BUSHFIRE PLANNING AUSTRALIA

BUSHFIRE ASSESSMENT REPORT

CHILDCARE CENTRE

Cessnock Road, Gillieston Heights

Prepared for Stevens Land Pty Ltd

Bushfire Planning Australia

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Disclaimer and Limitation

This report is prepared solely for Stevens Land Pty Ltd (the 'Client') for the specific purposes of only for which it is supplied (the 'Purpose'). This report is not for the benefit of any other person; either directly or indirectly and is strictly limited to the purpose and the facts and matters stated in it and will not be used for any other application.

This report is based on the site conditions surveyed at the time the document was prepared. The assessment of the bushfire threat made in this report is made in good faith based on the information available to Bushfire Planning Australia at the time.

The recommendations contained in this report are considered to be minimum standards and they do not guarantee that a building or assets will not be damaged in a bushfire. In the making of these comments and recommendations it should be understood that the focus of this document is to minimise the threat and impact of a bushfire.

Finally, the implementation of the adopted measures and recommendations within this report will contribute to the amelioration of the potential impact of any bushfire upon the development, but they do not and cannot guarantee that the area will not be affected by bushfire at some time.

Document Status: 2406 - SFPP Childcare Centre

Version	Status	Purpose	Author	Review Date
1	Draft	Draft for Review	Katrina Mukevski	14 January 2025
2	Draft	Draft for Client Review	Stuart Greville	31 January 2025
3	Final	Final for Submission	Stuart Greville	31 January 2025

Certification

As the author of this Bushfire Threat Assessment (BAR), I certify this BAR provides the detailed information required by the NSW Rural Fire Service under Clause 45 of the Rural Fires Regulation 2022 and Appendix 1 of Planning for Bushfire Protection 2019 for the purposes of an application for a bush fire safety authority under section 100B(4) of the Rural Fires Act 1997.

BPAD Bushfire Planning & Design Accredited Practitioner Level 2

Stuart Greville

Accredited Bushfire Practitioner

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Date: 31 January 2025

In signing the above, I declare the report is true and accurate to the best of my knowledge at the time of issue.

Executive Summary

Bushfire Planning Australia (BPA) has been engaged by Stevens Land Pty Ltd (the 'Proponent') to undertake a Bushfire Assessment Report (BAR) for a proposed childcare centre located at 464 Cessnock, Gillieston Heights (Lot 55 DP975994) within part of the approved Regrowth Kurri Kurri Precinct 1B residential subdivision (DA/2022/912). The childcare centre is proposed to be located within Precinct 1B on Lots 301-304 and Lot 719.

A childcare centre is defined as a Special Fire Protection Purpose (SFPP) under the NSW Rural Fire Service (RFS) document Planning for Bushfire Protection 2019 (PBP 2019). An assessment of the bushfire hazards the entire site is exposed to has been undertaken and an appropriate combination of bushfire protection measures are recommended to ensure the development and occupants are not exposed to an unacceptable bushfire risk.

This BAR has been prepared in accordance with the submission requirements detailed in Appendix 2 of PBP 2019 and has demonstrated the proposed expansion satisfies the Aims and Objectives of PBP 2019, including the Specific Objectives for SFPP developments.

Additionally, this BAR has considered and additional requirements for Class 9 buildings outlined in the Addendum to PBP 2019 published by the RFS. Addendum 2022 was produced to align with the changes and implications of additional bushfire protection measures for Class 9 buildings (including childcare centres) described in Part G5D4 of the National Construction Code 2022 (NCC 2022) that came into effective on 1 May 2023.

This BAR found the site was exposed to a low bushfire hazard located greater than 100m south-west of the proposed development contained within a drainage reserve. The area of remnant vegetation to the west and north-west of the site is required to be managed as an Inner Protection Zone as a condition of the development consent (DA/2022/912 and DA/2022/193).

There is no unmanaged land within 100m of the development site. Although as a Class 9 building, the bushfire protection measures contained in the 2022 Addendum to PBP 2019 must be complied with.

The following key recommendations have been designed to enable the proposed development to achieve Performance Criteria for SFPP developments detailed in Section 6.8 of PBP 2019 and Appendix B of the Addendum 2022 to PBP 2019:

Asset Protection Zones:

1. The entire site is to be managed as an Inner Protection Area (IPA) as outlined within Appendix 4 of PBP 2019 and the RFS document *Standards for asset protection zones.*

Construction and Design

2. The new building is to be constructed in accordance with Section 3 and 6 of Australian Standard AS3959-2018 Construction of buildings in bushfire prone areas (AS3959-2018). being **BAL-19**.

Water Supply

3. The proposed development shall be connected to a reliable water supply network and that suitable fire hydrants are located throughout the development site that are clearly marked and provided for the purposes of bushfire protection. Fire hydrant spacing, sizing and pressure shall comply with AS2419.1 2005 and section 6.8.3 of PBP 2019.

Landscaping

4. Consideration should be given to landscaping and fuel loads on site to decrease potential fire hazards on site.

Emergency Management

5. A Bushfire Emergency Management and Evacuation Plan (BEMEP) shall be prepared that is consistent with the RFS Guidelines 'Development Planning – A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan December 2014'.

This assessment has been made based on the bushfire hazards observed in and around the site at the time of inspection and production.

Should the above recommendations be implemented, the proposed modification to the approved development will result in a better bushfire outcome as the existing bushfire risk should be suitably mitigated to offer an acceptable level of protection to life and property for those persons and assets occupying the site but they do not and cannot guarantee that the area will not be affected by bushfire at some time.

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Terms and Abbreviations

Abbreviation	Meaning
APZ	Asset Protection Zone
AS2419-2005	Australian Standard – Fire Hydrant Installations
AS3959-2018	Australian Standard – Construction of Buildings in Bush Fire Prone Areas
BAR	Bushfire Assessment Report
BCA	Building Code of Australia
BC Act	NSW Biodiversity Act 2016
BDAR	Biodiversity Development Assessment Report
BMP	Bush Fire Management Plan
BPA	Bush Fire Prone Area (Also Bushfire Prone Land)
BPL	Bush Fire Prone Land
BPLM	Bush Fire Prone Land Map
BPM	Bush Fire Protection Measures
DoE	Commonwealth Department of the Environment
DPI Water	NSW Department of Primary Industries – Water
EPA Act	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
FDI	Fire Danger Index
FMP	Fuel Management Plan
ha	hectare
IPA	Inner Protection Area
LGA	Local Government Area
MCC	Maitland City Council
NCC	National Construction Code
NPWS	NSW National Parks and Wildlife Service
OPA	Outer Protection Area
OEH	NSW Office of Environment and Heritage
PBP 2019	Planning for Bushfire Protection 2019
RF Act	Rural Fires Act 1997
RF Regulation	Rural Fires Regulation
RFS	NSW Rural Fire Service
SFPP	Special Fire Protection Purposes
VMP	Vegetation Management Plan

1. Introduction

Bushfire Planning Australia (BPA) has been engaged by Stevens Land Pty Ltd (the 'Proponent') to undertake a Bushfire Assessment Report (BAR) for a proposed childcare centre located at 464 Cessnock Road, Gillieston Heights within the recently approved Regrowth Kurri Kurri Precinct 1B residential subdivision (DA/2022/912). The proposed childcare development comprises of multiple lots including Lot 719, Lot 301 to 304, on the corner of the approved road MC11 and MC01.

The assessment aims to consider and assess the bushfire hazard and associated potential bushfire threat relevant to the proposed development, and specific objectives for Special Fire Protection Services (SFPP), and to outline the minimum mitigative measures which would be required in accordance with the provisions of the New South Wales Rural Fire Service (RFS) publication *Planning for Bushfire Protection 2019* (PBP 2019) and the associated Addendum to PBP 2019 that has been released and adopted through the *Environmental Planning and Assessment Amendment* (Planning for Bushfire Protection) *Regulation 2007* and the *Rural Fires Regulation 2022*.

Additionally, this BAR will also consider the changes and implications of additional bushfire protection measures for Class 9 buildings (including childcare centres) described in G5D4 of the National Construction Code 2022 (NCC 2022).

1.1. Aims and Objectives

The assessment aims to consider and assess the bushfire hazard and associated potential bushfire threat relevant to the proposed development, and to outline the minimum mitigative measures which would be required in accordance with the provisions of the New South Wales Rural Fire Service (RFS) publication *Planning for Bushfire Protection 2019* (PBP 2019) and the *Rural Fires Regulation 2022.*

This assessment has been undertaken in accordance with clause 45 of the Rural Fires Regulation 2022. This BAR also addresses the aims and objectives of PBP 2019, being:

- Afford buildings and their occupants protection from exposure to a bushfire;
- Provide a defendable space to be located around buildings;
- Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;
- Ensure that appropriate operational access and egress for emergency service personnel and occupants is available;
- Provide for ongoing management and maintenance of bushfire protection measures (BPMs); and
- Ensure that utility services are adequate to meet the needs of firefighters.

A compliance table demonstrating compliance with PBP 2019 is provided in **Appendix B & C**.

1.2. Specific Objectives for Special Fire Protection Purposes

The aims and objectives listed in section 1.1 of PBP 2019 remain applicable to SFPP developments, however further consideration has been given to SFPP developments due to the nature of these environments and the occupants they accommodate. Occupants of SFPP developments are generally more vulnerable to bushfire attack therefore specific objectives have been put in place to ensure greater protection is provided (section 6.2 PBP 2019). Specific objectives include:

- Minimise levels of radiant heat, localised smoke and ember attack through increased APZ, building design and siting;
- Provide for an appropriate operational environment for emergency service personnel during firefighting and emergency management;
- Ensure the capacity of existing infrastructure (such as roads and utilities) can accommodate the increase in demand during emergencies as a result of the development; and
- Ensure emergency evacuation procedures and management which provides for the special characteristics and needs of occupants.

As a childcare centre is classified as a SFPP development, the specific objectives and acceptable solutions for a SFPP development have been considered.

1.3. National Construction Code 2022

This Bushfire Assessment Report (BAR) will also consider the implications of additional bushfire protection measures for Class 9 buildings (including child care centres) described in G5D4 of the National Construction Code 2022 (NCC 2022). The changes to NCC 2022 became effective on 1 May 2023. These additional measures are contained in Specification 43 and are intended to operate in conjunction with other bushfire safety measures that lie outside the scope of the NCC 2022.

However, it is essential to understand that BPA's expertise and services are primarily oriented towards compliance and advisory within the framework of PBP 2019, as regulated and endorsed by the RFS. The RFS's guidelines and assessments are specifically tailored to address bushfire protection measures within the framework of the NSW planning system and do not extend to the broader scope of the NCC.

The NCC 2022 includes a NSW variation to G5D4 which allows for compliance with the NCC 2022 using alternative approaches as modified by the development consent with a bushfire safety authority issued by the RFS under s100b of the Rural Fires Act 1997.

The additional bushfire protection measures described in G5D4 are set out in Specification 43. The measures set out in Specification 43 are intended to operate in conjunction with other bushfire safety measures that lie outside the scope of the NCC, such as PBP 2019.

The additional measures that are not assessed in this report include:

- S43C3 – Separation between buildings
- S43C4 – Separation from allotment boundaries and carparking areas
- S43C5 – Separation from hazards
- S43C6 – Non-combustible path around building
- S43C7 – Access pathways
- S43C8 – Exposed external areas
- S43C9 – Internal tenability
- S43C12 – Emergency power supply
- S43C13 – Signage

1.4. Planning for Bushfire Protection - Addendum 2022

To ensure the application of Planning for Bushfire Protection (PBP 2019) is consistent with NCC 2022, the Rural Fire Service (RFS) prepared an Addendum to PBP 2019 to align with NCC 2022. The Addendum addresses the Class 9 Provisions in NCC 2022 within the context of PBP 2019, since these classes of buildings have been previously addressed as a SFPP developments in PBP 2019.

Additional Performance Criteria and Acceptable Solutions relevant to bushfire protection measures (BPMs) within PBP 2019 for SFPP Class 9 buildings have been introduced in the Addendum to ensure consistency with the relevant provisions of NCC 2022.

The NSW Variation to NCC 2022 immediately set asides some provisions of Specification 43, including S43C2 - Separation from classified vegetation. The minimum distances for APZs for SFPP development as prescribed in PBP 2019 prevail.

The additional measures that are assessed in this report include:

- S43C10 – Building Envelope
- S43C11 – Supply of water for fire-fighting purposes
- S43C14 – Vehicular access

2. Site Description

Table 1: Site Details

Address	464 Cessnock Road, Gillieston Heights
Title	Lot 719, 301, 302, 303 & 304 within Lot 55 DP975994
LGA	Maitland City Council
Site Area	Approximately 3,058m^2
Land Use Zone	R1 General Residential (**Figure 1**)
Context	The site is located within the approved Regrowth Kurri Kurri Precinct 1B residential subdivision (DA/2022/912), west of Cessnock Road. The site and surrounding land within 140m are currently managed or consists of low-threat vegetation that will be cleared in preparation of the approved residential subdivision development.
Fire History	The site lies within a local government area with a Fire Danger Index (FDI) rating of 100.

