

Bushfire Risk Assessment and Protection Measures

Proposed Residential Development

Farm Stay Accommodation

Lot 1 in DP 1249240 - No: 131 Buckaroo Road
Buckaroo NSW



26 April 2022

Executive Summary

This report provides an assessment of the bushfire risk and bushfire protection measures relevant to a residential infill development at Lot 1 in DP 1249240 – 131 Buckaroo Rd, Buckaroo NSW. The proposal involves construction of two (2) new serviced apartments/farm stay accommodation.

A review of NSW ePlanning Spatial Viewers bushfire prone land layer confirms the allotment is shown to contain or are impacted by the buffer zone to bushfire prone vegetation. The area of vegetation impacting the development has been assessed as grassland on a level slope. In considering these factors, this bushfire risk assessment has determined that the dwellings are located within an area not expected to exceed 12.5kw/m² (BAL-12.5) of radiant heat to the most exposed elevation once the asset protection zones have been established.

The development application to construct the new dwellings/farm stay apartments (2) are therefore required to address the bushfire protection measures defined by Planning for Bushfire Protection 2019, pursuant to Section 4.14 of the Environmental Planning and Assessment Act 1979.

The subject development is assessed against the aims, objectives and performance criteria of the NSW Rural Fire Service document 'Planning for Bush Fire Protection' 2019 (PBP 2019). The recommendations of this report seek to address the acceptable solutions of Planning for Bushfire Protection 2019 by incorporating the following bushfire protection measures:

- Provision of a defensible space and landscaping in accordance with that required for an asset protection zone (APZ);
- Building construction in accordance with AS3959-2018;
- The provision of adequate water supplies required for firefighting operations;
- Utility installation designed to reduce the potential of fire spread and ignition from gas or electricity.

Where these measures are incorporated, it is determined that the proposal adequately satisfies the aim and objectives of PBP 2019 for a residential building development on bushfire prone land.

Statement of Compliance/Non-Compliance – Planning for Bush Fire Protection 2019		
Based on the incorporation of the bushfire protection measures recommended herein, does the proposal reasonably satisfy the aim and objectives of PBP 2019	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is an alternate/performance solution proposed or required due to non-compliance with PBP or non-compliance with the deemed-to-satisfy provisions of the BCA	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the development integrated as per Section 4.46 of the EP&A Act 1979	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is referral to the NSW Rural Fire Service required/recommended	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

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Abbreviations:

- APZ – Asset Protection Zone.
- AS 3959-2018 – Australian Standard Buildings in Bushfire Prone Areas.
- BFPLM – Bushfire Prone Land Mapping
- BFSa – Bushfire Safety Authority (RFS)
- BPM - Bushfire Protection Measures
- EP&A Act – Environmental Planning and Assessment Act, 1979
- IPA – Inner Protection Area as per Planning for Bush Fire Protection.
- LGA – Local Government Authority
- Lot 1 - Lot 1 in DP 1249240 – 131 Buckaroo Rd, Buckaroo NSW
- NCC – National Construction Code (2019)
- OPA – Outer Protection Area as per Planning for Bush Fire Protection.
- PBP 2019 – Planning for Bush Fire Protection, 2019
- RFS – NSW Rural Fire Service

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1 Property and Proposal

Client:	Minco Homes
Street:	131 Buckaroo Road,
Suburb:	Buckaroo NSW
Lot/DP:	Lot 1 in DP 1249240
Local Government:	Mid-Western Regional Council
Development Type:	Residential Infill – Two (2) Serviced Apartments
Prepared by:	Geoffrey Hicks - BPAD L2-16662
Version Control	Version No: 1

1.1 Introduction

APZA Services have been engaged by Minco Homes on behalf of the owners of Lot 1, to prepare a bushfire assessment for the proposed serviced apartments/farm stay dwellings (Class 1a under the NCC). We understand the report will be used to supplement a development application to Mid-Western Regional Council.

The aim of this bushfire protection assessment is to;

- Review the proposed development application to determine compliance with the relevant bushfire protection legislation and policies with Planning for Bushfire Protection 2019 in particular:
- Determine the formation of the vegetation on the land adjoining the development site in accordance with the vegetation classification system contained in Planning for Bushfire Protection 2019;
- Undertake an assessment to determine the effective slope of the land which will cause the most insignificant fire behaviour on the facility;
- Determine the Fire Danger Index [FDI] for the site;
- Undertake an assessment to determine the adequacy of the bushfire protection measures, including the following matters:
 - The provision of setbacks from vegetated areas;
 - Fire fighting water supplies;
 - Access requirements for emergency service vehicles.
 - Land management responsibilities; and
 - Evacuation management.

1.2 Location and Description of Development

The subject land is located on the northern side of Buckaroo Road as shown in Figure 1, and has direct access to the Road. The site is a large rural allotment with an area of approximately 12.03ha. The site is located in an R5 Zone by Mid-Western Regional Council LEP (2009) and the development is permitted with consent.

The lot contains an existing single-storey building surrounded by established/managed grasses. An aerial survey (Nearmap) and site plan of the lot is provided in Figure 2 and 3. The plans propose two (2) single storey serviced apartments (short term farm stay) with Colorbond sheet metal roof, aluminium windows and doors. The sub-floor has been indicated as full open.

