaving the facility
- windows facing from the facility towards the public domain to provide passive surveillance to the street as a safety measure and a connection between the facility and the community
- integrating existing and proposed landscaping with fencing.

C7

On sites with multiple buildings and/or entries, pedestrian entries and spaces associated with the child care facility should be differentiated to improve legibility for visitors and children by changes in materials, plant species and colours.

C8

Where development adjoins public parks, open space or bushland, the facility should provide an appealing streetscape frontage by adopting some of the following design solutions:

- clearly defined street access, pedestrian paths and building entries
- low fences and planting which delineate communal/private open space from adjoining public open space
- minimal use of blank walls and high fences.

Objective: To ensure that front fences and retaining walls respond to and complement the context and character of the area and do not dominate the public domain.

C9

Front fences and walls within the front setback should be constructed of visually permeable materials and treatments. Where the site is listed as a heritage item, adjacent to a heritage item or within a conservation area front fencing should be designed in accordance with local heritage provisions.

C10

High solid acoustic fencing may be used when shielding the facility from noise on classified roads. The walls should be setback from the property boundary with screen landscaping of a similar height between the wall and the boundary.

3.3 Building orientation, envelope, building design and accessibility

Orientation refers to the position of a building and its internal spaces in relation to its site, the street, the subdivision and neighbouring buildings, vistas and weather factors such as sun and wind. Building orientation influences the urban form of the street and building address. In residential areas, orientation of the facility may directly affect residential amenity including solar access and visual and acoustic privacy.

The building envelope is determined by the permissible building height and site setbacks. The following elements of building design make up the overall form.

Building height - helps shape the desired future character of a place relative to its setting and topography.

Setbacks - are usually expressed as the distance of a building from property boundaries. Setbacks are important to the amenity of new development and buildings on adjacent sites. Setbacks to the street establish the alignment of buildings along a street frontage. Combined with building height and road reservation, street setbacks define the proportion and scale of the street and contribute to the character of the public domain.

Floor space ratios - of buildings on a site is the ratio of the gross floor area of all buildings within the site to the site area. Floor space ratios can be used to define and regulate the bulk and scale of developments.

Architectural form - defines a building as viewed from a distance and makes a strong contribution to local character. Aesthetics and articulation can assist in refining the form and enhancing it with scale and proportion by providing a balanced composition of solid and void.

Roof design - forms an important part of the skyline and may provide opportunities for open space. Roof design can reduce a building's bulk and visual impact.

Facades - contribute to the visual interest of the building and the character of the local area. They have an impact on the public domain where they face the street and may influence the amenity of neighbouring buildings.

Materials and finishes - including consistency of finish, durability of surface finishes and fixtures, resistance to damage and vandalism, and minimal recurrent maintenance provide visual interest and create good amenity and a positive visual impact.

Buildings for child care services must be designed so that they are safe and secure for children, staff and other users.

Child care facilities need to allow equitable access by all members of the community, including those with disabilities. They should also provide suitable play areas for children with disabilities.

Considerations

Objective: To respond to the streetscape and site, mitigate impacts on neighbours, while optimising solar access and opportunities for shade.

C11

Orient a development on a site and design the building layout to:

- ensure visual privacy and minimise potential noise and overlooking impacts on neighbours by
  - facing doors and windows away from private open space, living rooms and bedrooms in adjoining residential properties
  - placing play equipment away from common boundaries with residential properties
  - locating outdoor play areas away from residential dwellings and other sensitive uses
- optimise solar access to internal and external play areas
- avoid overshadowing of adjoining residential properties
- minimise cut and fill
- ensure buildings along the street frontage define the street by facing it
- ensure where a child care facility is located above ground level, outdoor play areas are protected from wind and other climatic conditions.

Objective: To ensure that the scale of the child care facility is compatible with adjoining development and the impact on adjoining buildings is minimised.

C12

The following matters may be considered to minimise the impacts of the proposal on local character:

- building height should be consistent with other buildings in the locality
- building height should respond to the scale and character of the street
- setbacks should allow for adequate privacy for neighbours and children at the proposed child care facility
- setbacks should provide adequate access for building maintenance
- setbacks to the street should be consistent with the existing character.

Where a Local Environmental Plan or Development Control Plan do not specify a floor space ratio for the R2 Low Density Residential zone, a floor space ratio of 0.5:1 is to apply to a child care facility in the R2 zone.

Objective: To ensure that setbacks from the boundary of a child care facility are consistent with the predominant development within the immediate context.

C13

Where there are no prevailing setback controls minimum setback to a classified road should be 10 metres. On other road frontages where there are existing buildings within 50 metres, the setback should be the average of the two closest buildings. Where there are no buildings within 50 metres, the same setback is required for the predominant adjoining land use.

C14

On land in a residential zone, side and rear boundary setbacks should observe the prevailing setbacks required for a dwelling house.

Objective: To ensure that buildings are designed to create safe environments for all users.

C15

Entry to the facility should be limited to one secure point which is:

- located to allow ease of access, particularly for pedestrians
- directly accessible from the street where possible
- directly visible from the street frontage
- easily monitored through natural or camera surveillance
- not accessed through an outdoor play area.
- in a mixed-use development, clearly defined and separate from entrances to other uses in the building.

Objective: To ensure that child care facilities are designed to be accessible by all potential users.

C16

Accessible design can be achieved by:

- providing accessibility to and within the building in accordance with all relevant legislation
- linking all key areas of the site by level or ramped pathways that are accessible to prams and wheelchairs, including between all car parking areas and the main building entry
- providing a continuous path of travel to and within the building, including access between the street entry and car parking and main building entrance. Platform lifts should be avoided where possible
- minimising ramping by ensuring building entries and ground floors are well located relative to the level of the footpath.

Note: The National Construction Code and the Disability (Access to Premises – Buildings) Standards 2010 set out the requirements for access to buildings for people with disabilities.

3.4 Landscaping

Landscaping of child care facilities can play an important role in integrating facilities into the surrounding streetscape and context. Good integration of facilities benefits neighbours and future residents.

Special attention is required when designing landscaping for sites on bush fire prone land (for detailed guidance refer to Planning for Bush Fire Protection and NSW Rural Fire Service website.) The type, location and ongoing maintenance of landscaping within the Asset Protection Zone (APZ) is a necessary Bush Fire Protection Measure.

Considerations

Objective: To provide landscape design that contributes to the streetscape and amenity.

C17

Appropriate planting should be provided along the boundary integrated with fencing. Screen planting should not be included in calculations of unencumbered outdoor space.

Use the existing landscape where feasible to provide a high quality landscaped area by:

- reflecting and reinforcing the local context
- incorporating natural features of the site, such as trees, rocky outcrops and vegetation communities into landscaping.

C18

Incorporate car parking into the landscape design of the site by:

- planting shade trees in large car parking areas to create a cool outdoor environment and reduce summer heat radiating into buildings
- taking into account streetscape, local character, pedestrian safety and context when siting car parking areas within the front setback
- using low level landscaping to soften and screen parking areas.

3.5 Visual and acoustic privacy

Visual privacy is about allowing residents on adjacent properties to occupy their private space without being overlooked by child care facilities and ensuring child care facilities are not overlooked by neighbouring properties. Privacy is influenced by the activities in each of the spaces where overlooking may occur, the times and frequency these spaces are being used, the expectations of occupants for privacy and residents' willingness to reduce overlooking with screening devices.

Acoustic privacy involves reducing sound transmission between activity rooms and outdoor play areas of the child care facility and its neighbours. Design and site layout are the main ways of reducing acoustic impacts for example:

- site context and orientation of the building
- building design including the location of public and private open spaces and the arrangement of internal spaces
- physical relationship to surrounding uses
- building separation and providing physical barriers between the outdoor areas and the noise receivers.

Outdoor areas near residential uses can be designed to encourage more passive activities. Acoustic attenuation measures can be used to reduce reflected noise and once a facility is operating the installation of public address systems should be discouraged.

Considerations

Objective: To protect the privacy and security of children attending the facility.

C19

Open balconies in mixed use developments should not overlook facilities nor overhang outdoor play spaces.

C20

Minimise direct overlooking of indoor rooms and outdoor play spaces from public areas through:

- appropriate site and building layout
- suitably locating pathways, windows and doors
- permanent screening and landscape design.

Objective: To minimise impacts on privacy of adjoining properties.

C21

Minimise direct overlooking of main internal living areas and private open spaces in adjoining developments through:

- appropriate site and building layout
- suitable location of pathways, windows and doors
- landscape design and screening.

Objective: To minimise the impact of child care facilities on the acoustic privacy of neighbouring residential developments.

C22

A new development, or development that includes alterations to more than 50 per cent of the existing floor area, and is located adjacent to residential accommodation should:

- provide an acoustic fence along any boundary where the adjoining property contains a residential use. An acoustic fence is one that is a solid, gap free fence
- ensure that mechanical plant or equipment is screened by solid, gap free material and constructed to reduce noise levels e.g. acoustic fence, building, or enclosure.

C23

A suitably qualified acoustic professional should prepare an acoustic report which will cover the following matters:

- identify an appropriate noise level for a child care facility located in residential and other zones
- determine an appropriate background noise level for outdoor play areas during times they are proposed to be in use
- determine the appropriate height of any acoustic fence to enable the noise criteria to be met.

3.6 Noise and air pollution

Child care facilities located near major roads, rail lines, and beneath flight paths are likely to be subject to noise impacts. Other noisy environments such as industrial areas and substations may impact on the amenity and well-being of the children and staff. The location of child care facilities should be selected to avoid or minimise the potential impact of external sources of significant noise.

The Protection of the Environment Operations Act 1997 provides the statutory framework for managing air emissions in NSW and should be consulted when proposing facilities in or close to industrial areas. The Protection of the Environment Operations (Clean Air) Regulation sets air emission standards for different industries.

Considerations

Objective: To ensure that outside noise levels on the facility are minimised to acceptable levels.

C24

Adopt design solutions to minimise the impacts of noise, such as:

- creating physical separation between buildings and the noise source
- orienting the facility perpendicular to the noise source and where possible buffered by other uses
- using landscaping to reduce the perception of noise
- limiting the number and size of openings facing noise sources
- using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens)
- using materials with mass and/or sound insulation or absorption properties, such as solid balcony balustrades, external screens and soffits
- locating cot rooms, sleeping areas and play areas away from external noise sources.

C25

An acoustic report should identify appropriate noise levels for sleeping areas and other non-play areas and examine impacts and noise attenuation measures where a child care facility is proposed in any of the following locations:

- on industrial zoned land
- where the ANEF contour is between 20 and 25
- along a railway or mass transit corridor, as defined by State Environmental Planning Policy (Infrastructure) 2007
- on a major or busy road
- other land that is impacted by substantial external noise.

Objective: To ensure air quality is acceptable where child care facilities are proposed close to external sources of air pollution such as major roads and industrial development.

C26

Locate child care facilities on sites which avoid or minimise the potential impact of external sources of air pollution such as major roads and industrial development.

C27

A suitably qualified air quality professional should prepare an air quality assessment report to demonstrate that proposed child care facilities close to major roads or industrial developments can meet air quality standards in accordance with relevant legislation and guidelines.

The air quality assessment report should evaluate design considerations to minimise air pollution such as:

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

3.7 Hours of operation

The hours of operation of child care facilities should not adversely impact the amenity of surrounding properties, particularly in residential areas. However, there is increasing demand for child care services outside the standard 7.00am – 7.00pm period as working hours become increasingly flexible for both shift and office workers. Hence there is a need to strike a balance between the needs of families and compatibility with the surrounding uses in an area.

Considerations

Objective: To minimise the impact of the child care facility on the amenity of neighbouring residential developments.

C28

Hours of operation where the predominant land use is residential should be confined to the core hours of 7.00am to 7.00pm weekdays. The hours of operation of the proposed child care facility may be extended if it adjoins or is adjacent to non-residential land uses.

C29

Within mixed use areas or predominantly commercial areas, the hours of operation for each child care facility should be assessed with respect to its compatibility with adjoining and co-located land uses.

3.8 Traffic, parking and pedestrian circulation

Site access from the public road to the site is important to ensure safety. At the same time, a safe pedestrian environment is essential on the site.

Car parking areas need to ensure the safety of all visitors to the site, whether it is a stand-alone facility or part of a mixed use residential, commercial or industrial development.

On- and off-site conflicts with children, visitors and users of the facility should be minimised through a combination of design and management plans. For example, drop off, parking, play areas and pedestrian access points in light industrial or commercial areas need to be carefully sited, away from heavy vehicle traffic and main roads to minimise risk of accidents.

Providing suitable parking arrangements for staff, parents and visitors will facilitate a quality environment and convenience for users. Car parking rates are generally measured as a function of capacity, that is, spaces per number of children and staff. The capacity of a facility will be determined by several factors dictated by compliance with requirements under the National Quality Framework. These include:

- the amount of unencumbered space provided within a facility
- the reigning staff / child ratio provisions.

The number of car parking spaces provided on the site should be determined relative to the availability, frequency and convenience of public transport and the safety and amenity consequences of parking overflowing into adjoining streets. Facilities located in inner urban and high-density areas may require fewer off street car parking spaces than in lower density areas with limited access to transport, employment and services.

Car parking within a basement can provide optimum use of the site area and minimise visual impacts.

Where basement car parking is provided, design should aim to:

- locate car park entries behind the building line
- integrate entries with the overall building façade. Design options include ventilation grills, louvres, screening devices, 'hit and miss' brickwork and similar cladding finishes
- minimise visual prominence. This can be done by stepping car park levels or using split levels on sloping sites
- direct visitors to this parking to minimise on-street parking.

Bicycle parking should be provided suitable for the context and user needs of the centre.

Considerations

Objective: To provide parking that satisfies the needs of users and the demand generated by the centre and to minimise conflicts between pedestrians and vehicles.

C30

Off street car parking should be provided at the rates for child care facilities specified in a Development Control Plan that applies to the land.

Where a Development Control Plan does not specify car parking rates, off street car parking should be provided at the following rates:

Within 400 metres of a railway or Metro station within Greater Sydney:

- 1 space per 10 children
- 1 space per 2 staff. Staff parking may be stack or tandem parking with no more than 2 spaces in each tandem space.

In other areas:

- 1 space per 4 children.

A reduction in car parking rates may be considered where:

- the proposal is an adaptive reuse of a heritage item
- the site is in a B8 Metropolitan Zone or other high-density business or residential zone
- the site is in proximity to high frequency and well connected public transport
- the site is co-located or in proximity to other uses where parking is appropriately provided (for example business centres, schools, public open space, public or commercially operated car parks)
- there is sufficient on street parking available at appropriate times within proximity of the site.

C31

In commercial or industrial zones and mixed use developments, on street parking may only be considered where there are no conflicts with adjoining uses, that is, no high levels of vehicle movement or potential conflicts with trucks and large vehicles.