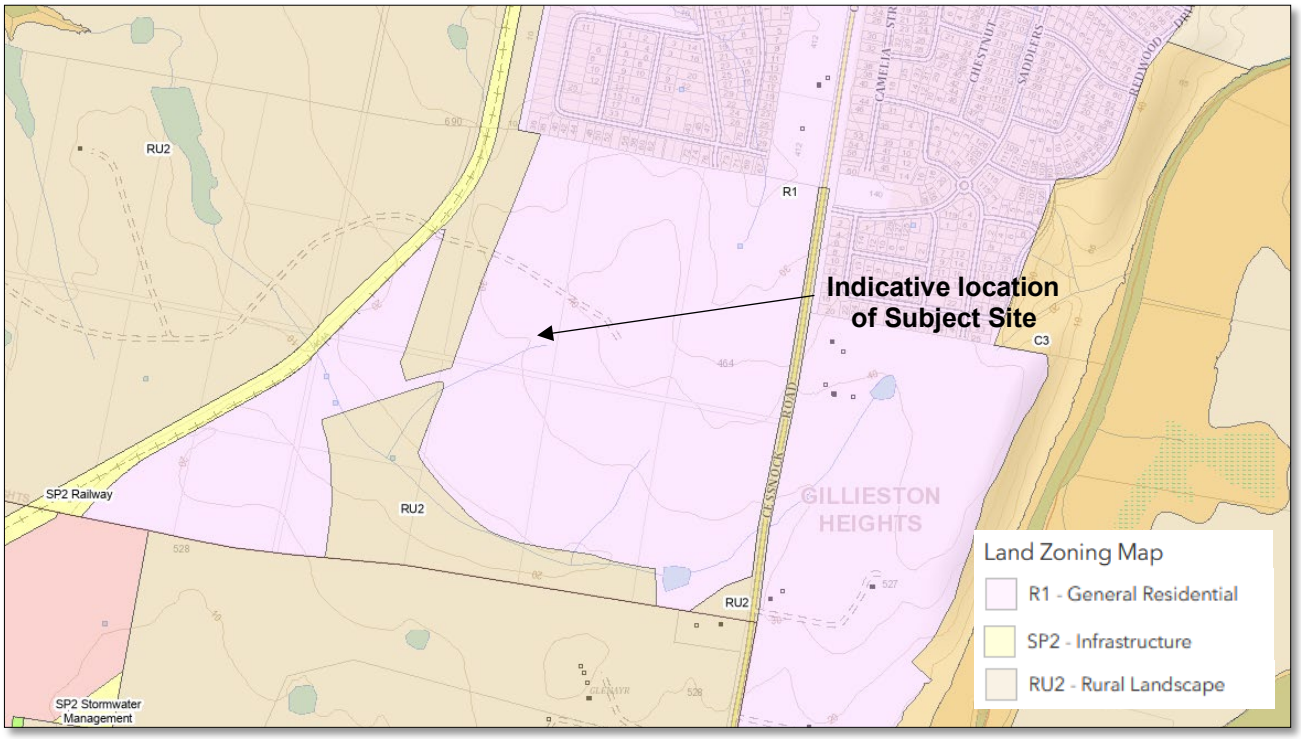

Figure 1: Maitland Local Environmental Plan 2011 (Land Zoning Map Sheet)

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Job No: 2406

Figure 2

Site Location

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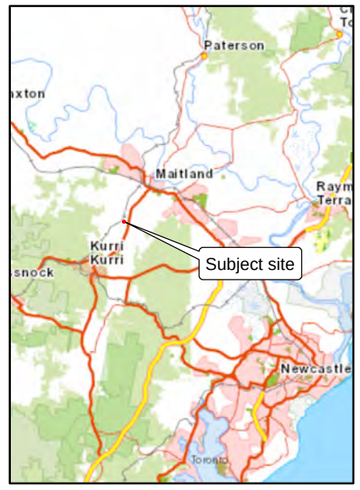

Subject site

100m buffer

140m buffer

SOURCE:
Base Map © Department of Customer Service 2020

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0 50 100 150 200 250
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A3 Scale: 1:5,000

File:2406-Loxford-CCC-Fig1-SiteLocation-241231 Date: 31/12/2024

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2.1. Bushfire Prone Land

Bushfire activity is prevalent in landscapes that carry fuel and the two predominant bushfire types are grassland and forest fires. Factors such as topographic characteristics and quantity of fuel loads influence the intensity and spread of fire. The scale of a bushfire hazard is tailored to the characteristics of the hazard, the size and characteristics of the affected population, types of land use exposed to bushfire, predicted development growth pressures and other factors affecting bushfire risk.

Figure 3 demonstrates the entire site is mapped as Vegetation Category 3 bushfire prone land which extends within and beyond 100m of the site in all directions.

Vegetation Buffer bushfire prone land exists to the north-west of the site within 100m although separated by an approved road within the Regrowth Kurri Kurri Precinct 1B residential subdivision (DA/2022/912). Similarly, Vegetation Category 1 bushfire prone land exists to the immediate south of the site, however, this vegetation will be cleared as part of the approved Regrowth Kurri Kurri Precinct 1B residential subdivision.

The closest vegetation in an unmanaged condition is located greater than 100m to the south-west of the site and separate by two approved roads. This is identified as the primary bushfire hazard.

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Figure 3

NSW Bush Fire Prone Land

BUSHFIRE PLANNING AUSTRALIA

Subject Site

140m Buffer

100m Buffer

Bushfire Prone Land

Vegetation Category 1

Vegetation Category 2

Vegetation Category 3

SOURCE:
Cadastral Boundary: NSW Department of Finance, Services and Innovation 2024
Aerial photo: Nearmap 06/10/2024
NSW Bush Fire Prone Land: NSW Rural Fire Service 2024

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A3 Scale: 1:1,000

File:2406-Loxford-CCC-Fig2-BFPL-241231 Date: 31/12/2024

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2.2. Proposed Development

The proposed development is located within the approved Regrowth Kurri Kurri Precinct 1B residential subdivision (DA/2022/912), affecting Lot 719, 301, 302, 303 and 304.

The proposed childcare centre has an internal unencumbered floor area of 367.25m^2 across 6 child rooms for a total of 110 children, and includes an office and reception area, an outdoor play area, car parking, landscaping and associated infrastructure.

Plans for the proposed childcare development are contained in **Appendix A** and shown in **Figures 4** and **5**.

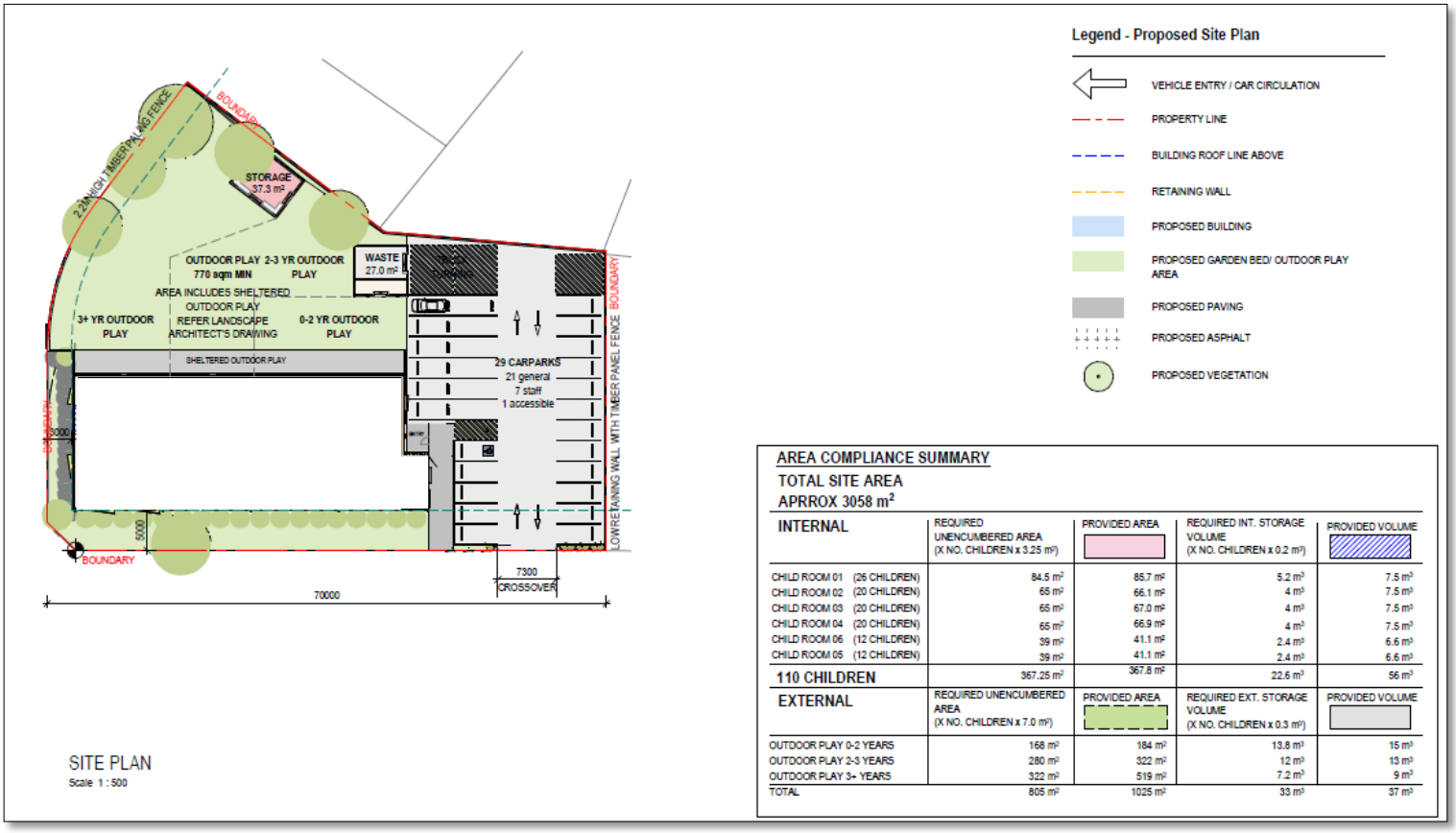

Figure 4: Proposed Development - Site Plan

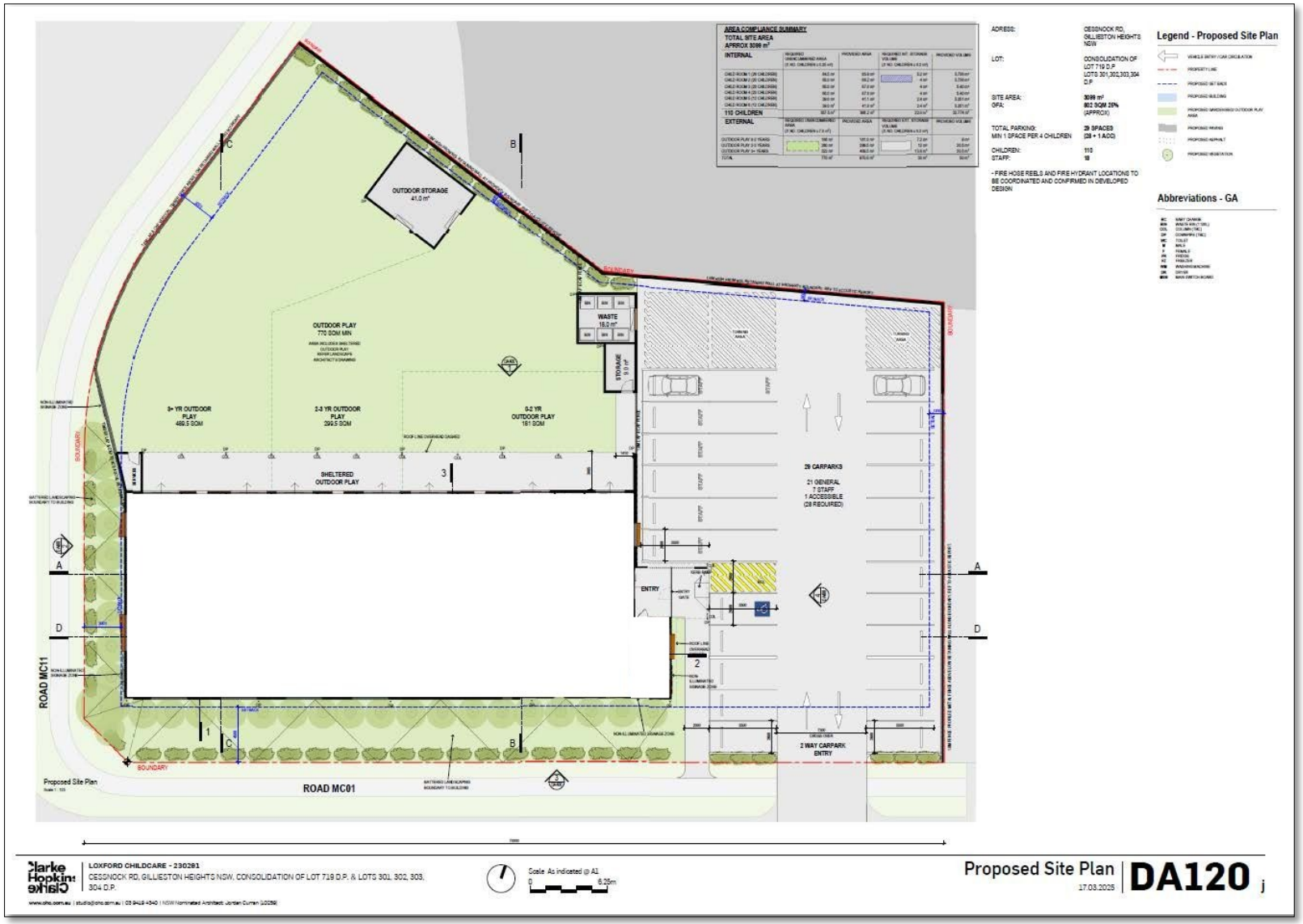

Figure 5: Indoor floor plan of proposed childcare centre

3. Bushfire Hazard Assessment

3.1. Vegetation Assessment

Vegetation classification over the site and surrounding area has been carried out as follows:

- Aerial Photograph Interpretation to map the vegetation classification (Mecone Mosaic & Nearmap)
- Reference to NSW State Vegetation Type, Department of Planning, Industry and Environment 2024 (**Figure 6**); and
- Reference to the Vegetation Management Plan - Precinct 1B prepared by GHD (**Figure 7**).

