

Bush Fire Assessment Report

Eco-Tourist Facility (Glamping Tents) and Associated Managers Residence/Refuge Building 1141 Crudine Road Crudine

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Report Title:	Bush Fire Assessment Report (BFAR)
Project Name:	Eco-Tourist Facility (Glamping Tents) and Associated Managers Residence/Refuge Building
Client:	Rashiru Totamuna
Project No.	38794
Report	38794-BR01_B
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Date:	27/07/2022
Revision:	A



Reference: 38794-BR01 B



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1 INTRODUCTION

1.1 Background

This Bush Fire Assessment Report (BFAR) has been prepared to accompany a Development Application (DA) for an eco-tourist facility (glamping tents) and associated managers residence/refuge building on Lot 1 DP 1241440, 1141 Crudine Road, Crudine. The purpose of this report is to provide a bushfire assessment for the proposed development in accordance *Planning for Bushfire Protection 2019* (PBP).

1.2 Proposed Development

The development site is located in the area of Crudine approximately 55km south of the township of Mudgee, within the Mid-Western Regional Local Government Area. The proposed development is for a new eco-tourist facility (3 x glamping tents) and associated residence.

Glamping Tents

The three (3) glamping tents will include:

- A glamping tent (sleeping area).
- A connected ensuite.
- Outdoor seating area/decking.
- An outdoor (covered) camp kitchen.

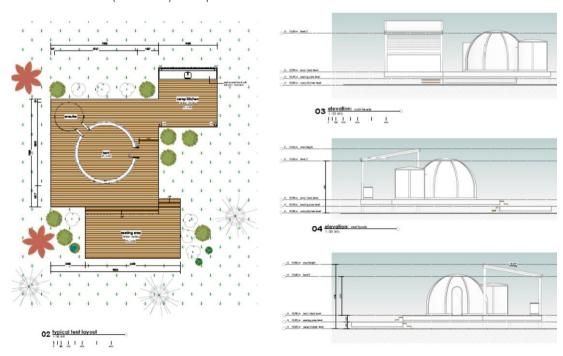


Figure 1: Glamping Tents

Source: Barnson Pty Ltd (Appendix A)



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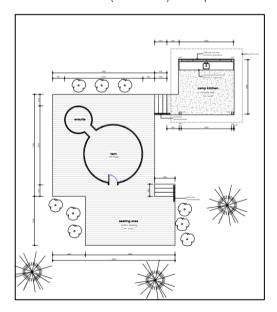
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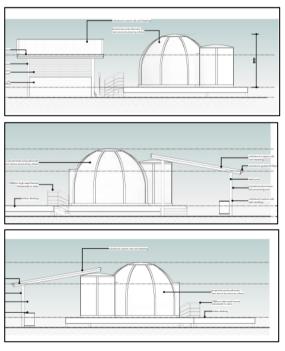


Figure 1: Glamping Tents

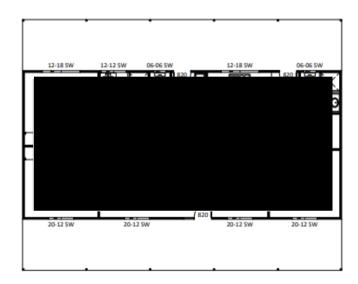
Source: Barnson Pty Ltd (Appendix A)

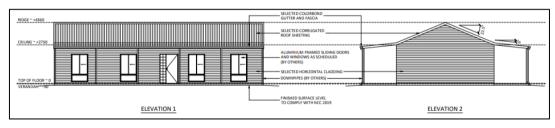


Caretaker/Refuge Building

The caretakers/refuge building includes:

- Three bedrooms which is able to accommodate the occupants of the three tents.
- A central lounge and dining area.
- Open kitchen.
- Laundry and bathroom.





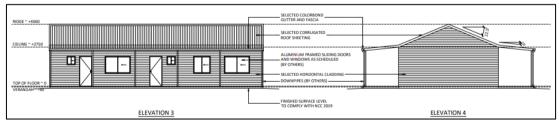


Figure 2: Caretaker/Refuge Building

Source: Apex Engineering Group Pty Ltd (Appendix B)

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1.3 Legislative Requirements

1.3.1 Environmental Planning and Assessment Act 1979

1.3.1.1 Integrated Development

The proposed development is integrated development by virtue of Section 4.46 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as it requires both development consent and authorisation under Section 100B (Bushfire Safety Authority) of the *Rural Fires Act 1997* in order for it to be carried out.

1.3.1.2 Bush Fire Prone Land

The subject site is designated as bush fire prone land, pursuant to Section 10.3 of the EP&A Act. The site is identified as containing Vegetation Buffer on the Bush Fire Prone Land Map as shown in **Figure 3** below.

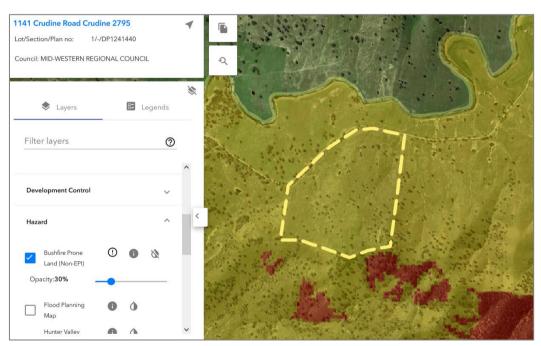


Figure 3 – Bush Fire Prone Land Map

Source: (NSW Planning & Environment, 2022)

1.3.1.1 Rural Fires Act 1997

Section 100B of the *Rural Fires Act 1997* (RF Act) requires a Bush Fire Safety Authority to be obtained before developing bushfire prone land for certain purposes. These purposes include development of bush fire prone land for a Special Fire Protection Purpose, which encompasses the proposed development.

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Clause 44 of the *Rural Fires Regulation 2013* outlines the requirements for inclusion in any application for a Bush Fire Safety Authority. This report has been prepared to provide the information required by Clause 44. A checklist for the Clause 44 matters is provided in **Appendix C**.

1.3.1.2 Planning for Bush Fire Protection

The New South Wales' Rural Fire Service's (RFS) *Planning for Bush Fire Protection 2019* (PBP) applies to all DAs in bush fire prone land.

This report has been prepared to address the requirements of PBP, specifically as a Special Fire Protection Purpose (SFPP). Considering the nature of the development proposal, a merit's-based assessment of PBP has also been undertaken.



2 THE SITE & ITS SURROUNDS

2.1 Site Location

The site is located approximately 55km south of the township of Mudgee, as shown in **Figure 4** below. The site is located in the Mid-Western Regional Local Government Area.

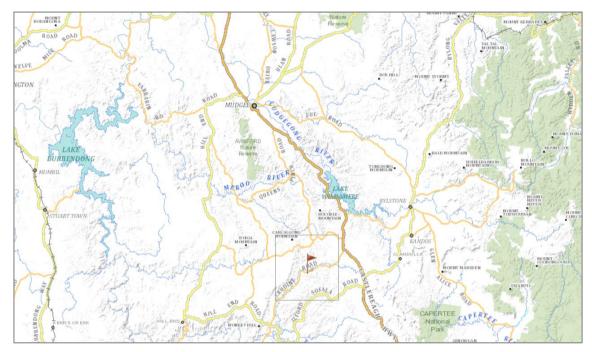


Figure 4 - Site Location

Source: (NSW Government Spatial Services, 2022)

2.2 Site Details

The site is comprised of Lot 1 DP 1241440 and has a property area of approximately 64 hectares. Refer to the Deposited Plan provided in **Appendix D** of this report.

The site has frontage to Crudine Road, which is a gravel sealed road. The site is vacant and contains grassland vegetation with scattered eucalypts, as shown in **Figure 5** below.

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Figure 5 – Site Aerial Source: (NearMaps, 2022)

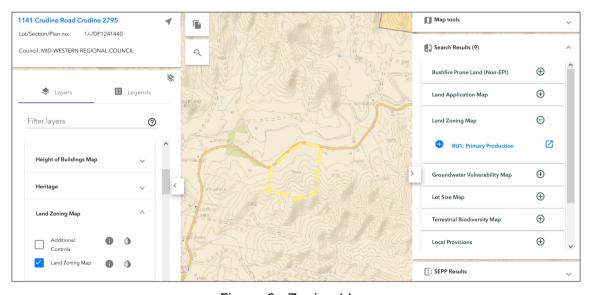


Figure 6 – Zoning Map

Source: (NSW Planning & Environment, 2022)

The site is zoned RU1 Primary Production pursuant to the provisions under the *Mid-Western Regional Local Environmental Plan 2012* as shown in **Figure 6** above. The area is generally zoned RU1 Primary Production, consisting of agricultural land uses and scattered dwellings.



2.3 Environmental Considerations

2.3.1 Environmentally Significant Features

No matters of environmental significance have been identified for the site and there is no known areas of high biodiversity on the site or within proximity.

2.3.2 Threatened Species, Populations and Ecological Communities

No ecological assessments are known to have been undertaken for the site. The site is however heavily disturbed as a result of the previous and current land uses.

2.3.3 Indigenous Heritage

An Aboriginal Heritage Information Management System (AHIMS) Search was undertaken for the site which revealed that no items of indigenous heritage have been recorded as being identified on the site – **Appendix E** of this report.

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3 BUSH FIRE ASSESSMENT

3.1 Methodology

The methodology utilised for the bush fire assessment is outlined in A1.1 of the PBP. The following provides the required information in accordance with the methodology.

3.2 Bush Fire Fuels

Pursuant to Appendix 1 of PBP, all vegetation within 140m of the site (assessment area) has been classified in accordance with *Ocean Shores to Desert Dunes* (Keith, 2004) and Figure 2.3 of AS3959. Photographs of the vegetation from the site inspection carried out on 31 May 2022 as identified in **Figure 7** are provided in the following plates for each assessment plot.

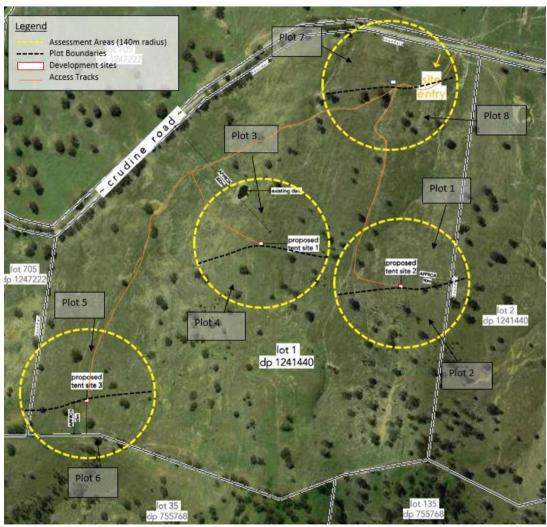


Figure 7 – Vegetation Classification

Source: NEAMAP (Edited 22/6/2022)



Plot 1		
Existing Classification:	Grassland	
Post Development Classification:	Grassland	
Description:	Grassland vegetation.	
Plate 1 – Plot 1	Plate 2 – Plot 1	
Plot 2		
Existing Classification:	Grassland	
Post Development Classification:	Grassland	
Description:	Grassland vegetation with scattered isolated Eucalypts, generally consisting of established white box trees and other native species.	
Plate 3 – Plot 2	Plate 4 – Plot 2	
Plot 3		
Existing Classification:	Grassland	

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Post Development Classification:	Grassland
Description:	Grassland vegetation with some isolated Eucalyptus and remnants of previous trees on the site.





Plate 5 – Plot 3	Plate 6 – Plot 3

PIOL 4	
Existing Classification:	Grassland
Post Development Classification:	Grassland

Grassland vegetation with some isolated Eucalyptus and remnants of previous trees on the site.



Description:



Plate 7 – Plot 4	Plate 8 – Plot 4
Plot 5	
Existing Classification:	Grassland
Post Development Classification:	Grassland
Description:	Grassland vegetation.







Plate 9 – Plot 5	Plate 10 – Plot 5
1 1410 5 1 1010	1 1410 10 1 1010

Plot 6	
Existing Classification:	Grassland
Post Development Classification:	Grassland
Description:	Grassland vegetation with scattered isolated Eucalypts, generally consisting



of established white box trees and other

Plate 11 – Plot 6	Plate 12 – Plot 6
Plot 7	
Existing Classification:	Grassland
Post Development Classification:	Grassland
Description:	Grassland vegetation.







Plate 13 – Plot 7		Plate 14 – Plot 7
Plot 8		

Existing Classification:

Post Development Classification:

Grassland

Description: Grassland vegetation.





Plate 15 – Plot 8 Plate 16 – Plot 8

3.3 Topography

Pursuant to Appendix 1.4 of PBP, contour data has been sourced from the NSW Spatial Information Exchange Mapping system. The contour data was verified by ground truthing during the site inspection. The land is undulating throughout, as shown in **Figure 8** below.





Figure 8 - Topography

Source: (NSW Government Spatial Services, 2022)

3.4 Fire Weather Area

The subject site is located within the Mid-Western Regional LGA. Pursuant to Table A1.6 of the PBP, the relevant Forest Fire Danger Index (FFDI) for the site is 80.