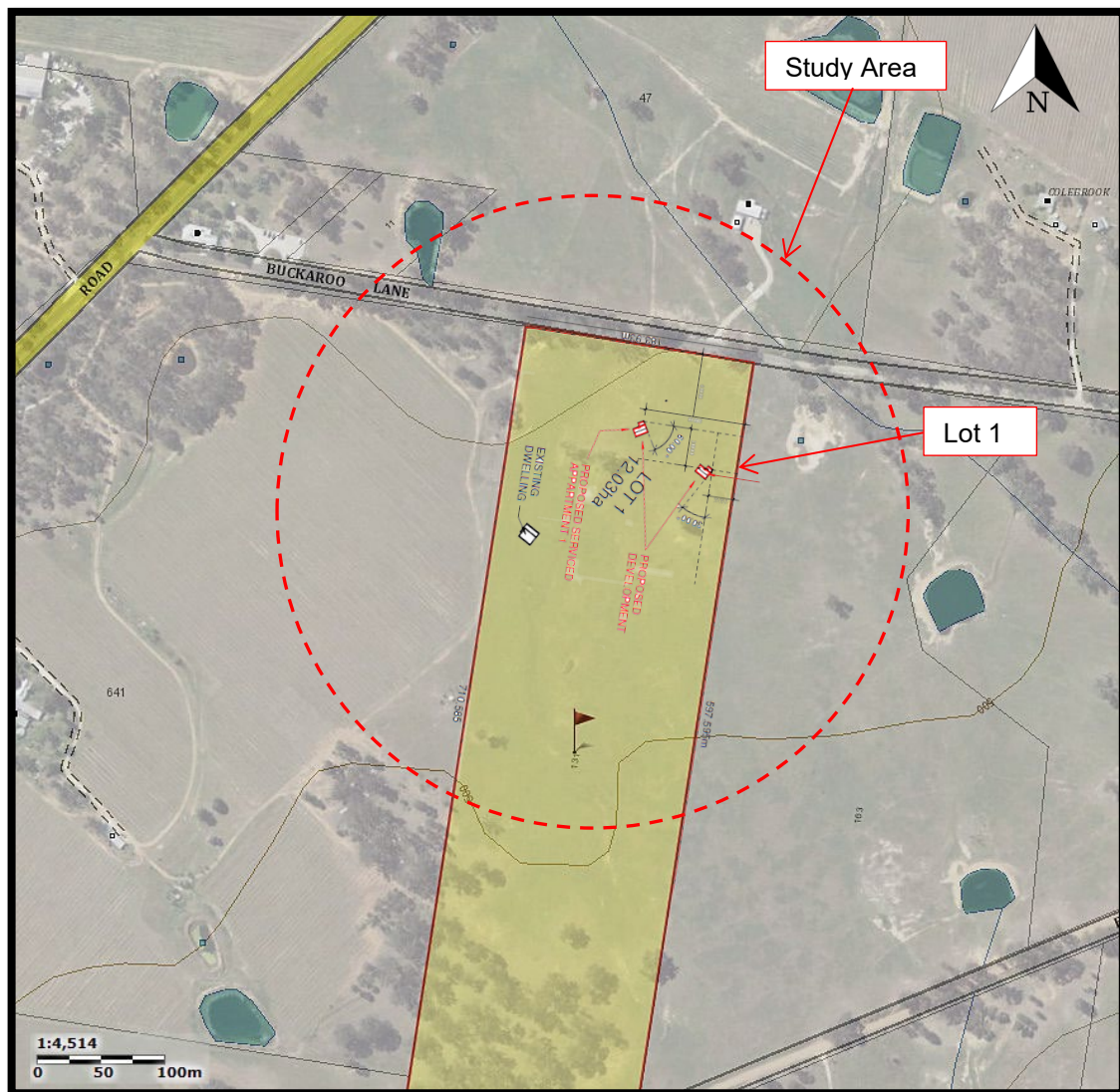


Figure 1 – SIX Maps Site location and Study Area (Insert BFPLM)