In accordance with PBP 2019, an assessment of the vegetation over a distance of 100m in all directions from the site was undertaken. Vegetation that may be considered a bushfire hazard was identified in all directions from the development footprint. The vegetation classification is based on the revised Table 2.3 in AS3959-2018 and Appendix 1 of PBP 2019. The unmanaged fuel loads detailed in the *RFS Comprehensive Fuel Loads Fact Sheet* (March 2019) have been adopted for the purpose of assessing the bushfire hazard. The findings of the site inspection were compared to the available vegetation mapping. The inconsistencies between the mapping sources and hazardous vegetation mapped on the NSW RFS Bushfire Prone Land maps were quantified during the site assessment.

3.1.1. Reliability Assessment

Although the bushfire prone land mapping is intended to be regularly updated, land use and vegetation cover that contribute to bushfire hazards are subject to change. A reliability assessment was undertaken for the subject site and all land within 140 metres. In this instance the bushfire prone land mapping is not consistent with existing vegetation present within or surrounding the site.

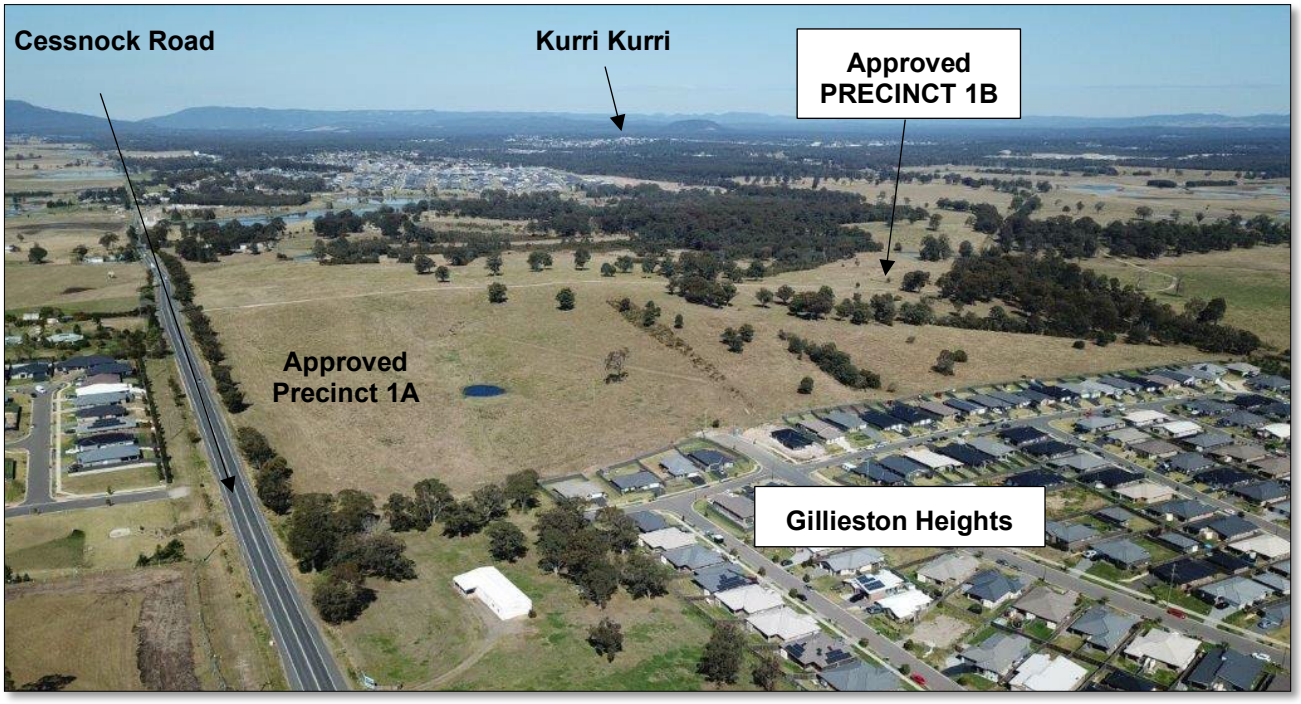

Plate 1: Approved Precincts 1A and 1B looking south-west over Gillieston Heights towards Kurri Kurri

Plate 2: T6 & T8 - Vegetation within 100m of the site will be removed or managed as an APZ

Plate 3: T8 - Open forest (*Hunter Macleay DSF*) to be managed as an IPA north-west of site

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Figure 6

NSW State Vegetation Type (Class)

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Subject site

140m buffer

100m buffer

Vegetation Class

Coastal Floodplain Wetlands

Hunter-Macleay Dry Sclerophyll Forests

SOURCE:
Cadastral Boundary: NSW Department of Finance, Services and Innovation 2024
Aerial photo: Nearmap 06/10/2024
NSW Vegetation Type: NSW Department of Planning, Industry and Environment 2024

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File:2406-Loxford-CCC-Fig3-Vegetation-SV-Class-241231 Date: 31/12/2024

DRAFT

Paper Size ISO A4

0 50 100 150 200

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

GHD

Loxford Project Group Pty Ltd
Regrowth Kurri Kurri – Maitland LGA
Vegetation Management Plan (Precinct 1B)

Project No. **12527690**
Revision No. **A**
Date **08/08/2022**

Proposed site layout

Figure 2

G:\22\20284\GIS\Maps\Deliverables\12527690_ProjectData\12527690_VMP_MaitlandLGA_Nth_Precinct1B_A.aprx\12527690_VMP1B02_ProposedSiteLayout_A
Print date: 08 Aug 2022 - 13:57

Data source: Nearmap: Imagery dated June 2020, extracted 20200825; Hydro Aluminium Pty Ltd: Subject Site, Proposed layout, 2021; LPI: DTDB / DCDB, 2017. Created by: fmackay

3.2. Slope Assessment

The slope assessment was undertaken as follows:

- Review of LiDAR point cloud data - including DEM (NSW LPI); and
- Detail survey of existing and design contours.

An assessment of the slope over a distance of 140m in the hazard direction from the site boundary was undertaken. The effective slope was then calculated under the classified vegetation where there was a fire run greater than 50m. The topography of the site has been evaluated to identify both the average slope and by identifying the maximum slope present. These values help determine the level of gradient which will most significantly influence the fire behaviour of the site.

The effective slope in all directions is shown in **Figure 8, Figure 9** and **Table 2.**

The final bushfire hazard assessment defining vegetation classifications and effective slope is shown in **Figure 10.**

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Figure 8

Digital Elevation Model

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Subject site

140m buffer

100m buffer

Contour (2m)

Contour (0.5m)

Elevation (AHD)

High : 47m

Low : 1m

SOURCE:
Cadastral Boundary: NSW Department of Finance, Services and Innovation 2024
Surface analysis based on NEWCASTLE 1 metre Resolution LiDAR © Department Finance, Services and Innovation 2012

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A3 Scale: 1:1,000

File:2406-Loxford-CCC-Fig4-DEM-241231 Date: 31/12/2024

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Figure 9

Slope Analysis: LiDAR

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Subject site
140m buffer
100m buffer

Slope

0° - 5°
5° - 10°
10° - 15°
15° - 20°
>20°

SOURCE:
Cadastral Boundary: NSW Department of Finance, Services and Innovation 2024
Surface analysis based on NEWCASTLE 1 metre Resolution LiDAR © Department Finance, Services and Innovation 2012
Aerial photo: Nearmap 06/10/2024

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0 10 20 30 40 50
Meters

A3 Scale: 1:1,000

File:2406-Loxford-CCC-Fig5-SlopeLiDAR-241231 Date: 31/12/2024

3.4. Slope & Vegetation Assessment Results

All vegetation identified within the current Bush Fire Prone Land map was confirmed as part of the site assessment.

The site and surrounding land to the north, east and south within 100m is currently cleared or will be cleared of all vegetation in preparation for the approved Regrowth Kurri Kurri Precinct 1B residential development (DA/2022/192). This includes a portion of the vegetation corridor located to the immediate south and south-west of the site.

Under DA/2022/193, the vegetation within 100m to the west of the site, has been approved to be managed an asset protection zone (APZ) in accordance with the Vegetation Management Plan (VMP) prepared by GHD. The site is also separated from this APZ by an approved road.

As both the approved residential development and the approved APZ are defined as managed, they are not required to be considered for the purposes of PBP 2019.

The closest unmanaged vegetation hazard is identified as the remaining vegetation corridor located to the south-west of the site. Whilst multiple approved roads separate the site and this unmanaged vegetation, it is not deemed a bushfire hazard given it is located greater than 100m from the site. This assessment concludes there are no bushfire hazards within 100m of the site, therefore the bushfire risk is low.

The results of hazard assessment are detailed in **Table 2** and shown in **Figure 10**.

Table 2: Slope and Vegetation Assessment Results

Transect	Vegetation or Other Infrastructure	Vegetation Classification (PBP 2019)	Slope
T1 North	Approved Regrowth Kurri Kurri Precinct 1B residential subdivision (DA/2022/912)	Excluded (Managed Land)	-0.9° Upslope
T2 East	Approved Regrowth Kurri Kurri Precinct 1B residential subdivision (DA/2022/912)	Excluded (Managed Land)	-3.5° Upslope
T3 South	Approved Regrowth Kurri Kurri Precinct 1B residential subdivision (DA/2022/912)	Excluded (Managed Land)	0.3° Downslope
T4 South-west	Approved road within Regrowth Kurri Kurri Precinct 1B residential subdivision (DA/2022/912)	Excluded (Managed Land)	3.0° Downslope
T5 West	Proposed childcare building (western façade) to the managed APZ, separated by an approved road	Excluded (Managed Land)	3.0° Downslope
T6 West	Managed APZ as per the Vegetation Management Plan (VMP) under DA/2022/193	Excluded (Managed Land)	3.1° Downslope
T7 North-west	North-west corner of the proposed childcare centre development footprint to the managed APZ, separated by an approved road	Excluded (Managed Land)	3.4° Downslope
T8 North-west	Managed APZ (grassland transitioning to forest vegetation) as per the Vegetation Management Plan (VMP) under DA/2022/193	Excluded (Managed Land)	2.4° Downslope

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Figure 10

Slope & Vegetation Assessment

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- Subject site
- 140m buffer
- 100m buffer
- Contour (2m)
- Contour (0.5m)
- RL
- Downslope transect
- Upslope transect
- Managed as APZ per VMP DA/2022/193

Vegetation

- Forest (Hunter Macleay DSF - cleared understorey/ grazed
- Forest (Hunter Macleay DSF)
- Grassland; Managed Land (actively grazed paddocks)
- Low threat vegetation (railway corridor)

SOURCE:
Cadastral Boundary: NSW Department of Finance, Services and Innovation 2024
Aerial photo: Nearmap 06/10/2024
Vegetation: Bushfire Planning Australia 2024
Surface analysis based on NEWCASTLE 1 metre Resolution LiDAR © Department Finance, Services and Innovation 2012

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A3 Scale: 1:1,000

File:2406-Loxford-CCC-Fig6-SlopeVeg-250109 Date: 9/01/2025

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3.5. Significant Environmental Features

The recommended bushfire protection measures have been designed to minimise any unacceptable impacts on any significant environmental features, noting the site will be cleared and devoid of any remnant vegetation.

3.6. Threatened Species, populations or ecological communities

The area of the site to be affected by the proposed development has been identified to minimise impact on any threatened species, population or EEC. All bushfire mitigation measures; including APZs will consider the existing and potential biodiversity values to minimise impact where possible.

3.7. Aboriginal Objects

A search of the AHIMS database (results contained in **Appendix D**) revealed there are potentially three (3) Aboriginal sites or places recorded within 50m of the entire Lot 55 DP975994.

4. Bushfire Protection Measures

This Bushfire Assessment Report (BAR) has adopted the methodology to determine the appropriate Bushfire Protection Measures (BPMs) detailed in PBP 2019. As part of the BAR, the recommended BPMs demonstrate the aims and objectives of PBP 2019 have been satisified including the matters considered by the RFS necessary to protect persons, property and the environment from the danger that may arise from a bushfire. BPMs defined in PBP 2019 are:

- APZs
- Access
- Water Supply and Utilities
- Building Construction and Design
- Landscaping
- Emergency Management Arrangements

4.1. Asset Protection Zones

An Asset Protection Zone (APZ) is an area surrounding a development that is managed to reduce the bushfire hazard to an acceptable level to mitigate the risk to life and property. The required width of the APZ varies with slope and the type of hazard. An APZ can consist of both an inner protection area (IPA) and an outer protection area (OPA) as shown in **Figure 11** and **Figure 12**.

An APZ can include the following:

- Lawns;
- Discontinuous gardens;
- Swimming pools;
- Roads, driveways and managed verges;
- Unattached non-combustible garages with suitable separation from the dwelling;
- Open space / parkland; and
- Car parking.