3.5 Asset Protection Zone Determination

The relevant Asset Protection Zones (APZ) are to be determined based on Table A1.12.1 of PBP (minimum distances for APZs – SFPP developments). Accordingly, an assessment is provided in **Table 1** below.

Table 1 – Asset Protection Zone Determination				
Plot	Vegetation Class	Effective Slope	APZ	
1	Grassland	Downslope >15- 20°	No APZ	
2	Grassland	Upslope/Flat	No APZ	
3	Grassland	Downslope >15- 20 ⁰	No APZ	
4	Grassland	Upslope/Flat	No APZ	
5	Grassland	Downslope >10- 15°	No APZ	



Table 1 – Asset Protection Zone Determination				
Plot	Vegetation Class	Effective Slope	APZ	
6	Grassland	Upslope/Flat	No APZ	
7	Grassland	Upslope/Flat	36m	
8	Grassland	Downslope >0-5°	40m	

3.6 Bushfire Attack Level Assessment

Table 6.8a of PBP 2019 (Page 56) provides the following construction standards for Ecotourism developments:

A construction level of BAL-12.5 or greater is applied to the refuge building in accordance with AS 3959 or NASH Standard and 7.5 of PBP.

That is, the construction standards only apply to the managers residence/refuge building proposed on the development site.

The inputs used in the calculation of the BAL are outlined in **Table 2** below. The relevant BAL is applicable to the proposed buildings on the site.

Table 2 – BAL Inputs			
Requirement	Input Used		
Relevant FDI (table 2.1 of AS3959)	80		
Classified vegetation	As per Section 3.2 of this report, Keith (2004) and Figure 2.3 of AS3959.		
Separation Distance	As provided below.		
Effective Slope	As per Table 1.		

Using the inputs outlined above, the BAL has been calculated for Plots 7 and 8, which are for the proposed managers residence/refuge building, identified in **Section 3.2**.

	Table 3 – Bushfire Attack Levels				
Plot	Vegetation Class	Separation Distance (recommended 55m APZ)	Effective Slope	BAL	
7	Grassland	55m	Upslope/flat	BAL-12.5	
8	Grassland	55m	Downslope >0- 5°	BAL 12.5	
			Worst Case BAL	BAL-12.5	



The Development Application seeks to create a 55m Asset Protection Zone, which far exceeds the minimum requirement stipulated in the assessment included at Table 1 of this report. As result, the proposed caretaker/refuge building achieves the required BAL-12.5 construction standard.

The BAL only applies to the proposed managers residence/refuge building, and does not apply to the proposed tents and any class 10a storage sheds/structures unless they are positioned within 6m of the proposed refuge building.

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4 BUSH FIRE PROTECTION MEASURES

4.1 Introduction

The proposed development, being a Special Fire Protection Purpose (SFPP), is required to comply with the Bush Fire Protection Measures (BFPM) outlined in Section 6.8 of PBP. This section of the report assesses the relevant BFPMs. There are eight key BFPMs outlined by PBP for SFPP development:

- Asset Protection Zones;
- Landscaping;
- Construction Standards;
- Access:
- Water Supply;
- Electrical Services;
- Gas Services; and
- Emergency management Planning.

The relevant BFPMs are addressed throughout Section 4 of this report.

4.2 Aims and Objectives of PBP

The aim of PBP is:

to provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment.

The specific objectives of PBP are to:

- afford buildings and their occupants protection from exposure to a bush fire;
- provide for 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 BPMs;
- and ensure that utility services are adequate to meet the needs of firefighters.

The proposal has considered radiant heat levels of less than 29kW/m² to avoid flame contact, that would provide for appropriate separation to the hazards. The



development in conjunction with the bush fire protection measures will provide for safe operational access and egress for emergency services personnel and patrons as well as sufficient water supply. Therefore, the proposed development is considered to be consistent with the objectives of PBP.

4.3 Objectives for SFPP Developments

Section 6.2 of PBP contains the specific objectives for special fire protection purposes:

- Minimise levels of radiant heat, localised smoke and ember attack through increased APZ, building design and siting;
- Provide 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.

In being consistent with the BFPMs, the proposed development complies with objectives for SFPP developments, as outlined above.

4.4 Asset Protection Zones

The following table outlines the Performance Criteria and associated Acceptable Solutions for the APZ BFPM in accordance with Table 6.8a of PBP.

Table 4 Asset Protection Zones			
Performance Criteria	Acceptable Solution/Comment	Compliance	
Radiant heat levels of greater than 10kW/m ² (calculated at	The proposed development is an "ecotourism" development and therefore it is not proposed to create extensive Asset Protection Zones around each of the proposed three tents.	✓	
1200k) will not be experienced on any part of the	Instead, it is proposed that the proposed car takers residence, which is located within the norther portion of the site, operates as a refuge area.		
building.	The development application proposes to create an enlarged Asset Protection Zone around the car takers of 55m in all directions which is beyond the minimum requirements calculated in Table 3 of this report, taken from Table A1.12.1 of the PfBP 2019.		
APZ maintenance is practical, soil	The proposed Asset Protection Zone around the caretakers building will be located on topography	✓	

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stability is not compromised and the potential for crown fires is minimised.	categorised as "upslope" or >0-5 degrees. Therefore, the proposed Asset Protection Zone is found to be suitable.	
APZs are maintained to prevent the spread of fire to the building. The APZ is provided in perpetuity.	There APZ's shall be managed in accordance with the requirements of Appendix 4 of PBP and are wholly situated within the boundaries of the site. There are no structures located within 6m of each proposed building.	✓

4.5 Landscaping

The following table outlines the Performance Criteria and associated Acceptable Solutions for Landscaping in accordance with Table 6.8a of PBP.

Table 5 Landscaping			
Performance Criteria	Acceptable Solution/Comment	Compliance	
Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for winddriven embers to cause ignitions.	Landscaping on the site shall be established and maintained in accordance with Appendix 4 of PBP. There shall be no branches overhanging the roof and new plantings shall be established to ensure that there are no continuous tree canopies. Any proposed fencing shall be constructed in accordance with Section 7.6 of PBP.	~	

4.6 Construction Standards

The following table outlines the Performance Criteria and associated Acceptable Solutions for Construction Standards in accordance with Table 6.8a of PBP.



Table 6 Construction Standards			
Performance Criteria	Acceptable Solution/Comment	Compliance	
The proposed building can withstand bush fire attack in the form of embers, radiant heat and flame contact.	As detailed in Section 3.6, A refuge/caretaker building has been proposed and is located within the norther portion of the site. The building is to benefit from an enlarged Asset Protection Zone which will provide sufficient distance to allow the building to be Bal 12.5 construction (AS3959).	✓	
Ecotourism Occupants of the ecotourism facility are provided with appropriate shelter in the event of bushfire.	The proposed managers residence will also act as a refuge building for the proposed eco-tourist facility. The building has adequate space for all occupants of the proposed three tents and the manager to shelter during a bushfire event. The proposed refuge building shall be constructed to a BAL 12.5 standard, as per PBP requirements.	√	

4.7 Access Standards

The following table outlines the Performance Criteria and associated Acceptable Solutions for Access in accordance with Table 6.8b of PBP.

Table 7 Access		
Performance Criteria	Acceptable Solution/Comment	Compliance
Firefighting vehicles are	Access throughout the site shall be designed and constructed as follows:	✓
provided with safe, all-weather access	 Two wheel drive, all weather access roads and internal driveways; 	
to structures and hazard vegetation.	 Any traffic management devices shall not prohibit access for emergency service vehicles; 	
	 Turning areas shall be established in accordance with Appendix 3 of PBP; 	
	 All access roads and driveways are to be a minimum 3.5m width and have designated parking bays with hydrants located outside these areas to ensure accessibility to reticulated water for fire suppression. 	
The capacity of access roads is adequate for	The capacity of the proposed driveways and parking/manoeuvrability areas will be sufficient to carry fully loaded firefighting vehicles up to 23 tonnes. No bridges or causeways are required.	✓



firefighting vehicles.		
There is appropriate access to water supply.	Reticulated water is available to the development.	✓
Perimeter Road	Given the urban locality of the proposed development, it is considered that a perimeter road is not required in this instance. The proposed access point and onsite manoeuvrability shall provide for safe access for fire fighting vehicles and evacuation for residents and staff.	N/A
Non-Perimeter Road	An internal road (driveway) is proposed. This road shall provide suitable access and egress for firefighting vehicles while occupants are evacuating.	✓

Performance Based Solution – Access

- The proposed refuge building is accessible from the public road in accordance with the access requirements within Table 5.3B of PfBP 2019.
- The three (3) tent accommodations are located within the western and south-eastern extremities of the site, downslope from the proposed refuge building. The location of the buildings has been sited to provide superior amenities and to take advantage of the vantage points at the locations within the site. As a result, the proposed tents will be located more than 100m from the refuge building and therefore will not be strictly compliant with the acceptable solutions within Table 6.8b of PfbP2019. Nonetheless, as part of the proposed development, it is proposed that direct and compliant vehicle access from each of the tents is provided to the refuge centre which benefits from an enlarged Asset Protection Zone that is beyond the minimum requirements of PfBP 2019.
- In addition, the applicant intends to develop a Plan of Management that also adopt a management regime around the access road, which will involve regular slashing to reduce and limit the bushfire hazard around the access roads and to allow safe egress at the time of a bushfire event.
- Each of the tents will be afforded a Bushfire Emergency Management Plan that is consistent with the NSW RFS publication A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan, and the Australian Standard AS 3745:2010 *Planning for emergencies in facilities*. The plan will provide the occupants with an understanding of the steps to take at the time of a bushfire event including the process of evacuating to the refuge centre.

4.8 Water Supplies

The following table outlines the Performance Criteria and associated Acceptable Solutions for Water supply in accordance with Table 6.8c of PBP.



Table 8 Water Supply	/	
Performance Criteria	Acceptable Solution/Comment	Compliance
An adequate water supply is provided for firefighting purposes.	Reticulated water is not available to the site. Therefore, it is proposed that each tent is afforded with a 10,000 litre tank and the managers residence with a 60,000L tank to be used for firefighting purposes.	✓
water supplies are located at regular intervals; and the water supply is accessible and reliable for firefighting operations.	The water supply shall be easily accessible for fire fighting vehicles.	✓
Flows and pressure are appropriate.	Not applicable.	N/A
The integrity of the water supply is maintained.	All above-ground water service pipes including taps etc shall be constructed of metal material.	√
Water supplies are adequate in areas where reticulated water is not available.	Access to the tank should be constructed to comply with the requirements under this provision. This includes: - 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 of the access hole; aboveground tanks are manufactured from concrete or metal.	✓

4.9 Electricity and Gas Services

The following table outlines the Performance Criteria and associated Acceptable Solutions for the Electricity and Gas Services in accordance with Table 6.8c of PBP.

Table 9 Electricity and Gas Services			
Performance Criteria	Acceptable Solution/Comment	Compliance	



Location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.	It is recommended that any new powerlines are to be constructed underground. Vegetation around existing/new transmission lines are to be maintained in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Powerlines.	✓
Location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	 The structures are to be connected to bottled gas (if required). The following recommendations are provided: Installed and maintained in accordance with AS/NZS 1596:2004 with metal piping used; All fixed cylinders are to be kept clear of flammable materials to a distance of 10m; All connections to be metal construction; Safety valves are to be directed away from the building and at least 2m away from any combustible material; Polymer-sheathed flexible gas supply lines are to be used; Aboveground gas service pipes external to the building are to be metal. 	

4.10 **Emergency Management Planning**

The following table outlines the Performance Criteria and associated Acceptable Solutions for Construction Standards in accordance with Table 6.8d of PBP.

Table 10 Construction Standards			
Performance Criteria	Acceptable Solution/Comment	Compliance	
A Bush Fire Emergency Management and Evacuation is prepared.	A Bush Fire Emergency Management and Evacuation Plan is to be prepared in accordance with RFS requirements, AS3745:2010 and AS4083:2010. The plan should include planning for the early relocation of occupants.	✓	
Appropriate and adequate management arrangements are established for consultation and	An Emergency Planning Committee is required to be established for the facility who will consultant with residents and staff in developing and implements an Emergency Procedures Manual.	✓	

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implementation of	Details of all emergency assembly areas including on site
the Bush Fire	and off-site arrangement shall bee established, and an
Emergency	annually emergency evacuation is to be conducted.
Management and	
Evacuation Plan.	

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5 RECOMMENDATIONS

The assessment of the proposed development carried out in this report has assumed the development will be carried out in accordance with a number of bush fire protection measures (BFPMs).

The following provides a summary of the BFPMs that must be incorporated into the development to ensure it best protects the development from the effects of bushfire in accordance with the requirements of PBP and other best practice guidelines.