C32

A Traffic and Parking Study should be prepared to support the proposal to quantify potential impacts on the surrounding land uses, to optimise the safety and convenience of the parking area(s) and demonstrate how impacts on amenity will be minimised. The study should also address any proposed variations to parking rates and demonstrate that:

- the amenity of the surrounding area will not be affected
- there will be no impacts on the safe operation of the surrounding road network.

Objective: To provide vehicle access from the street in a safe environment that does not disrupt traffic flows.

C33

Alternate vehicular access should be provided where child care facilities are on sites fronting:

- a classified road
- roads which carry freight traffic or transport dangerous goods or hazardous materials.

The alternate access must have regard to:

- the prevailing traffic conditions
- pedestrian and vehicle safety including bicycle movements
- the likely impact of the development on traffic.

C34

Child care facilities proposed within cul-de-sacs or via narrow lanes or roads should ensure that safe access can be provided to and from the site, and to and from the wider locality in times of emergency.

Objective: To provide a safe and connected environment for pedestrians both on and around the site.

C35

The following design solutions may be incorporated into a development to help provide a safe pedestrian environment:

- separate pedestrian access from the car park to the facility
- defined pedestrian crossings and defined/ separate paths included within large car parking areas
- separate pedestrian and vehicle entries from the street for parents, children and visitors
- pedestrian paths that enable two prams to pass each other
- delivery, loading and vehicle turnaround areas located away from the main pedestrian access to the building and in clearly designated, separate facilities
- minimise the number of locations where pedestrians and vehicles cross each other
- in commercial or industrial zones and mixed-use developments, the path of travel from the car parking to the centre entrance physically separated from any truck circulation or parking areas
- vehicles can enter and leave the site in a forward direction
- clear sightlines are maintained for drivers to child pedestrians, particularly at crossing locations.

C36

Mixed use developments should include:

- driveway access, manoeuvring areas and parking areas for the facility that are separate to parking and manoeuvring areas used by trucks
- drop off and pick up zones that are exclusively available for use during the facility's operating hours with spaces clearly marked accordingly, close to the main entrance and preferably at the same floor level. Alternatively, direct access should avoid crossing driveways or manoeuvring areas used by vehicles accessing other parts of the site
- parking that is separate from other uses, located and grouped together and conveniently located near the entrance or access point to the facility.

C37

Car parking design should:

- include a child safe fence to separate car parking areas from the building entrance and play areas
- provide clearly marked accessible parking as close as possible to the primary entrance to the building in accordance with appropriate Australian Standards
- include wheelchair and pram accessible parking.

4. Applying the National Regulations to development proposals

This part covers:

Internal physical environment

This section describes the specific regulations that apply to internal physical environment matters, references related construction standards and provides design guidance on how the regulations may be met.

External physical environment

This section describes the specific regulations that apply to external physical environmental matters, references related construction standards and provides design guidance on how the regulations may be met.

Best practice example

This section outlines the recommended layout for a stand-alone child care facility by bringing together the internal and external physical environmental matters. The underpinning principles may also be applied to mixed use developments which include a centre-based child care facility in commercial, industrial or high-density zones.

National Quality Framework Assessment Checklist

The checklist will assist applicants to demonstrate that the development is designed to achieve the requirements of Part 4.3 Physical Environment of the Education and Care Services National Regulations.

The physical environment of a child care facility must be safe, suitable and provide a rich and diverse range of experiences that promote children's learning and development.

This fundamentally underpins the National Regulations covering education and care services, which need to be met before a child care facility can be given service approval to operate. The good design of a child care facility is a major contributor to ensuring these Regulations are addressed and service approval processing is quick and efficient.

The SEPP states that if the requirements of the National Regulations relating to the amount of unencumbered indoor and outdoor space are not met in a DA in NSW, the concurrence of the regulatory authority will be required. In determining whether to grant or refuse concurrence, the authority must consider all requirements applicable to the proposal under the Regulations.

The following advice and information will assist child care developers and operators in applying the requirements of the National Regulations when preparing DAs. The minimum construction standards contained in the National Construction Code relating to child care facilities also apply.

A. Internal physical environment

4.1 Indoor space requirements

Regulation 107

Education and Care Services National Regulations

Every child being educated and cared for within a facility must have a minimum of 3.25m^2 of unencumbered indoor space.

If this requirement is not met, the concurrence of the regulatory authority is required under the Education SEPP.

Unencumbered indoor space excludes any of the following:

- passageway or thoroughfare (including door swings) used for circulation
- toilet and hygiene facilities
- nappy changing area or area for preparing bottles
- area permanently set aside for the use or storage of cots
- area permanently set aside for storage
- area or room for staff or administration
- kitchens, unless the kitchen is designed to be used predominately by the children as part of an educational program e.g. a learning kitchen
- on-site laundry
- other space that is not suitable for children.

All unencumbered indoor spaces must be provided as a secure area for children. The design of these spaces must allow for the safe supervision of children, within each space.

When calculating indoor space requirements, the area required for any additional child may be waived when the child is being cared for in an emergency circumstance as set out in Regulation 123(5) or the child is being educated or cared for in exceptional circumstances as set out in Regulation 124(5) and (6) of the National Regulations.

Applicants should also note that Regulation 81 requires that the needs for sleep and rest of children at the service be met, having regard to their ages, development stages and individual needs. Development applications should indicate how these needs will be accommodated.

Verandahs may be included when calculating indoor space with the written approval from the regulatory authority.

Design guidance

Verandahs as indoor space

For a verandah to be included as unencumbered indoor space, any opening must be able to be fully closed during inclement weather. It can only be counted once and therefore cannot be counted as outdoor space as well as indoor space (refer to Figure 1).

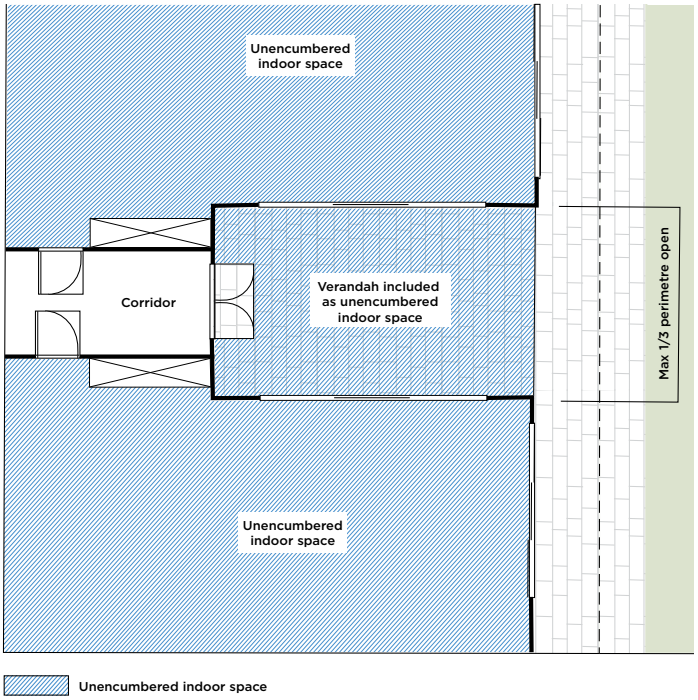


Figure 1 An outdoor verandah can be included as unencumbered indoor space with written approval. In spatial calculations this can only be counted once.

Storage

Storage areas including joinery units are not to be included in the calculation of indoor space. To achieve a functional unencumbered area free of clutter, storage areas need to be considered when designing and calculating the spatial requirements of the facility. It is recommended that a child care facility provide:

- a minimum of 0.3m^3 per child of external storage space
- a minimum of 0.2m^3 per child of internal storage space.

Storage does not need to be in a separate room or screened, and there should be a mixture of safe shelving and storage that children can access independently.

Storage of items such as prams, bikes and scooters should be located adjacent to the building entrance.

Where an external laundry service is used, storage and collection points for soiled items should be in an area with separate external access, away from children. This will prevent clothes being carried through public areas and reduce danger to children during drop off and collection of laundry.

4.2 Laundry and hygiene facilities

Regulation 106

Education and Care Services National Regulations

There must be laundry facilities or access to laundry facilities; or other arrangements for dealing with soiled clothing, nappies and linen, including hygienic facilities for storage prior to their disposal or laundering. The laundry and hygienic facilities must be located and maintained in a way that is not accessible by, and does not pose a risk to, children.

Child care facilities must also comply with the requirements for laundry facilities that are contained in the National Construction Code.

Design guidance

Laundry and hygiene facilities are a key consideration for education and care service premises. The type of laundry facilities provided must be appropriate to the age of children accommodated.

On site laundry

On site laundry facilities should contain:

- a washer or washers capable of dealing with the heavy requirements of the facility
- a dryer
- laundry sinks
- adequate storage for soiled items prior to cleaning
- an on-site laundry cannot be calculated as useable unencumbered play space for children (refer to Figure 2).

External laundry service

A facility that does not contain on site laundry facilities must make external laundering arrangements. Any external laundry facility providing services to the facility needs to comply with any relevant Australian Standards.

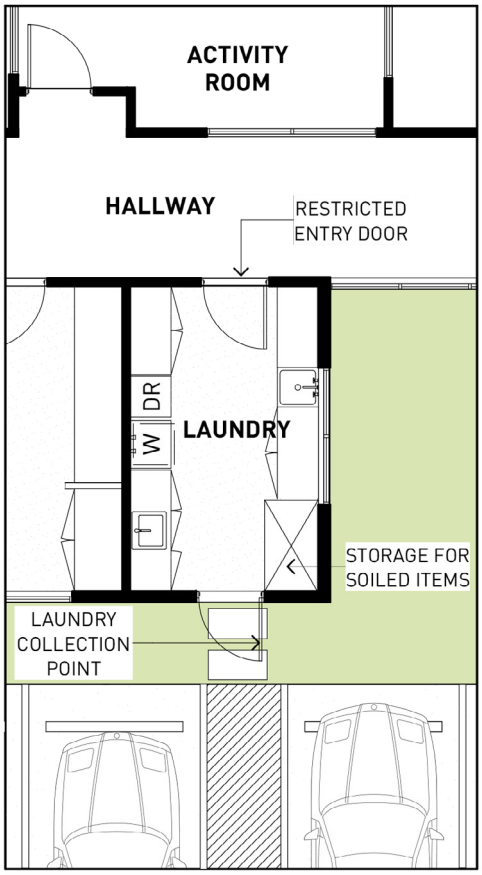


Figure 2 A typical child care facility laundry layout. External access may be provided if laundry is done off site or for deliveries.

A typical child care facility laundry with plenty of storage.

Windows from activity rooms provide adequate supervision into the bathrooms.

4.3 Toilet and hygiene facilities

Regulation 109

Education and Care Services National Regulations

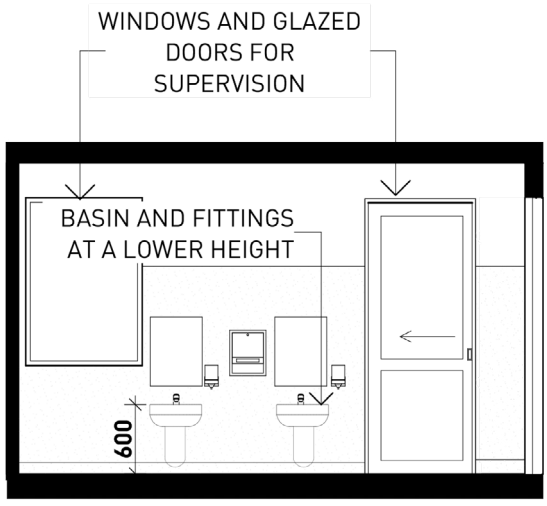
A service must ensure that adequate, developmentally and age-appropriate toilet, washing and drying facilities are provided for use by children being educated and cared for by the service; and the location and design of the toilet, washing and drying facilities enable safe use and convenient access by the children.

Child care facilities must comply with the requirements for sanitary facilities that are contained in the National Construction Code.

Design guidance

Toilet and hygiene facilities should be designed to maintain the amenity and dignity of the occupants (refer to Figure 3). Design considerations could include:

- junior toilet pans, low level sinks and hand drying facilities for children
- a sink and handwashing facilities in all bathrooms for adults
- direct access from both activity rooms and outdoor play areas
- windows into bathrooms and cubicles without doors to allow adequate supervision by staff
- external windows in locations that prevent observation from neighbouring properties or from side boundaries.



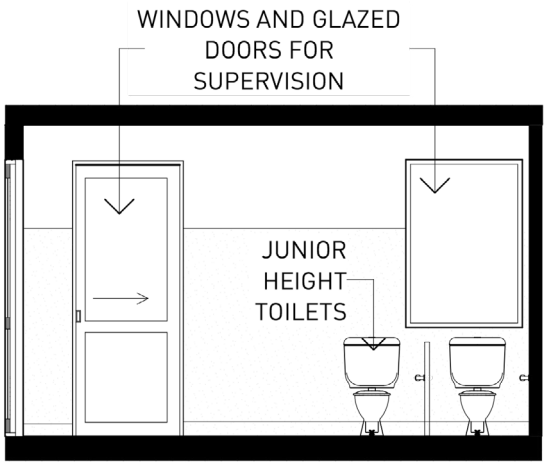


Figure 3 Bathroom facilities including toilet pans for use by children at a lower height.

4.4 Ventilation and natural light

Regulation 110

Education and Care Services National Regulations

Services must be well ventilated, have adequate natural light, and be maintained at a temperature that ensures the safety and wellbeing of children.

Child care facilities must comply with the light and ventilation and minimum ceiling height requirements of the National Construction Code. Ceiling height requirements may be affected by the capacity of the facility.

Design guidance

Ventilation

Good ventilation can be achieved through a mixture of natural cross ventilation and air conditioning. Encouraging natural ventilation is the basis of sustainable design; however, there will be circumstances where mechanical ventilation will be essential to creating ambient temperatures within a facility.

To achieve adequate natural ventilation, the design of the child care facilities must address the orientation of the building, the configuration of rooms and the external building envelope, with natural air flow generally reducing the deeper a building becomes. It is recommended that child care facilities ensure natural ventilation is available to each indoor activity room.

Natural light

Solar and daylight access reduces reliance on artificial lighting and heating, improves energy efficiency and creates comfortable learning environments through pleasant conditions. Natural light contributes to a sense of well-being, is important to the development of children and improves service outcomes. Daylight and solar access changes with the time of day, seasons and weather conditions. When designing child care facilities consideration should be given to:

- providing windows facing different orientations
- using skylights as appropriate
- ceiling heights.

Designers should aim to minimise the need for artificial lighting during the day, especially in circumstances where room depth exceeds ceiling height by 2.5 times. It is recommended that ceiling heights be proportional to the room size, which can be achieved using raked ceilings and exposed trusses, creating a sense of space and visual interest.

Louvres can be incorporated to allow for ventilation when doors are closed.

Clerestory windows are effective at adding natural light to activity rooms.

High ceiling heights provide good proportion in long and wide rooms.

4.5 Administrative space

Regulation 111

Education and Care Services National Regulations

A service must provide adequate area or areas for the purposes of conducting the administrative functions of the service, consulting with parents of children and conducting private conversations.