The presence of a few shrubs or trees in the APZ is acceptable provided that they:

- Do not touch or overhang any buildings;
- Are well spread out and do not form a continuous canopy;
- Are not species that retain dead material or deposit excessive quantities of ground fuel in a short period or in a danger period; and
- Are located far enough away from any dwelling so that they will not ignite the dwelling by direct flame contact or radiant heat emission.

Woodpiles, wooden sheds, combustible material storage areas, large areas / quantities of garden mulch, stacked flammable building materials etc. are not recommended in the APZ.

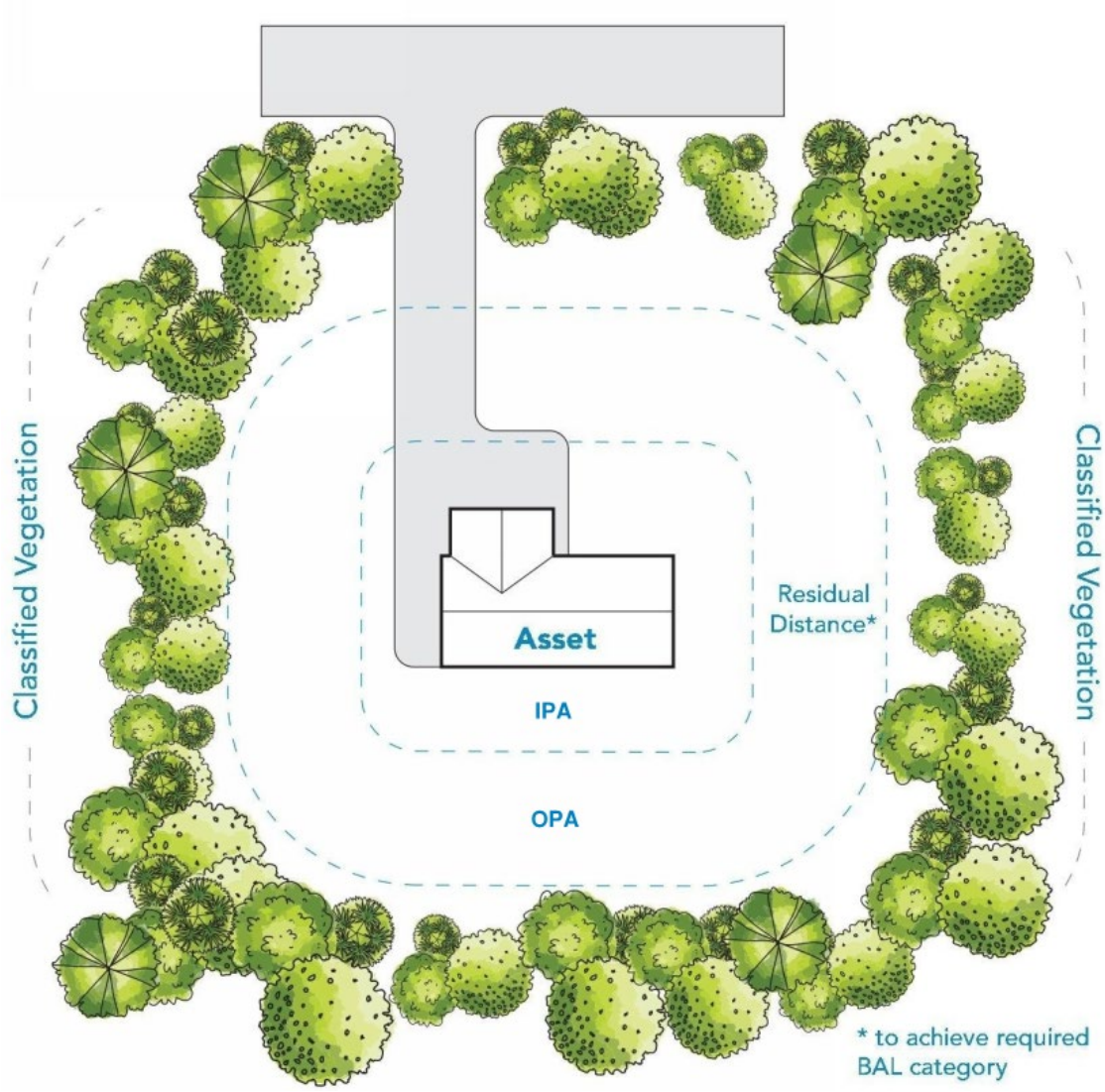


Figure 11: Inner and Outer Asset Protection Zones

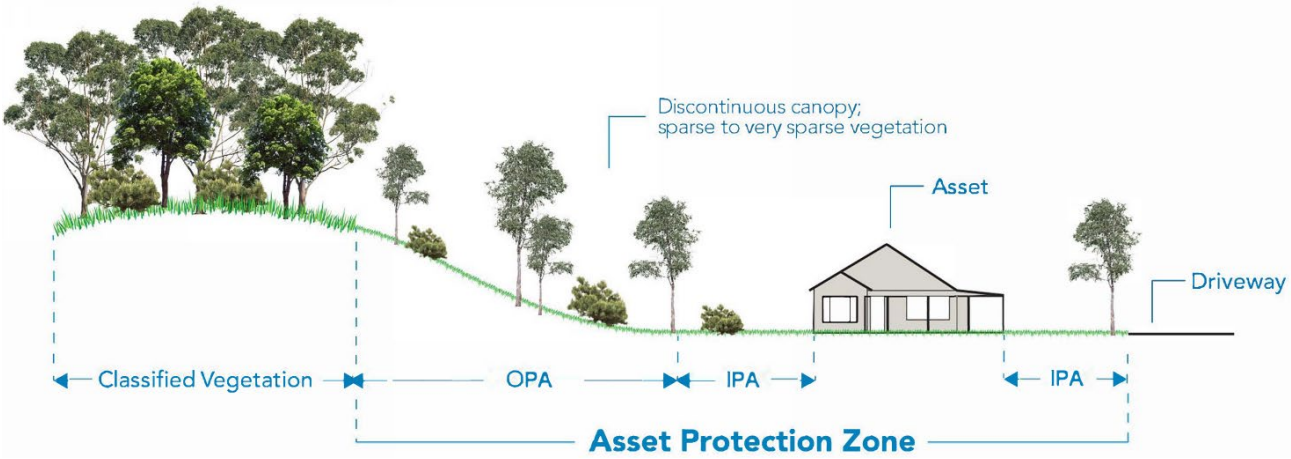


Figure 12: Example of the APZ profile

4.1.1. Special Fire Protection Purposes

Special Fire Protection Purposes (SFPP) developments mean the occupants of the proposed development may be more vulnerable to bush fire attack and therefore may require greater protection from such threats as well as assisted evacuation. SFPPs include childcare centres, hospitals, schools, seniors housing and tourist accommodation.

Section 6.8 of PBP 2019 provides protection measures for SFPP developments. In comparison to a standard residential development where radiant heat levels of no greater than 29kW/m^2 are acceptable, radiant heat levels of greater than 10kW/m^2 must not be experienced by on any part of the buildings. To achieve radiant heat levels of less than 10kW/m^2, APZs of 79 metres or greater are typically required (based on Table A1.12.1 of PBP 2019) for *forest* vegetation formations that have a downslope of >0.0° to <5.0°. This is achieved given the closest unmanaged forest hazard is greater than 100m south-west of the site.

Objectives for SFPP developments place emphasis on the space surrounding buildings (as defendable space and APZs) and less reliance on construction standards. SFPP developments are highly dependent on suitable emergency evacuation arrangements, which require greater separation from bush fire threats.

4.1.2. Determining the Appropriate Setbacks

To achieve compliance with the performance criteria for APZs (Table 6.8a), the Acceptable Solutions outlined in Table A1.12.1 of PBP 2019 has been adopted as a deemed-to-satisify solution.

As the site lies within the Maitland Council LGA, it is assessed under a FDI rating of 100. Given there are no unmanaged hazards within 100m of the site and it will not be exposed to radiant heat levels exceeding 10kW/m^2 or 29kW/m^2, an APZ is not required for this site.

Refer to **Table 3** and **Figure 16** for the recommended APZs.

Table 3: Required APZ setbacks

Transect	Vegetation Classification (PBP 2019)	Slope	APZ PBP2019 Table A1.12.1	APZ 10kw/m^2
T1 North	Excluded (Managed Land)	-0.9° Upslope	N/A	N/A
T2 East	Excluded (Managed Land)	-3.5° Upslope	N/A	N/A
T3 South	Excluded (Managed Land)	0.3° Downslope	N/A	N/A
T4 South-west	Excluded (Managed Land)	3.0° Downslope	N/A	N/A
T5 West	Excluded (Managed Land)	3.0° Downslope	N/A	N/A
T6 West	Excluded (Managed Land)	3.1° Downslope	N/A	N/A
T7 North-west	Excluded (Managed Land)	3.4° Downslope	N/A	N/A
T8 North-west	Excluded (Managed Land)	2.4° Downslope	N/A	N/A

4.2. Access

In the unlikely event of a serious bushfire, it will be essential to ensure that adequate ingress / egress and the provision of defendable space are afforded in the layout. The following design specifications detailed in PBP 2019 are relevant to the proposed development:

- Internal roads are two-wheel drive all weather roads;
- Access is provided to all structures;
- the capacity of road surfaces is sufficient to carry fully loaded fire fighting vehicles (23 tonnes);
- have a minimum vertical clearance to a height of four metres at all times;

An entrance and exit to the proposed childcare centre will be provided from the approved road along the southern site boundary. The internal driveways are considered property access roads as they are not intended to be dedicated as public perimeter or non-perimeter roads.

In this instance the proposed access arrangements are considered to be acceptable and complies with the relevant Acceptable Solutions under Table 6.8b of PBP 2019.

Refer to **Figure 13** and **Appendix A** for proposed development showing access.

4.2.1. SFPP Development Access - PBP Addendum 2022

An additional specific requirement for certain Class 9 buildings; including the proposed development has been introduced to align with the NCC 2022. The 2022 Addendum to PBP 2019 requires firefighting vehicles to have safe, all-weather access to structures and hazardous vegetation. Table 3 of the 2022 Addendum outlines the Acceptable Solutions to meet the Performance Criteria.

Vehicular access to a Class 9 building is mandated to ensure firefighting vehicles can efficiently and quickly reach the building, crucial for effective bushfire response. This requirement is part of broader bushfire protection measures aimed at enhancing the safety of occupants and the structural integrity of buildings in bushfire-prone areas.

The Acceptable Solutions require vehicular access to be provided in a continuous direction around the entire building to provide access to structures and hazardous vegetation. **Figure 13** indicates the driveway and car park layout of the proposed childcare centre provides access from the approved road along the southern boundary from a 7.3m wide shared entry/exit driveway.

It is noted the Acceptable Solution for continuous vehicular access has been adopted by the RFS to ensure consistency with the relevant provision of the NCC, namely S43C14 under Specification 43 of Part G5D4 of the NCC. It is further noted that S43C14 is required as if the building were a large isolated building (Part C3D5(2)). For the purpose of the NCC, a large, isolated building has an internal floor area exceeding 18,000m^2. The proposed building is no greater than 45m wide and 16m deep and has ten (10) doorways providing immediate access into the building on the two elevations. There are no external doorways along the western or southern elevations.

Although a continuous path of travel is unable to be provided around the entire building, as the proposed childcare centre is located on a corner, there are multiple access points in the event of an emergency as shown in **Figure 14**.