- Asset Projection Zone/Defendable Space:
 - It is recommended that an Asset Protection Zone of 55m is established around the proposed caretakes building.
 - The Asset Protection Zone is to be managed in accordance with Appendix 4 of PBP;
 - The Asset Protection Zone should be registered on title and ongoing management should occur in perpetuity and prior to an occupation certification
- Landscaping:
 - Landscaping shall be established and maintained in accordance with Appendix 4 of PBP and the applicable Asset Protection Zone Standards;
 - There shall be no branches overhanging the roof of any proposed structures and new plantings shall be established to ensure that there are no continuous tree canopies;
 - Any proposed fencing shall be constructed in accordance with Section 7.6 of PBP.
- Construction Standards:
 - The proposed caretakers building is to be constructed to a BAL-12.5 standard and in accordance with PBP/AS 3959:2009.
- Access
 - Access to water hydrants shall be kept clear at all times;
 - Turning areas as shall be established in accordance with Appendix 3 of PBP;
 - The access roads shall be constructed to be capable of carrying a fully loaded firefighting vehicle up to 23 tonnes;
 - All internal roads are to be at least 3.5m in width and no bridges or causeways are to be constructed, however if required, shall be constructed and maintained in accordance with PBP provisions.
 - No tree plantings or obstructions shall occur on either side of the access roads that would prohibit access to and from the site in the event of fire.
 - A management zone should be established around each of the access points and regular slashing in accordance with an adopted Plan of Management should be executed.
- Services
 - Water:
 - A 10,000L tank should be provided at each of the tents and 60,000L at the caretakers building.



- Hardened driveways are to be provided to these access points/hydrants;
- All aboveground water service pipes including taps etc shall be constructed of metal material.
- Electricity and Gas:
 - It is recommended that any new powerlines are to be constructed underground;
 - Vegetation around existing/new transmission lines are to be maintained in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Powerlines;
 - Any proposed gas bottles shall be installed and maintained in accordance with AS/NZS 1596:2004 with metal piping used;
 - All fixed cylinders are to be kept clear of flammable materials to a distance of 10m (or appropriately shielded);
 - All connections are to be of metal construction.
- Bushfire Danger Period:
 - Before the commencement of the Bushfire Danger Period, a review of the vegetation on the site and applied BFPMs is recommended to be undertaken.
 Fuel reduction measures are recommended throughout the site.
- Emergency Evacuation Plans:
 - Preparation of a Bush Fire Emergency Management and Evacuation Plan, in accordance with RFS requirements;
 - An Emergency Planning Committee is required to be established for the facility in accordance with PBP requirements;

A Fire Management Plan (FMP) should be prepared for the property that is reviewed and updated annually.



6 CONCLUSION

The proposed development, on completion, will ensure that the proposed development is located in an area that has a low to moderate bushfire hazard level. With the implementation of the recommendations, as outlined in **Section 5**, it is considered that the proposed development is appropriately protected from bushfire and complies with the requirements of PBP. The proposed development is not expected to increase the bushfire risk.



7 REFERENCES

NearMaps. (2021, July 6). NearMaps. Retrieved from http://maps.au.nearmap.com/

- NSW Government Spatial Services. (2021, July 6). *Six Maps.* Retrieved from http://maps.six.nsw.gov.au/
- NSW Planning & Environment. (2020, July 7). *Planning Viewer*. Retrieved from https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/lot
- NSW Rural Fire Service. (2019). *Planning for Bush Fire Protection: A Guide for Council's, Planners, Fire Authorities and Developers.* Sydney: NSW RFS.

Reference: 38794-BR01 B | 27



Appendix A – Glamping Plans

A 01	COVER SHEET	REV B	DATED 20.06.202
A 02	SITE PLAN	REV B	DATED 20.06.202
7 03	TYPICAL TENT SITE LAYOUT	REV B	DATED 20.06.202

In addition to the National Construction Code series, Building Code of Australia Vol. 2, 2019, the Plumbing Code of Australia, 2019 & the building regulations applicable to the state of New South Wales, the following applicable Australian Standards & codes of practice are to be adhered to through the documentation & construction works;

AS3000 – Electrical installations; buildings, structures & premises (known as the saa wiring rules)

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

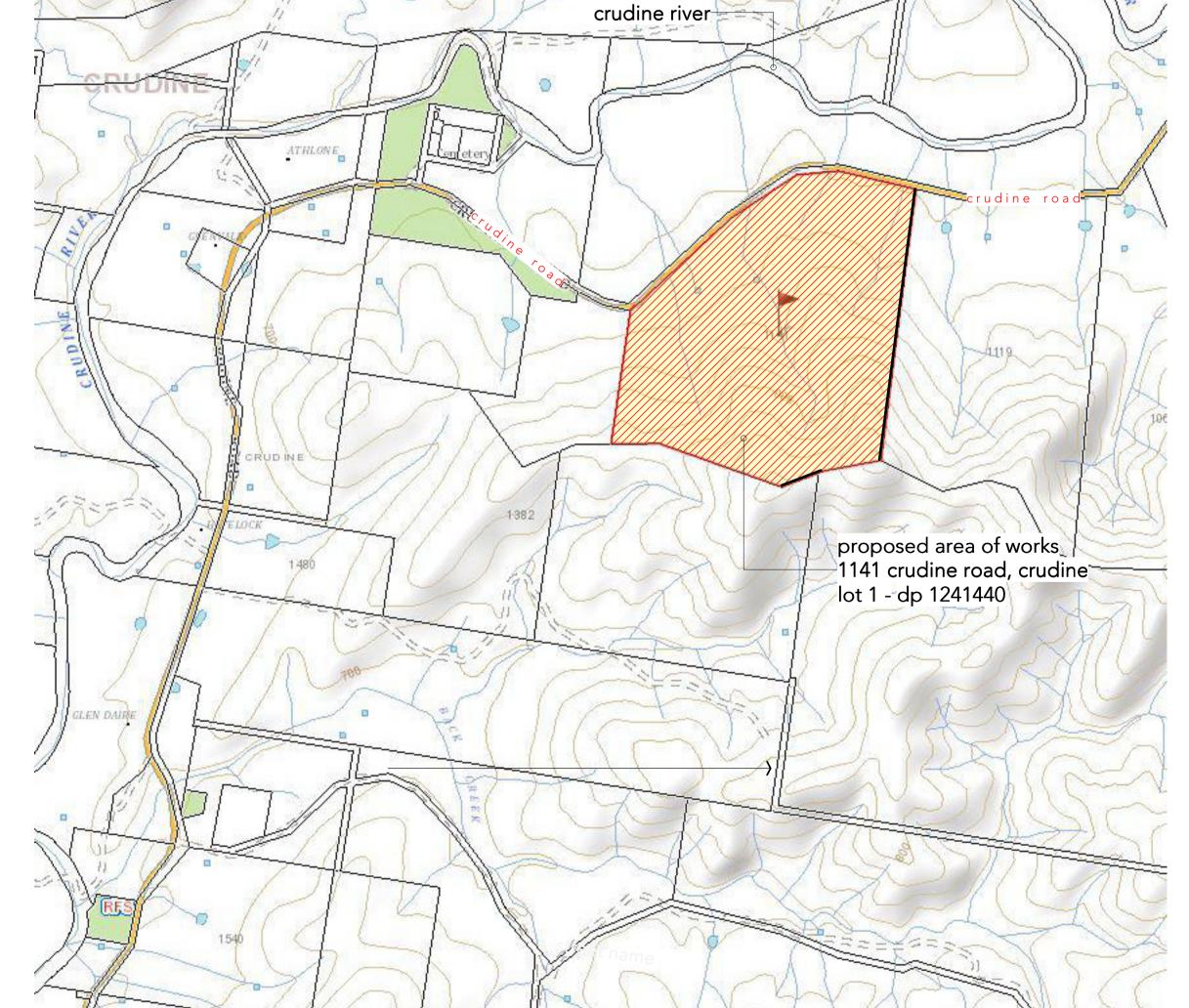
All dimensions are in millimetres unless stated otherwise & levels are expressed in metres. Figured dimensions are to be taken in preference to scaled dimensions unless otherwise stated. All dimensions are nominal, and those relevant to setting out & off-site work shall be verified by the contractor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



PROPOSED GLAMPING TENT TOURIST FACILITY

1141 CRUDINE ROAD, CRUDINE NSW 2795





PROPOSED GL

TOURIST

BARNSON PTY LTD

Suite 6/11 White Street Tamworth NSW 2340

ontact Us

1300 BARNSON (1300 227 676)

e generalenquiry@barnson.com.au www.barnson.com.au

Bathurst | Coffs Harbour | Dubbo | Mudgee | Orange | Sydney | Tamworth

Client: MR RASHI TOTAMUNA

Project: PROPOSED GLAMPING TENT TOURIST FACILITY @ 1141 CRUDINE ROAD, CRUDINE NSW 2795

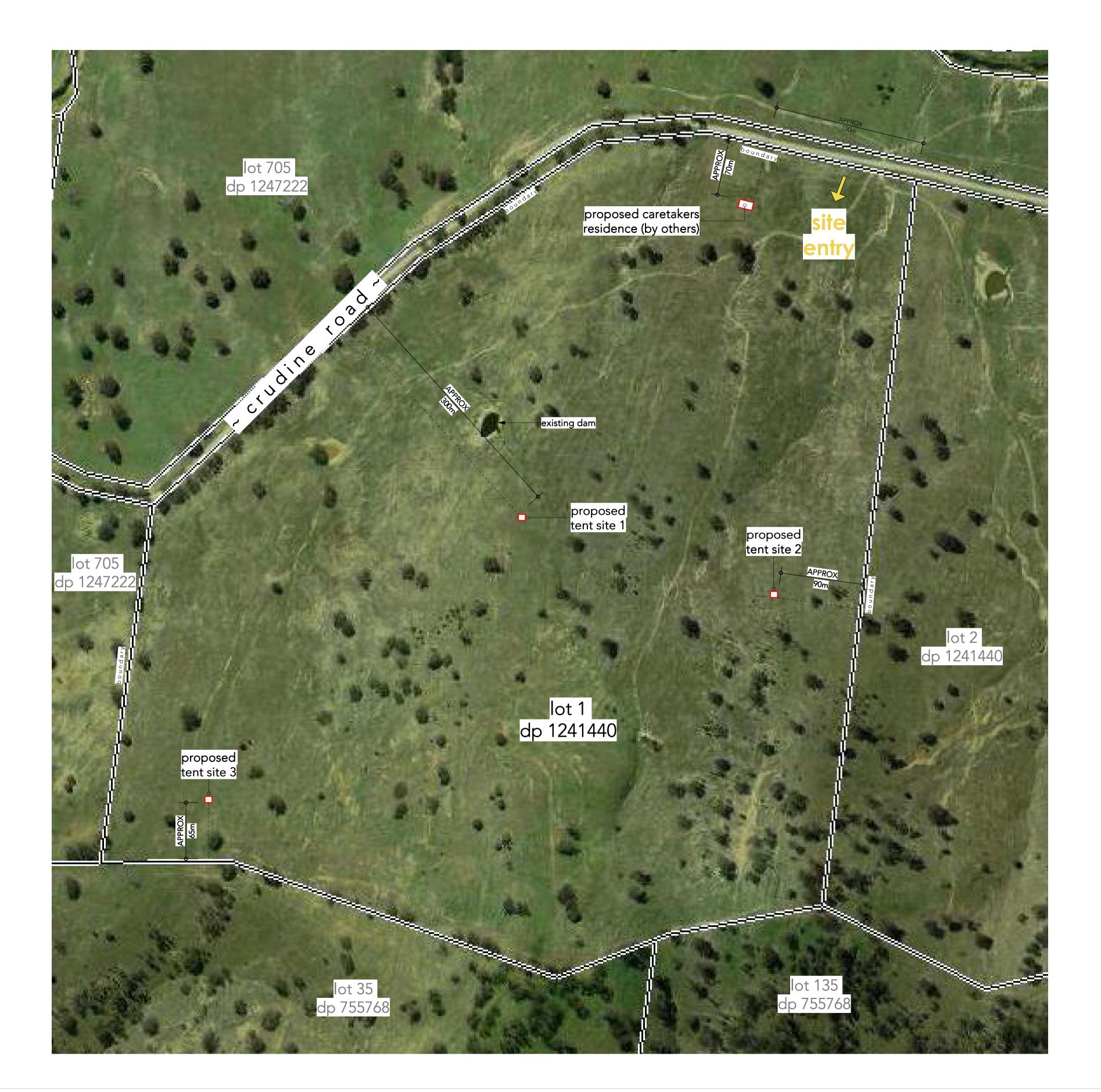
CRUDINE ROAD, CRUDINE NSW 2795

Title: COVER SHEET

Drawing Number

38794 - A01

Revision





note: final levels to be confirmed on site in consultation with client.

site notes:

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

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

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

Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services & detailed locations of all services, including;

- obtain telstra's "duty of care" document regarding working in the vicinity of telstra plant. - verify co-axial/optic fibre cable location

Subsequent registered or other surveys in this area may affect the boundary definition shown on this plan. Any

can accept no responsibility for such differences. All work to be undertaken in accordance with the details shown on the drawings, the specifications & the directions of

differences so caused to the boundary definition shown on this plan are beyond the control of Barnson Pty Ltd who

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

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

obtained.