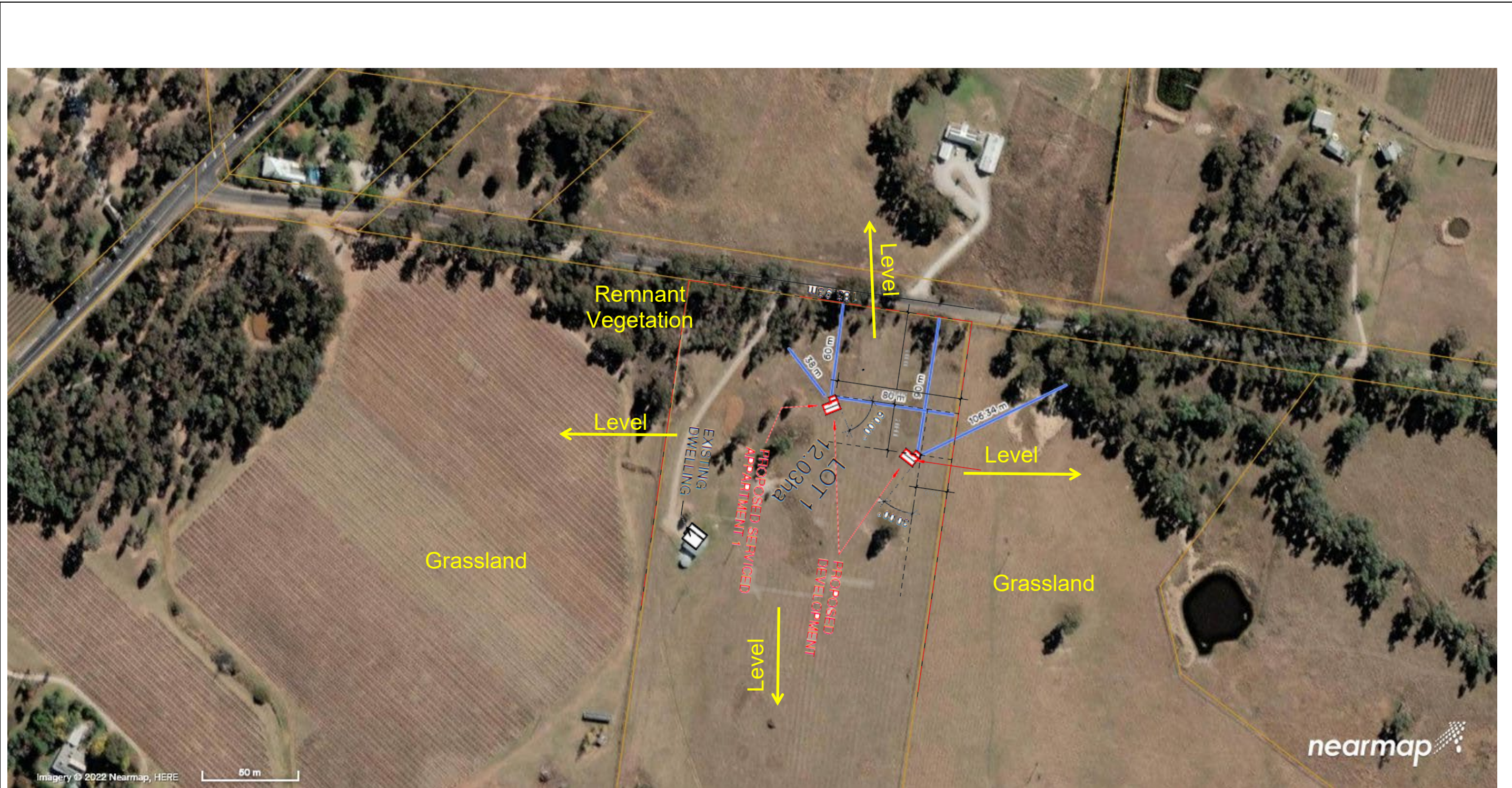


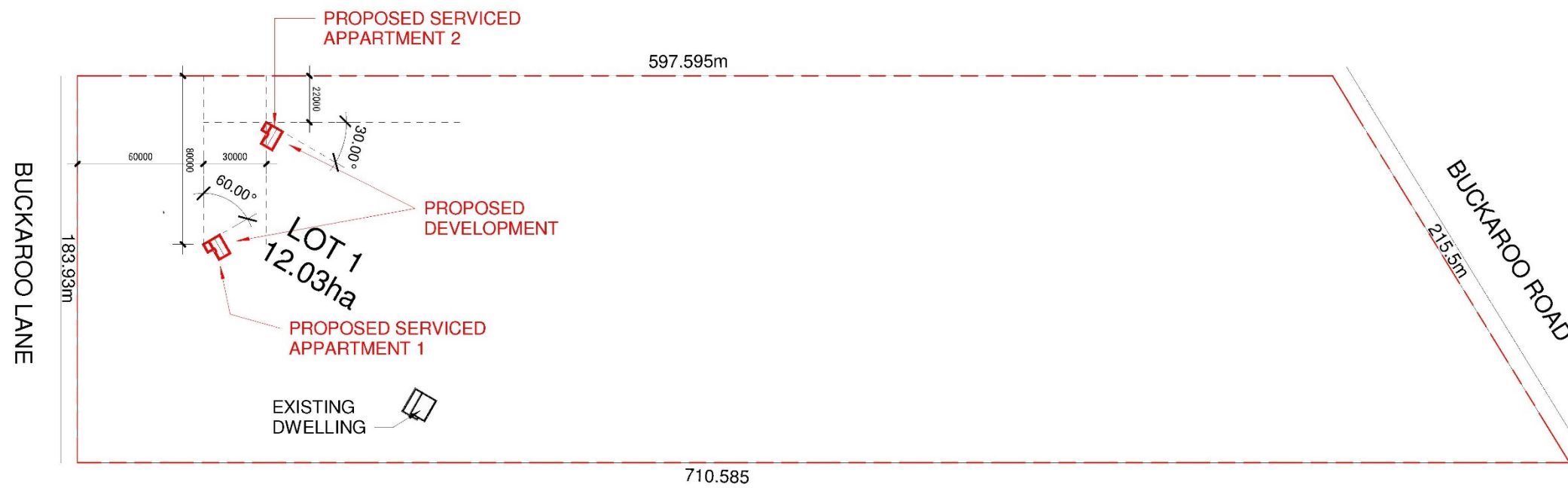
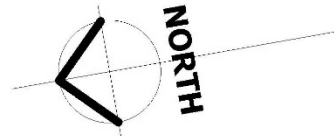
Figure 2 – Aerial image of lot 1 and bushfire hazard within the study area (Nearmap)



Bushfire Hazard Analysis

DA

AREA SCHEDULE	
Name	Area
001. LIVING	57.03 m ²
001. DECK	12.96 m ²
002 LIVING	57.03 m ²
002 DECK	12.96 m ²
139.98 m ²	



- NOTES:
- SITE ACCESS TO COMPLY WITH SECTION 4.1.3(2) OF PLANNING FOR BUSHFIRE PROTECTION 2006.
 - SITE LANDSCAPING TO COMPLY WITH PRINCIPLES OF APPENDIX 5 OF PLANNING FOR BUSHFIRE PROTECTION 2006.

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No.	Description	Date
P1	Revision 2	17/12/21
DA	DEVELOPMENT APPLICATION	21/2/22

JOHN & TRACY HOWLE
 LOT 1 DP 1249240, 131 BUCKAROO ROAD,
 BUCKAROO 2850

LOCATION PLAN	
Project Number	TH0001
Date	27/04/22
Drawn by	JH
Checked by	Checker
Scale	1 : 2000

SH2

Figure 3 – Site Plan

2 Bushfire Threat Assessment

2.1 Assessment Requirement

The subject land is identified as being Bushfire Prone Land on NSW ePlanning Spatial Viewer Hazard Map layer. Therefore, the proposed development is to be assessed by Council under the provision of Section 4.14 of the Environmental Planning and Assessment Act 1979 (EP&A Act), which includes the consideration of the NSW Rural Fire Service (RFS) document Planning for Bushfire Protection 2019, referred to within this report as PBP 2019.

The following detailed assessment is strictly based on the methodology and requirements of PBP 2019 and supporting RFS policy.

2.2 Vegetation Type

In accordance with PBP 2019 the predominant vegetation class based on the Keith (2004) framework has been determined for a distance of at least 140 metres out from the subject land. Vegetation extent (bushfire hazard) within the study area is derived from aerial photo imaging and a desktop assessment of the subject property and surrounds. Vegetation was cross referenced against the NSW Office of Environment and Heritage (OEH – SEED) utilising David A. Keith and Christopher C. Simpson plant community database. The area/s of vegetation considered as a hazard and subsequent threat to the site are summarised as follows:

Table 1 – Vegetation located within the subject site

Direction from the site	Predominant vegetation (Keith 2004 formations)	Comment
North-East	Remnant - Rainforest Equivalent	Land to the north-east consists of grassland within Lot 1 with some vegetation along the edge of Buckaroo Lane considered as a remnant hazard (i.e. <1 Ha in area - rainforest equivalent) in terms of bushfire threat to the subject site.
All Other Directions	Grassland	The vegetation is considered a rural grassland.

2.3 Effective Slope

In accordance with PBP 2019 the slope that would most significantly influence fire behaviour was determined over a distance of 100 metres out from the subject land where the bushfire hazard was found.

In this instance, the relevant gradient has been determined using Department of Lands SIX mapping (displaying 10 metre contours).

Table 2: The effective slope influencing bushfire behaviour is assessed as:

Direction:	Slope:	Vegetation Formation
• North-East	Flat	Remnant - rainforest equivalent
• South	Flat	Grassland
• East	Flat	Grassland
• West	Flat	Grassland

2.4 Forest Fire Danger Index (FFDI)

FFDI for Mid-Western Regional = 100 (A1.6 PBP 2019 and AS3959 – Table 2.1)

2.5 Known Constraints

The land within the development site known as Lot 1 does not contain significant environmental features such as detailed in threatened species or threatened ecological community under the Biodiversity Conservation Act (2016); SEPP Koala Habitat (2020); SEPP Coastal Management (2018); land slip areas; National Parks Estate; areas of geological interest or riparian corridors.

No Aboriginal relics or Aboriginal places are known to be located within the development site.

A desktop assessment of the publicly available planning enquiry system has found no other constraints to be considered regarding the proposed development on Lot 1. No other known significant environmental features have been noted, recorded or advised of as part of this assessment.

3 Bushfire Protection Measures

The Bushfire Protection Measures (BPMs) for residential infill development include provisions relating to APZs, access, water supply, electricity and gas services, construction standards, landscaping and emergency evacuation. The BPMs for infill developments include the following:

- The construction standards to be used for building elements;
- Asset protection zones;
- Capacity of public roads to handle increased volumes of traffic during a bushfire emergency;
- The adequacy of access and egress for the purposes of emergency response;
- The siting and adequacy of water supplies for firefighting operations;
- The adequacy of bushfire maintenance plans and fire emergency procedures;

Planning for Bushfire Protection 2019 provides a methodology to determine the Asset Protection Zones required for habitable buildings in residential subdivisions that are designated as bushfire prone. The following section of this report examines these requirements for the construction of the proposed dwelling on Lot 1 in DP 1249240.