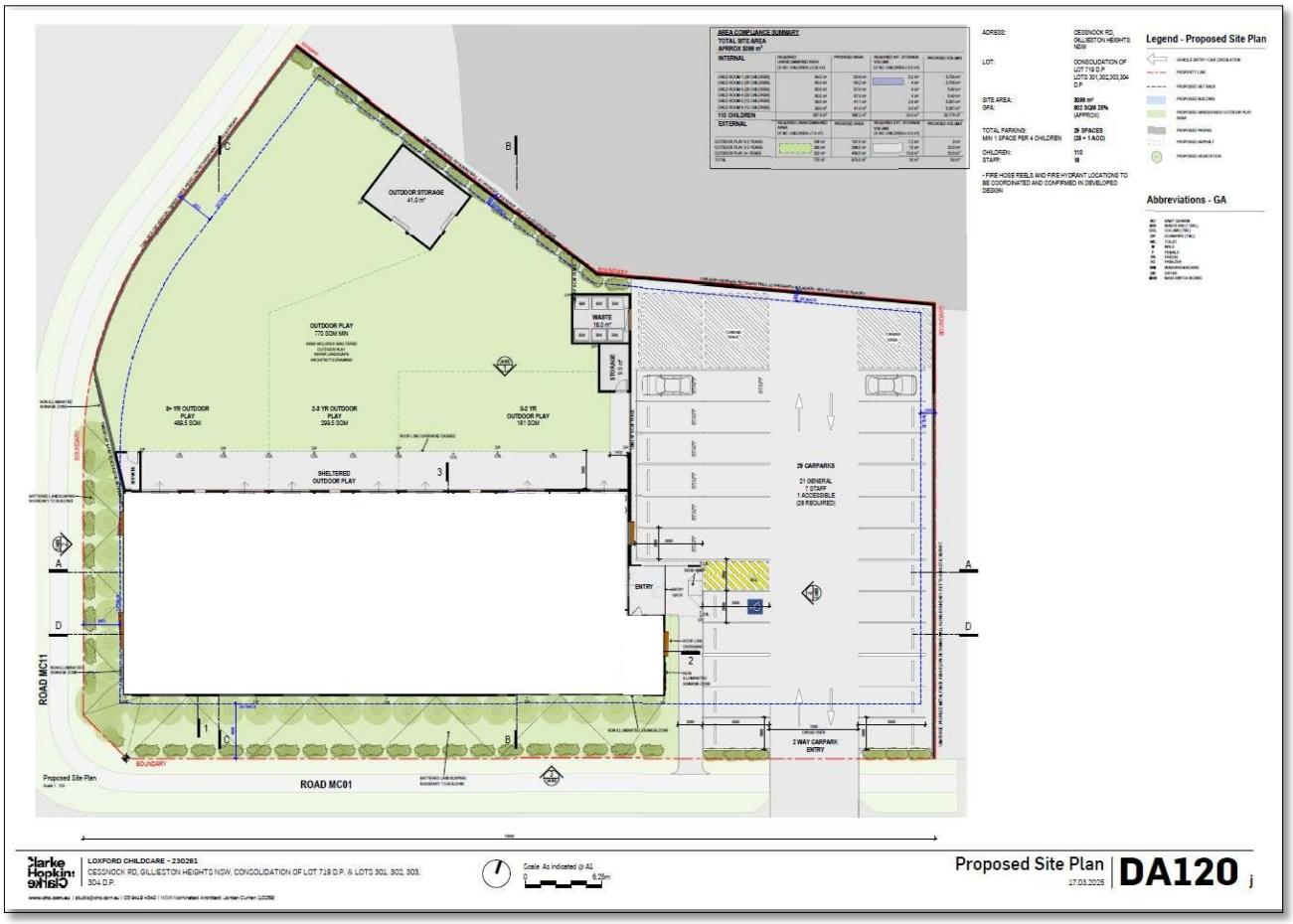


Figure 13: Internal vehicular access

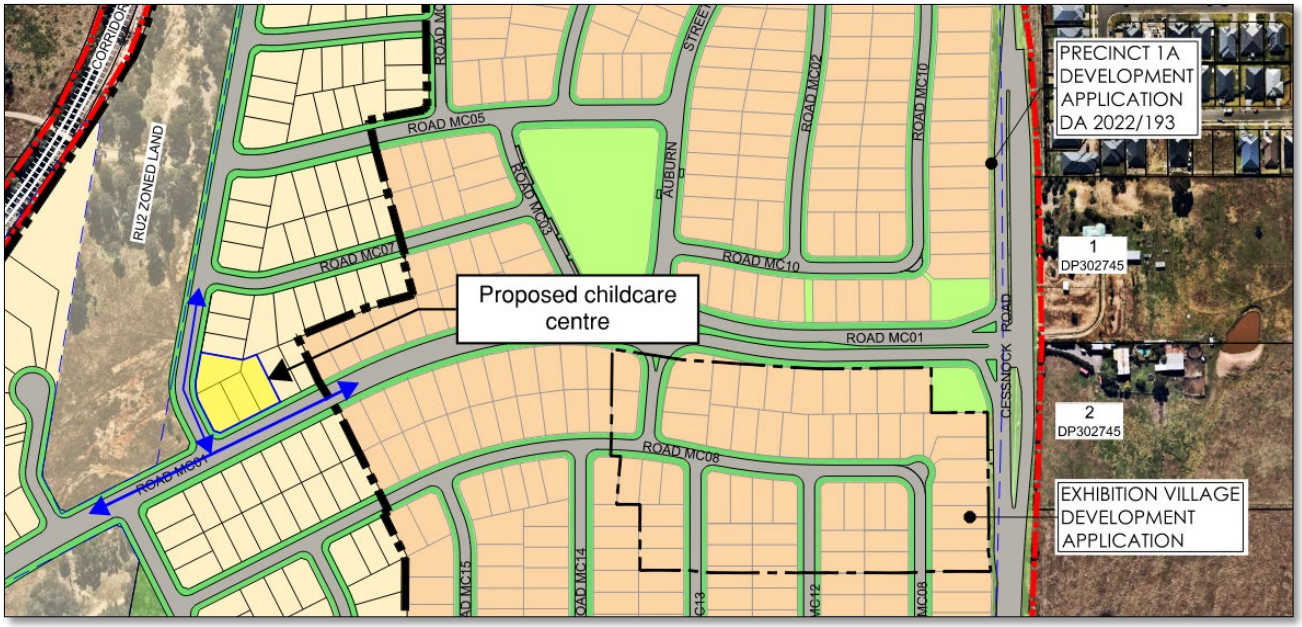


Figure 14: Proposed childcare centre is located on a corner lot providing direct access on two elevations

4.3. Services - water, electricity and gas

4.3.1. Water

Fire hydrant spacing, sizing and pressure should comply with AS 2419.1-2005 and are not to be located within any road carriageway.

The proposed development will be connected to the reticulated water supply. There is a reticulated water supply directly along the western and southern site boundary. Multiple fire hydrants will be located to the west and south of the site. Each hydrant is able to reach a 90m radius and therefore able to provide hose coverage around the entire development (**Figure 15**).

4.3.2. Water Supply - PBP Addendum 2022

Further to compliance with Table 6.8c of PBP 2019, the proposed additions are able to comply with Table 4 of PBP Addendum 2022 as a reticulated water supply is provided (**Figure 15**).

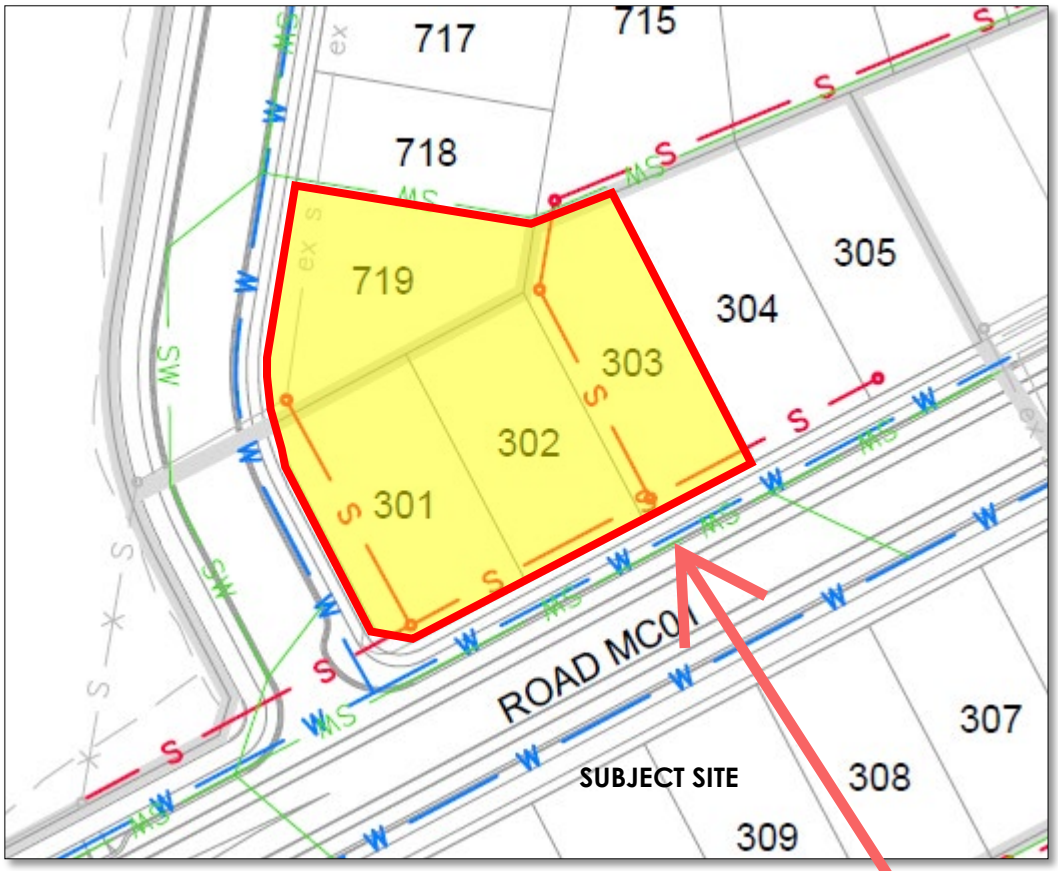


Figure 15: Services Plan for Precinct 1B

4.3.3. Electricity

All new electricity services will be located underground.

4.3.4. Gas

Any reticulated or bottled gas should be installed and maintained according to the requirements of the relevant authorities and AS 1596-2002. It is expected that the location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.

4.4. Construction Standards - Bushfire Attack Level

All buildings constructed within the site are recommended to satisfy the Performance Requirements of the National Construction Code: Building Code of Australia (BCA).

Accordingly, all forthcoming Class 9 buildings shall satisfy the requirements of Part 3.7.4 of the BCA. The *Deemed-to-Satisfy* (DTS) provision of the NCC can only be achieved if buildings in bushfire prone areas are constructed in accordance with Australian Standard *AS3959-2018 Construction of buildings in bushfire prone areas*. Alternatively, the DTS provisions can also be achieved if the habitable building is constructed in accordance with the NASH Standard 'Steel Framed Construction in Bushfire Areas'.

Building design and the materials used for construction of future dwellings should be chosen based on the information contained within AS3959-2018, and accordingly the designer/architect should be made aware of this recommendation.

The determinations of the appropriate bushfire attack level (BAL) is based on the maximum potential radiant heat exposure. BALs are based upon parameters such as weather modelling, fire-line intensity, flame length calculations, as well as vegetation and fuel load analysis.

As the proposed building is located greater than 100m from the nearest unmanaged bushfire hazard, there is insufficient risk to warrant specific bushfire constructions. Accordingly, a **BAL-LOW** rating applies to the proposed childcare centre.

4.4.1. Construction Standards - PBP Addendum 2022

In accordance with Table 2 of the PBP Addendum 2022, and regardless of the BAL assessment, a construction level of **BAL-19** is applied to all new childcare centres. Accordingly, the proposed development would be required to be constructed in accordance with Sections 3 and 6 of AS3959-2018.

Nevertheless, the BAL ratings have been calculated for the proposed development as shown in **Table 4**.

Table 4: Bushfire Attack Level Assessment

Transect	Vegetation Classification (PBP 2019)	Slope	APZ (<10kW/m^2)	Distance from Hazard	Bushfire Attack Level (BAL)
T1 to T8	*Excluded* (Managed Land)	Various	N/A	>100m	BAL-LOW

4.5. Landscaping and Vegetation Management

In APZs and IPAs, the design and management of the landscaped areas in the vicinity of buildings have the potential to improve the chances of survival of people and buildings. Reduction of fuel does not require the removal of all vegetation. Trees and plants can provide some bushfire protection from strong winds, intense heat and flying embers (by filtering embers) and changing wind patterns.

Generally landscaping in and around a bushfire hazard should consider the following:

- Priority given to retaining species that have a low flammability;
- Priority given to retaining species which do not drop much litter in the bushfire season and which do not drop litter that persists as ground fuel in the bush fire season;
- Priority given to retaining smooth barked species over stringy bark; and
- Create discontinuous or gaps in the vegetation to slow down or break the progress of fire towards the dwellings.

Landscaping within APZs and IPAs should give due regard to fire retardant plants and ensure that fuel loads do not accumulate as a result of the selected plant varieties.

The principles of landscaping for bushfire protection aim to:

- Prevent flame impingement on dwellings;
- Provide a defendable space for property protection and shelter form radiant heat;
- Reduce fire spread;
- Deflect and filter embers; and
- Reduce wind speed.

Plants that are less flammable have the following features;

- High moisture content and high levels of salt;
- Low volatile oil content of leaves;
- Smooth barks without ‘ribbons’ hanging from branches or trunks; and
- Dense crown and elevated branches.

Avoiding understorey planting and regular trimming of the lower limbs of trees also assists in reducing fire penetration into the canopy. Rainforest species such as Syzygium and figs are preferred to species with high fine fuel and/or oil content. Trees with loose, fibrous or stringy bark should be avoided. These trees can easily ignite and encourage ground fire to spread up to, and then through the crown of trees.

Consideration should be given to vegetation fuel loads present on site with particular attention to APZs. Careful thought must be given to the type and physical location of any proposed site landscaping. Inappropriately selected and positioned vegetation has the potential to ‘replace’ any previously removed fuel load.

Bearing in mind the desired aesthetic and environment sought by site landscaping, some basic principles have been recommended to help minimise the chance of such works contributing to the potential hazard on site. Whilst it is recognised that fire-retardant plant species are not always the most aesthetically pleasing choice for site landscaping, the need for adequate protection of life and property requires that a suitable balance between visual and safety concerns be considered.

It is reiterated again that it is essential that any landscaped areas and surrounds are subject to ongoing fuel management and reduction to ensure that fine fuels do not build up.

4.6. Emergency Services

There is a NSW Fire & Rescue Service station is located at 110 Mount Vincent Road, East Maitland approximately 11.5kms (15 mins) drive away from the site (**Figure 16**). A second NSW Fire and Rescue station is located at 1 Chelmsford Drive, Metford approximately 10km (13 mins) from the site (**Figure 17**). In an emergency, either or both of these services could attend the site.