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

Rev Date Amendment

B 20.06.2022 ISSUE FOR DA

A 31.05.2022 CONCEPTS FOR REVIEW

drainage

Surface water drainage must be prevented from entering the building with fgl sloping 50mm over the first 1m away from the building & the finished slab height at a minimum ffl 150mm above fgl or minimum 100mm above fgl in sandy, well drained areas of low rainfall intensity (Q20 125mm), or 50mm above impermeable paved or concreted areas all in accordance with the NCC, Vol. 2, 3.1.2.3

Site drainage is to be constructed according to AS/NZS 3500.3 - Stormwater drainage or AS/NZS 3500.5 - Domestic installations & the NCC, Vol. 2, 3.1.2.0.

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

DESIGN.PLAN.MANAGE

BARNSON PTY LTD Suite 6/11 White Street Tamworth NSW 2340 Contact Us

- † 1300 BARNSON (1300 227 676)
- e generalenquiry@barnson.com.au
- w www.barnson.com.au

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH GENERAL BUILDING DRAWINGS, **SPECIFICATIONS & OTHER CONSULTANTS** DRAWINGS APPLICABLE TO THIS PROJECT. ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. **DIMENSIONS TO BE CHECKED ON SITE BEFORE** COMMENCEMENT OF WORK. REPORT DISCREPANCIES TO BARNSON PTY LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED IN ANY WAY WITHOUT THE WRITTEN PERMISSION

MR RASHI TOTAMUNA

PROPOSED GLAMPING TENT TOURIST FACILITY @ 1141 CRUDINE ROAD, CRUDINE NSW 2795

Drawing Title: SITE PLAN

DA ISSUE

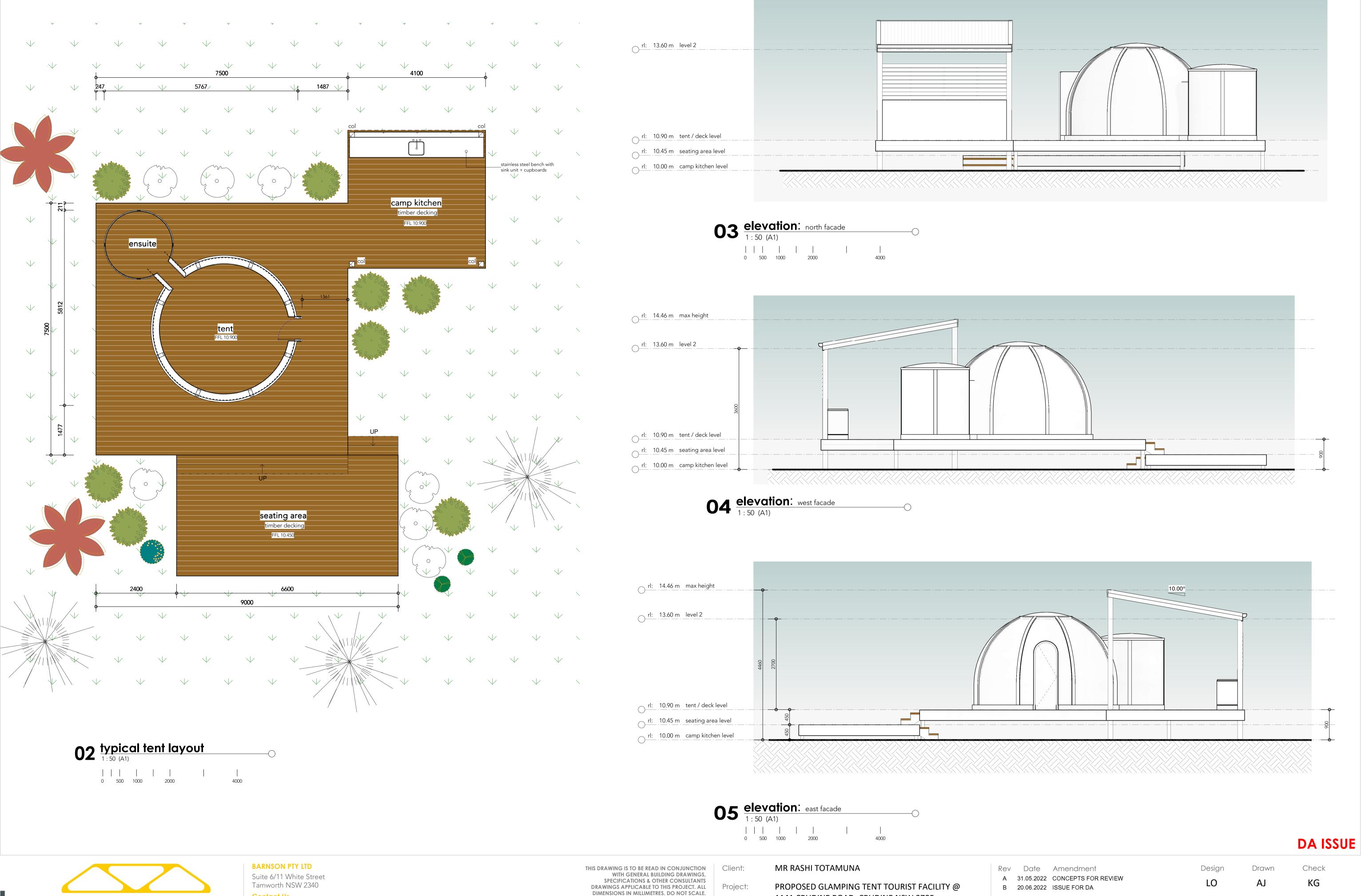
Check Sheet **02** of **03**

Revision

Drawing Number

38794- A02

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DIMENSIONS IN MILLIMETRES. DO NOT SCALE. DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCEMENT OF WORK. REPORT DISCREPANCIES TO BARNSON PTY LTD. NO PART OF THIS DRAWING MAY BE REPRODUCED IN ANY WAY WITHOUT THE WRITTEN PERMISSION

OF BARNSON PTY LTD.

1141 CRUDINE ROAD, CRUDINE NSW 2795

Drawing Title: TYPICAL TENT SITE LAYOUT

Sheet **03** of **03** Drawing Number Revision 38794- A03



Appendix B - Refuge Building

GENERAL NOTES:

These documents show the general arrangement of the building and include some items not supplied by Steelx Pty Ltd. Refer to the quotation provided by Steelx Pty Ltd. for nomination of all items to be provided by Steelx Pty Ltd. All items not nominated therein shall be supplied and installed by others.

These Plans are provided to assist with erection of your steel building. All Plans are not to Scale.

Any person constructing the building needs to be competent in general construction processes. You will require a licence to construct the building (consult your state building authority). You should also ensure that relevant insurance has been taken out.

(A) ENGINEERING AND CONSTRUCTION

The building is fully engineered and must be built in accordance with the plans and the bill of materials (BOM) for the engineering to be valid. This includes the proper use of construction bracing, fixing of all screws and bolts.

WARNING: Construction Bracing is essential to ensure the site and building are safe during the construction process. The building is not designed to withstand erection forces, nor to stand up by itself when it is partially complete. Consequently, construction bracing is critical. DO NOT REMOVE CONSTRUCTION BRACING UNTIL THE BUILDING IS COMPLETE.

Construction plans are required to be the latest plans provided by Steelx Pty Ltd. Earlier plans may have become outdated due to engineering changes and should not be used. The plans and drawings are extensive and give all the information needed for a competent person to erect the building.

(B) DELIVERY AND COMPONENTS

The owner has been requested to check off the BOM after the building delivery. You should check that you are able to locate all materials nominated in the BOM. You should also confirm length, size and thickness, nominated in the BOM is what has been provided. Any missing items are the responsibility of the client once correct delivery has been confirmed as per terms and conditions.

(C) DESIGN CRITERIA

These standard buildings plans have been prepared to comply with the following criteria: Design Wind Classification as noted in the engineer's letter.

(D) DOCUMENTATION SUPPLIED BY STEELX PTY LTD.

All documentation provided is the intellectual property of Steelx Pty Ltd, for the exclusive use of Steelx customer nominated. No other persons is authorised to use or replicate any information or designs shown. Plans including floor plans, elevations, section and bracing elevations, structural engineer's certification for the building.

(E) ADDITIONAL DOCUMENTATION TO BE SUPPLIED BY PURCHASER/OWNER

The Purchaser/Owner is responsible for:

- (i) Provision of Soils Report for the site and in the building are on which the building is to be erected
- (ii) Provision of the Site Plan showing the Real Property Description of the site, levels and contours, easements, site services, site features including vegetation, proposed sewerage and stormwater drainage, proposed pad levels, extent of cut and fill, locations and orientation of the building, driveways, retaining walls etc.
- (iii) Nomination of termite risk management procedures to be undertaken in compliance with NCC 2019
- (iv) Compliance with specific site constraints e.g.:
 - local estate covenants, building envelopes, plan of development etc.
 - bushfire management requirements (NCC 2019)
- shadow diagrams etc.
- (v) Energy efficiency assessment and compliance with all conditions thereof
- (vi) Any additional documentation required by Local Authority for approval purchase not otherwise provided by Steelx Pty Ltd. as scheduled in class (B) above

(vii) Supply of window and doors to suit plans and frames supplied

(F) BUILDING CONSTRUCTION REQUIREMENTS

The Purchaser/Owner is to be ensured that all building construction complies with: Workplace Health and Safety requirements for the particular State or Territory NCC 2019 and all subsequent amendments and standards contained therein, including:

- All roofing and wall cladding to comply with NCC 2019
- All glazing to comply with NCC 2019
- All stairs and balustrades to comply with NCC 2019
- Stairs are provided by owner and designed by others

(G) MOISTURE MANAGEMENT

It is the responsibility of the Builder to ensure Moisture Management is provided during framed wall construction through effective use of flashings, sealants and vapour permeable membrane such as vapour permeable sarking, building wraps, vapour retarders and damp-proof course. Before installing cladding, all wall openings, penetrations, intersection, connections, window sills, head and jambs must incorporate appropriate flashing and water proofing materials. Components and their installation that are used to manage moisture in framed wall construction must, at a minimum, comply with the requirements of relevant standards, building codes and manufacturer's specification.

(H) EXTERIOR CLADDING

Selected wall cladding to have a max allowance of 15 kilograms per square metre.

(I) SMOKE DETECTORS

Smoke alarms (consumer mains power) to be installed in accordance with NCC 2019 and must comply with AS3786 and relevant state legislative requirement.

(J) TOILET ACCESS

Provide lift off hinges to all toilet doors with internal length of 1900mm or less

(K) SLAB AND FOOTING

- All slab and footings have been designed to AS2870. Soil classifications covered by this design include A, S, M for all designs, raft slab designs include H1 and H2 designs.
 P, E, H1 and H2 including H1-D and H2-D are not covered by the strip footing design.
 Specially engineered footing designs are required for all soil types not explicitly mentioned.
 Slab and footings are designed to be formed on natural soil with a minimum bearing capacity of 100 kPa.
- * Refer to 6.0 Slab and Foundation Notes for detailed information about Slab and Foundation construction

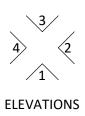
Drawings Index

Page	Drawings
1.0	General Notes
2.0	Floor Plan
3.0	Elevations
4.0	Section
5.0	Connection Details
6.0	Slab and Foundation Notes
7.0	Slab Layout
8.0	Concrete Beam Details
	·

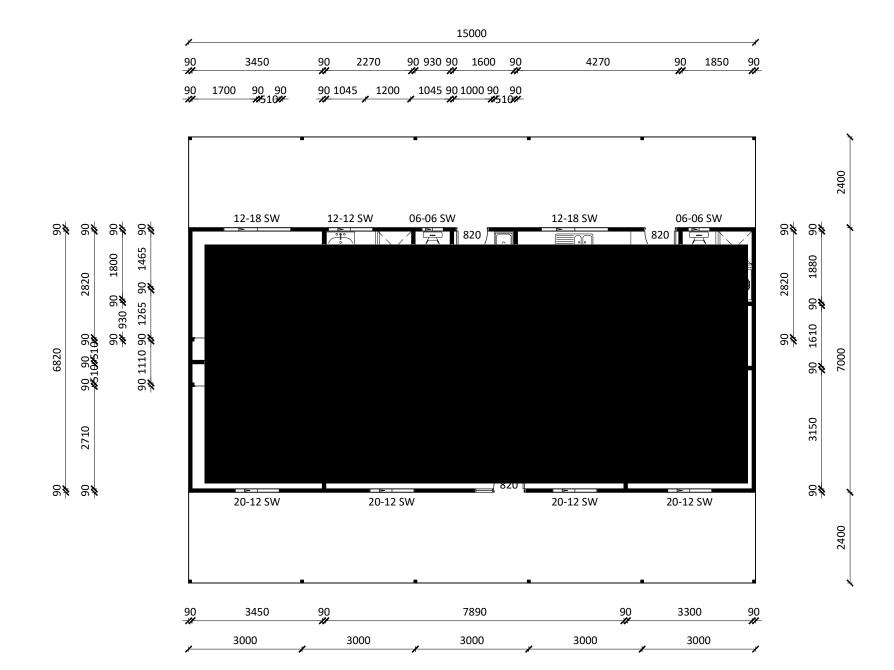
^{*}Supplier and Engineered drawings supplied with construction plans only