Design guidance

Design considerations could include closing doors for privacy and glass partitions to ensure supervision.

Note: Areas or rooms for staff and administration are excluded in the calculation of unencumbered indoor space under National Regulation 107.

When designing administrative spaces, consideration should be given to functions which can share spaces and those which cannot (refer Figure 4). Sound proofing of meeting rooms may be appropriate where they are located adjacent to public areas, or in large rooms where sound can easily travel.

Administrative spaces should be designed to ensure equitable use by parents and children at the facility. A reception desk may be designed to have a portion of it at a lower level for children or people in a wheel chair.

Reception spaces in administrative areas should be welcoming to adults and children and be designed for equitable access by all.

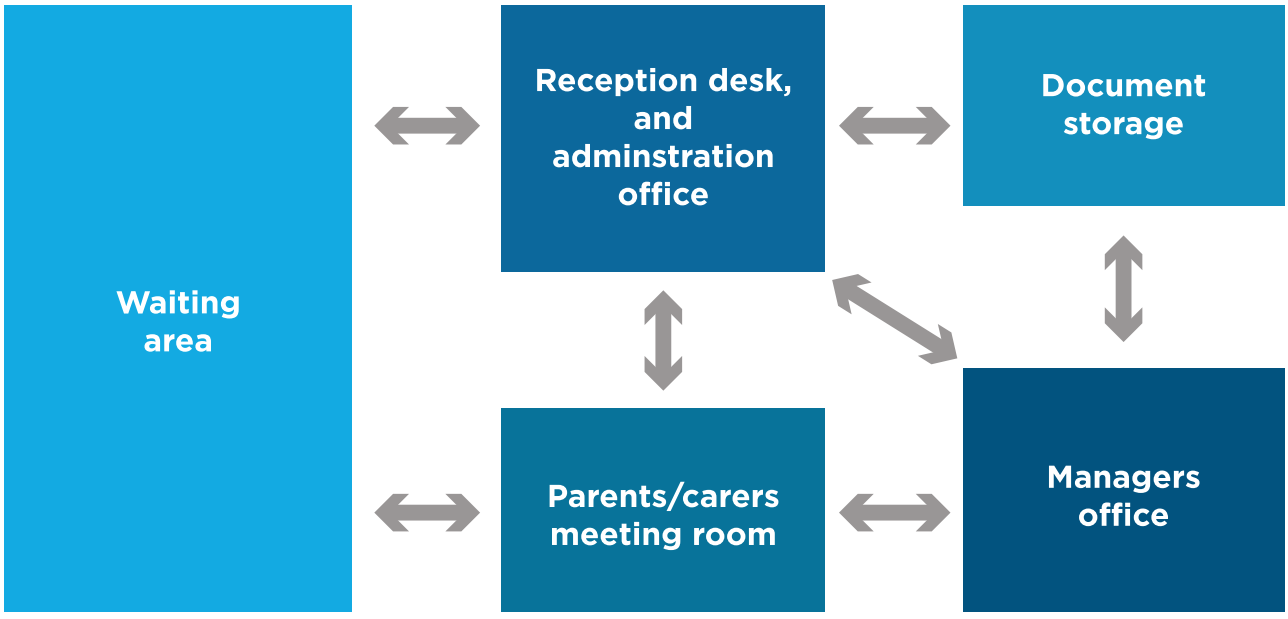


Figure 4 Diagram showing relationships between administrative spaces within a child care facilitiy. Requirements of rooms and functions may vary depending on the size and individual requirements of the facility.

4.6 Nappy change facilities

Regulation 112

Education and Care Services National Regulations

Child care facilities must provide for children who wear nappies, including appropriate hygienic facilities for nappy changing and bathing. All nappy changing facilities should be designed and located in an area that prevents unsupervised access by children.

Child care facilities must also comply with the requirements for nappy changing and bathing facilities that are contained in the National Construction Code.

Design guidance

In circumstances where nappy change facilities must be provided, design considerations should include:

- properly constructed nappy changing bench or benches
- a bench type baby bath within one metre from the nappy change bench
- the provision of dedicated hand cleansing facilities for adults in the immediate vicinity of the nappy change area
- a space to store steps
- positioning to enable adequate supervision of the activity and play areas.

4.7 Premises designed to facilitate supervision

Regulation 115

Education and Care Services National Regulations

A centre-based service must ensure that the rooms and facilities within the premises (including toilets, nappy change facilities, indoor and outdoor activity rooms and play spaces) are designed to facilitate adequate supervision of children at all times, having regard to the need to maintain their rights and dignity.

Child care facilities must also comply with any requirements regarding the ability to facilitate supervision that are contained in the National Construction Code.

Design guidance

Design considerations should include:

- solid walls in children's toilet cubicles (but no doors) to provide dignity whilst enabling supervision
- locating windows into bathrooms or nappy change areas away from view of visitors to the facility, the public or neighbouring properties
- avoiding room layouts with hidden corners where supervision is poor, or multi room activity rooms for single groups of children
- avoiding multi-level rooms which compromise, or require additional staffing, to ensure adequate supervision. If multi-level spaces are proposed, consideration should be given to providing areas that can be closed off and used only under supervision for controlled activities (refer to Figures 5, 6 and 7).

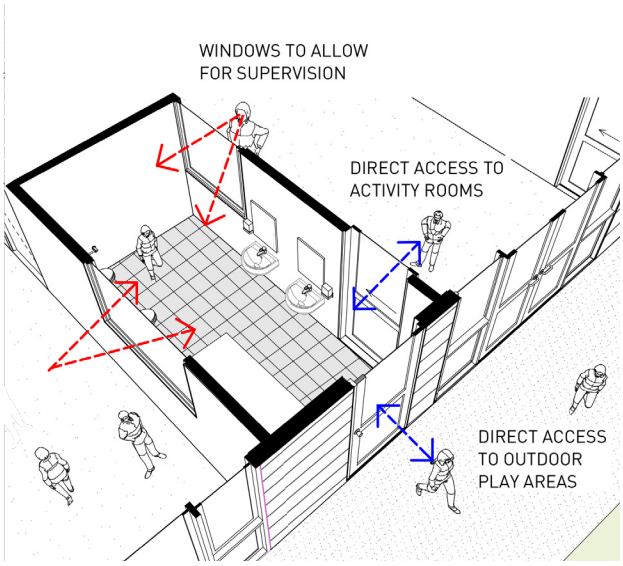


Figure 5 Bathroom facilities to have direct access to outdoor areas and activity rooms. Supervision requirements need to be considered in the design to prevent blind spots.

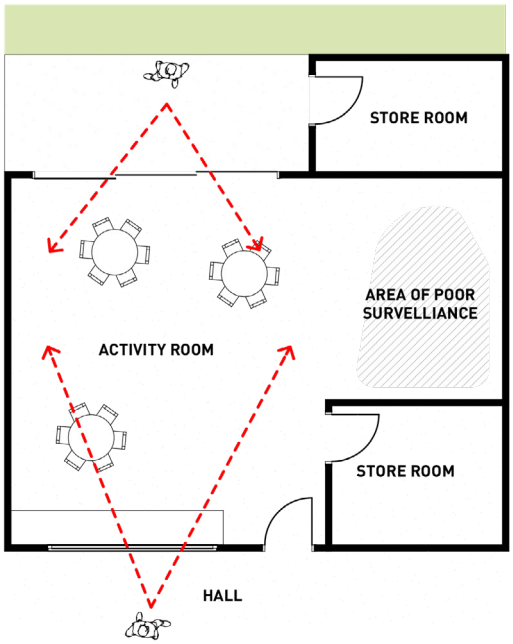


Figure 6 Avoid tucked away areas as these reduce effective supervision.

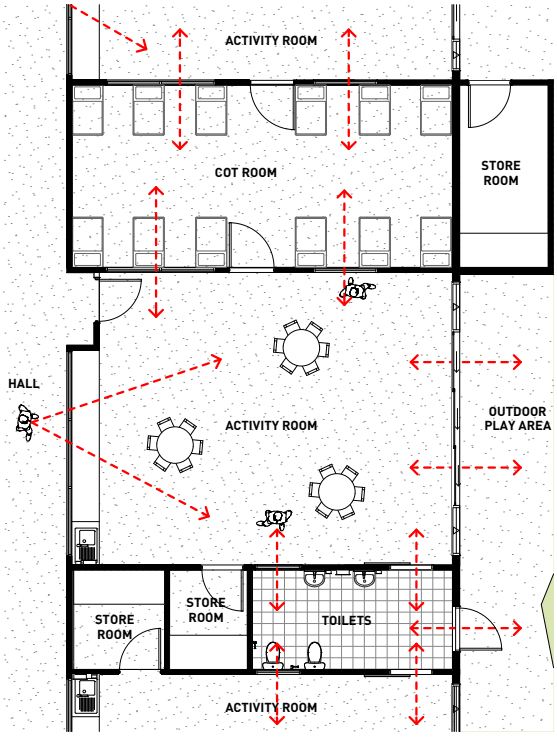


Figure 7 Good design of spaces allows for effective supervision between all areas children will occupy.

4.8 Emergency and evacuation procedures

Regulations 97 and 168

Education and Care Services National Regulations

Regulation 168 sets out the list of procedures that an education and care service must have, including procedures for emergency and evacuation.

Regulation 97 sets out the detail for what those procedures must cover including:

- instructions for what must be done in the event of an emergency
- an emergency and evacuation floor plan, a copy of which is displayed in a prominent position near each exit
- a risk assessment to identify potential emergencies that are relevant to the service.

Risks associated with multi-storey buildings, including the appropriate child-to-staff ratios and emergency and evacuation plans, need to be assessed in the context of the service approval. These matters need to be considered by the Quality Assurance and Regulatory Services Directorate, Early Childhood Education on behalf of the Secretary of the NSW Department of Education.

There are circumstances where a service approval may approve a maximum number of children that is lower than the development consent, for example due to complexities related to evacuation. The lowest maximum number of children should prevail, whether it be in the development consent or the service approval to further the health, safety and well being of children. That said, the applicant may still apply to modify either the service approval or the development consent to increase the maximum number of children.

Design guidance

Facility design and features should provide for the safe and managed evacuation of children and staff from the facility in the event of a fire or other emergency.

This should take into consideration the number and age of the occupants, emergency and evacuation plans, the location of the facility and the relevant fire safety measures within the building.

Multi-storey buildings with proposed child care facilities above ground level may consider providing additional measures to protect staff and children. For example:

- independent emergency escape routes from the facility to the ground level that would separate children from other building users to address child protection concerns during evacuations
- child appropriate handrails and barriers if shared fire stairs are utilised
- a safe haven or separate emergency area where children and staff can muster during the initial stages of a fire alert or other emergency. This would enable staff to account for all children prior to evacuation.

For all child care facilities, an emergency and evacuation plan should be submitted with a DA and should consider:

- the mobility of children and how this is to be accommodated during an evacuation
- the location of a safe congregation/assembly point, away from the evacuated building, busy roads and other hazards, and away from evacuation points used by other occupants or tenants of the same building or of surrounding buildings
- how children will be supervised during the evacuation and at the congregation/assembly point, relative to the capacity of the facility and governing child-to-staff ratios.

Fire safety of centres in high rise buildings

The design and construction of new child care facilities must comply with the requirements of the National Construction Code. Specific fire safety provisions apply to certain child care facilities including those in multi-storey buildings.

B. External physical environment

4.9 Outdoor space requirements

Regulation 108

Education and Care Services National Regulations

An education and care service premises must provide for every child being educated and cared for within the facility to have a minimum of 7.0m^2 of unencumbered outdoor space.

If this requirement is not met, the concurrence of the regulatory authority is required under the Education SEPP.

Unencumbered outdoor space excludes any of the following:

- pathway or thoroughfare, except where used by children as part of the education and care program
- car parking area
- storage shed or other storage area
- laundry
- other space that is not suitable for children.

When calculating outdoor space requirements, the area required for any additional child may be waived when the child is being cared for in an emergency circumstance as set out in Regulation 123(5) or the child is being educated or cared for in exceptional circumstances as set out in Regulation 124(5) and (6) of the National Regulations.

Applicants should also note that Regulation 274 (Part 7.3 NSW Provisions) states that a centre-based service for children preschool age or under must ensure there is no swimming pool on the premises, unless the swimming pool existed before 6 November 1996. Where there is an existing swimming pool, a water safety policy will be required.

A verandah that is included within indoor space cannot be included when calculating outdoor space and vice versa.

Design guidance

Calculating unencumbered space for outdoor areas should not include areas of dense hedges or plantings along boundaries which are designed for landscaping purposes and not for children's play (refer to Figure 9 and 10).

When new equipment or storage areas are added to existing services, the potential impact on unencumbered space calculations and service approvals must be considered.

Verandahs (covered outdoor space) as outdoor space

Where a covered space such as a verandah is to be included in outdoor space it should:

- be open on at least one third of its perimeter
- have a clear height of 2.1 metres
- have a wall height of less than 1.4 metres where a wall with an opening forms the verandah perimeter
- have adequate flooring and roofing
- be designed to provide adequate protection from the elements (refer to Figure 8).

Outdoor play areas are important for growth and development.

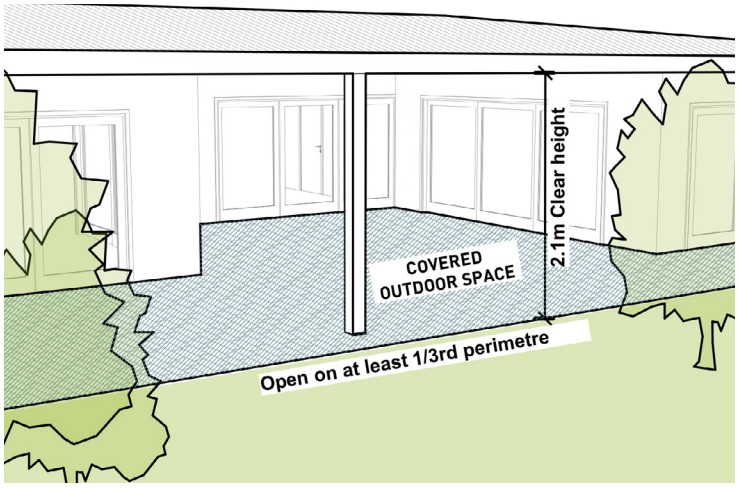


Figure 8 Covered areas such as verandahs can be included in outdoor space calculations.

Figure 9 Dense planting along boundaries and other areas not suitable for children should be excluded when calculating outdoor unencumbered space.