3.1 Determination of Bushfire Attack Level and Relevant Construction Standards

The relevant BAL ratings have been determined using Site Assessment Methodology in Appendix No: 1 of PBP 2019 and Table A1.12.2 of PBP (FFDI 100) has been used to determine the width of required Asset Protection Zones (APZ) for the proposed dwellings. Using the vegetation, weather and slope data identified in Section 2, the results of the construction standards and required APZ analysis are shown in Table 3 and 4 below:

Table 3 – Determination of construction standards for Apartment 1 with FFDI 100

Direction ¹	Vegetation ²	Fuel ³ Load t/ha	Slope ⁴	Distance in Metres ⁵	PBP 2019 BAL ⁶
North-East	Remnant - rainforest equivalent	10/13.2	Flat	38m	BAL-12.5
South	Grassland	6/6	Flat	22m APZ	BAL-12.5
East	Grassland	6/6	Flat	22m APZ	BAL-12.5
West	Grassland	6/6	Flat	22m APZ	BAL-12.5

¹ Direction of assessment from proposed development.

² Predominant vegetation classification over 140 m from proposed development.

³ Fuel loads in tonnes per hectare – surface and elevated / overall fuel load

⁴ Effective slope assessed over 100 m from proposed development where the bushfire hazard occurs.

⁵ Shortest distance to exposed facade.

⁶ Bushfire Attack Level (BAL) corresponding to Appendix 1 A1.12.5 – ‘Planning for Bushfire Protection (2019)’.

Table 4 – Determination of construction standards for Apartment 2 with FFDI 100

Direction ¹	Vegetation ²	Fuel ³ Load t/ha	Slope ⁴	Distance in Metres ⁵	PBP 2019 BAL ⁶
North	Grassland	6/6	Flat	22m Boundary	BAL-12.5
South	Grassland	6/6	Flat	22m APZ	BAL-12.5
East	Grassland	6/6	Flat	22m APZ	BAL-12.5
West	Grassland	6/6	Flat	22m APZ	BAL-12.5

¹ Direction of assessment from proposed development.

² Predominant vegetation classification over 140 m from proposed development.

³ Fuel loads in tonnes per hectare – surface and elevated / overall fuel load

⁴ Effective slope assessed over 100 m from proposed development where the bushfire hazard occurs.

⁵ Shortest distance to exposed facade.

⁶ Bushfire Attack Level (BAL) corresponding to Appendix 1 A1.12.5 – ‘Planning for Bushfire Protection (2019)’.

3.2 Defendable Space / Vegetation Management

Intent of Bushfire Protection Measures (BFPM): *'To provide sufficient space and maintain reduced fuel loads, so as to ensure radiant heat levels at buildings are below critical limits and to prevent direct flame contact with a building'*.

Recommendation:

At the commencement of building works and in perpetuity the property around both apartments for a distance of 22 metres in all directions shall be managed as an Inner Protection Area (IPA) as outlined within section 3 and Appendix 4 of 'Planning for Bush Fire Protection 2019' and the NSW Rural Fire Service document 'Standards for asset protection zones'.

The 22 metre IPA will ensure the grassland bushfire attack level will not exceed 12.5Kw/m² (BAL-12.5) of radiant heat exposure.

The above recommendation should ensure that no easily combustible material, structures, available forest fuel/bushfire vegetation or other items be installed, stored or allowed to re-accumulate and become contiguous within the yard area. Trees planted within the IPA should be well spread out and should not form a continuous canopy. The IPA extent should not support or carry a running bush fire towards the subject development site and associated infrastructure.

The Inner Protection Area should be managed in terms of PBP which states:
'The IPA is critical to providing a defendable space and managing heat intensities at the building surface. The IPA should provide a tree canopy cover of less than 15% and should be located greater than 2 m from any part of the roofline of a dwelling. Garden beds of flammable shrubs are not to be located under trees and should be no closer than 10 m from an exposed window or door. Trees should have lower limbs removed up to a height of 2 m above the ground'.

Landscaped areas within the APZ are to be maintained in accordance with the following documents;

- PBP 2019: Appendix 4: Asset Protection Zone Standards;
- Standards for Asset Protection Zones (NSW Rural Fire Service).

3.3 Landscaping

Landscaping and maintenance within the IPA should ensure the following;

- There shall be minimal fine fuel at ground level which could be set alight by a bushfire;
- Trees and shrubs planted within the APZ should be low-flammability species (i.e. native and/ or introduced species) and should not directly abut the building;
- The use of non-combustible ground surfaces such as gravel paths and paved areas is encouraged, particularly surrounding the building envelope;
- Lawn areas shall be maintained low cut and clear. There shall be minimal fine fuel at ground level which could be set alight by a bushfire;
- Areas under fences, gates and trees shall be raked and kept clear of fine fuel;
- Gutters, roofs and roof gullies shall be kept clear of leaves and other debris.
- Verandahs, decks, carports, courtyards etc. shall not be used to store combustible materials and shall be kept free of leaves and other debris;

- Trees may be retained within the IPA where:
 - No part of the tree overhangs within 2 metres of any building.
 - The canopy is discontinuous such that tree crowns are separated by a minimum of 5 metres where the APZ adjoins woodland or other vegetation type.

4 Construction Standards

Building construction standards are referred to in AS 3959-2018 'Construction of buildings in bushfire-prone areas' (AS 3959-2018) and refer to the determination of the Bushfire Attack Level (BAL), which is assessed in accordance with Appendix 1 of the PBP 2019. The BAL is based on known vegetation type, effective slope and managed separation distance between the development and the edge of the bushfire hazard/s which will have the greatest impact on the development.

In accordance with the BAL assessment shown in Table 3, the highest BAL rating to affect this development is;

BAL-12.5 - Attack by burning debris is significant with radiant heat (not greater than 12.5kW/m²). Radiant heat is unlikely to threaten building elements (such as unscreened glass). Specific construction requirements for ember protection and accumulation of debris are warranted.

Recommendation:

All elements of the new building works will need to comply with Section 3 and Section 5 (BAL – 12.5) Australian Standard AS3959-2018 'Construction of buildings in bush fire-prone areas' and section 7.5 of 'Planning for Bush Fire Protection' or the applicable version (as prescribed by the current National Construction Code) of NASH Standard 'National Standard Steel Framed Construction in Bushfire Areas' as appropriate.

The following variations to AS 3959 apply in NSW for the purposes of NSW G5.2(a)(i) of Volume One and NSW 3.10.5.0(c)(i) of Volume Two of the NCC;

Unenclosed decking/verandah support posts, bearers, joists & decking/trafficable surfaces to all new verandahs/decks etc are required to be from non-combustible materials **or fire resisting timber** (as per AS3959-2018 appendix F). *Note:* Treated Pine is unacceptable in bushfire prone areas within NSW.

The existing dwelling has been constructed to comply with AS3959 – BAL 12.5 as part of a previous development consent. There is no further bushfire protection measure recommended for the existing dwelling within this report.

5 Access

The road network is already in place and the site is accessed directly from both Buckaroo Road (south) and Buckaroo Lane (north). The road network is a two-way lane road, well maintained and under most conditions should provide adequate access and egress for both residents and emergency service vehicle. This arrangement would achieve an acceptable solution with regards to the performance criteria of Section 5 and Appendix 4 of PBP 2019.