Figure 16: NSW Rural Fire Service - East Maitland

Figure 17: NSW Fire & Rescue Station - East Maitland

5. Conclusion and Recommendations

Bushfire Planning Australia (BPA) has been engaged by Stevens Land Pty Ltd (the 'Proponent') to undertake a Bushfire Assessment Report (BAR) for a proposed childcare centre located at 464 Cessnock, Gillieston Heights (Lot 55 DP975994) within part of the approved Regrowth Kurri Kurri Precinct 1B residential subdivision (DA/2022/912).

A childcare centre is defined as a Special Fire Protection Purpose (SFPP) under the NSW Rural Fire Service (RFS) document Planning for Bushfire Protection 2019 (PBP 2019). An assessment of the bushfire hazards the entire site is exposed to has been undertaken and an appropriate combination of bushfire protection measures are recommended to ensure the development and occupants are not exposed to an unacceptable bushfire risk.

This BAR has been prepared in accordance with the submission requirements detailed in Appendix 2 of PBP 2019 and has demonstrated the proposed expansion satisfies the Aims and Objectives of PBP 2019, including the Specific Objectives for SFPP developments.

Additionally, this BAR has considered and additional requirements for Class 9 buildings outlined in the Addendum to PBP 2019 published by the RFS. Addendum 2022 was produced to align with the changes and implications of additional bushfire protection measures for Class 9 buildings (including childcare centres) described in Part G5D4 of the National Construction Code 2022 (NCC 2022) that came into effective on 1 May 2023.

The following key recommendations have been designed to enable the proposed development to achieve Performance Criteria for SFPP developments detailed in Section 6.8 of PBP 2019 and Appendix B of the Addendum 2022 to PBP 2019:

Asset Protection Zones:

1. The entire site is to be managed as an Inner Protection Area (IPA) as outlined within Appendix 4 of PBP 2019 and the RFS document *Standards for asset protection zones*;

Construction and Design

2. The new building is to be constructed in accordance with Section 3 and 6 of Australian Standard AS3959-2018 Construction of buildings in bushfire prone areas (AS3959-2018); being **BAL-19**;

Water Supply

3. The proposed development shall be connected to a reliable water supply network and that suitable fire hydrants are located throughout the development site that are clearly marked and provided for the purposes of bushfire protection. Fire hydrant spacing, sizing and pressure shall comply with AS2419.1 2005 and section 6.8.3 of PBP 2019;

Landscaping

4. Consideration should be given to landscaping and fuel loads on site to decrease potential fire hazards on site; and

Emergency Management

5. A Bushfire Emergency Management and Evacuation Plan (BEMEP) shall be prepared that is consistent with the RFS Guidelines 'Development Planning – A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan December 2014'.

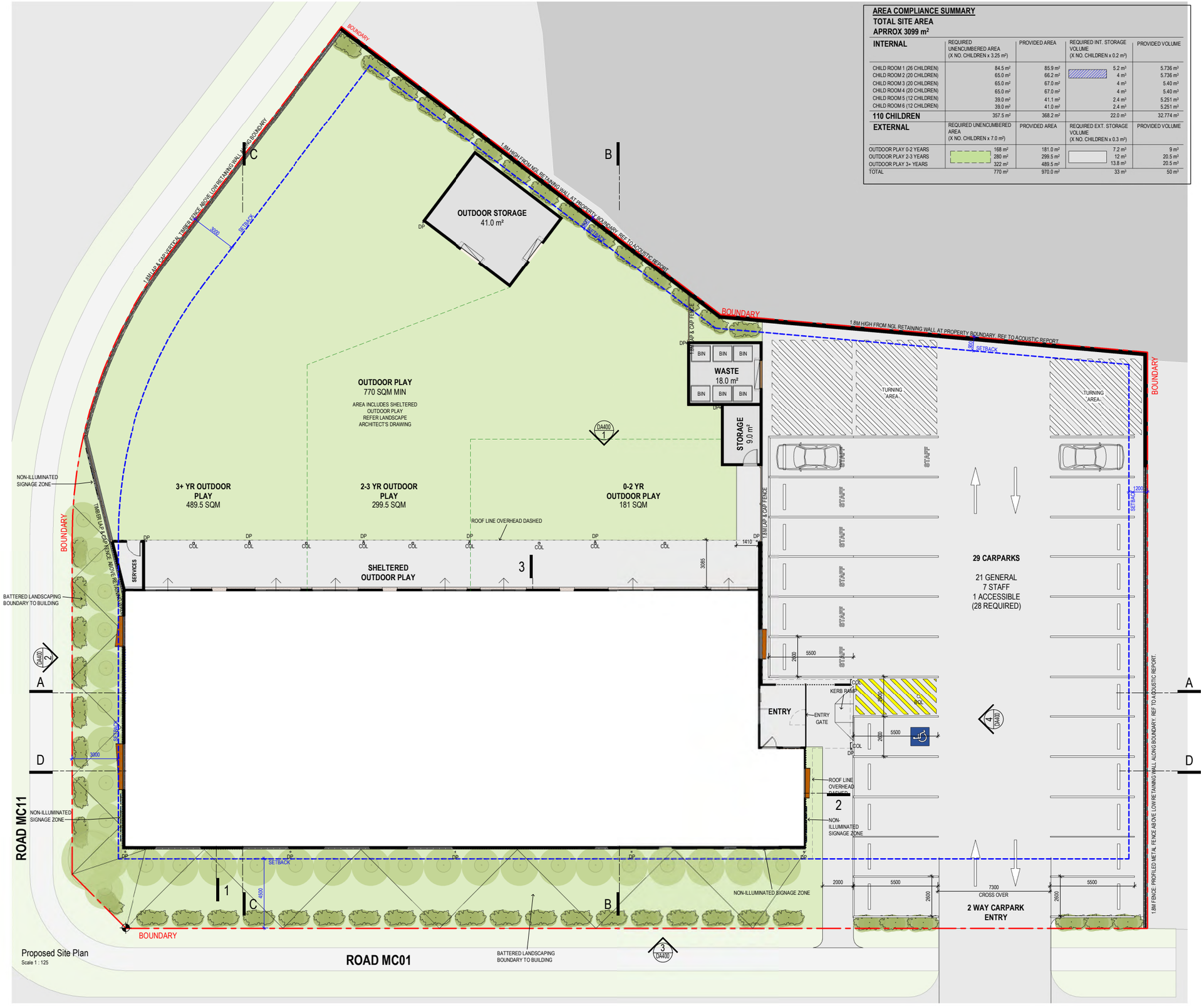
This assessment has been made based on the bushfire hazards observed in and around the site at the time of inspection and production.

Should the above recommendations be implemented, the proposed development will offer an acceptable level of protection to life and property for those persons and assets occupying the site, but they do not and cannot guarantee that the area will not be affected by bushfire at some time.

6. References

- Keith (2004). Ocean Shores to Desert Dunes - The Native Vegetation of New South Wales and the ACT.
- NSW Rural Fire Service (2005). Standards for Asset Protection Zones. NSW Rural Fire Service.
- NSW Rural Fire Service (2019). Planning for Bushfire Protection - A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners.
- Ramsay, GC and Dawkins, D (1993). Building in Bushfire-prone Areas - Information and Advice. CSIRO and Standards Australia.
- Rural Fires and Environmental Assessment Legislation Amendment Act 2002.
- Standards Australia (2018). AS3959-2018: Construction of Buildings in Bushfire-prone Areas.

Appendix A: Proposed Architectural Drawings



Proposed Site Plan
Scale 1 : 125

AREA COMPLIANCE SUMMARY

TOTAL SITE AREA
APRROX 3099 m²

INTERNAL	REQUIRED UNENCUMBERED AREA (X NO. CHILDREN x 3.25 m²)	PROVIDED AREA	REQUIRED INT. STORAGE VOLUME (X NO. CHILDREN x 0.2 m³)	PROVIDED VOLUME
CHILD ROOM 1 (26 CHILDREN)	84.5 m²	85.9 m²	5.2 m³	5.736 m³
CHILD ROOM 2 (20 CHILDREN)	65.0 m²	66.2 m²	4 m³	5.736 m³
CHILD ROOM 3 (20 CHILDREN)	65.0 m²	67.0 m²	4 m³	5.40 m³
CHILD ROOM 4 (20 CHILDREN)	65.0 m²	67.0 m²	4 m³	5.40 m³
CHILD ROOM 5 (12 CHILDREN)	39.0 m²	41.1 m²	2.4 m³	5.251 m³
CHILD ROOM 6 (12 CHILDREN)	39.0 m²	41.0 m²	2.4 m³	5.251 m³
110 CHILDREN	357.5 m²	368.2 m²	22.0 m³	32.774 m³
EXTERNAL	REQUIRED UNENCUMBERED AREA (X NO. CHILDREN x 7.0 m²)	PROVIDED AREA	REQUIRED EXT. STORAGE VOLUME (X NO. CHILDREN x 0.3 m³)	PROVIDED VOLUME
OUTDOOR PLAY 0-2 YEARS	168 m²	181.0 m²	7.2 m³	9 m³
OUTDOOR PLAY 2-3 YEARS	280 m²	299.5 m²	12 m³	20.5 m³
OUTDOOR PLAY 3+ YEARS	322 m²	489.5 m²	13.8 m³	20.5 m³
TOTAL	770 m²	970.0 m²	33 m³	50 m³

ADRESS: CESSNOCK RD, GILLIESTON HEIGHTS NSW

LOT: CONSOLIDATION OF LOT 719 D.P LOTS 301,302,303,304 D.P

SITE AREA: **3099 m²**
GFA: **802 SQM 25%** (APPROX)

TOTAL PARKING: **29 SPACES**
MIN 1 SPACE PER 4 CHILDREN **(28 + 1 ACC)**

CHILDREN: **110**
STAFF: **18**

- FIRE HOSE REELS AND FIRE HYDRANT LOCATIONS TO BE COORDINATED AND CONFIRMED IN DEVELOPED DESIGN

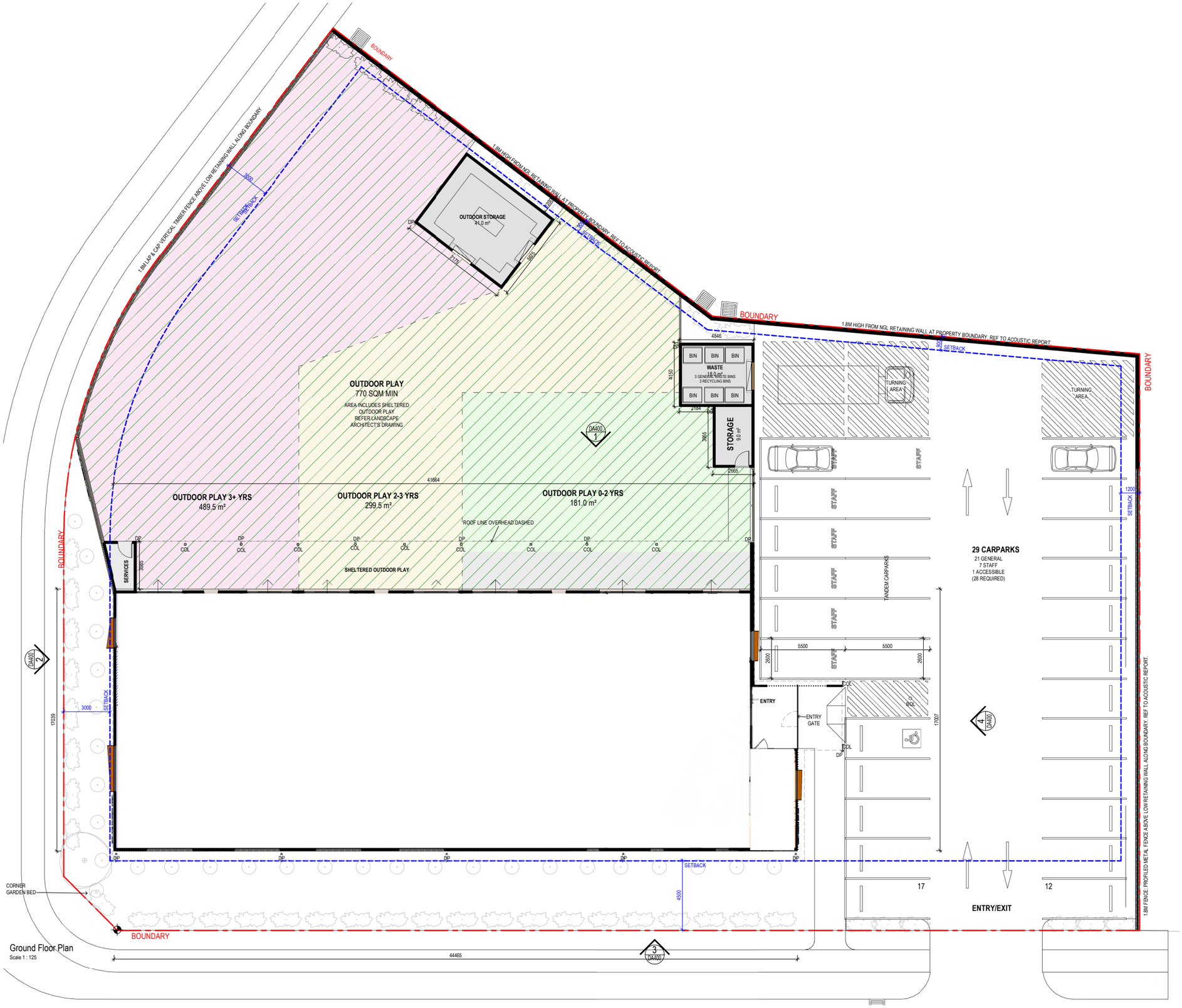
Legend - Proposed Site Plan

- VEHICLE ENTRY / CAR CIRCULATION
- PROPERTY LINE
- PROPOSED SET BACK
- PROPOSED BUILDING
- PROPOSED GARDEN BED/ OUTDOOR PLAY AREA
- PROPOSED PAVING
- PROPOSED ASPHALT
- PROPOSED VEGETATION

Abbreviations - GA

BC	BABY CHANGE
BIN	WASTE BIN (1100L)
COL	COLUMN (TBC)
DP	DOWNPIPE (TBC)
WC	TOILET
M	MALE
F	FEMALE
FR	FRIDGE
FZ	FREEZER
WM	WASHING MACHINE
DR	DRYER
MSB	MAIN SWITCH BOARD

www.chc.com.au | studio@chc.com.au | 03 9419 4340 | NSW Nominated Architect: Jordan Curran (10259)



Ground Floor Plan
Scale 1 : 125

Legend - General Arrangement

- INTERNAL UNENCUMBERED AREA
- INTERNAL STORAGE
- EXTERNAL UNENCUMBERED AREA
- EXTERNAL STORAGE

Abbreviations - GA

BC	BABY CHANGE
BIN	WASTE BIN (1100L)
COL	COLUMN (TBC)
DP	DOWNPIPE (TBC)
WC	TOILET
M	MALE
F	FEMALE
FR	FRIDGE
FZ	FREEZER
WM	WASHING MACHINE
DR	DRYER
MSB	MAIN SWITCH BOARD

DEVELOPMENT APPLICATION

Clarke Hopkins Clarke
www.chc.com.au | studio@chc.com.au | 03 9419 4340 | NSW Nominated Architect: Jordan Curran (10259)

LOXFORD CHILDCARE - 230291
CESSNOCK RD, GILLIESTON HEIGHTS NSW, CONSOLIDATION OF LOT 719 D.P. & LOTS 301, 302, 303, 304 D.P.