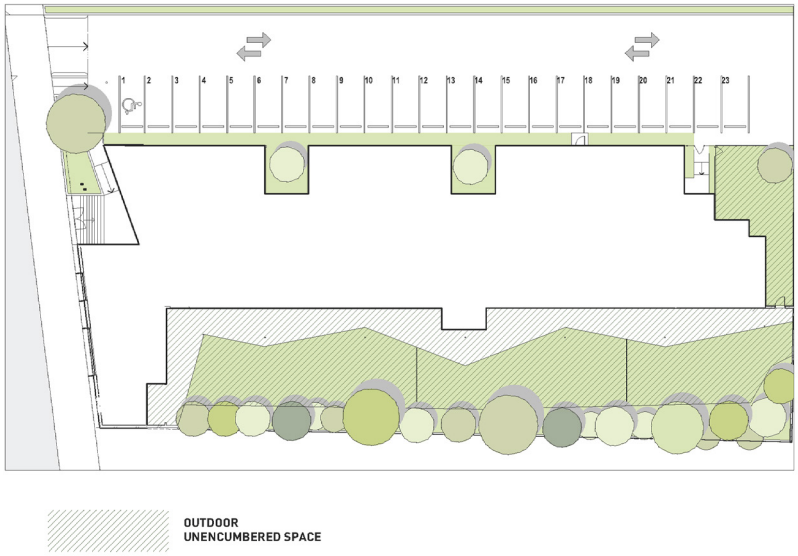


Figure 10 Areas to be included when calculating outdoor unencumbered space.

Simulated outdoor environments

Applicants should aim to provide the requisite amount of unencumbered outdoor space in all development applications.

A service approval will only be granted in exceptional circumstances when outdoor space requirements are not met. For an exemption to be granted, the preferred alternate solution is that indoor space be designed as a simulated outdoor environment.

Simulated outdoor space must be provided in addition to indoor space and cannot be counted twice when calculating areas.

Simulated outdoor environments are internal spaces that have all the features and experiences and qualities of an outdoor space. They should promote the same learning outcomes that are developed during outdoor play. Simulated outdoor environments should have:

- more access to natural light and ventilation than required for an internal space through large windows, glass doors and panels to enable views of trees, views of the sky and clouds and movement outside the facility
- skylights to give a sense of the external climate
- a combination of different floor types and textures, including wooden decking, pebbles, mounds, ridges, grass, bark and artificial grass, to mimic the uneven surfaces of an outdoor environment
- sand pits and water play areas
- furniture made of logs and stepping logs
- dense indoor planting and green vegetated walls
- climbing frames, walking and/or bike tracks
- vegetable gardens and gardening tubs.

Simulated outdoor environments contain sand pits, rocks and elements from the natural environment.

An indoor space designed to be a simulated outdoor space.

4.10 Natural environment

Regulation 113

Education and Care Services National Regulations

The approved provider of a centre-based service must ensure that the outdoor spaces allow children to safely explore and experience the natural environment.

Design guidance

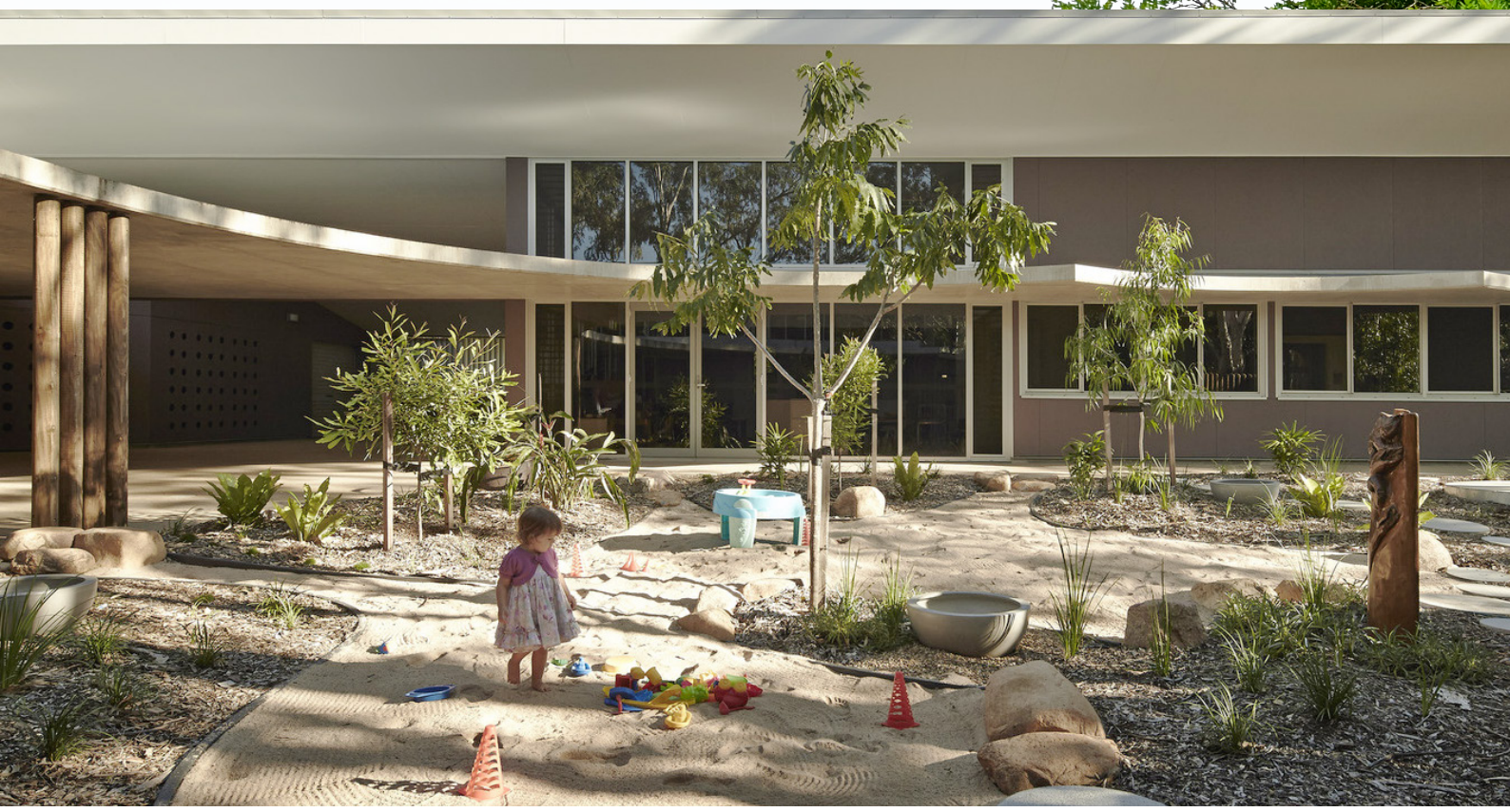
Creating a natural environment to meet this regulation includes the use of natural features such as trees, sand and natural vegetation within the outdoor space.

Shrubs and trees selected for the play space must be safe for children. Avoid plant species that risk the health and safety of the centre's occupants, such as those which:

- are known to be poisonous, produce toxins or have toxic leaves or berries
- have seed pods or stone fruit, attract bees, have thorns, spikes or prickly foliage or drop branches.

The outdoor space should be designed to:

- provide a variety of experiences that facilitate the development of cognitive and physical skills, provide opportunities for social interaction and appreciation of the natural environment
- ensure adequate supervision and minimise opportunities for bullying and antisocial behaviour
- enhance outdoor learning, socialisation and recreation by positioning outdoor urban furniture and play equipment in configurations that facilitate interaction.



Natural environments are important for growth and play.

4.11 Shade

Regulation 114

Education and Care Services National Regulations

The approved provider of a centre-based service must ensure that outdoor spaces include adequate shaded areas to protect children from overexposure to ultraviolet radiation from the sun.

Design guidance

Providing the correct balance of sunlight and shade to play areas is important for the health and well-being of children and staff. Combining built and natural shade will often be the best option.

Solar access and sun protection

Controlled exposure to daylight for limited periods is essential as sunlight provides vitamin D which promotes healthy muscles, bones and overall wellbeing. However, exposure to ultraviolet radiation in childhood significantly increases the chances of getting skin cancer later in life.

Outdoor play areas should be provided with controlled solar access throughout the year, including protecting children and staff from ultraviolent radiation from the sun and play equipment from becoming hot. Well-designed play spaces provide comfortable and safe areas for children to engage in activities for improved health and well-being.

Outdoor play areas should:

- have a minimum of 2 hours of solar access between 8.00am and 4.00pm during winter months, for at least 30% (or 2.1m^2) of the 7.0m^2 of outdoor space per child required.
- adequate shade for outdoor play areas is to be provided in the form of natural shade such as trees or built shade structures giving protection from ultraviolet radiation to at least 30 per cent of the outdoor play area
- have evenly distributed shade structures over different activity spaces.

Natural shade

Natural shade should be a major element in outdoor play areas. Trees with dense foliage and wide-spreading canopies provide the best protection. Existing stands of trees, particularly in rear setbacks, should be retained to provide shaded play areas. Species that suit local soil and climatic conditions and the character of the environment are recommended.

Dense shrubs can also provide shade. They should be planted around the site perimeter so they don't obstruct supervision. Pruning shrubs on the underside may create shaded play nooks underneath.

Planting for shade and solar access is enhanced by:

- placing appropriately scaled trees near the eastern and western elevations
- providing a balance of evergreen and deciduous trees to give shade in summer and sunlight access in winter.

Built shade structures

Built structures providing effective shade include:

- permanent structures (pergolas, sails and verandahs)
- demountable shade (marquees and tents)
- adjustable systems (awnings)
- shade sails.

Shade structures should not create safety hazards. Support systems such as upright posts should be clearly visible with rounded edges or padding. Vertical barriers at the sides of shade structures should be designed to prevent children using them for climbing. Shade structures should allow adults to view and access the children's play areas, with a recommended head clearance of 2.1 metres. The floor area underneath the structure should be of a sufficient size and shape to allow children to gather or play actively.

Shade structure can be a fixed structural element or a shade sail.

4.12 Fencing

Regulation 104

Education and Care Services National Regulations

Any outdoor space used by children must be enclosed by a fence or barrier that is of a height and design that children preschool age or under cannot go through, over or under it.

This Regulation does not apply to a centre-based service that primarily provides education and care to children over preschool age, including a family day care venue where all children are over preschool age.

Child care facilities must also comply with the requirements for fencing and protection of outdoor play spaces that are contained in the National Construction Code.

Design guidance

Fencing at child care facilities must provide a secure, safe environment for children and minimise access to dangerous areas. Fencing also needs to positively contribute to the visual amenity of the streetscape and surrounding area. In general, fencing around outdoor spaces should:

- prevent children climbing over, under or though fences
- prevent people outside the facility from gaining access by climbing over, under or through the fence
- not create a sense of enclosure
- if the outdoor space is being fenced internally, then the fence must be at least 1.2m high.

Design considerations for side and rear boundary fences should include:

- being made from solid prefinished metal, timber or masonry
- having a minimum height of 1.8 metres
- having no rails or elements for climbing higher than 150mm from the ground.

Fencing and gates should be designed to ensure adequate sightlines for vehicles and pedestrian safety in accordance with Australian Standards, Austroads and Transport for NSW traffic management guidance. Gates should be designed to prevent children leaving/entering unsupervised by use of childproof locking systems (refer to Figure 11).

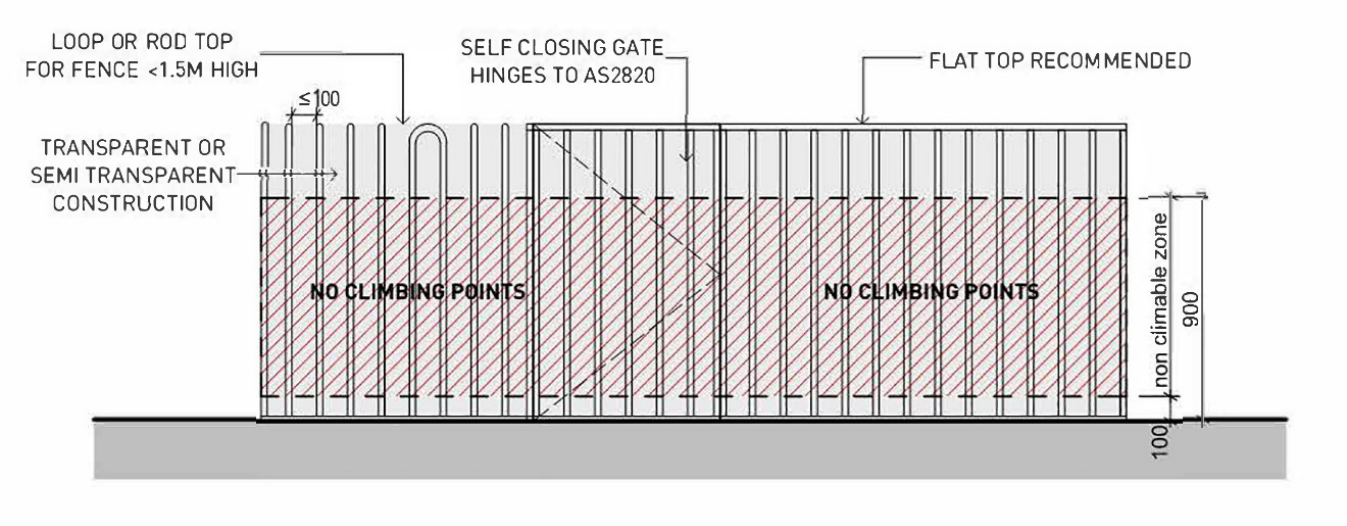


Figure 11 Heights and requirements for child care facility fencing.

4.13 Soil assessment

Regulation 25

Education and Care Services National Regulations

Subclause (d) of Regulation 25 requires an assessment of soil at a proposed site, and in some cases, sites already in use for such purposes as part of an application for service approval.

With every service application one of the following is required:

- a soil assessment for the site of the proposed education and care service premises
- if a soil assessment for the site of the proposed child care facility has previously been undertaken, a statement to that effect specifying when the soil assessment was undertaken
- a statement made by the applicant that states, to the best of the applicant's knowledge, the site history does not indicate that the site is likely to be contaminated in a way that poses an unacceptable risk to the health of children.

Design Guidance

To ensure consistency between the development consent and the service approval application, a soil assessment should be undertaken as part of the development application process.

Where children will have access to soil the regulatory authority requires a preliminary investigation of the soil. This includes sites with or without buildings and existing approved children's services where:

- the application is to alter or extend the premises
- the alteration or extension requires earthworks or deep excavations (exceeding a depth of one metre)
- the works are going to take place in an area used for children's outdoor play or will be used for children's outdoor play after the work is completed
- a soil assessment has not been undertaken at the children's service.

Minor landscaping, creation of sand pits, movement of play equipment and so on do not qualify as earthworks and do not require a soil assessment.

An assessment of soil for a children's service approval application may require three levels of investigation:

- Stage 1 - Preliminary investigation (with or without soil sampling)
- Stage 2 - Detailed site investigation
- Stage 3 – Site specific human health risk assessment.

C. Best practice example

Figure 12 is a sample plan of a facility designed with a best practice layout. The arrangement of rooms is linear with activity rooms and administration areas located off a central hallway.

Children's bathrooms and cot rooms are located between activity rooms to allow direct and easy access from both internal and external play areas.

Administration and services rooms such as the laundry and kitchen are located nearest the parking. This allows for separate access for deliveries away from children and their play areas.