We note the apartments are located more than 70 metres from the public access road and the following access requirements apply for this site;

- Driveway/s to have a minimum 4m carriageway width;
- a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches; property access must provide a suitable turning area in accordance with Appendix 3;
- curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress;
- the minimum distance between inner and outer curves is 6m;
- the crossfall is not more than 10 degrees;
- maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads; and

Note: Some short constrictions in the access may be accepted where they are not less than 3.5m wide, extend for no more than 30m and where the obstruction cannot be reasonably avoided or removed. The gradients applicable to public roads also apply to community style development property access roads in addition to the above.

6 Water Supply

Intent of Bushfire Protection Measures (PBP 2019): *'To provide adequate services of water for the protection of buildings during and after the passage of a bush fire.'*

Reticulated (Mains) Water Supply: **No**

In rural areas and areas not serviced by reticulated water supplies, the provision of static water supply is essential. A tank is therefore required. PBP table 5.3d requires a minimum of 20,000 litres for a lot size exceeding 10,000m². The tank has already been provided as part of the development consent for the existing dwelling, therefore we recommend a 10,000 litre water tank shall be provided for each apartment.

The water tank/s will require the follow;

- a connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure; 65mm Storz outlet with a ball valve is fitted to the outlet;
- ball valve and pipes are adequate for water flow and are metal;
- supply pipes from tank to ball valve have the same bore size to ensure flow volume;
- underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank;
- a hardened ground surface for truck access is supplied within 4m;
- above-ground tanks are manufactured from concrete or metal;
- raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F AS 3959);
- unobstructed access can be provided at all times;
- underground tanks are clearly marked;
- tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters, and

- all exposed water pipes external to the building are metal, including any fittings.

A'SWS' (static water supply) marker shall be obtained from the local NSW Rural Fire Service office and positioned for ease of identification from the road by brigade personnel and other users of the SWS.

7 Utilities - Gas and Electrical Supplies

Intent of Bushfire Protection Measures (PBP 2019): 'To locate gas and electricity so as not to contribute to the risk of fire to a building'.

- Where practicable, new electricity supply service is to be located underground from the connection point (i.e. at a point inside the property boundary) to the proposed building.
- Any proposed gas connection shall be installed and maintained in accordance with AS1596 and the requirements of relevant authorities;
- Metal piping shall be used;
- All fixed gas cylinders are to be kept clear of all flammable materials to 10 metres and shielded on the hazard side of the installation (i.e. via non-combustible shielding material);
- Release valves are to be directed away from the building and at least 2 metres away from any combustible material. Connections to and from gas cylinders are to be metal;
- Polymer sheathed flexible gas supply lines to gas meters adjacent to the building are not to be used;

8 Recommendation and Conclusion

Recommendations:

This report has identified that the proposed two (2) apartments will be located 22 metres from grassland vegetation in all directions and recommends that bushfire protection measures shall be applied to the building.

The following recommendations have been made within this report:

Asset Protection Zone

1. At the commencement of building works and in perpetuity the property around both apartments for a distance of 22 metres in all directions shall be managed as an Inner Protection Area (IPA) as outlined within section 3 and Appendix 4 of 'Planning for Bush Fire Protection 2019' and the NSW Rural Fire Service document 'Standards for asset protection zones'.

Water and Utilities

2. Electricity and gas services are to comply with section 7 -table 7.4a of 'Planning for Bushfire Protection 2019'.

3. A 10,000 litre minimum water supply shall be provided to both apartments for firefighting purposes.

If an above tank is provided it shall be non-combustible and fitted with a 65mm storz outlet with a gate or ball valve via a 50mm diameter metal pipe. A fire fighting vehicle must be able to gain access to within 4 metres of the water supply.

4. A'SWS' (static water supply) marker shall be obtained from the local NSW Rural Fire Service office and positioned for ease of identification from the road by brigade personnel and other users of the SWS.

Access

5. Driveways shall be provided to comply with section 7 -table 7.4a of 'Planning for Bushfire Protection 2019'.

Design and Construction

6. The apartments (2) shall comply with Section 3 and Section 5 (BAL – 12.5) Australian Standard AS3959-2018 'Construction of buildings in bush fire-prone areas' and section 7.5 of 'Planning for Bush Fire Protection' or the applicable version (as prescribed by the current National Construction Code) of NASH Standard 'National Standard Steel Framed Construction in Bushfire Areas' as appropriate.
7. Unenclosed decking/verandah support posts, bearers, joists & decking/trafficable surfaces to all new verandahs/decks etc are required to be from non-combustible materials or ***fire resisting timber*** (as per AS3959-2018 appendix F). *Note:* Treated Pine is unacceptable in bushfire prone areas within NSW.

Landscaping

8. Landscaping shall conform to PBP 2019: Appendix 4: Asset Protection Zone Standards and Rural Fire Service document 'Standards for Asset Protection Zones'.

Compliance or Non-Compliance with PBP:

Table 5 – Compliance with PBP performance criteria and intent for bushfire safety protection measures for infill development

Performance	Comment
<p>Asset Protection Zone</p> <p>An APZ is provided and maintained for the life of the development.</p>	<p>Can Comply: A 22 metre defensible space is provided around both apartments as an IPA in perpetuity. <i>Note:</i> The IPA's are located within the allotment</p>
<p>Access Requirements</p> <p>Safe, operational access is provided (and maintained) for emergency service personnel in suppressing a bushfire while residents are seeking to relocate, in advance of a bushfire (satisfying the intent and performance criteria for access roads in PBP 2019).</p>	<p>Can Comply: Access/Egress is provided from Buckaroo Lane. This arrangement satisfies the intent of the performance criteria of PBP and is sufficient for operational firefighting and emergency egress.</p>
<p>Water Supply</p> <p>Adequate water and electricity services are provided for firefighting operations.</p>	<p>Can Comply: 10,000 Litres water tanks have been provided. Water tanks, electricity and any gas connections shall be in accordance with PBP 2019 - Table 7.4a.</p>
<p>Construction Standards</p> <p>Demonstrated that the proposed building can withstand bushfire attack in the form of wind, smoke, embers, radiant heat and flame contact.</p>	<p>Can Comply: BAL-12.5 levels have been determined and bushfire protection measures have been applied to the development in accordance with AS3959-2018.</p>
<p>Landscaping</p> <p>Designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind driven embers to cause ignitions.</p>	<p>Can Comply: Landscaping within the APZ (IPA) shall be maintained in accordance with recommendations of section 3 of this report</p>