Scale As indicated @ A1
0 6.25m

Ground Floor Plan

17.03.2025

DA200

Appendix B: Planning for Bushfire Protection 2019 Compliance Tables

Appendix E: Planning for Bushfire Protection 2019 – Compliance Table: Special Fire Protection Purposes

Table 1: Aims and Objectives of Planning for Bushfire Protection 2019

Objectives	Satisfied	Comment
➢ Afford buildings and their occupants protection from exposure to a bush fire	✓	It is unlikely that any occupants of the building will be directly exposed to a prolonged bushfire due to the low bushfire hazard and the bushfire protection measures including the minimum 100m separation from the nearest bushfire hazard.
➢ Provide for a defendable space to be located around buildings	✓	The entire property is able to be managed in a low fuel state (APZ) and the proposed building is separated by the bushfire hazard by a minimum 100m of managed land (mostly roads). Vehicular access is also provided between the hazard and the new building.
➢ Provide appropriate separation between a hazard and buildings, which, in combination with other measures, prevent the likely fire spread to buildings	✓	The building proposed to be operated as a Class 9 building is greater than 100m from the nearest bushfire hazard ensuring that radiant heat levels experienced at the building will not exceed 10kW/m^2.
➢ Ensure that safe operational access and egress for emergency service personnel and residents is available	✓	Direct vehicular and pedestrian access for emergency vehicles is available to three elevations, including the east, west and southern elevations. Any occupants of the building are able to evacuate the building in the opposite direction from the hazard.
➢ Provide for ongoing management and maintenance of BPMs	✓	Ongoing maintenance of the property will be required to ensure the APZ remains consistent with the requirements of PBP 2019.
➢ Ensure that utility services are adequate to meet the needs of firefighters	✓	The development includes all essential utility services to meet the needs of firefighters; including a reliable water supply.

Table 2: Performance Criteria and Acceptable Solutions for SFPP (Chapter 6 PBP 2019)

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMPLIES	COMMENT
✓ - **Acceptable Solution** **AS - Alternative Solution**			
6.8.1 APZs **Table 6.8a** **Intent of Measure:** *To provide suitable building design, construction and sufficient space to ensure radiant heat levels do not exceed critical limits for firefighters and other emergency services personnel undertaking operations, including supporting or evacuating occupants.*			
ASSET PROTECTION ZONES	Radiant heat levels of greater than 10kW/m^2 (1200K) are not experienced at any part of the building.	The building is provided with an APZ in accordance with Table A1.12.1. in Appendix 1.	✓	The proposed building is located greater than 100m from the nearest bushfire hazard. No part of the building will be exposed to radiant heat levels greater than 10kW/m^2.
	APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is negated.	The APZ is not located on lands with a slope exceeding 18°	✓	The maximum slope of the site is 3.0 ° downslope or less.
	APZs are managed and maintained to prevent the spread of a fire towards the building.	The APZ is managed in accordance with the requirements of Appendix 4	✓	The operator of the childcare centre will be required to manage the property as an IPA.
	The APZ is provided in perpetuity.	APZs are wholly within the boundaries of the development site.	✓	There are no exceptional circumstances that would require an APZ to be located external to the development site.
LANDSCAPING	Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	Landscaping is in accordance with APZ standards (see Appendix 4). Fencing is constructed in accordance with section 7.6.	✓	All new landscaping has considered the requirements of APZs per Appendix 4. All new fencing will be colorbond or similar non-combustible material.
CONSTRUCTION STANDARDS	The proposed building can withstand bushfire attack in the form of wind, embers, radiant heat and flame contact.	A construction level of BAL-12.5 under AS3959 or NASH and Table 7.5 is applied.	✓	The proposed building has been designed to comply with BAL-19 in accordance with Table 2 of Appendix B of the Addendum 2022 to PBP 2019.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMPLIES	COMMENT
✓ - Acceptable Solution AS - Alternative Solution			
6.8.2 Access **Table 6.8b** *To provide safe operational access for emergency services personnel in suppressing a bush fire, while residents are accessing or egressing an area.*			
ACCESS	Fire fighters are provided with safe all-weather access to structures	SFPP access roads are two-wheel drive, all-weather roads	✓	Vehicular access is provided on the site to the eastern elevation. The internal driveway is no greater than 100m from the front property boundary.
		Access is provided to all structures and hazard vegetation.	✓	
		Traffic management devices are constructed to not prohibit access by emergency services vehicles.	✓	
		Access roads must provide suitable turning areas in accordance with Appendix 3.	✓	
		Access roads must provide suitable turning areas in accordance with Appendix 3	-	
	The capacity of access roads is adequate for firefighting vehicles.	The capacity of road surfaces and any bridges/ causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges and causeways are to clearly indicate load rating.	✓	All new driveways are designed in accordance with the relevant engineering specifications. The proposed property access roads/ driveways will have sufficient load capacity for all firefighting vehicles.
	There is appropriate access to water supply.	Hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression.	✓	Multiple fire hydrants are located within both public roads, no less than 30m from the site.
		Hydrants are provided in accordance with AS2419.1:2005	✓	
		There is suitable access for Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.	✓	
PERIMETER ROADS	Perimeter access roads are designed to allow safe access and egress for medium rigid firefighting vehicles while	There are two-way sealed roads.	N/A	
		8m carriageway width kerb to kerb.	N/A	

	PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMPLIES	COMMENT
✓ - Acceptable Solution AS - Alternative Solution				
	occupants are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface.	Hydrants are to be located clear of parking areas.	N/A	
		There are through roads, and these are linked to the internal road system at an interval of no greater than 500m.	N/A	
		Curves of roads have a minimum inner radius of 6m.	N/A	
		The maximum grade road is 15° and average grade is 10°.	N/A	
		The road crossfall does not exceed 3°.	N/A	
		A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches; and	N/A	
NON-PERIMETER ROADS	Non-perimeter access roads are designed to allow safe access and egress for medium rigid firefighting vehicles while occupants are evacuating.	Minimum 5.5m width kerb to kerb.	N/A	
		Parking is provided outside of the carriageway.	N/A	
		Hydrants are to be located clear of parking areas.	N/A	
		There are through roads, and these are linked to the internal road system at an interval of no greater than 500m.	N/A	
		Curves of roads have a minimum inner radius of 6m.	N/A	
		The maximum grade road is 15° and average grade is 10°.	N/A	
		The road crossfall does not exceed 3°.	N/A	
		A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches is provided.	N/A	

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMPLIES	COMMENT
✓ - Acceptable Solution AS - Alternative Solution			
6.8.3 Services – Water, electricity and gas **Table 6.8c** *To provide adequate services for water for the protection of buildings during and after the passage of a bushfire, and not to locate gas and electricity so as not to contribute to the risk of fire to a building.*			
WATER	An adequate water supply for firefighting purposes is installed and maintained.	Reticulated water is to be provided to the development, where available.	✓	A reticulated water supply is provided.
		A 10,000 litres minimum static water supply for firefighting purposes is provided for each occupied building where no reticulated water is available	**N/A**	
	Water supplies are located at regular intervals The water supply is accessible and reliable for firefighting operations	Fire hydrant spacing, design and sizing comply with AS2419.1:2005;	✓	A reticulated water supply is provided.
		Hydrants are not located within any road carriageway;	✓	
		Reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.	✓	A reticulated water supply is provided.
	Flows and pressures are appropriate	Fire hydrant flows and pressures comply with AS2419.1:2005.	✓	
	The integrity of the water supply is maintained	All above ground water service pipes are metal, including and up to any taps.	✓	
ELECTRICITY	Location of electricity services limits the possibility of ignition of surrounding bushland or the fabric of buildings.	Where practicable, electrical transmission lines are underground.	✓	The proposed building will be connected to the existing underground electricity service.
		Where overhead electrical transmission lines are proposed as follows: → lines are installed with short pole spacing (30 metres), unless crossing gullies,	**N/A**	

	PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMPLIES	COMMENT
✓ - Acceptable Solution AS - Alternative Solution				
		gorges or riparian areas; and → no part of a tree is closer to a power line than the distance set out in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines		
GAS	Location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	Reticulated or bottled gas is installed and maintained in accordance with AS 1596:2014 and the requirements of relevant authorities, metal piping is to be used. All fixed gas cylinders are kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side; Connections to and from gas cylinders are metal: Polymer-sheathed flexible gas supply lines are not used; and Above-ground gas service pipes are metal, including and up to any outlets.	✓	Any new gas connections will be underground and will be unlikely to create an additional hazard risk to surrounding bushland.
6.8.4 Emergency Management Planning **Table 6.8d** *To provide suitable emergency and evacuation arrangements for occupants of SFPP developments*				
EMERGENCY MANAGEMENT	A bush fire emergency and evacuation management plan is prepared.	Bush fire emergency management and evacuation plan is prepared consistent with the: ❑ the NSW RFS document: A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan; and ❑ AS3745:2010 Planning for emergencies in facilities.	✓	A Bushfire Management Plan will be prepared prior to the occupation of the new building.

Appendix C: Addendum 2022 to PBP 2019 Compliance Table

Appendix D: NSW RURAL FIRE SERVICE Addendum to Planning for Bushfire Protection

Table 1: Addendum PBP 2022 – Rural Fire Service

Intent of Measure	Performance Criteria	Acceptable Solution	Complies	Comment
			✓ - Acceptable Solution PS - Performance Solution	
Table 2: **Construction Standards**	The proposed building can withstand bushfire attack in the form of wind, embers, radiant heat and flame contact.	A construction level of BAL-19 or greater under AS3959 and section 7.5 of PBP is applied.	✓	The proposed childcare centre building will be constructed in accordance with Sections 3 and 6 of AS3959-2018; as a BAL-19 rated building.
Table 3: **Access**	Firefighting vehicles are provided with safe all weather access to structures and hazardous vegetation.	Vehicular access must be capable of providing continuous access for emergency vehicles to enable travel in a forward direction from a public road around the entire building; and	PS	Vehicular access is provided on the site to three elevations: including the main front entrance (eastern elevation), the southern elevation and the western elevation. The internal driveway is no greater than 100m from the front property boundary. Vehicular access to a Class 9 building is mandated to ensure firefighting vehicles can efficiently and quickly reach the building, crucial for effective bushfire response. As the subject site is less than 70m in depth, a responding firefighting vehicle has 100% hose reel coverage from either public road; regardless of the type of appliance (eg RFS Cat 1 tanker of F&R Pumper). Unlike a large, isolated building, the proposed childcare centre has a very small footprint and is easily accessible from the public road network along the southern and western elevations. The existing fire hydrants located in front of the site are strategically placed to allow firefighters to access the southern and western elevations of the building and continue through to the rear via the concrete footpath along the immediate curtilage of the building. The parking area provides safe defendable space between the building and the identified bushfire hazard to the south west of the site. Non-compliance with the requirement to provide continuous vehicular access around the entire building does not substantially reduce the ability for firefighters to gain access to all structures and vegetation within the site.

Intent of Measure	Performance Criteria	Acceptable Solution	Complies	Comment
			✓ - Acceptable Solution PS - Performance Solution	
		Must have a minimum unobstructed width of 6m with no part of its furthest boundary more than 18m from the building and is no part of the 6m width be built upon or used for any purpose other than vehicular or pedestrian movement; and	PS	The internal driveways are 6m wide to allow two-way travel. All parts of the driveway and parking areas are within 18m of the building.
		Must provide reasonable pedestrian access from the vehicular access to the building; and	✓	A concrete path immediately surrounds the entire building within the site or as part of the public footpath immediately adjoining the property boundary.
		Must have a load bearing capacity and unobstructed height to permit the operation and passage of fire fighting vehicles; and	✓	The internal driveway pavement is designed with sufficient capacity to permit the passage of a firefighting vehicle.
		Must be wholly within the allotment except that a public road complying with above may serve as the vehicular access or part thereof.	✓	All driveways and parking areas are within the subject site.