The best practice example shows an optimal layout for new single storey, standalone developments. However, many of the underpinning principles apply equally to modifications of existing facilities, mixed use developments, and conversions of buildings to new facilities.

Figure 12 Cutaway plan showing arrangement and relationship between rooms within a child care facility.

D. National Quality Framework Assessment Checklist

Table 2 - Assessment checklist

REGULATION	PROPOSED	COMPLIES (TICK OR CROSS)
104. Fencing or barrier that encloses outdoor spaces. Outdoor space that will be used by children will be enclosed by a fence or barrier that is of a height and design that children preschool age or under cannot go through, over or under it. Note: This clause does not apply to a centre-based service primarily for children over preschool age or a family day care residence or venue for over preschool age children.	Indicate height, materials and style on plans.	
106. Laundry and hygiene facilities The proposed development includes laundry facilities or access to laundry facilities OR explain the other arrangements for dealing with soiled clothing, nappies and linen, including hygienic facilities for storage of soiled clothing, nappies and linen prior to their disposal or laundering. Laundry / hygienic facilities are located where they do not pose a risk to children	On-site or off-site facilities	On-site Off-site
107. Unencumbered indoor space The proposed development includes at least 3.25m^2 of unencumbered indoor space for each child. Refer to Regulation 107 of the Education and Care Services National Regulation for further information on calculating indoor space.	Number of children: Required area: Provided Area:	
108. Unencumbered outdoor space The proposed development includes at least 7.0m^2 of unencumbered outdoor space for each child. Refer to Regulation 108 of the Education and Care Services National Regulation for further information on calculating outdoor space, and for different requirements for out-of-school-hours care services.	Number of children: Required area: Provided Area	
109. Toilet and hygiene facilities The proposed development includes adequate, developmentally and age-appropriate toilet, washing and drying facilities for use by children being educated and cared for by the service. The location and design of the toilet, washing and drying facilities enable safe and convenient use by the children.	Show number of toilets and hand basins on plan	

Table 2 - Assessment checklist

REGULATION	PROPOSED	COMPLIES (TICK OR CROSS)
110. Ventilation and natural light The proposed development includes indoor spaces to be used by children that — • will be well ventilated; and • will have adequate natural light; and • can be maintained at a temperature that ensures the safety and well-being of children.	Indicate on plans and elevations how natural ventilation and lighting is achieved.	
111. Administrative space The proposed development includes an adequate area or areas for the purposes of conducting the administrative functions of the service; and consulting with parents of children; and conducting private conversations. Note: This space cannot be included in the calculation of unencumbered indoor space – see Regulation 107.	Indicate administrative space on plans	
112. Nappy change facilities (To be completed only if the proposed development is for a service that will care for children who wear nappies) The proposed development includes an adequate area for construction of appropriate hygienic facilities for nappy changing including at least one properly constructed nappy changing bench and hand cleansing facilities for adults in the immediate vicinity of the nappy change area. The proposed nappy change facilities can be designed and located in a way that prevents unsupervised access by children.	Indicate nappy change on plans	
113. Outdoor space—natural environment The proposed development includes outdoor spaces that will allow children to explore and experience the natural environment.	Indicate on landscape plans	
114. Outdoor space—shade The proposed development includes adequate shaded areas to protect children from overexposure to ultraviolet radiation from the sun.	Indicate shade on landscape plans	
115. Premises designed to facilitate supervision The proposed development (including toilets and nappy change facilities) are designed in a way that facilitates supervision of children at all times, having regard to the need to maintain the rights and dignity of the children.	Indicate on floor plans	

5. Glossary of terms

Table 3 - Glossary

Word	Meaning
Acoustic privacy	A measure of sound insulation between dwellings, between dwellings and communal areas, and between external and internal spaces.
Adaptive reuse	The conversion of an existing building or structure from one use to another, or from one configuration to another.
Amenity	The 'liveability', comfort or quality of a place which makes it pleasant and agreeable to be in for individuals and the community. Amenity is important in the public, communal and private domains and includes the enjoyment of sunlight, views, privacy and quiet. It also includes protection from pollution and odours.
ANEF	Australian Noise Exposure Forecast (refer www.airservicesaustralia.com). Aircraft noise is identified as contours on the Australian Noise Exposure Forecast (ANEF) Map. The higher the ANEF contour value, the greater the exposure to aircraft noise.
Building line	The predominant line formed by the main external face of the building. Balconies or bay window projections may or may not be included depending on desired streetscape.
Building height	As defined in the Standard Instrument - Principal Local Environmental Plan.
Busy road or rail line	As defined in State Environmental Planning Policy (Infrastructure) 2007 and Development Near Rail Corridors and Busy Roads – Interim Guideline.
Centre-based service	As defined in the *Education and Care Services National Regulations*.
Child care facility	Term used as an abbreviation of *centre-based child care facility*.
Centre-based child care facility	As defined in the Standard Instrument - Principal Local Environmental Plan.
Classified Road	As defined in the Roads Act 1993. (Note: Classified road includes all State Roads and specified Regional Roads. Regional roads comprise two categories: those regional roads that are classified under the Roads Act 1993 and those regional roads that are not classified. Local roads are not classified.)
Concurrence	State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 includes a provision that consent cannot be given by a local council for a centre-based child care facility under certain circumstances unless the Regulatory Authority (currently NSW Department of Education) grants concurrence.
DA	Development Application.
Daylight	Consists of both skylight (diffuse light from the sky) and sunlight (direct beam radiation from the sun). Daylight changes with the time of day, season and weather conditions.
Dwelling	Dwelling means a room or suite of rooms occupied or used or so constructed or adapted as to be capable of being occupied or used as a separate domicile (as defined in the Standard Instrument).

Table 3 - Glossary

Word	Meaning
Education and care service	As defined in the *Children (Education and Care Services) National Law (NSW) 104a.*
Education and care service premises	As defined in the *Children (Education and Care Services) National Law (NSW) 104a*
Facade	The external face of a building, generally the principal face, facing a public street or space.
Floor Space Ratio	As defined in the Standard Instrument - Principal Local Environmental Plan.
Landscaped Area	As defined in the Standard Instrument - Principal Local Environmental Plan.
National Construction Code	The National Construction Code contains the minimum technical provisions for the design and construction of new buildings, and plumbing and drainage systems in new and existing buildings. The National Construction Code is made up of the Building Code of Australia and the Plumbing Code of Australia.
National Law	Refers to the *Children (Education and Care Services) National Law (NSW) 104a.*
National Regulations	Refers to the *Education and Care Services National Regulations*.
National Quality Framework (NQF)	'National Quality Framework' is made up of the Children (Education and Care Services) National Law, the Education and Care Services National Regulations, the National Quality Standard (Schedule 1 of the Regulations), an assessment and rating scheme, and an approved learning framework. The National Quality Framework regulates children's education and safety, staffing, partnerships with families and the community, the physical environment and use of child care facilities throughout Australia.
Regulatory authority	As defined in *Children (Education and Care Services) National Law (NSW) 104a and Children (Education and Care Services National Law Application) Act 2010 No 104*. In NSW, this is the Secretary of NSW Department of Education.
Education SEPP	*State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017.*
Sloping site	A site with a slope of 15 per cent or greater.
Solar access	The ability of a building to continue to receive direct sunlight without obstruction from other buildings or impediments, not including trees.
Street setback	The space along the street frontage between the property boundary and the building. Refer to building line or setback as defined in the Standard Instrument - Principal Local Environmental Plan.
Sunlight	Direct beam radiation from the sun
Unencumbered indoor space	As defined by Regulation 107 of the *Education and Care Services National Regulations.*
Unencumbered outdoor space	As defined by Regulation 108 of the *Education and Care Services National Regulations.*

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APPENDIX H

Preliminary Site Investigation

barnson.
DESIGN . PLAN . MANAGE

Site Contamination Investigation

Client: Gowrie NSW

Site Address: Gowrie Childcare Centre - 39 Saleyards Lane, Mudgee

13 August 2024

Our Reference : 41821-ER01_A

DISCLAIMER

This report has been prepared solely for Gowrie NSW (Rep. Nicole Jones) in accordance with the scope provided by the client and for the purpose(s) as outlined throughout this report.

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Project Name:	Preliminary Site Contamination Assessment – Gowrie Childcare Centre - 39 Saleyards Lane, Mudgee
Client:	Gowrie NSW
Project Number:	41821
Report Reference:	41821 ER01_A
Date:	16/08/2024

Prepared by:	**Reviewed by:**
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Nardus Potgieter MSc(Chem) BSc(Hons)(Env.Tech.) **Senior Environmental Scientist**	**Jim Sarantzouklis** MAIBS (Assoc.) MEHA RPIA Director

Executive Summary

Barnson Pty Ltd was engaged by Gowrie NSW (Rep. Nicole Jones) to undertake a preliminary contaminated site investigation in support of the proposed extension of the Gowrie Childcare Centre at 39 Saleyards Lane, Mudgee, hereafter referred to as the Subject Site.

The investigation has as its objectives to identify contamination issues that may affect the suitability of the Subject Site for continued use as childcare facility and assess the need for possible further investigations, and remediation or management of any contamination issues identified.

The investigation was based on a desktop review of information available for the Subject Site, as well as the findings of a site inspection and confirmatory sampling and analysis of surface soils collected at the site. A review of the available historical information indicated that the Subject Site was previously the location of the Mudgee livestock saleyards.

Activities associated with the historical and current use of the Subject Site were identified as having a potential to contaminate surface soil at the site. The following potential sources of contamination were identified:

- Historical saleyard activities
- Drainage across the site
- Disposal of waste
- Demolition waste or unclassified fill

A site inspection, supplemented with confirmatory sampling and analysis, was conducted to determine the presence and significance of potential contamination associated with the identified sources. The concentrations of all contaminants investigated were found to be below screening criteria in all surface soil samples collected from the Investigation Area.

Based on the findings of the desktop review and site investigation it can be stated with a reasonable level of confidence that the Investigation Area is suitable for the proposed development as childcare facility as there are no contaminants present at the site which are likely to present a risk of impact to the health of humans.

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Appendices

1. INTRODUCTION

1.1. Background

Barnson Pty Ltd was engaged by Gowrie NSW (Rep. Nicole Jones) to undertake a preliminary contaminated site investigation in support of the proposed extension of the Gowrie Childcare Centre at 39 Saleyards Lane, Mudgee (hereafter referred to as the Subject Site).

The Subject Site is located in the western extent of Mudgee, NSW, to the southwest of Saleyards Lane. Figure 1.1 presents a map indicating the location of the Subject Site. The existing childcare facility is located on Lot 30 DP 1267151. The proposal is to consolidate two adjoining lots (Lot 29 DP 1307255 and Lot 20 DP 1305817) located to the southeast and use the additional land to extend the existing childcare building, play area and parking lot. The additional land identified for the extension of the facility is an area of approximately 700m^2, is identified as the Investigation Area.

Figure 1.1: Location of the Subject Site.

The Education and Care Services National Regulations (Regulation 25(1)d) requires an assessment of the soil for possible contamination for any candidate site identified for the development of an education and childcare service premises. In accordance with the Regulation, a soil assessment means an analysis of soil conducted by an environmental consultant for the purposes of determining—

(a) the nature, extent and levels of contamination; and

(b) the actual or potential risk to human health resulting from that contamination;

In addition to this, State Environmental Planning Policy (Resilience and Hazards, 2021) require that for any proposed development, the consent authority must determine if land is contaminated and, if so, whether it is suitable for the intended purpose or require remediation, when determining a development application.

In order to fulfil these requirements Barnson undertook a Preliminary Site Investigation (PSI) of the Investigation Area, in support of both the approval of the facility under the Education and Care Services National Law as well as the Development Approval under NSW Environmental Planning and Assessment Act (1979).

1.2. Objectives

The objectives of the Investigation are:

- identify potential contamination present at the Subject Site;
- provide a clear indication of potential contamination which may pose a risk to the health of children; and
- assess the need for possible further investigations, remediation or management of significant contamination issues identified.

1.3. Scope of Work

To meet the stated objectives, Barnson completed the following scope of work:

- Site identification including a review of site history, site condition, surrounding environment, geology, hydrogeology and hydrology.
- Assessment of potential sources of contamination.
- Development of a conceptual model of the site (CSM) with regard to contaminant sources and exposure pathways, based on information gathered from the data review.
- Site inspection walkover to assess site conditions.

- Assessment of the risk/impact of the identified contamination sources within the context of the site and the CSM.
- Provide conclusions as to whether or not the site is suitable for intended development.

1.4. Purpose of this report

The purpose of this report is to document, with cognisance of the Guidelines of Consultants Reporting on Contaminated sites (NSW EPA, 2020), works undertaken, in accordance with the scope of works as described in Section 1.3, results of the desktop review and site inspection, and recommendations for further actions required to determine fitness of the site for the intended use.

1.5. Assumptions and Limitations

The following assumptions have been made in preparing this report:

- The nature of the intended future use of the site will be the establishment and operation of a childcare facility. This assumption forms the basis for the conceptual site model.
- All information pertaining to the contamination status of the site has been obtained through public record searches, a preliminary site inspection and analysis of samples collected at the site. All documents and information in relation to the site, which were obtained from public records, are accepted to be correct and has not been independently verified or checked.

It should be recognised that even the most comprehensive site assessments may fail to detect all contamination on a site. This is because contaminants may be present in areas that were not previously surveyed or sampled or may migrate to areas that showed no signs of contamination when sampled. Investigative works undertaken at the subject site by Barnson identified actual conditions only at those locations in which sampling and analysis were performed. Opinions regarding the conditions of the site have been expressed based on historical information and analytical data obtained and interpreted from previous assessments of the site. Barnson does not take responsibility for any consequences as a result of variations in site conditions.

2. SITE DESCRIPTION

2.1. Site Identification

Table 2.1 presents a summary of the available information pertaining to the identification of the Subject Site.

Table 2.1: Summary of Subject Site identification details.

Information	Details
Site address	39 Saleyards Lane, Mudgee, NSW 2850
Lot/Section and Deposited Plan No.	Lot 30 DP 1267151 Lot 29 DP 1307255 Lot 20 DP 1305817
County	Wellington
Parish	Mudgee
Local Government Area	Mid-Western Regional Council
Subject Site Area	Approx. 2,550m^2
Investigation Area	Approx. 700m^2

The Subject Site and the land surrounding it is R1: General Residential. Refer to Figure 2.1

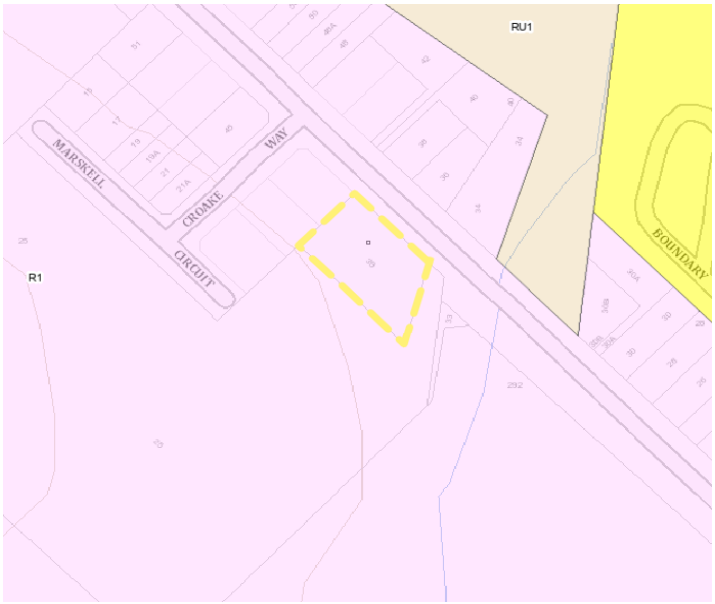

Figure 2.1: Land use zoning of the Subject Site.