Conclusion

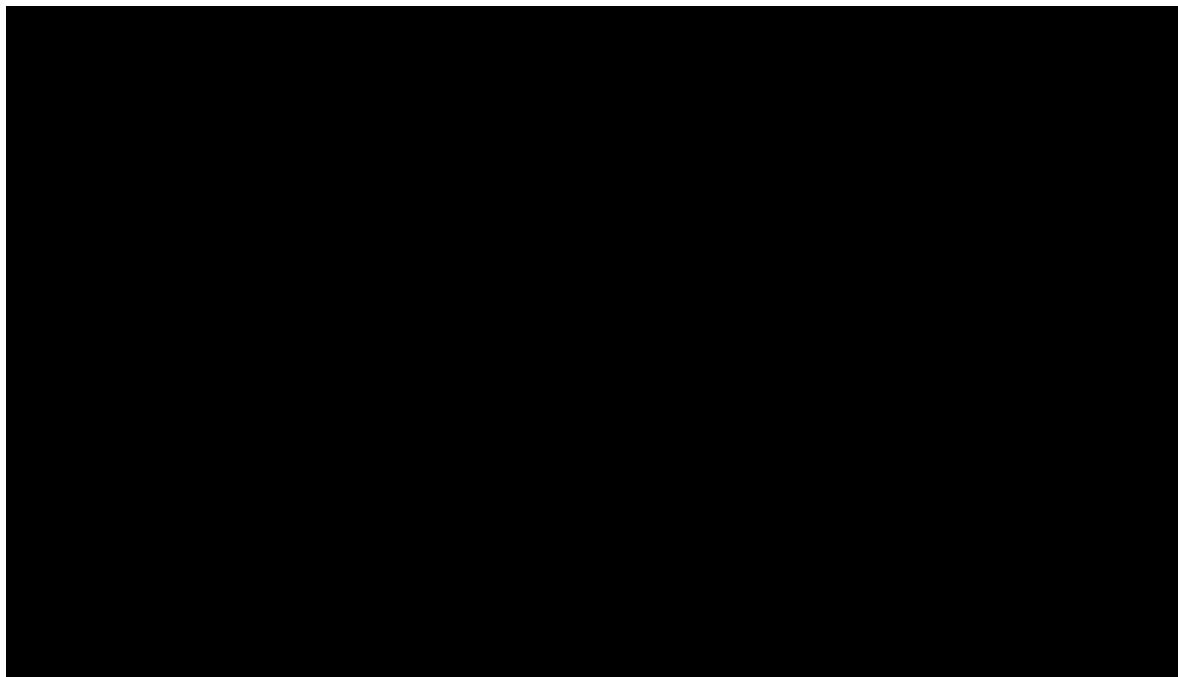
Where the recommendations of this report are incorporated, it is considered that this development proposal can comply with section 7 of Planning for Bushfire Protection 2019, as required under section 4.14 of the Environmental Planning and Assessment Act 1979.

The recommended mitigation measures include the maintenance of an Asset Protection Zone; the use of BAL-12.5 construction; and the incorporation of standards relating to the provision of access, water supplies and utility installation. These measures address the aims and objectives of PBP and are consistent with the relative and current bushfire risk to the subject development site.

As infill development, the proposal can satisfy the intent of the performance criteria of PBP 2019 and as a considered opinion can therefore meet the specific objectives for Residential Infill Development (section 7).

Therefore, the subject development can reasonably facilitate PBP 2019 objectives in as far as;

- Affording occupants of any building adequate protection from exposure to bushfire;
- Providing for a defensible space to be located around buildings;
- Providing appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and/or material ignition;
- Ensuring that safe operational access and egress for emergency service personnel and residents is available;
- Providing for ongoing management and maintenance of bushfire protection measures, including fuel loads in the APZ; and
- Ensuring that utility services are adequate to meet the needs of fire fighters (and others assisting in bush firefighting).



9 Reference:

Australian Building Codes Board (2019). *National Construction Code Volume two - Building Code of Australia*. ABCB.

ePlanning Spatial Viewer

<<https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address>> date view – 26/04/2022

Keith, D.A. (2004). *Ocean Shores to Desert Dunes: The Native Vegetation of New South Wales and the ACT*. NSW Department of Environment and Conservation.

Nearmap Online Mapping Imagery <<http://maps.au.nearmap.com>> date view - 26/04/2022

NSW Department of Planning and Environment (2012) Circular PS 12-004 Development assessment on bush fire prone land - section 4.14.

NSW Government SEED – Environmental Data Sharing '<https://www.seed.nsw.gov.au/>' Date Viewed - 26/04/2022

Rural Fire Service NSW (March 2019) “Comprehensive Vegetation Fuel Loads”

Rural Fire Service NSW (2019) “*Planning for Bush Fire Protection*”

Rural Fire Service NSW (2005) “Standards for Asset Protection Zones”

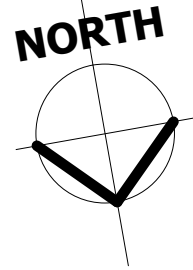
SIX Maps, an online mapping tool for NSW developed by LPI <<http://maps.six.nsw.gov.au/>> date viewed - 26/04/2022

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Standards Australian. (2018) *AS 3959-2018: Construction in Bushfire Prone Areas*. SAI Global, Sydney, Australia.

Disclaimer: Any recommendation or advice expressed in this document is made in good faith and in accordance with the relevant legislation for bushfire prone development in NSW. It should be borne in mind that the measures recommended in this report cannot guarantee that a building will survive a bushfire event on every occasion. This is due to the degree of vegetation management, the unpredictable behaviour of bushfires and extreme weather conditions. The author of this report accepts no responsibility for any loss or damage, whether direct or consequential, suffered by any person as the result of or arising from the reliance on the statements, information or recommendations of this document.

DA



BUCKAROO ROAD

LOT 1
12.03ha

2000L ABOVE GROUND METAL WATER TANK. 20,000 LTRS WILL BE STORED PERMANENTLY FOR FIRE FIGHTING PURPOSES. REMAINDER FOR GENERAL USAGE.

LINE OF 10m 'INNER PROTECTION AREA' AS OUTLINED IN DEVELOPMENT CONSENT.

EXISTING DEVELOPMENT

BUCKAROO LANE

597.595m

ABOVE GROUND METAL WATER TANK.

PROPOSED SERVICED APARTMENT 2

LINE OF 10m 'INNER PROTECTION AREA'.

148868

PROPOSED SERVICED APARTMENT 1

LINE OF 10m 'INNER PROTECTION AREA'.

99653

ABOVE GROUND METAL WATER TANK.