1.0 GENERAL NOTES

Apex Engineering Group PTY LTD Purchaser Name: Rashiru Totamuna ACN 632 588 562 ME Aust. (Registered NER Structural) 5276680 QLD: RPEQ No. 24223; TAS: 185770492; MC: PE0003848; N.T: 303557ES; Practising Professional Structural & Civil Engineers Site Address: 1141 Crudine Rd Crudine NSW 2795 Australia Seller: TSC Orange Engineering TDS Building NSW Pty Ltd NOT FOR CONSTRUCTION Phone: 0466 967 444 Page 1 of 11 Email: orange@theshedcompany.com.au © Copyright Steelx IP Pty Ltd Signature John Ronaldsor Drawing # TORA220042 - 2 Print Date: 17/06/22 Date: 17/06/22





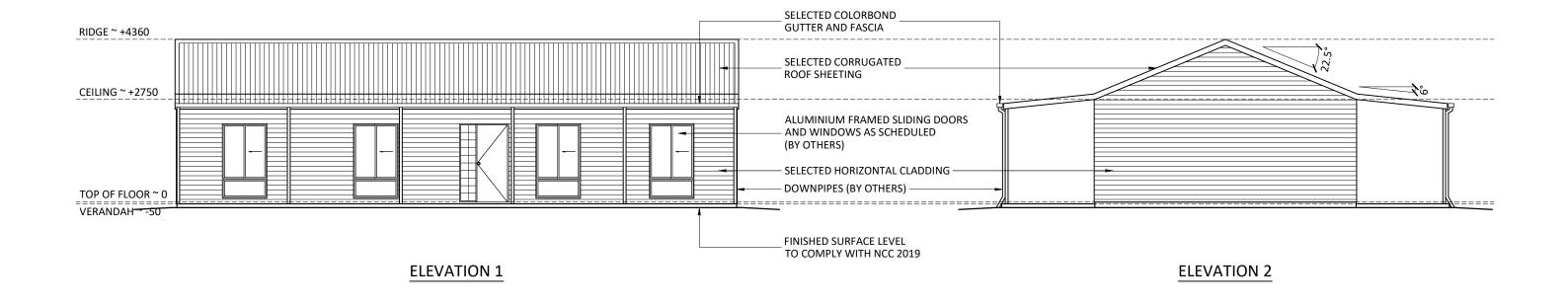


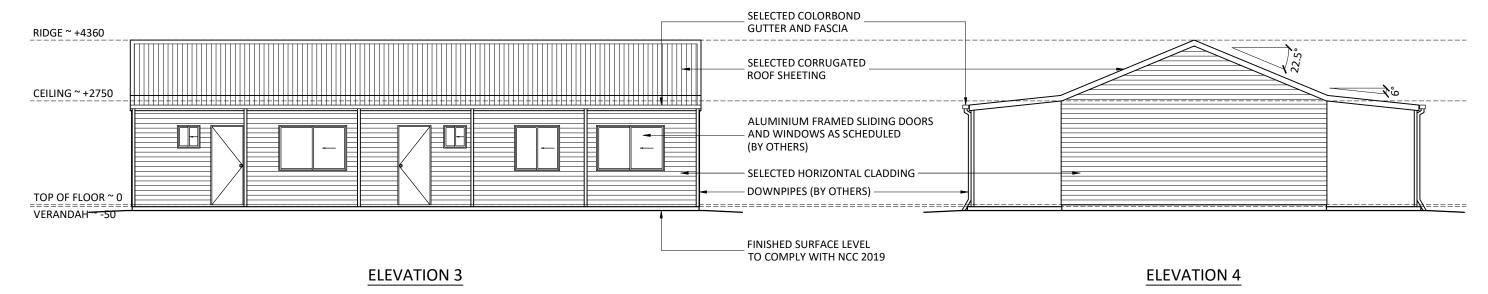
2.0 FLOOR PLAN

DENOTES SMOKE ALARM LOCATION

NOTE: Amenities and Furnishing shown are illustrative only

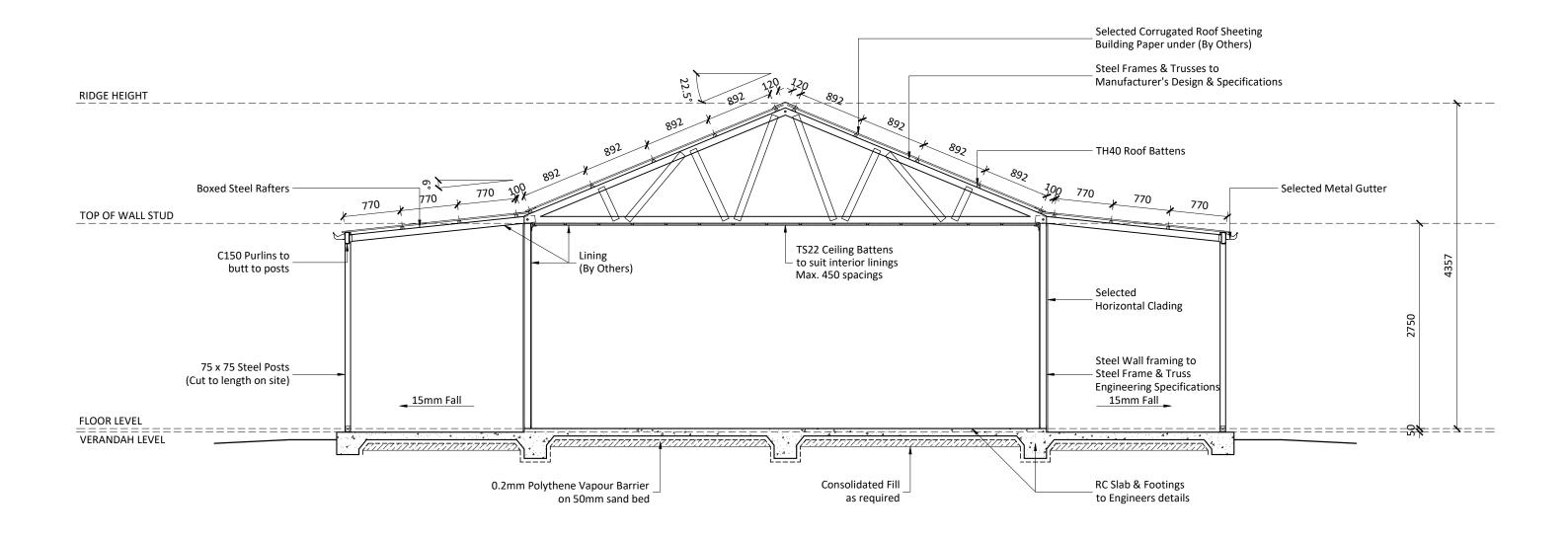
Purchaser Name: Rashiru Totamuna				Apex Engineering Group PTY LTD ACN 632 588 562 ME Aust. (Registered NER Structural) 5276680
Site Address: 1141 Crudine Rd Crudine NSW 2795 Australia		Engineering	Seller: TSC Orange TDS Building NSW Pty Ltd	QLD: RPÉQ Ño. 24223; TAS: 185770492; VIC: PE0003848; N.T: 303557ES; Practising Professional Structural & Civil Engineers
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3.0 ELEVATIONS

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Site Address: 1141 Crudine Rd Crudine NSW 2795 Australia		Engineering	Seller: TSC Orange TDS Building NSW Pty Ltd	QLD: RPEQ No. 24223; TAS: 185770492; MC: PE0003848; N.T: 303557ES; Practising Professional Structural & Civil Engineers
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4.0 SECTION

Purchaser Name: Rashiru Totamuna

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Engineering
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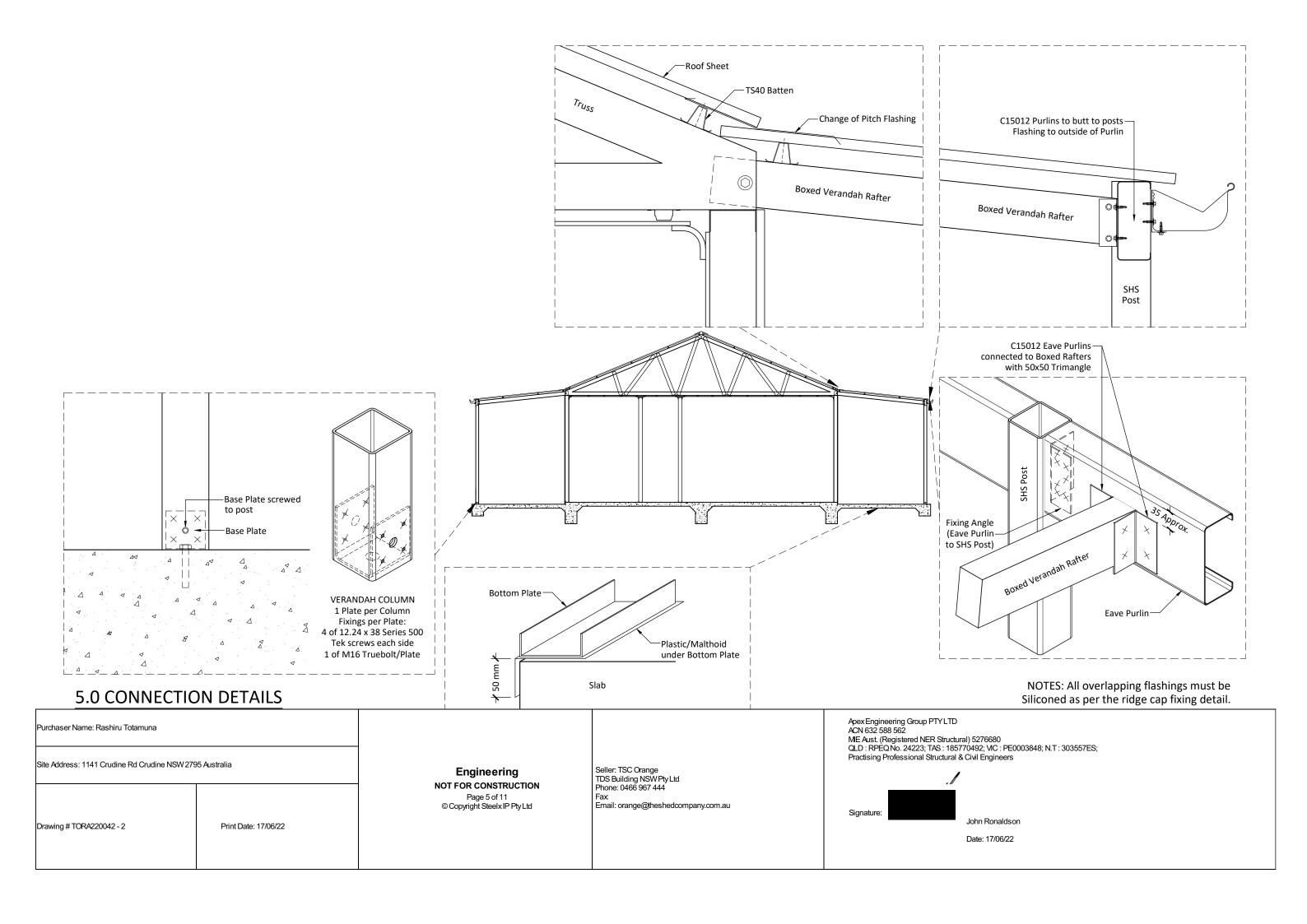
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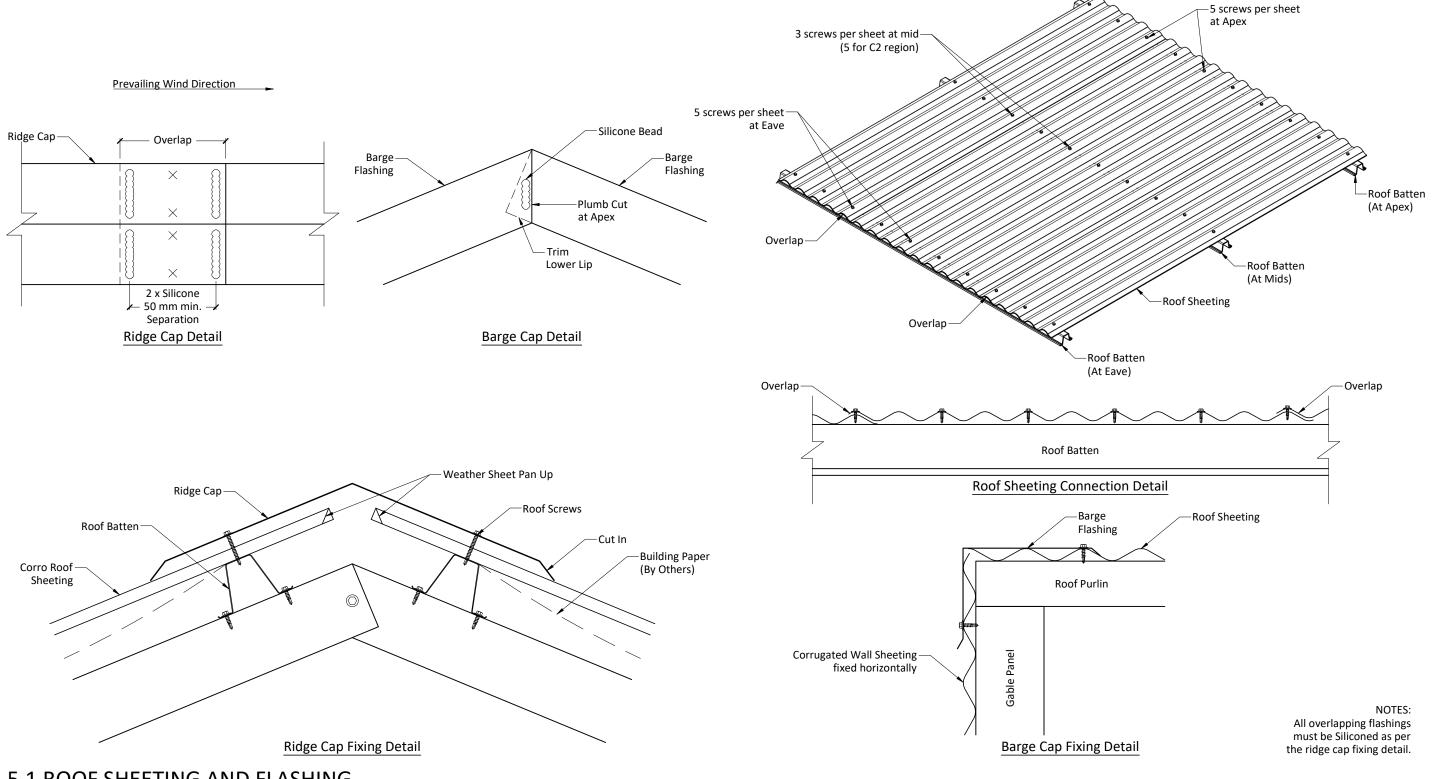
Apex Engineering Group PTY LTD
ACN 632 589 562
ME Astar (Registered NER Structural) 5276680
QLD : RPEQ No. 24223; TAS: 185770492; VMC : PE0003848; N.T.: 303557ES;
Practising Professional Structural & Civil Engineers