2.2. Layout and Features

Figure 2.2 presents an aerial photo of the Subject Site with the features discussed indicated as sketch plan overlay.

The Subject Site is fenced and has direct northeastern frontage to Saleyards Lane. The area to be included and developed is part of a larger former agricultural landholding which includes residential land use to the north and west of the Subject Site. The eastern boundary of the site is an unnamed watercourse flowing in a northerly direction towards the Cudgegong River.

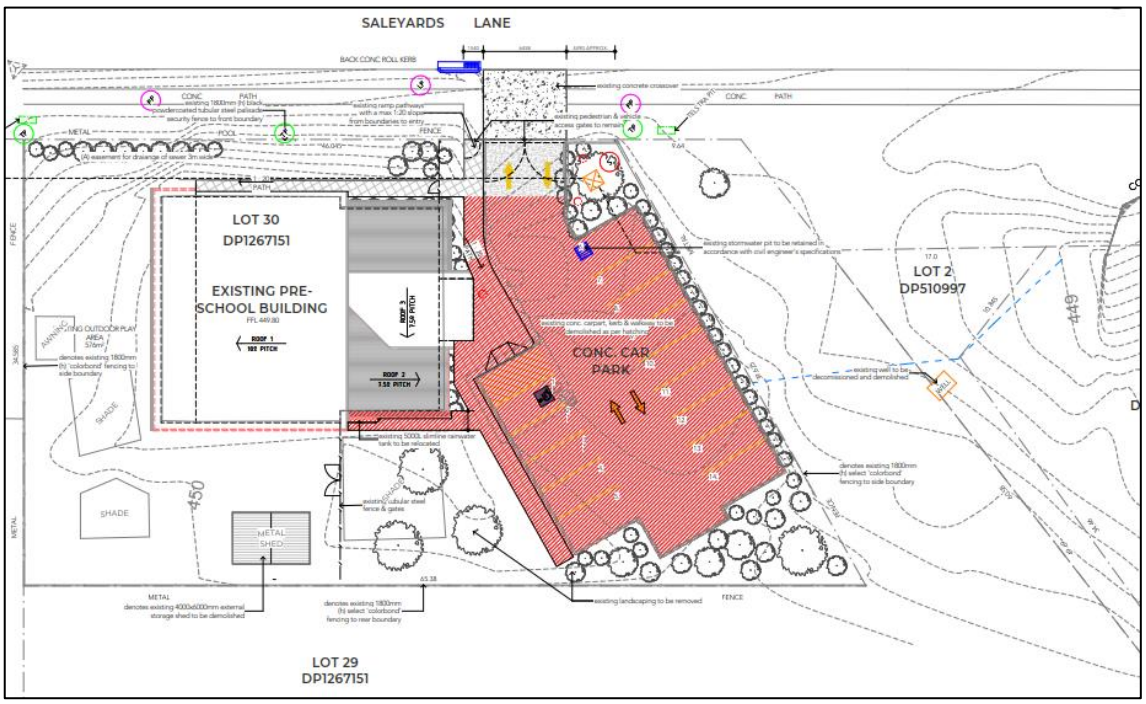

Figure 2.2: Existing Subject Site layout.

The existing facility is fenced and is accessed from the northeast. The additional land being included for the proposed extension is currently unoccupied and the portion fronting onto Saleyards Lane is unfenced (see Figure 2.3). The portion of the land to the south of this is fenced but has been affected by recent construction activities to the north (see Figure 2.4).

Figure 2.3: View of the existing childcare facility with the northern portion of the Investigation Area in the foreground.

Figure 2.4: Remainder of unoccupied Investigation Area with watercourse and culvert under Saleyards Lane in the background.

2.3. Historical Land Use

The Subject Site has historically been occupied by the Mudgee saleyards. Historical aerial images of the site dating back to 1965 show the saleyard pens and administration structure at the location of the Subject Site. The Saleyard operations remained at this location up to the early 2000's when in 2002 some structures on the current Subject Site have been cleared, with the entire area formerly occupied by the saleyards cleared by 2009.

The current childcare facility is observed on the 2015 aerial and is presumed to have been constructed somewhere between 2009 and 2015. The areas included in the Investigation Area that are currently unoccupied have been unoccupied since the Saleyards operations were cleared between 2002 and 2009.

Historical aerial photos of the area with the approximate location of the Subject Site indicated are attached as Appendix A.

2.4. Historical Record of Site Contamination

Datasets maintained by the Office of Environment and Heritage (OEH) including notices under CLM Act, POEO Environment Protection License Register, and environmental incidents were reviewed.

- List of NSW contaminated sites notified to EPA – The sites appearing on the OEH "List of NSW contaminated sites notified to the EPA" indicate that the notifiers consider that the sites are contaminated and warrant reporting to EPA. However, the contamination may or may not be significant enough to warrant regulation by the EPA. The EPA needs to review information before it can make a determination as to whether the site warrants regulation. A search of the listing returned no record for the Subject Site.
- Contaminated Land Record of Notices – A site will be on the Contaminated Land Record of Notices only if the EPA has issued a regulatory notice in relation to the site under the *Contaminated Land Management Act 1997*. A search of the register in August 2024 returned no record for the Subject Site and indicated no listings for any site within a radius of 1,000m.

  There is further no record of the Subject Site, in any of the following databases:
  - Former Gasworks Database
  - EPA PFAS Investigation Program
  - Defence PFAS Investigation & Management Program
  - Air Services Australia National PFAS Management Program
  - Defence 3 Year Regional Contamination Investigation Program

2.5. Previous Site Investigations

No information relating to any previous assessment of contamination at the Subject Site was available for review.

2.6. Proposed Development

Gowrie NSW is proposing to extend the current childcare facility, outside play are and parking area to the southeast. Figure 2.5 present an architectural drawing showing the proposed extension.

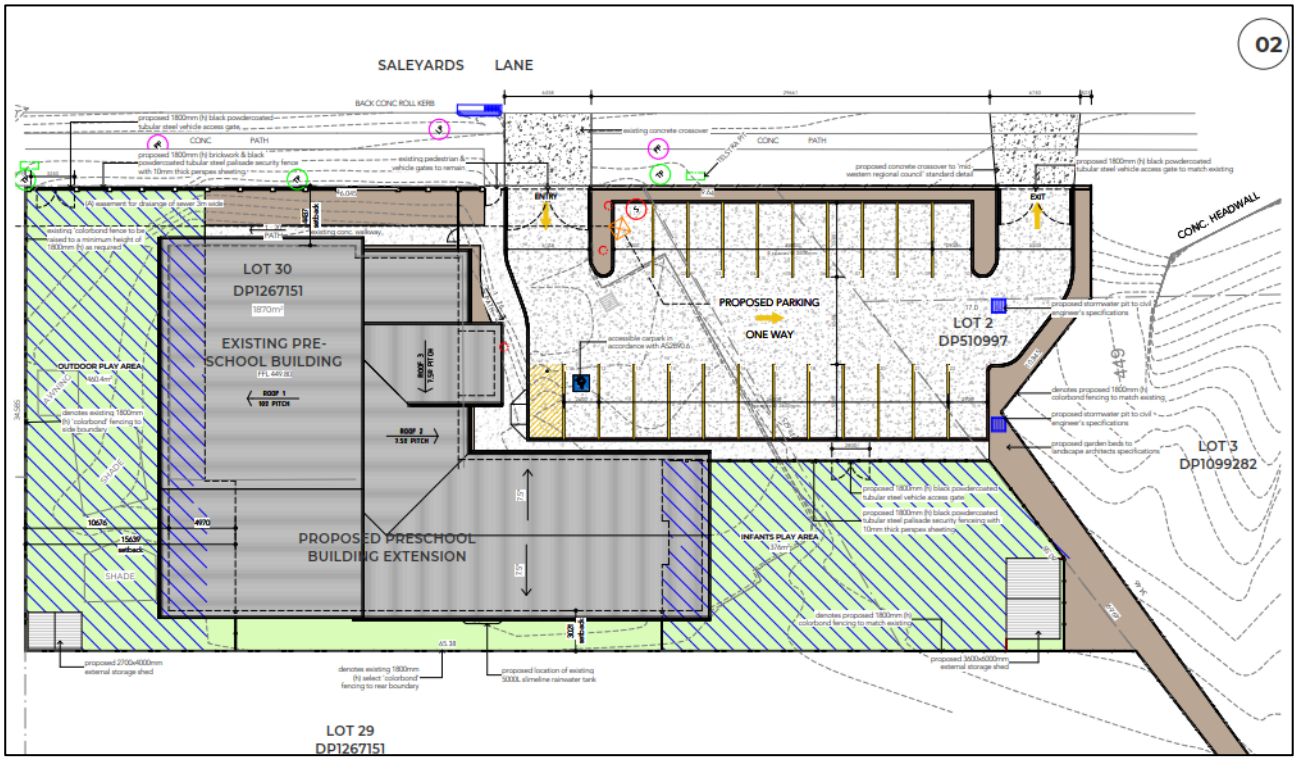

Figure 2.5: Proposed Childcare extension

The preliminary site investigation is undertaken to evaluate potential risks to human health associated with the new areas of the of the extended facility being included in the localities accessible by the children and staff.

3. SITE SETTING

3.1. Geology

A review of the 1:100000 Geology Map of Mudgee (refer to Figure 3.1) shows that geologically, the Subject Site is underlain by Cainozoic aged alluvial silt, clay and sand, variable huic content, sporadic pebble-to cobble-sized unconsolidated conglomeratic lenses.

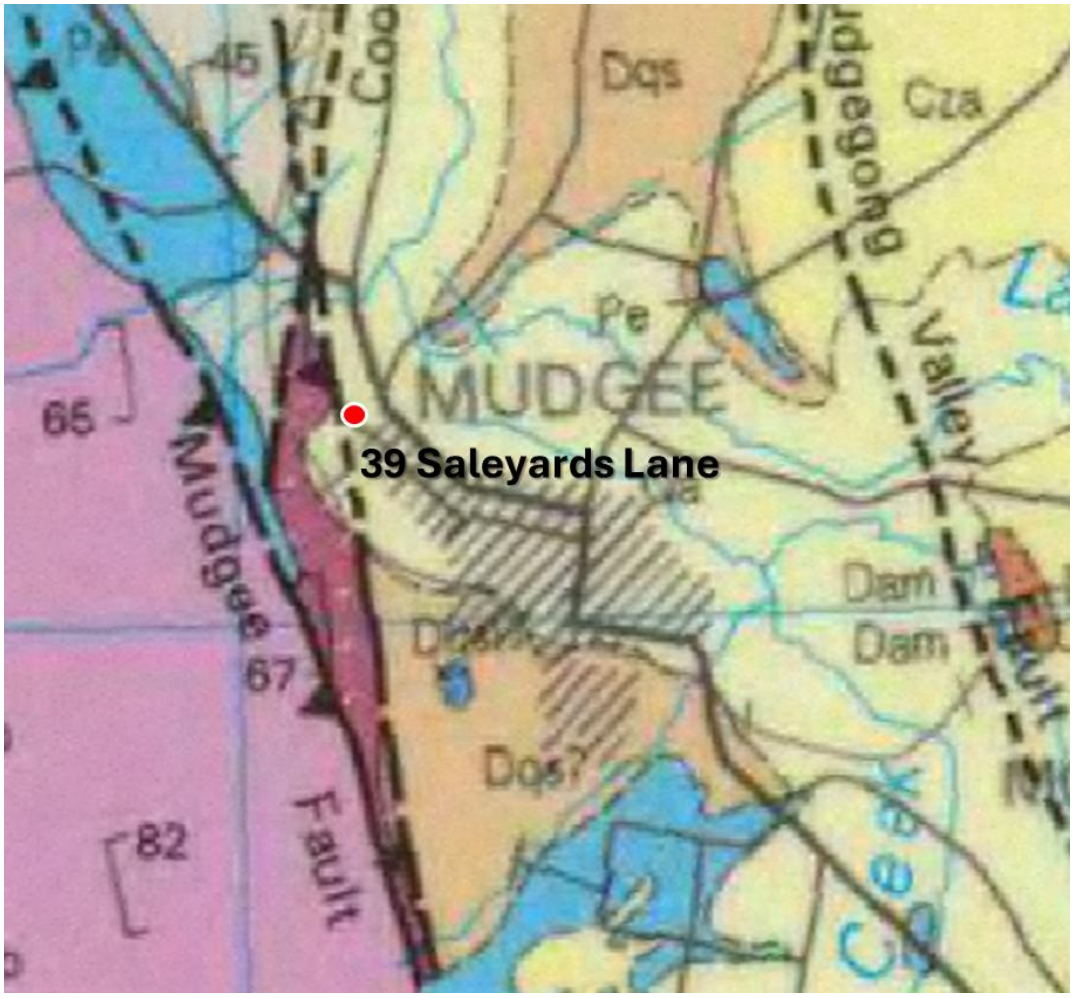

Figure 3.1: Mudgee 1:100,000 geology map showing the location of the Subject Site

Source: Google Earth, accessed 07/08/2024

An examination of the Geological Survey of NSW maps of Naturally Occurring Asbestos (accessed on 02 August 2024), shows that the geological units underlaying the Subject Site area has zero asbestos potential.

3.2. Soils

The Subject Site is mapped within the Craigmore soil landscape. Non-calcic Brown Soils (Dr2.12; Dr2.13; Dr2.42; Dr3.42) and Red Earths (Gn2.15; Gn2.16) on very old Quaternary alluvium. Yellow Podzolic-Solodic Soils intergrades (Dy3.42) on lower lying areas. Some Alluvial Soils (Uc1) and leached loams (Um4.21) on lower terraces adjacent to major streams.

The Atlas of Australian Acid Sulfate Soil has the subject site in an area of 'extremely low' probability of occurrence (a 1-5% chance of occurrence). Surface soils in the area can be saline in places.

3.3. Topography and Drainage

Figure 3.2 presents topographical information overlain on the map of the Subject Site. The presented data shows that the Subject Site is relatively flat throughout. Generally, the site and surrounding locality has a slight fall to the east, towards the nearby watercourse.