75610

60000

Site Plan
SCALE 1 : 500

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No.	Description	Date
P1	Revision 2	17/12/21
DA	DEVELOPMENT APPLICATION	21/2/22

JOHN & TRACY HOWLE
LOT 1 DP 1249240, 131 BUCKAROO ROAD,
BUCKAROO 2850

SITE PLAN

Project Number	TH0001
Date	27/04/22
Drawn by	JH
Checked by	Checker

SH3

Scale 1 : 500

AREA SCHEDULE	
Name	Area
001. LIVING	57.03 m ²
001. DECK	12.96 m ²
002 LIVING	57.03 m ²
002 DECK	12.96 m ²
139.98 m ²	

DOOR SCHEDULE			
Mark	Width	Height	Description
001	2684	2143	3-STACKER DOOR 21.26
002	864	2032	
003	720	2040	2 x 720 BI-FOLD
004	1000	2150	1000 BARN DOOR
005	1200	2100	2100H SQ SET OPENING
006	770	2040	770
007	1200	2100	2100H SQ SET OPENING
008	720	2040	2 x 720 BI-FOLD
009	915	2032	

Grand total: 9

WINDOW SCHEDULE			
Mark	Height	Width	Model
001	1800	1570	ASW1815T
002	944	1810	ASW0918
003	600	610	ASW0606
004	1540	2410	AFW1524
005	1800	610	AAW1806T
006	1540	2410	AFW1524
007	600	610	ASW0606
008	944	1810	ASW0918
009	1800	1570	ASW1815T

Grand total: 9

NOTES:

- FINISHED FLOOR LEVEL TO BE 700mm ABOVE NATURAL GROUND LEVEL.



Ground Level S.A 1&2

SCALE 1 : 100



HOMESFORLIFE

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No.	Description	Date
P1	Revision 2	17/12/21
DA	DEVELOPMENT APPLICATION	21/2/22

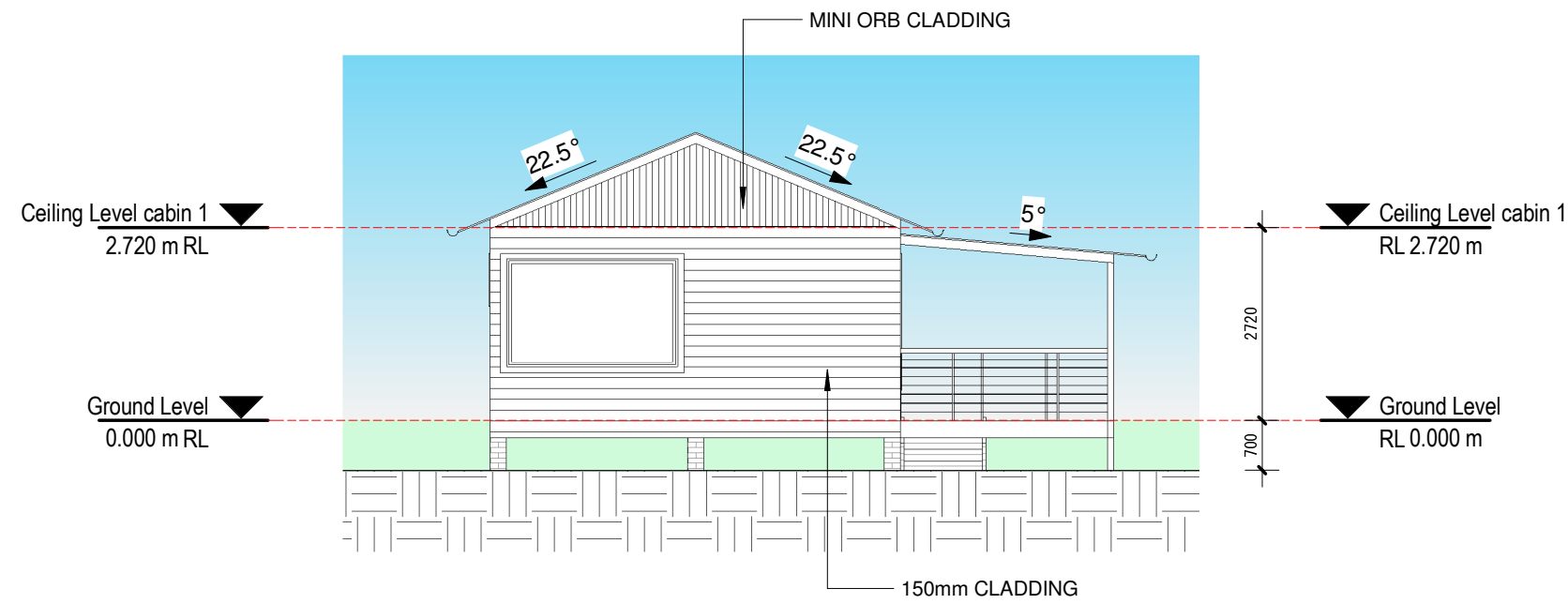
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 LOT 1 DP 1249240, 131 BUCKAROO ROAD,
 BUCKAROO 2850

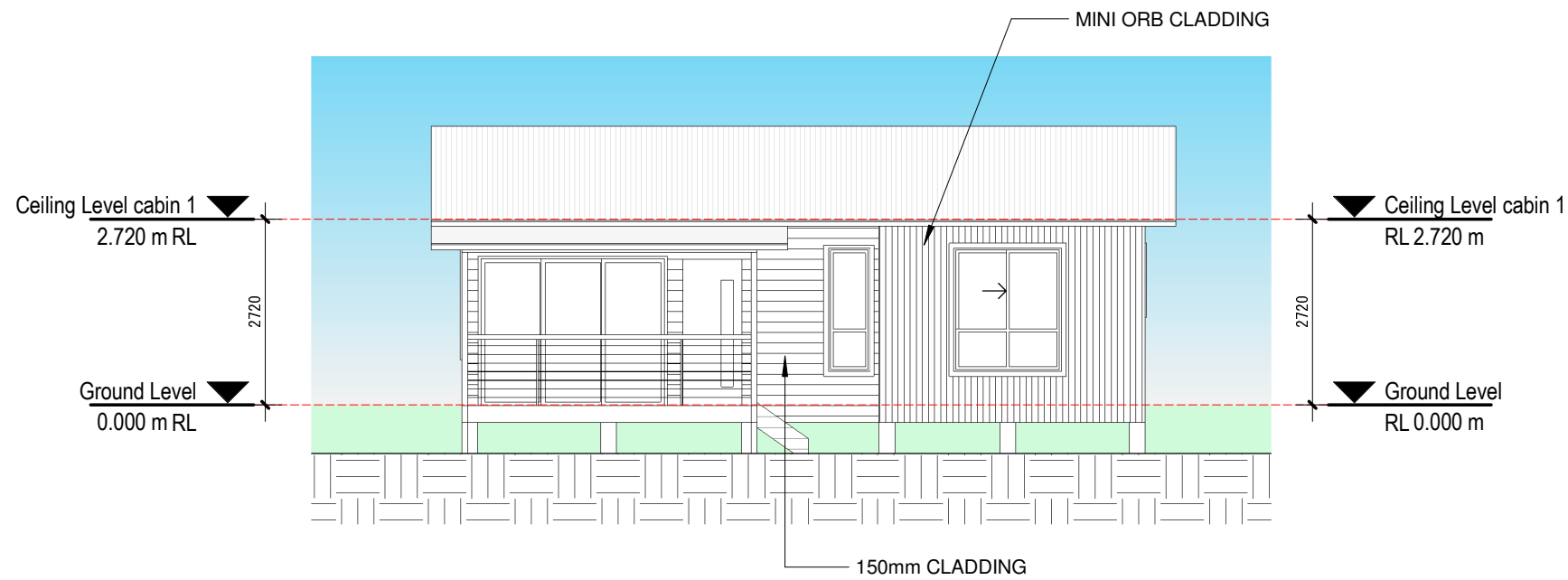
GROUND LEVEL

Project Number	TH0001	SH4
Date	27/04/22	
Drawn by	JH	
Checked by	Checker	
Scale		1 : 100