Intent of Measure	Performance Criteria	Acceptable Solution	Complies	Comment
			✓ - Acceptable Solution PS - Performance Solution	
Table 4: Water Supply	An adequate water supply for firefighting purposes is installed and maintained.	Reticulated water is to be provided to the development, where available; and	✓	
		Water for fire fighting purposed must be made available and consist of: ➢ a fire hydrant system installed in accordance with AS2419.1; or ➢ where no reticulated water is available, a static water supply consisting of tanks, swimming pools, dams or the like, or a combination of these, together with suitable pumps, hoses and fittings, determined in consultation with NSW RFS that – o is capable of providing the required flow rate for a period of not less than 4 hours or o has a volume of 10,000 litres for each occupied building	✓	The proposed childcare centre will be connected to the existing reticulated water supply located on the southern side of the unnamed public road. Based on the location of the existing hydrants and the siting of the proposed building, all parts of the building are well within 90m of both hydrants in accordance with AS2419.1

Table 2: NCC 2022 Part G5D4 Specification 43

<table>
<tr><th colspan="2">Ancillary Provisions</th><th>Complies</th><th>Comment</th></tr>
<tr><td colspan="2"></td><td colspan="2">✓ - Acceptable Solution
PS - Performance Solution</td></tr>
<tr><td rowspan="3">S43C1
Scope</td><td>This Specification sets out bushfire protection measures for buildings occupied by people who may be unable to readily evacuate the building prior to a bushfire.</td><td></td><td>Noted</td></tr>
<tr><td>Compliance with this Specification does not guarantee the safety of building occupants or the maintenance of tenable conditions within a building during a bushfire event.</td><td></td><td>Noted</td></tr>
<tr><td colspan="3">Notes:
The measures set out in Specification are intended to operate in conjunction with other bushfire safety measures that lie outside the scope of the NCC. Information about these measures can be found in the Guide to NCC Volume One for Part G5.</td></tr>
<tr><td rowspan="3">S43C2
Separation from classified vegetation

EXCLUDED UNDER NSW VARIATION
Rural Fire Service – PBP 2022</td><td>(1) The building must be separated from classified vegetation—
(a) by not less than the minimum distances specified in Table S43C2; or
(b) such that radiant heat flux on exposed building elements will not exceed 10kW/m².</td><td>N/A
✓</td><td rowspan="2">An APZ has been provided in accordance with RFS Planning for Bushfire Protection 2019 such that the proposed building will not be exposed to radiant heat levels exceeding 10kW/m².</td></tr>
<tr><td>(2) For the purposes of (1), the term classified vegetation has the meaning that it has in AS 3959.</td><td>Noted</td></tr>
<tr><td colspan="3">Table S43C2: Minimum distance of building to classified Vegetation
<table>
<tr><th>Vegetation classification</th><th>Slope</th><th>Minimum distance (m) of the building to classified vegetation</th></tr>
<tr><td>High risk</td><td>Upslope and flat land</td><td>60</td></tr>
<tr><td>High risk</td><td>Downslope max 20 degrees</td><td>110</td></tr>
<tr><td>Medium risk</td><td>Upslope and flat land</td><td>40</td></tr>
<tr><td>Medium risk</td><td>Downslope max 20 degrees</td><td>80</td></tr>
<tr><td>Low risk</td><td>Upslope and flat land</td><td>30</td></tr>
<tr><td>Low risk</td><td>Downslope max 20 degrees</td><td>50</td></tr>
</table>
Table Notes:
1. Table values are based on a Fire Danger Index of 100 in accordance with AS 3959.
2. High risk equates to vegetation classification of forest and woodland in accordance with AS 3959.
3. Medium risk equates to vegetation classification of scrub and rainforest in accordance with AS 3959.</td></tr>
</table>

Ancillary Provisions		Complies	Comment
		✓ - Acceptable Solution PS - Performance Solution	
	4. Low risk equates to vegetation classification of scrubland, mallee/mulga, and grassland in accordance with AS3959.		
S43C3 **Separation between buildings**	(1) The building must be located not less than 12 m from any other building.		
	(2) The separation distance required by (1) need not be complied with if the external walls and roof of the building are constructed - (a) with an FRL of not less than 60/60/60 when tested from the outside, with any openings protected in accordance with AS 3959 for BAL-19 or greater; or (b) using a material of system that satisfies the test criteria of AS 1530.8.1 for a radiant heat flux of 10 kW/m².		
S43C4 **Separation from allotment boundaries and carparking areas**	(1) The building must be located not less than 10 m from any allotment boundary or carparking area.	✘	
	(2) The separation distance required by (1) need not be complied with if the external walls and roof of the building are constructed: (a) with an FRL of not less than 60/60/60 when tested from the outside, with any openings protected in accordance with AS 3959 for BAL-19 or greater; or (b) using a material of system that satisfies the test criteria of AS 1530.8.1 for a radiant heat flux of 10 kW/m².		
S43C5 **Separation from hazards**	The external walls and roof of the building must be protected from potential hazards on the site such as gas bottles, fuel storage, storage of combustible materials, waste bins, vehicles, machinery, and the like, by – (a) a separation distance of not less than 10 m; or (b) where within the 10 m separation distance described in (a), construction with an FRL of not less than 60/60/60 when tested from the outside, with any openings protected in		

Ancillary Provisions		Complies	Comment
		✓ - Acceptable Solution PS - Performance Solution	
	accordance with AS 3959 for BAL-19 or greater; or (c) construction using a material of system that satisfies the test criteria of AS 1530.8.1 for a radiant heat flux of 10 kW/m².		
S43C6 **Non-combustible path around building**	A non-combustible pathway not less than 1.5m wide must be provided around the perimeter of the building.		
S43C7 **Access Pathways**	(1) Access pathways that lead to a road or open space must— (a) be readily identifiable; and (b) have an even surface; and (c) have a minimum clear width of not less than 1 m.		
	(2) If the access pathway is an accessway that is required to comply with Part D4, the requirements of Part D4 override (1) to the extent of any inconsistency.		
S43C8 **Exposed external areas**	For any external area designed to hold people unable to be safely accommodated within the building, that may be exposed to radiant heat flux from a fire front during a bushfire event, the maximum incident radiant heat flux from the fire front must not exceed 1 kW/m2 above background solar radiant heat flux.		
S43C9 **Internal tenability**	To maintain internal tenability throughout the duration of occupancy during a bushfire event, the building must comply with the following: (a) An air handling system must be provided that is capable of— (i) being adjusted for full recycling of internal air for limited periods to avoid the introduction of smoke into the building; and (ii) maintaining an internal air temperature of not greater than 25°C.		

Ancillary Provisions		Complies	Comment
		✓ - Acceptable Solution PS - Performance Solution	
	(b) The building envelope must be designed such that if an air handling system required by (a) fails, then— (i) internal air temperatures can be maintained below 39°C; and (ii) internal surface temperatures can be maintained below 60°C.		
	(c) If the building is divided into separate compartments then, for the purposes of (a), each compartment must have a separate air handling system.		
	(d) Each air handling system required by(a) must be designed to account for the activation of smoke detectors from low concentrations of smoke from external sources, so as to ensure that air conditioning and other essential systems remain operational.		
S43C10 **Building envelope** **EXCLUDED UNDER NSW VARIATION** **Rural Fire Service – Addendum PBP 2022** **(Table 2)**	The external walls and roof of the building must be— (a) non-combustible, except for materials listed in C2D10(4) or (5); and		Assessed by RFS as part of an application for a Bush Fire Safety Authority. The building will be constructed in accordance with Section 3 and 5 of AS3959-2018; being a BAL-29 rating.
	(b) constructed in accordance with AS 3959 for BAL—19 or greater.	✓	
S43C11 **Supply of water for firefighting** **EXCLUDED UNDER NSW VARIATION –** **Rural Fire Service – Addendum PBP 2022** **(Table 4)**	Water for fire-fighting purposes must be available and consist of— (a) a fire hydrant system complying with E1D2, or	✓	Assessed by RFS as part of an application for a Bush Fire Safety Authority. The proximity to multiple fire hydrants provides 100% coverage to the entire building.
	(b) a static water supply consisting of tanks, swimming pools, dams or the like, or a combination of these, together with suitable pumps, hoses and fittings, capable of providing the required flow rate for a period of 4 hours, determined in consultation with the relevant fire brigade.		

Ancillary Provisions		Complies	Comment
		✓ - Acceptable Solution PS - Performance Solution	
S4312 **Emergency power supply**	Emergency power must be provided to support, for not less than 4 hours before and 2 hours after the passing of the fire front during a bushfire event, the ongoing operation of— (a) air handling systems to maintain internal tenability; and		
	(b) any pumps for fire-fighting; and		
	(c) any emergency lighting, exit signs, and		
	(d) any other emergency equipment listed in C3D14(6) and required to be provided.		
S43C13 **Signage**	Signage must be provided to warn building occupants against storing combustible materials under or adjacent to the building.		
S43C14 **Vehicular access** **EXCLUDED UNDER NSW VARIATION:** **Rural Fire Service – Addendum PBP 2022** **(Table 3)**	Vehicular access to the building must be provided in accordance C3D5(2), as if the building were a large isolated building for the purposes of C3D4.	**PS**	Assessed by RFS as part of an application for a Bush Fire Safety Authority

Appendix D: AHIMS Report

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : 2406 CCC

Client Service ID : 970754

Katrina Greville

21 Costata Crescent
Adamstown New South Wales 2289

Attention: Katrina Greville

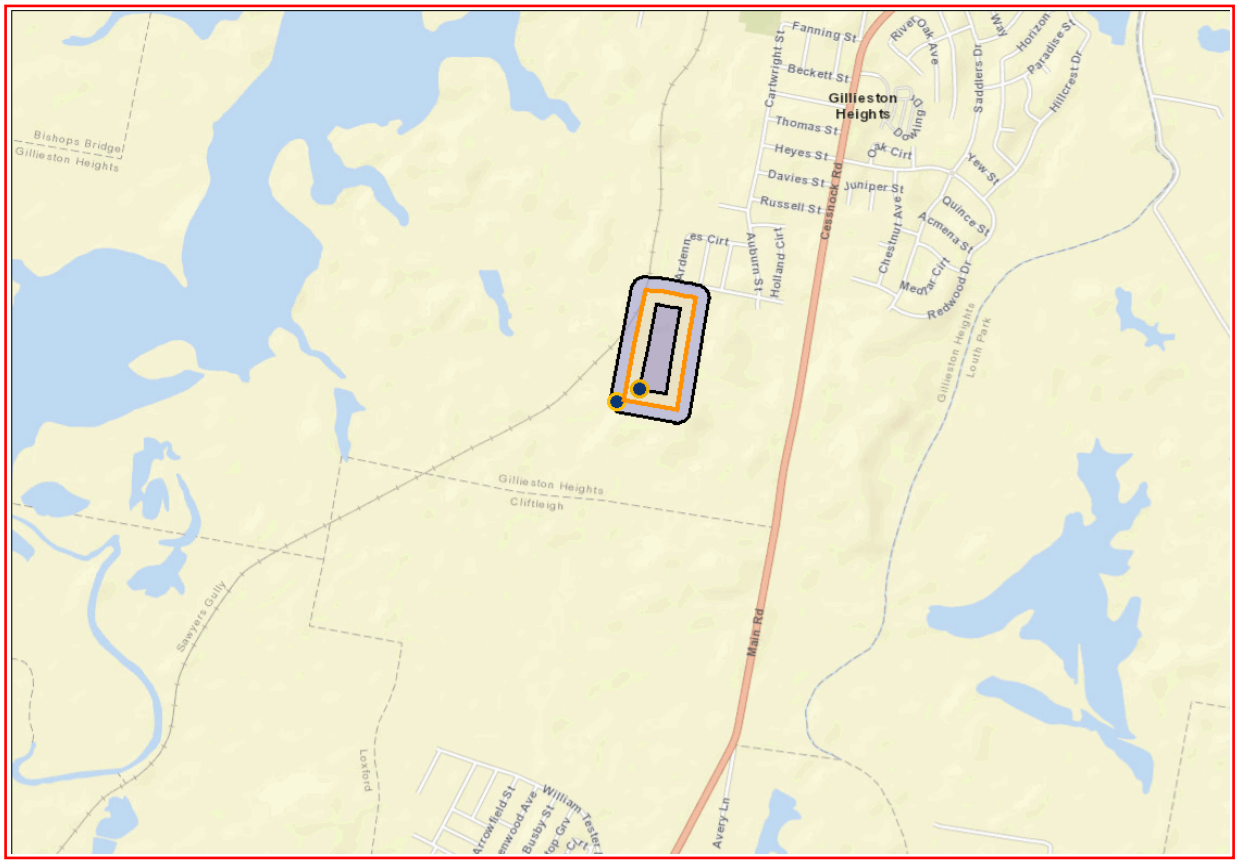
Email: klmukevski@bigpond.com

Date: 31 January 2025

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 55, DP:DP975994, Section : - with a Buffer of 50 meters, conducted by Katrina Greville on 31 January 2025.

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:

3	**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.

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