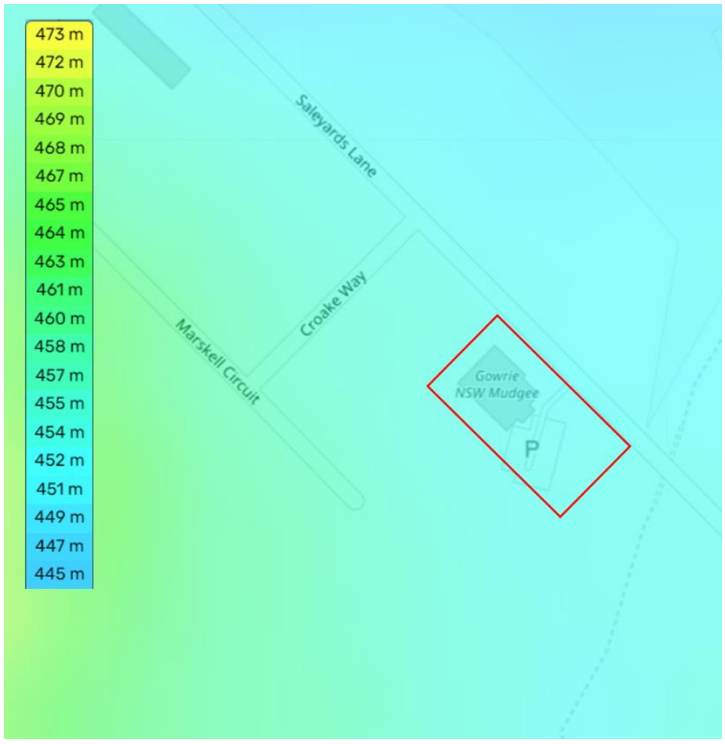

Figure 3.2: Subject Site topography.

The nearest natural water body to the Subject Site is the Cudgegong River, which at its closest is located at a distance of approximately 700m to the northeast.

3.4. Groundwater Resources

A review of existing groundwater bore records (WaterNSW, 2024) indicate there is a well located inside the boundaries of the Investigation Area. No other registered groundwater sites are identified within 500m of the Subject Site. The location of the well is indicated in Figure 3.3.

The information recorded in the database for the well (GW013263) indicate the depth as 10.6m. No information on Standing Water Level (S.W.L), Water Bearing Zone (W.B.Z) or yield is listed. The well was used for stock watering purposes.

Figure 3.3: Groundwater bores near the Subject Site.

Groundwater Sensitivity mapping obtained from the ePlanning Spatial Viewer, indicate that the Subject Site is located on environmentally sensitive land. Refer to Figure 3.4.

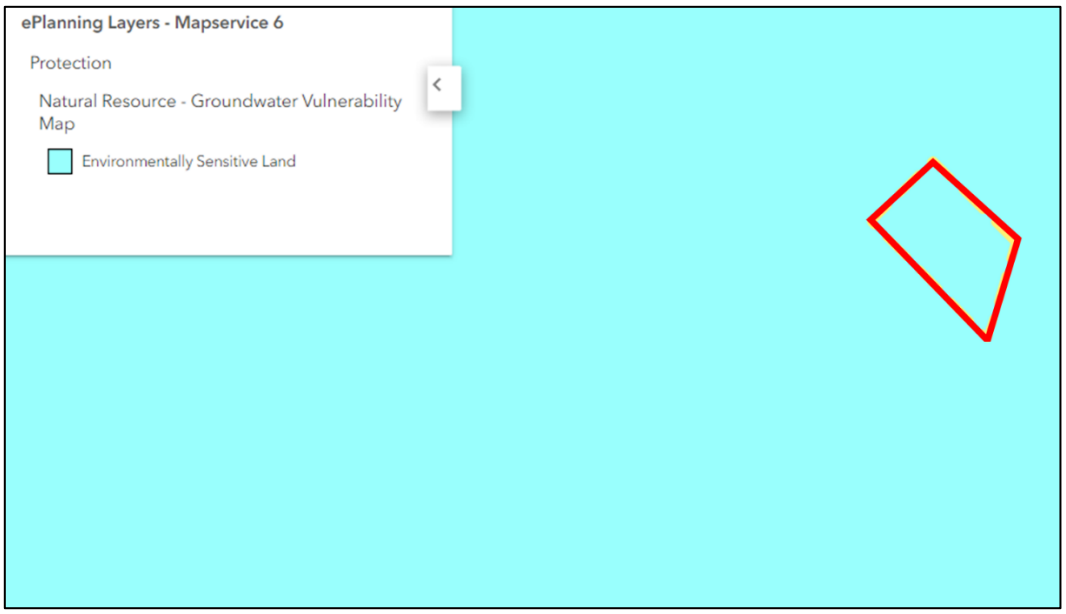

Figure 3.4: Groundwater vulnerability map.

4. CONCEPTUAL SITE MODEL

4.1. General

The Conceptual Site Model (CSM) is intended to provide an understanding of the potential for contamination and exposure to contaminants within the investigation areas. The CSM draws together the available historical information for the site, with site specific geological, and hydrogeological information to identify potential contaminants, contamination sources, migration and exposure pathways and sensitive receptors.

4.2. Sources

Based on the findings of the desktop assessment, the following potential contamination sources were identified:

- Historical saleyard activities

The historical use of the site as saleyards has the potential to contribute contaminants to surface soils through the presence of large numbers of animals in a small area and the use of vehicles in the loading and off-loading of the animals. The animals may contribute increased concentrations of nutrients (nitrogen and phosphate) through waste (manure and urine) while a small quantity of pesticide compounds used for pest control on animals may potentially be introduced. Potential contaminants associated with pesticides include heavy metals, as well as environmentally stable organochlorine and organophosphate compounds. These contaminants also relate to the historical use of the land for agriculture. Contaminants potentially introduced by the use of vehicles as part of the saleyard operations include petroleum hydrocarbons (e.g. fuel and lubricants)

- Drainage across the site

Aerial photos of the site indicate stormwater from the lot to the south drains across the unpaved Investigation Area in a north-easterly direction. The paved parking area is used for parking vehicles and serving as drop off. Contaminants (e.g. hydrocarbons) from the parking area has the potential to wash onto the Investigation Area and accumulate into the surface soils.

- Disposal of waste

Given the site is fenced, it is not readily accessible by the public and large scale illegal disposal of waste onto the site is considered unlikely. However, small quantities of blown waste or perhaps even waste tossed over the fence may be expected on the site.

- Demolition waste or unclassified fill

The demolition of the saleyards infrastructure and clearing and levelling of the site may have introduced fill or demolition waste to the surface of the site. Historical photographs of the site indicate no stockpiles of waste or fill.

4.3. Contaminants of Potential Concern

Considering the potential sources relevant to the Investigation Area, a wide variety of contaminants may be present. With the historical use of the site as saleyards considered the primary potential source of contamination, the potential residues of pesticides, including heavy metals, and hydrocarbons from vehicle use are accepted as the most likely contaminants. To a lesser extent, the drainage of runoff water from the adjoining paved carpark is accepted as a potential secondary source of localised hydrocarbon contamination. The presence of hazardous materials (asbestos and lead) is not considered likely potential contaminants.

Based on this understanding of the site history and activities, the contaminants of potential concern identified for the Investigation Area include:

- heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni and Zn);
- pesticides (organochlorines, organophosphates); and
- hydrocarbons (mainly fuel and lubricants);

4.4. Pathways

The primary pathways by which receptors could be exposed to the contaminants outlined above include:

- Inhalation of dust or vapours.
- Dermal contact with contaminated soils.
- Incidental ingestion of contaminated soils.

4.5. Receptors

Potential receptors may include:

Human receptor populations

- Children attending and carers working at the facility.
- Workers involved in the construction of the proposed structures.
- Visitors to the Subject Site (e.g. workers conducting maintenance, members of the public visiting).

4.6. Potential for Contamination

The Subject Site is not listed in any of the contaminated land databases. Based on the results of the desktop assessment, the overall likelihood for significant chemical contamination to be present within the site is low.

Although activities were identified that could potentially have a resulted in contamination of surface soils at the Subject Site, the type and quantity of contaminants introduced through these various sources are not expected to have led to significant contamination of the surface soils.

Description	Rationale	Potential Contaminants
Drainage across the site	Possible washdown of contaminants from adjoining paved parking area.	Hydrocarbons, heavy metals.
Historical saleyard activities	Possible presence of pesticide residue and hydrocarbons in the underlaying soil.	Pesticides, heavy metals, hydrocarbons.

Based on the results of the desktop assessment the overall likelihood for significant chemical contamination to be present at the Subject Site is considered to be low.

5. SITE INSPECTION

5.1. General

Barnson conducted an inspection of the Subject Site on Monday 5 August 2024. During the inspection the following observations were made:

- The surface of the investigation area is covered with managed and unmanaged vegetation (grasses), no trees present. (Figure 5.1).
- Evidence of earthworks and installation of drainage infrastructure to the south of the Investigation Area (see Figure 5.2).
- There are small stockpiles of waste, including steel posts, timber, wire, concrete and tyres located on an adjoining lot outside the fence of the Investigation Area. (Figure 5.3).
- Some evidence of windblown waste (cans and paper) was observed.
- The well located on site is covered. The well was visually inspected from surface and appeared dry with no water present.
- Parking lot is concrete bunded. All stormwater is channelled to a stormwater pit. Contaminated runoff from the carpark is unlikely.
- Landscape area inside existing fenced parking area is covered with vegetation. Landscape soil used to fill area to height of kerb and sustain plants.
- Area immediately outside of childcare facility fence appears to be sprayed with herbicide to reduce the need for maintenance.

Figure 5.1: Maintained and unmaintained vegetation covering surface of the Investigation Area.

Figure 5.2: Evidence of earthworks to the south of Investigation Area

Figure 5.3: Waste stockpiles outside Investigation Area.

Figure 5.4: Existing parking lot.

Figure 5.5: Landscape area in parking lot.

Figure 5.6: Bare soil next to existing facility fence.

The surface of the Investigation Area and landscape areas inside the existing facility was carefully inspected for signs of demolition waste. No evidence of demolition waste was observed anywhere on the surface.

5.2. Confirmatory Sampling

5.2.1. Sampling Design

The purpose of collecting confirmatory samples as part of the site inspection is to determine if any of the potential contaminants identified from the CSM are present. The samples are not intended for statistically valid characterisation or quantification of contamination levels. The collection of surface soil samples at the site was therefore focussed on areas where contamination of the surface soil could most likely have occurred.

The pattern followed for the soil sampling can be described as Systematic Sampling, where points are selected at regular intervals across the surface of a site. It is an efficient sampling method for confirmatory sampling that ensures an even coverage of the site, which is ideal for characterising sites (NSW EPA, 2020).

5.2.2. Sampling Density

The sampling density was selected for detection of a potential hot spot with a diameter of 10m at a 95% level of confidence. The grid spacing is 8 m and the sampling frequency is in accordance with the minimum recommended in the NSW EPA Sampling Guideline (NSW EPA, 2020) for grid based systematic sampling.

5.2.3. Sampling Depth

Based on the findings of the CSM the inspection and sampling were focussed on the surface soils (0-150mm). The site inspection included all accessible areas of the Subject Site.

5.2.4. Sampling Methods

Soil samples from the site were taken using a stainless-steel hand trowel. Soil was taken at each individual sampling location below the vegetative and detrital layer. Discrete soil samples were transferred directly to glass jar with a Teflon lined lid, supplied by the laboratory.

Tools were decontaminated between sampling locations to prevent cross contamination by brushing to remove caked or encrusted material, rinsing with clean tap water and allowing to air dry or using a clean towel.

5.2.5. Sampling Locations

Figure 5.7 presents a map of the Subject Site with the locations of the surface soil samples indicated. Table 5.1 is a summary description of the collected samples.

Figure 5.7: Locations of confirmatory surface soil samples.

Table 5.1: Summary of sample details.

Sample ID	Reference in Figure 5.7	Description
TP-01	A	Surface soil (0-150mm) collected from unfenced portion of Investigation Area.
TP-02	B	Surface soil (0-150mm) collected from unfenced portion of Investigation Area.
TP-03	C	Surface soil (0-150mm) co collected from unfenced portion of Investigation Area.
TP-04	D	Surface soil (0-150mm) collected from fenced area with unmanaged vegetation that will form part of future play area
TP-05	E	Surface soil (0-150mm) collected from fenced area with unmanaged vegetation that will form part of future play area.
TP-06	F	Surface soil (0-150mm) collected from landscape area to be repurposed as play area.
TP-07	G	Surface soil (0-150mm) collected from landscape area to be repurposed as play area.
TP-08	H	Surface soil (0-150mm) collected from landscape area to be repurposed as play area.
TP-09	D	Duplicate surface soil (0-150mm) sample collected from Location D.
TP-10	I	Additional surface soil (0-150mm) collected along fence where bare soil observed.

5.2.6. Analytes

The surface soil samples, were submitted to the Australian Laboratory Services (ALS) Pty Ltd laboratory in Mudgee for determination of the following parameters:

- metallic element (cadmium, chromium, copper, lead, nickel and zinc) concentrations, including arsenic and mercury in soil, and
- extraction with organic solvent and analysis of Total Recoverable Hydrocarbons (TRH) fractions C6 to C40, benzene, toluene, ethylbenzene and total xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), polychlorinated biphenyls (PCBs).

The sample collected from the strip of bare soil discovered along the existing facility fence was analysed also for Organochlorine (OCP) and Organophosphorus (OPP) Pesticides.

All samples submitted for analysis included laboratory QC duplicates and spikes for the parameters analysed.

5.3. Analytical Results

A copy of the laboratory report for the confirmatory samples is attached as Appendix B.

- The laboratory report indicates only metals were detected in the samples of surface soil analysed. In all surface soil samples analysed the concentrations of petroleum hydrocarbons as well as persistent pesticide and herbicide compounds are indicated as below the limits of detection.
- The metals detected include arsenic (As), chromium (Cr), copper (Cu), lead (Pb), nickel (Ni), and zinc (Zn). Concentrations of, cadmium and mercury were at or below detection in all samples.

Table 5.2 presents a summary of the analytical results for metals.

Table 5.2: Summary of metal concentrations detected in soil samples collected from the Subject Site

Analyte	TP-01	TP-02	TP-03	TP-04	TP-05	TP-06	TP-07	TP-08	TP-09
	mg.kg^{-1}								
Arsenic (As)	20	11	24	27	32	18	5	<5	28
Cadmium (Cd)	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium (Cr)	16	13	22	26	17	24	16	16	25
Copper (Cu)	27	18	21	9	19	17	11	12	11
Lead (Pb)	69	16	31	15	19	10	<5	<5	18
Mercury (Hg)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel (Ni)	11	5	10	4	31	8	8	10	6
Zinc (Zn)	89	34	66	18	111	143	25	32	34

5.4. Analytical Data Quality

5.4.1. Field

- An experienced sampler was used to collect the samples using standard methods.
- Samples were collected in new, clean containers using cleaned equipment and soils were placed in glass jars provided by the laboratory that were refrigerated after filling and transported in an insulated container to the laboratory.
- The collection of samples was undertaken in accordance with accepted standard protocols (NEPC 1999).
- Duplicate samples were collected at a frequency of 1:10. The duplicate samples were split from field samples, in the field. The duplicates were analysed for the same parameters as the primary samples.