SIGN HERE:



East 001
SCALE 1 : 100



North 001
SCALE 1 : 100



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DA	DEVELOPMENT APPLICATION	21/2/22

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BUCKAROO 2850

ELEVATIONS

Project Number	TH0001	SH5
Date	27/04/22	
Drawn by	JH	
Checked by	Checker	
Scale		1 : 100

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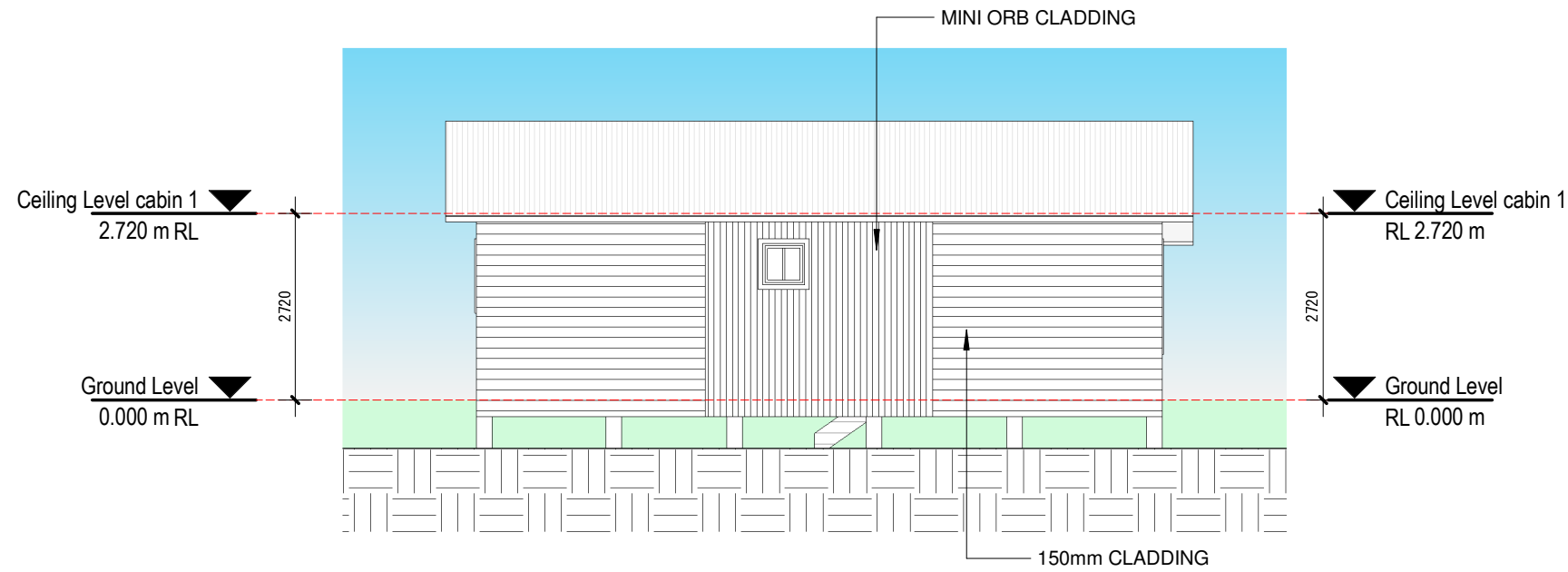
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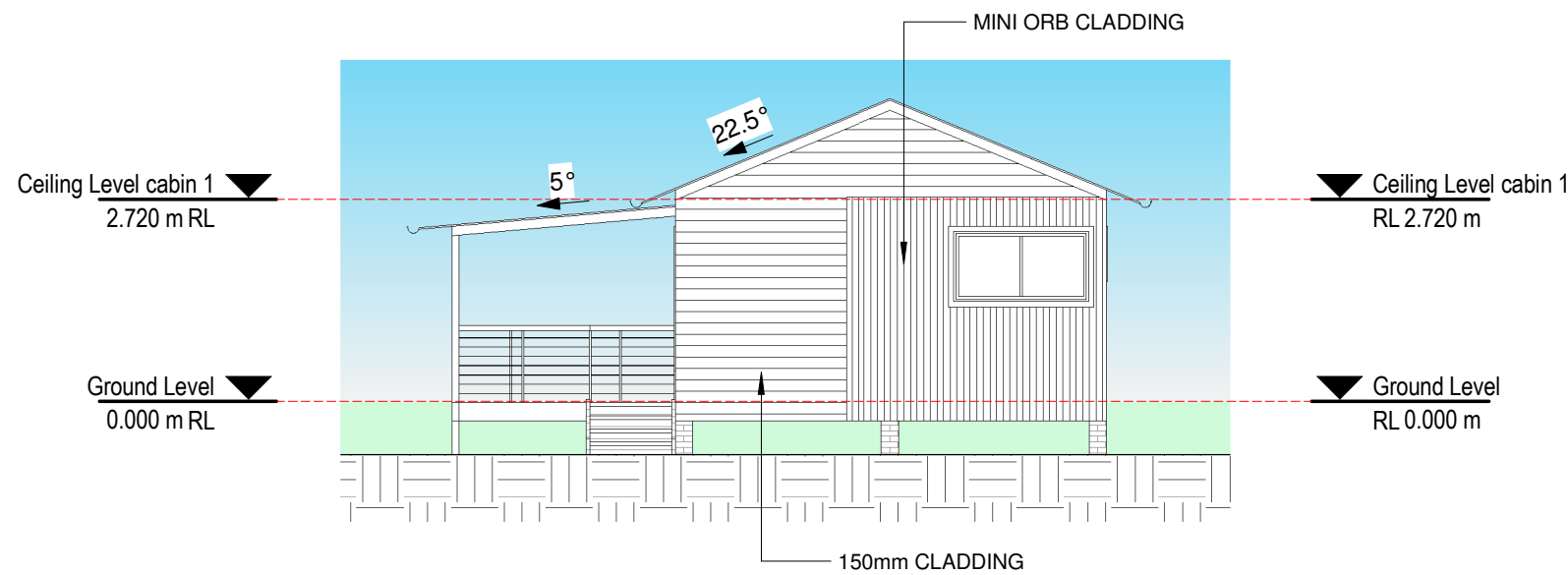
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South 001
 SCALE 1 : 100



West 001
 SCALE 1 : 100

No.	Description	Date
P1	Revision 2	17/12/21
DA	DEVELOPMENT APPLICATION	21/2/22

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ELEVATIONS

Project Number	TH0001	SH6
Date	27/04/22	
Drawn by	JH	
Checked by	Checker	
Scale		1 : 100

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