Seller: TSC Orange
TDS Building NSW Pby Ltd
Phone: 0466 967 444
Fax
Email: orange@theshedcompany.com.au

Signature:

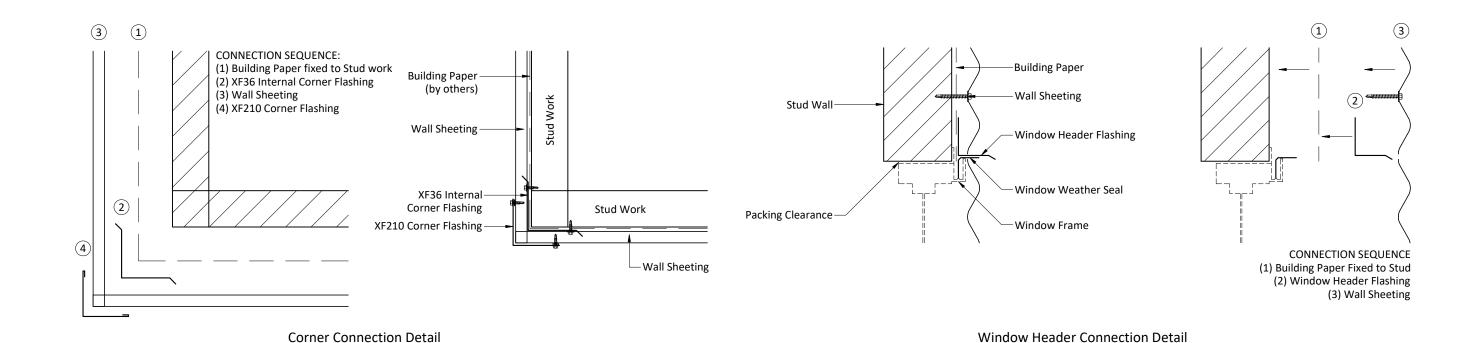
John Ronaldson
Date: 17/06/22

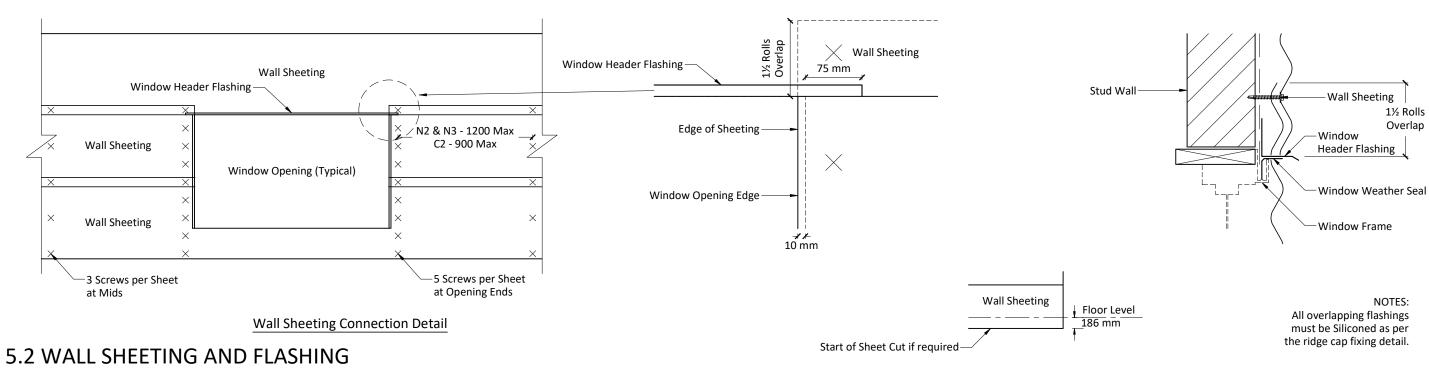




5.1 ROOF SHEETING AND FLASHING

Purchaser Name: Rashiru Totamuna Site Address: 1141 Crudine Rd Crudine NSW 2795 Australia				Apex Engineering Group PTY LTD ACN 632 588 562 ME Aust. (Registered NER Structural) 5276680 QLD : RPEQ No. 24223; TAS : 185770492; VIC : PE0003848; N.T : 303557ES; Practising Professional Structural & Civil Engineers
		Engineering NOT FOR CONSTRUCTION	Seller: TSC Orange TDS Building NSW Pty Ltd	A Lighton
Drawing # TORA220042 - 2	Print Date: 17/06/22	Page 6 of 11 © Copyright Steelx IP Pty Ltd	Phone: 0466 967 444 Fax Email: orange@theshedcompany.com.au	Signature: John Ronaldson Date: 17/06/22





Purchaser Name: Rashiru Totamuna Site Address: 1141 Crudine Rd Crudine NSW 2795 Australia Engineering NOT FOR CONSTRUCTION Page 7 of 11 © Copyright Steelx IP PtyLtd Promo: Qd66 997 444 Fax Email: orange@theshedcompany.com.au Apex.Engineering Group PTYLTD ACN 822 528 852 ME Australia Structural) \$276680 OLD : RPEQ No. 24223; TAS: 185770492; VC: PE0003848; N.T: 303557ES; Practising Professional Structural & Civil Engineers Seller: TSC Orange TDS Building NSW PtyLtd Phone: Q466 997 444 Fax Email: orange@theshedcompany.com.au Signature: John Ronaldson Date: 17/06/22

GENERAL NOTES ON STIFFENED RAFT SLAB

- G1. These drawings are only suitable for sites which have had a soil test carried out and where the ground movement is predominantly due to soil reactivity under normal moisture conditions. The designs attached only cater for site classified as A, S, M, M-D, H1, H1-D, H2, and H2-D.
- G2. **P and E sites are NOT covered**. These sites should be designed by a local geotechnical engineer. Where a site requires cut and fill over 300mm across the pad area, then
- G3. Fill placed after the Geotechnical report should be certified by a geotechnical engineer to level 1 in accordance with AS3796.
- G4. Site drainage to protect the slab and footings from excessive moisture is very important. Refer to B2.2 and B2.3
- G5. Slab to be founded on a minimum of 50mm thick compacted granular base. Vapour barrier (Visqueen membrane) to be placed under the entire slab. Bar chairs to be placed at a maximum of 900mm centres in both directions.
- G6. Concrete shall be a minimum of 32MPa, a maximum of 80mm slump and a maximum of 20mm aggregate. Concrete must be pencil vibrated and cured for at least 7 days.
- G7. Provisions for control of or allowance for shrinkage cracking shall be as follows: Where brittle floor coverings (ceramic tiles and the like) are to be used over an area greater than 16m², extra measures shall be taken to control shrinkage cracking. Such measures shall include one or more of the following
- * The amount of slab reinforcement shall not be less than SL92 or equivalent throughout the slab panels where brittle finishes are to be used. Alternatively, an additional sheet of slab mesh shall be placed in those areas.
- * The bedding system for the brittle coverings shall be selected on the basis of the expected slab movement and the characteristics of the floor coverings.
- * The placement of floor coverings shall be delayed. NOTE: A minimum period of three months drying of the concrete is usually required. Refer to "Foundation Performance and Maintenance" below.

FOUNDATION PERFORMANCE AND MAINTENANCE

B1 GENERAL

The designs and design methods given in this Standard are based on the performance criteria in clause 1.3. Importantly, significant damage may be avoided provided that foundation site conditions are properly maintained. This is expressed in section 1 by the statement that the probability of failure for reasonable site conditions is low, but is higher if extreme conditions are encountered. It is neither possible nor economical to design for the extreme conditions that could occur in the foundations if a site is not properly maintained. The expected standard of foundation maintenance is described in paragraph B2

Some minor cracking and movement will occur in a significant proportion of buildings, particularly those on reactive clays, and the various levels of damage are discussed in paragraph B3.

The performance requirements of a concrete floor in respect to shrinkage cracking and moisture reaction with adhesives are discussed in Paragraph B4.

A more extensive discussion of the material in Paragraphs B2 to B4 is contained in the CSIRO pamphlet, 10-91, "Guide to Home Owners on Foundation Maintenance and Footing Performance' and its recommendations should be followed.

B2 FOUNDATION MAINTENANCE

B2.1 Foundation soils

All soils are effected by water. Silts are weakened by water and some sands can settle if heavily watered, but most problems arise on clay foundations. Clays swell and shrink due to changes in the moisture content and the potential amount of movement is implied in the site classification in this Standard, which is designed as follows:

- (a) A means stable (non-reactive).
- (b) S means slightly reactive.
- (c) M means moderately reactive
- (d) H1 and H2 means highly reactive.
- (e) E means extremely reactive. (NOT COVERED BY THIS DESIGN)

Sites classified Class A and S may be treated as non-reactive sites in accordance with Paragraph B2.2. Sites classified as M, H1, H2 and E should comply with the recommendations given in Paragraph B2.3.

B2.2 Class A and S site

Sands, silts and clays should be protected from becoming extremely wet by adequate attention to site drainage and prompt repair of plumbing leaks.

B2.3 Class M. H1 and H2 sites

Sites classified as M, H1, H2 should be maintained at essentially stable moisture conditions and extremes of wetting and drying prevented. This will require attention to the following:

(a) Drainage of the site: The site should be graded or drained so that water cannot pond against or near the building. The ground immediately adjacent to the building should be graded to a uniform fall of 50 mm minimum away from the building over the first metre. The subfloor space for the buildings with suspended floors should be graded or drained to prevent ponding where this may affect the performance of the footing system.

The site drainage recommendations should be maintained for the economic life of the building.

- (b) Limitation on gardens: The development of the gardens should not interfere with the drainage systems. Garden beds adjacent to the building should be avoided. Care should be taken to avoid over watering of gardens close to the building footings.
- (c) Restrictions on trees and shrubs planting of trees should be avoided near the foundation of a building or neighbouring building on reactive sites as they can cause damage due to drying of the clay at substantial distances. To reduce, but not eliminate, the possibility of damage, tree planting should be restricted to a distance from the house of:
- (i) 1x mature height for Class H1 and H2 sites.
- (ii) ¾ mature height for Class M sites.

Where rows or groups of trees are involved, the distance from the building should be increased. Removal of trees from the site can also cause similar problems.

(d) Repair of leaks: Leaks in plumbing, including stormwater and sewerage drainage should be repaired promptly.

The level to which these measures are implemented depends on the reactivity of the site. The measures apply mostly to masonry buildings and masonry veneer buildings. For the frame buildings clad with timber or sheeting, lesser precautions may be appropriate.

B3 PERFORMANCE OF WALLS

It is acknowledged that minor foundation movements occur on nearly all sites and that it is impracticable to design a footing system that will protect the building form movement under all circumstances. The expected performance of footing systems design in accordance with the Standard is defined in terms of the damage classifications in Table C1, Appendix C.

Crack width is used as the major criterion for damage assessment, although tilting and twisting distortions can also influence the assessment. Local deviations of slope of walls exceeding 1/150 are undesirable. The assessment of damage may also be effected by where it occurs and the function of the building, although these effects are not likely to be significant in conventional buildings. In the classification of damage, account should also be taken of the history of the cracking. For most situations Category 0 or 1 should be the limit. However under adverse conditions, Category 2 should be expected although such damage should be rare. Significant damage is defined as category 3 or worse.

For Category 1 or 2 damage, remedial action should consist of stabilising the moisture conditions of the clay and paying attention to repairing or disguising the visual damage. This should be regarded as part of the normal maintenance of buildings on reactive clays.