- No field blank, rinsate, trip blank or matrix spikes were submitted for analysis. Samples from all batches did not contain contaminants which confirm the absence of cross contamination during transport and storage.
- Chain of custody was recorded for all samples. A copy of the signed sheet is attached as Appendix B.

5.4.2. Laboratory

The analyses were undertaken at a NATA accredited laboratory. The laboratory quality control procedures in the form of duplicates as well as analyte and surrogate spikes were applied to all contaminant classes analysed. The results reported for the duplicate is within the Relative Percent Difference range of the acceptance criteria for a duplicate sample. The analyte spike recoveries reported for the different sets of organic analytes are indicated as within the acceptance criteria (see Appendix B).

5.4.3. Data evaluation

All media appropriate to the objectives of this investigation have been adequately analysed and no area of significant uncertainty exist. It is concluded the data is suitable for the purposes of the contaminated site investigation.

6. ASSESSMENT

6.1. Assessment Criteria – Human Health and Environmental Risk

Screening for human health and ecological risk, utilises published human health investigation levels (HILs) from the National Environment Protection (Assessment of Site Contamination) Measure (NEPC, 1999) to identify contaminant concentrations in soil that may pose a risk to children attending the facility or visiting the site.

HILs are scientifically based, generic assessment criteria designed to be used in the screening of potential risks to human health from chronic exposure to contaminants. HIL's are conservatively derived and are designed to be protective of human health under the majority of circumstances, soil types and human susceptibilities and thus represent a reasonable 'worst-case' scenario for specific land-use settings. The HILs selected for evaluation of the Investigation Area are those derived for a standard residential scenario (HIL-A), which assumes typical residential land use with garden/accessible soil (home grown produce <10% fruit and vegetable intake, and no poultry). The HIL-A criteria are also appropriate for use in the assessment of childcare facility as land use category.

Although the primary concern in most site assessments is protection of human health, the assessment should also include consideration of ecological risks and protection of groundwater resources that may result from site contamination. EILs provide screening criteria to assess the effect of contaminants on a soil ecosystem and afford species level protection for organisms that frequent or inhabit soil and protect essential soil processes. Ecological investigation levels (EILs) have been derived for common metallic contaminants in soil. The values selected for the evaluation of the heavy metals detected in the soil samples from the Subject Site considers the physicochemical properties of soil and contaminants and the capacity of the soil to accommodate increases in contaminant levels above natural background while maintaining ecosystem protection for identified land uses.

Table 6.1 presents a summary of the health-risk based criteria and ecological investigation levels selected for assessment of the detected metal concentrations.

Table 6.1: Human health and ecological risk screening levels for metals.

	Health-based Investigation Levels	Ecological Investigation Levels (EIL)
	HIL A Residential	Residential
Element	mg.kg^{-1}	mg.kg^{-1}
Arsenic (As)	100	100
Cadmium (Cd)	20	-
Chromium (Cr) (Total)	NR	230
Copper (Cu)	6,000	230
Lead (Pb)	300	1,100
Mercury (Hg)	40	-

Nickel (Ni)	400	270
Zinc (Zn)	7,400	300

Note: NR=not relevant due to low human toxicity of Cr(III). NA=No applicable screening level. EILs selected are most conservative values relevant to Residential land use scenarios.

6.2. Findings

Direct comparison of the analytical results presented in Table 5.2 with the assessment criteria (refer Table 6.1) show that the detected metal concentrations in samples collected from the Investigation Area are well below the health and ecological risk-based criteria values. The general low concentrations of heavy metals detected suggest naturally occurring element abundance and is most likely not related to any of the potential sources of contamination identified for the Investigation Area. The presence of detectable concentrations of arsenic is an indication of the potential contribution of the large number of livestock that occupied the site as part of the saleyards operations. Historically, livestock were treated with arsenic based dip/drench solutions for external parasites. These pesticides could be washed off the hides and over time concentrate in surface soils. However, these results verify the assertion that the activities previously undertaken at the site did not contribute significant or widespread contamination to the surface soils.

The sample of soil collected in the bare soil area where herbicide was presumably applied contained no elevated concentrations of pesticides.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1. Conclusions

In accordance with the objectives stated in Section 1.2, and based on the information contained within this assessment, the following conclusions are presented (subject to the limitations noted in Section 1.5):

- Activities associated with the historical and current use of the Subject Site were identified as having a potential to contaminate surface soil at the site.
- The following potential sources of contamination were identified and evaluated:
  - Historical saleyard activities
  - Drainage across the site
  - Disposal of waste
  - Demolition waste or unclassified fill
- A site investigation and confirmatory sampling conducted to determine the presence and significance of potential contamination associated with the identified sources, revealed no evidence of contamination.
- The concentrations of all contaminants investigated were below screening criteria in all surface soil samples collected from the Investigation Area.
- The screening criteria used in the evaluation of the contaminant concentrations were appropriately conservative and suitable for assessment of the continued use of the site for educational purposes.
- Based on the findings of the desktop review and site investigation it is concluded that the contamination identified at the Subject Site represent no potential risk to human health and the environment and the Site is suitable for the proposed redevelopment.

7.2. Recommendations

- Based on the findings of the desktop review and site investigation it can be stated with a reasonable level of confidence that the Investigation Area is suitable for the proposed development as childcare facility as there are no contaminants present at the site which are likely to present a risk of impact to the health of humans.

8. REFERENCES

NEPC. (1999). *National Environment Protection (Assessment of Site Contamination) Measure (as amended, 2013).* National Environment Protection Council.

NSW EPA. (2015). *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997.* Sydney, NSW: State of NSW, Environment Protection Authority.

NSW EPA. (2020). *Consultants Reporting on Contaminated Land, Contaminated Land Guidelines.* Sydney: NSW Environmental Protection Authority.

NSW EPA. (2020). *Sampling Design Part 1 - Application, Contaminated Land Guidelines.* Sydney: NSW EPA.

WaterNSW. (2024). *Real Time Data*. Retrieved August 2, 2024, from Water NSW: https://realtimedata.waternsw.com.au/water.stm

barnson.

APPENDIX A

Historical Aerial Photographs

1965

1990

1994


Saleyards Ln
39 Saleyards Ln
Saleyards Ln
Maskell Cct
Fifth St

2002

2009

2015

barnson.

APPENDIX B

Chain of Custody and Laboratory Report

Environmental Division
Mudgee
Work Order Reference
ME2401269

Telephone · 02 6372 6735

barnson

Jnit 4 / 108-110 Market Street
Mudgee, NSW 2850
300 BARNSON (1300 227 676)
generalenquiry@barnson.com.au

CHAIN OF CUSTODY AND ANALYTICAL REQUEST

Job Number	41821	Date	6 August 2024
Laboratory	ALS Mudgee	Report to	Nardus Potgieter npotgieter@barnson.com.au
Sample Temperature on Receipt		Notes	
[redacted]			

Sample ID	Sample Description	Sample Date	Sample type	Analysis request				
				1	2	3	4	5
TP-01	Surface Soil	05/08/2024	Soil		X			
TP-02	Surface Soil	05/08/2024	Soil	X				
TP-03	Surface Soil	05/08/2024	Soil	X				
TP-04	Surface Soil	05/08/2024	Soil	X				
TP-05	Surface Soil	05/08/2024	Soil	X				
TP-06	Surface Soil	05/08/2024	Soil	X				
TP-07	Surface Soil	05/08/2024	Soil	X				
TP-08	Surface Soil	05/08/2024	Soil	X				
TP-09	Surface Soil	05/08/2024	Soil	X				
TP-10	Surface Soil	05/08/2024	Soil			X		

Analysis request		Method Code
1	8 Metals	S-2
2	TRH (C6-C40) / BTEXN / 8 Metals	S-5
3	OC / OP Pesticides	S-12
4		
5		

[redacted]

Date
6 August 2024

client 1x esky
No ice
No ice brick.

CERTIFICATE OF ANALYSIS

Work Order	: **ME2401269**	Page	: 1 of 8
Client	: **BARNSON**	Laboratory	: Environmental Division Mudgee
Contact	: Nardus Potgieter	Contact	: Mary Monds (ALS Mudgee)
Address	: Unit 4 108-110 Market Street MUDGEE NSW 2850	Address	: 1/29 Sydney Road Mudgee NSW Australia 2850
Telephone	: 0429 464 067	Telephone	: +61 2 6372 6735
Project	: Soil	Date Samples Received	: 06-Aug-2024 12:15
Order number	: ----	Date Analysis Commenced	: 07-Aug-2024
C-O-C number	: ----	Issue Date	: 13-Aug-2024 16:34
Sampler	: Client Sampler		
Site	: ----		
Quote number	: SY/053/14		
No. of samples received	: 10		
No. of samples analysed	: 10		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Mudgee, NATA accreditation no. 825, site no. 15224.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP-01 Surface Soil	TP-02 Surface Soil	TP-03 Surface Soil	TP-04 Surface Soil	TP-05 Surface Soil
				Sampling date / time	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00
Compound	CAS Number	LOR	Unit		ME2401269-001	ME2401269-002	ME2401269-003	ME2401269-004	ME2401269-005
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content	----	1.0	%		**10.9**	**----**	**----**	**----**	**----**
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**----**	**6.7**	**11.8**	**12.8**	**11.3**
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**20**	**11**	**24**	**27**	**32**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**16**	**13**	**22**	**26**	**17**
Copper	7440-50-8	5	mg/kg		**27**	**18**	**21**	**9**	**19**
Lead	7439-92-1	5	mg/kg		**69**	**16**	**31**	**15**	**19**
Nickel	7440-02-0	2	mg/kg		**11**	**5**	**10**	**4**	**31**
Zinc	7440-66-6	5	mg/kg		**89**	**34**	**66**	**18**	**111**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	**----**	**----**	**----**	**----**
C10 - C14 Fraction	----	50	mg/kg		<50	**----**	**----**	**----**	**----**
C15 - C28 Fraction	----	100	mg/kg		<100	**----**	**----**	**----**	**----**
C29 - C36 Fraction	----	100	mg/kg		<100	**----**	**----**	**----**	**----**
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	**----**	**----**	**----**	**----**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	**----**	**----**	**----**	**----**
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	**----**	**----**	**----**	**----**
>C10 - C16 Fraction	----	50	mg/kg		<50	**----**	**----**	**----**	**----**
>C16 - C34 Fraction	----	100	mg/kg		<100	**----**	**----**	**----**	**----**
>C34 - C40 Fraction	----	100	mg/kg		<100	**----**	**----**	**----**	**----**
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	**----**	**----**	**----**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP-01 Surface Soil	TP-02 Surface Soil	TP-03 Surface Soil	TP-04 Surface Soil	TP-05 Surface Soil
				Sampling date / time	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00
Compound	CAS Number	LOR	Unit		ME2401269-001	ME2401269-002	ME2401269-003	ME2401269-004	ME2401269-005
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**90.0**	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		**89.0**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		**94.9**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP-06 Surface Soil	TP-07 Surface Soil	TP-08 Surface Soil	TP-09 Surface Soil	TP-10 Surface Soil
				Sampling date / time	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00
Compound	CAS Number	LOR	Unit		ME2401269-006	ME2401269-007	ME2401269-008	ME2401269-009	ME2401269-010
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**21.5**	**14.2**	**20.1**	**11.2**	**7.9**
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**18**	**5**	<5	**28**	**----**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	**----**
Chromium	7440-47-3	2	mg/kg		**24**	**16**	**16**	**25**	**----**
Copper	7440-50-8	5	mg/kg		**17**	**11**	**12**	**11**	**----**
Lead	7439-92-1	5	mg/kg		**10**	<5	<5	**18**	**----**
Nickel	7440-02-0	2	mg/kg		**8**	**8**	**10**	**6**	**----**
Zinc	7440-66-6	5	mg/kg		**143**	**25**	**32**	**34**	**----**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	**----**
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
beta-BHC	319-85-7	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
delta-BHC	319-86-8	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
Heptachlor	76-44-8	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
Aldrin	309-00-2	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
Dieldrin	60-57-1	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05
Endrin	72-20-8	0.05	mg/kg		**----**	**----**	**----**	**----**	<0.05

Analytical Results

Sub-Matrix: SOIL
(Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Sample ID	TP-06 Surface Soil	TP-07 Surface Soil	TP-08 Surface Soil	TP-09 Surface Soil	TP-10 Surface Soil
				Sampling date / time	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00
					ME2401269-006	ME2401269-007	ME2401269-008	ME2401269-009	ME2401269-010
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
beta-Endosulfan	33213-65-9	0.05	mg/kg		----	----	----	----	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		----	----	----	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		----	----	----	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	----	----	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	----	----	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		----	----	----	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		----	----	----	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		----	----	----	----	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		----	----	----	----	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		----	----	----	----	<0.05
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		----	----	----	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg		----	----	----	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg		----	----	----	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg		----	----	----	----	<0.05
Diazinon	333-41-5	0.05	mg/kg		----	----	----	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		----	----	----	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		----	----	----	----	<0.2
Malathion	121-75-5	0.05	mg/kg		----	----	----	----	<0.05
Fenthion	55-38-9	0.05	mg/kg		----	----	----	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg		----	----	----	----	<0.05
Parathion	56-38-2	0.2	mg/kg		----	----	----	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		----	----	----	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		----	----	----	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		----	----	----	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		----	----	----	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP-06 Surface Soil	TP-07 Surface Soil	TP-08 Surface Soil	TP-09 Surface Soil	TP-10 Surface Soil
				Sampling date / time	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00	05-Aug-2024 00:00
Compound	CAS Number	LOR	Unit		ME2401269-006	ME2401269-007	ME2401269-008	ME2401269-009	ME2401269-010
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Prothiofos	34643-46-4	0.05	mg/kg		----	----	----	----	<0.05
Ethion	563-12-2	0.05	mg/kg		----	----	----	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		----	----	----	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		----	----	----	----	<0.05
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	----	----	**73.3**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	----	----	----	**79.0**

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry / Biology).

(SOIL) EA055: Moisture Content

(SOIL) EG005(ED093)T: Total Metals by ICP-AES

(SOIL) EG035T: Total Recoverable Mercury by FIMS

(SOIL) EP080/071: Total Petroleum Hydrocarbons

(SOIL) EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions

(SOIL) EP080: BTEXN

(SOIL) EP080S: TPH(V)/BTEX Surrogates

(SOIL) EA055: Moisture Content (Dried @ 105-110°C)

(SOIL) EP068A: Organochlorine Pesticides (OC)

(SOIL) EP068B: Organophosphorus Pesticides (OP)

(SOIL) EP068T: Organophosphorus Pesticide Surrogate

(SOIL) EP068S: Organochlorine Pesticide Surrogate