Even significant masonry cracking with crack widths over 5mm often has no influence on the function of the wall and only presents an aesthetic problem. Generally, the remedial action for such damage should start with an investigation to establish the cause of the damage. In many cases the treatment should consist of stabilising moisture conditions by physical barriers or paths or replenishing moisture in dry foundations. This may be followed by repair of the masonry and wherever possible added articulation should be included while repairs are being effected. Structural repairs to the footing system such as deep underpinning should only be considered as the last resort.

Underpinning should generally be avoided where the problem is related to reactive clays, although it is recognised there may be occasional situations where underpinning or other structural augmentation work is appropriate. None of this structural augmentation work should be undertaken without proper engineering appraisal.

In some cases, walls may be designed to span sagging footings and cantilever beyond hogging footings. In such cases, satisfactory performance will involve the wall remaining free of cracks and articulation joint movements, and remaining within the limits for the particular joint system.

B4 PERFORMANCE CONCRETE FLOORS

Shrinkage cracking can be expected in concrete floors. Concrete floors can also be damaged by swelling of reactive clays or settlement of fill. The categories of movement causing the damage are given in Table C2, Appendix C. In the classification, account should be taken of whether the damage is stable or likely to increase, and an allowance should be made for any deviations in level which resulted from, or occurred during construction.

The time of attachment of floor coverings and the selection of the adhesive for them should take in to account the moisture in the concrete floor and its possible effect on adhesion. Concrete floors can take a considerable time to dry (three to nine months).

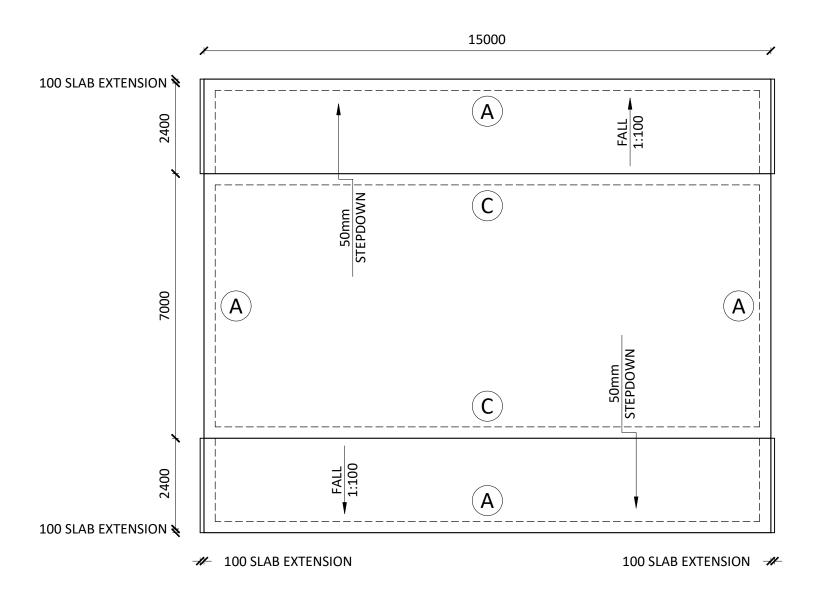
Floor coverings and their adhesives can be damaged by moisture in the concrete and by the shrinkage that occurs as the concrete dries. Drying could take three months or more. The time of fixing of floor coverings and the selection of the adhesive should take these factors into account.

6.0 SLAB AND FOUNDATION NOTES

Apex Engineering Group PTY LTD Purchaser Name: Rashiru Totamuna ACN 632 588 562 ME Aust. (Registered NER Structural) 5276680 QLD: RPEQ No. 24223; TAS: 185770492; MC: PE0003848; N.T: 303557ES; Practising Professional Structural & Civil Engineers Site Address: 1141 Crudine Rd Crudine NSW 2795 Australia Seller: TSC Orange Engineering TDS Building NSW Pty Ltd NOT FOR CONSTRUCTION Phone: 0466 967 444 Page 8 of 11 Email: orange@theshedcompany.com.au © Copyright Steelx IP Pty Ltd Signature: John Ronaldsor Drawing # TORA220042 - 2 Print Date: 17/06/22 Date: 17/06/22

7.0 A & S CLASS FOOTING PLANS

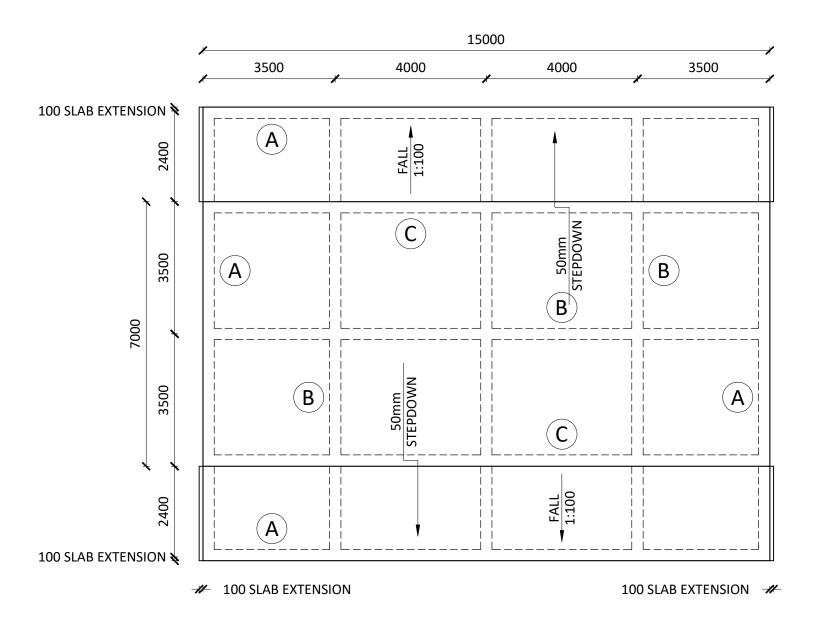
(DESIGNED IN ACCORDANCE WITH AS2870)



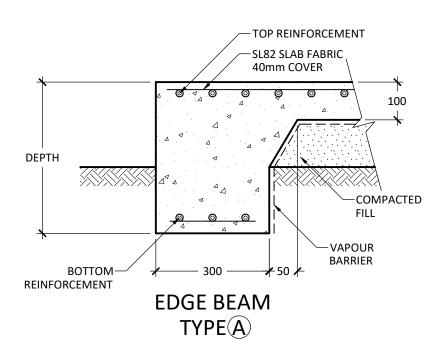
Purchaser Name: Rashiru Totamuna Site Address: 1141 Crudine Rd Crudine NSW 2795 Australia				Apex Engineering Group PTYLTD ACN 632 588 562 ME Aust. (Registered NER Structural) 5276680
		Engineering	Seller: TSC Orange TDS Building NSW Pty Ltd	QLD: RPEQ No. 24223; TAS: 185770492; VIC: PE0003848; N.T: 303557ES; Practising Professional Structural & Civil Engineers
Drawing # TORA220042 - 2	Print Date: 17/06/22	NOT FOR CONSTRUCTION Page 9 of 11 © Copyright Steelx IP Pty Ltd	Phone: 0466 967 444 Fax Email: orange@theshedcompany.com.au	Signature: John Ronaldson Date: 17/06/22

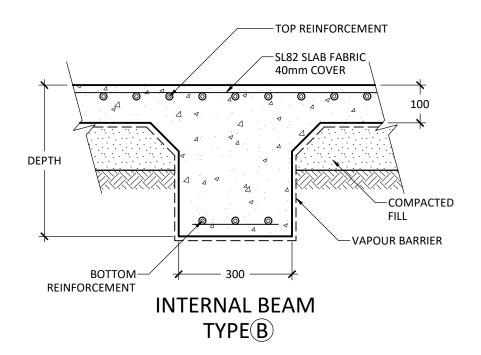
7.1 M & H CLASS FOOTING PLANS

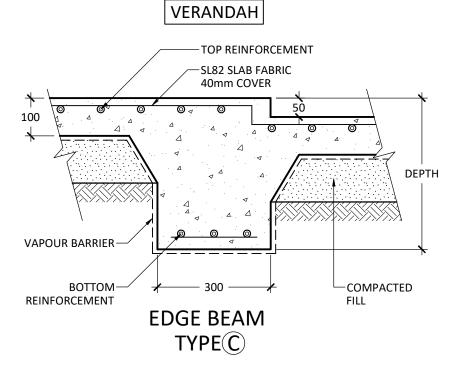
(DESIGNED IN ACCORDANCE WITH AS2870)

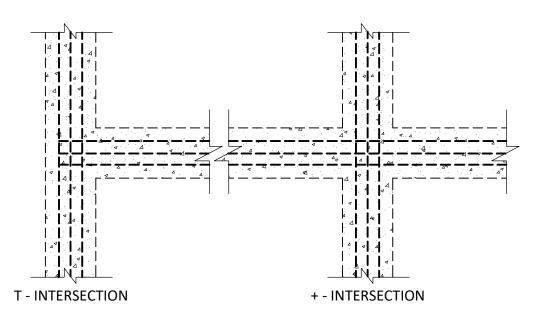


100kDa MINI DEADING O	100kDs MIN PEARING OF FOUNDING MATERIAL AT PASE OF FOOTING EXCAVATIONS							
Purchaser Name: Rashiru Totamuna Site Address: 1141 Crudine Rd Crudine NSW 2795 Australia				Apex Engineering Group PTYLTD ACN 632 588 562 ME Aust. (Registered NER Structural) 5276680				
		Engineering	Seller: TSC Orange TDS Building NSW Pty Ltd	QLD: RPEQ No. 24223; TAS: 185770492; VIC: PE0003848; N.T: 303557ES; Practising Professional Structural & Civil Engineers				
Drawing # TORA220042 - 2	Print Date: 17/06/22	NOT FOR CONSTRUCTION Page 10 of 11 © Copyright Steelx IP Pty Ltd	Phone: 0466 967 444 Fax Email: orange@theshedcompany.com.au	Signature: John Ronaldson Date: 17/06/22				









Continue bars across full width of T and + Intersections

SITE CLASS	DEPTH	BOTTOM REINFORCEMENT	TOP REINFORCEMENT
Α	300	3-L8TM	-
S	300	3-L8TM	-
М	300	3-L11TM	-
M-D	400	3-L11TM	-
H1	400	3-L11TM	-
H1-D	400	3-L11TM	1N12
H2	550	3-L11TM	2N12
H2-D	550	2 x 3-L11TM	2N16

8.0 CONCRETE BEAM DETAILS

Purchaser Name: Rashiru Totamuna				Apex Engineering Group PTYLTD ACN 632 588 562 ME Aust. (Registered NER Structural) 5276680	
Site Address: 1141 Crudine Rd Crudine NSW 2795 Australia		Engineering	Seller: TSC Orange TDS Building NSW Pty Ltd	QLD: RPÉQ Ño. 24223; TAS: 185770492; MC: PE0003848; N.T: 303557ES; Practising Professional Structural & Civil Engineers	
Drawing # TORA220042 - 2	Print Date: 17/06/22	NOT FOR CONSTRUCTION Page 11 of 11 © Copyright Steelx IP Pty Ltd	Phone: 0466 967 444 Fax Email: orange@theshedcompany.com.au	Signature: John Ronaldson Date: 17/06/22	



Appendix C – Checklist

Integrated Development in Bush Fire Prone Areas

section 100B

Development Referral to NSW Rural Fire Service

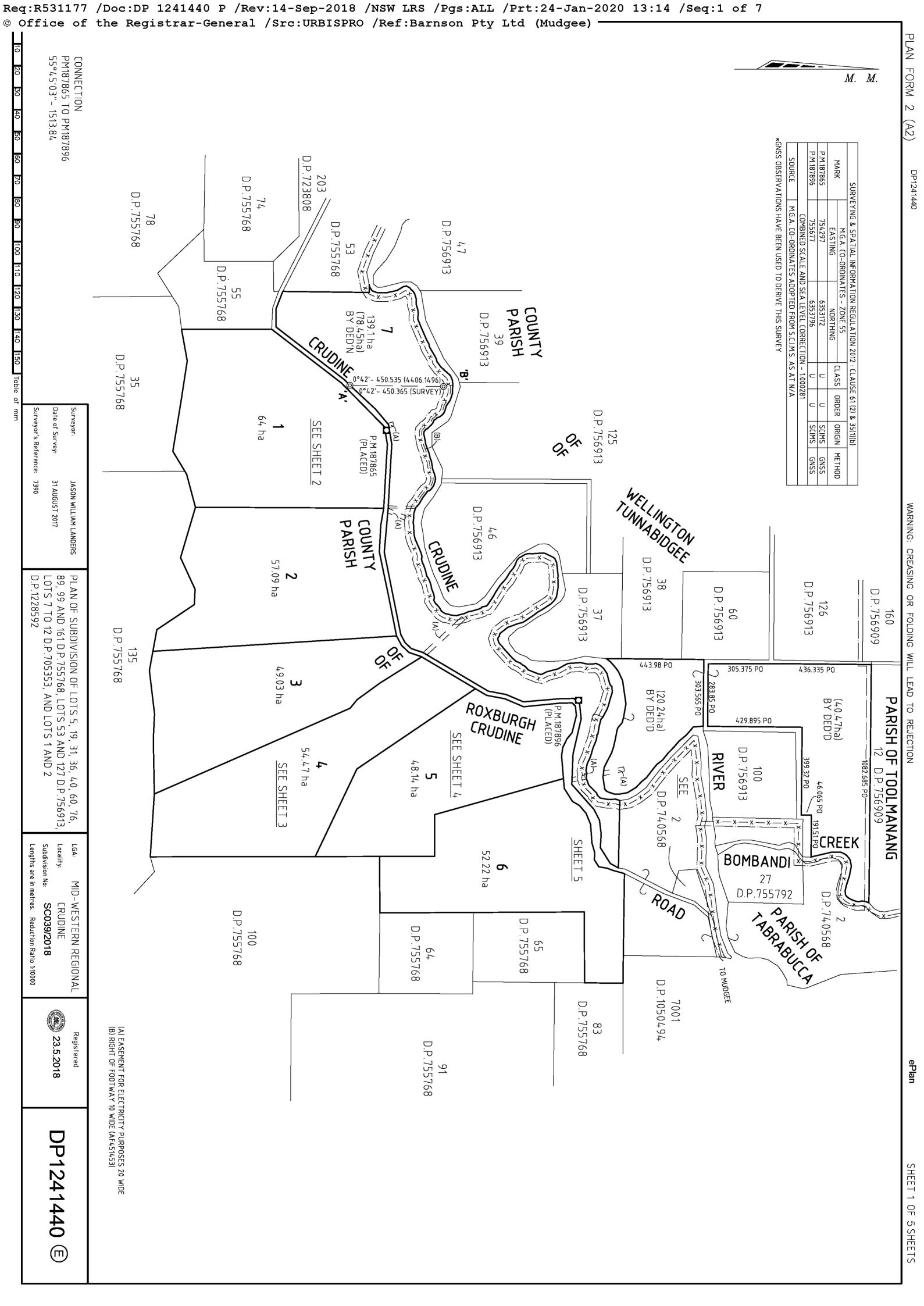
Once ALL boxes have been checked YES send the package to the address below.

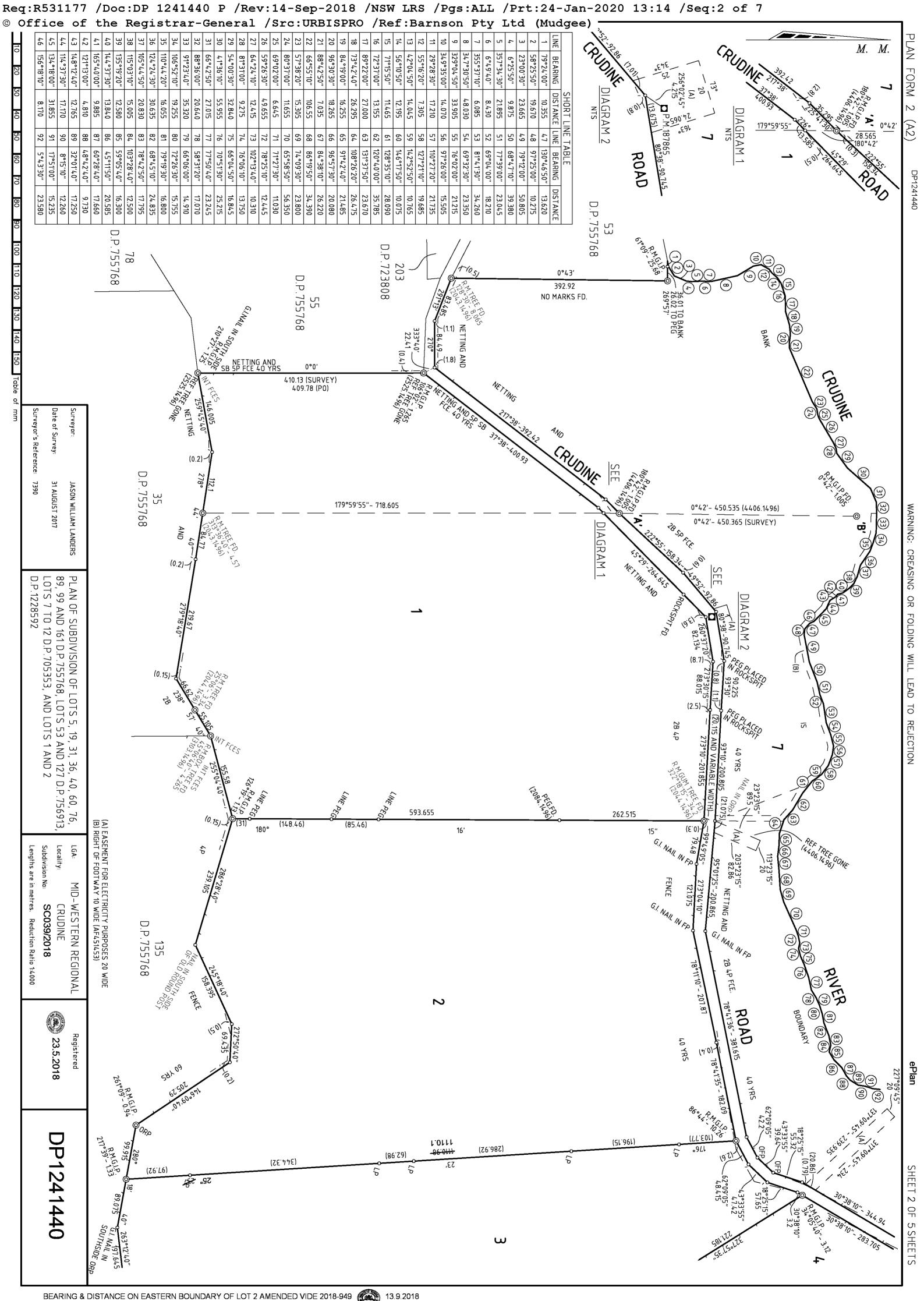
Council: Mid-wester	Legrenal Council refere	nce No: TBA	8/2 3
Council reference date:	7BA	,	a see
Council assessing officer:	TBA Phone	Contact:	
Send to: Customer Service Centres NSW Rural Fire Service Locked Mail Bag 17 Granville NSW 2142 1. Is the proposed development s	site located within a bush fire prone	area? ☑YES	□ NO
	as bush fire prone and Council has ne RFS under section 79C of the EF		ne development
2. Proposed Development Type:			
 □ Residential Subdivision □ School □ SEPP (SL) □ Hospital □ Student Accommodation □ Other 	☐ Child Care ☐ Group Home ☐ Respite Care ☐ Strata Subdivision ☐ Manufact'd Home Estate	□Retirement Village □ Tourist □ Sheltered Workshop □ Boundary Adjustment/Lo	t Construction
	ove and to 1, the DA is 'integrated or required to be assessed by the RF.		of Section 100B
Has payment (\$320) been included	d with this referral?	□ YES	☑ NO
The following information must be Information may be returned to Co	sent with this referral. Referrals tha uncil for additional information.	t are received by the RFS with i	nadequate
3. A copy of the Statement of Envi	ronmental Effects	☑ YES	□ NO
4. Set of plans including site and p	roposed development	□ YES	□ NO
If applicant provides a bush fire as (original colour report)?	sessment report, has the following I	been provided by the applicant	or consultant
	/ map,		□ NO

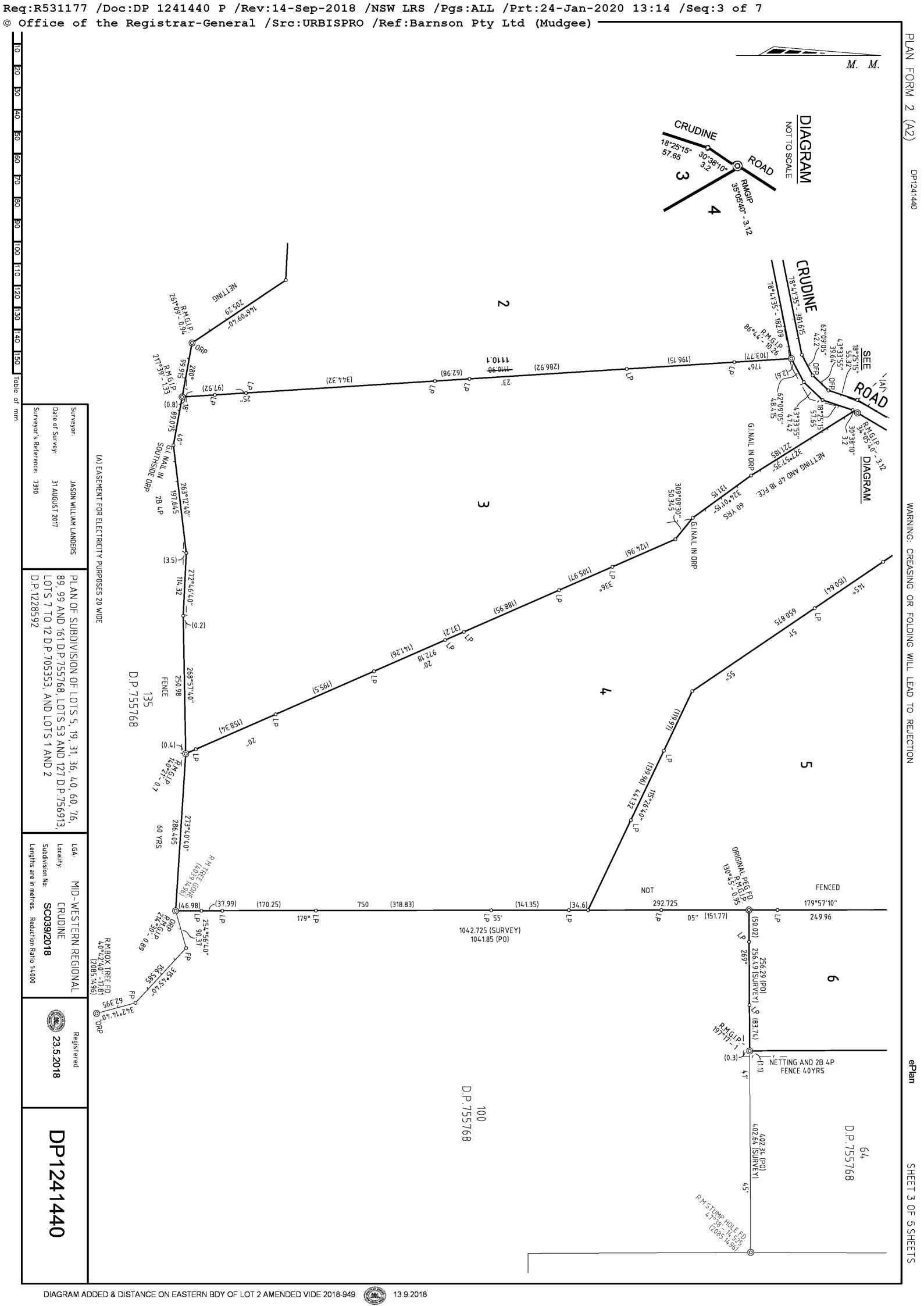
		/	
	7. The classification of vegetation out to 140 metres from the development consistent with the identification key in PBP 2006 (page 54-55).	₽ YES	□NO
	8. An assessment of the effective slope to a distance of 100 metres: - the effective slope is the slope under the vegetation assessed as being a hazard in relation to the development and not the slope within the asset protection zone.	₽ YES	□ NO
	9. Identification of any significant environmental features.	□ YES	□NO
	10. Details of threatened species populations, endangered ecological communities and critical habitat known to the applicant:- documentation supplied to coufauna.	YES ncil in relation to	□ NO flora and
	11. Details of aboriginal heritage known to the applicant.	TYES	□NO
	12. A bush fire assessment that addresses:- asset protection zones (including any management arrangements, any easements inc adjoining lands),		
	 siting and adequacy of water (in relation to reticulation rates or where dedicated water adequacy of access and egress 	storage will be re	equired), and
	13. An assessment of how the development complies with the acceptable solutions, performance requirements and relevant specific objectives within	YES Chapter 4 of PBF	□ NO 2006.
	APZs should be identified on plans for interface allotments by either a building line or bubuilding envelopes are identified which include other building constraints. Unless otherwenvelope will be taken as the building footprint.	ilding footprint. Ir	n some cases uilding
	Where an applicant proposes not to follow the acceptable solutions for particular bush findetailed evidence must be provided demonstrating compliance with performance criteria proposed.	re protection mea and intent of the	asures, measures
	Consultant/Applicant name: BARNSON Pty Ltd		
	Contact telephone: 1300 BARWSON		
	Are there any restrictions to a site inspection (e.g. locked gate, dogs, contact owner prio $\mathcal{N}^{\circlearrowright}$	r to inspection etc	0.)
	Any other applicable comment from applicant regarding DA or Site Inspections		
	Any other concerns / comments regarding bush fire that council may have for the develo environmental impact, revegetation works etc.)	pment application	n (e.g.
Co	ouncil assessing officer: signature:		

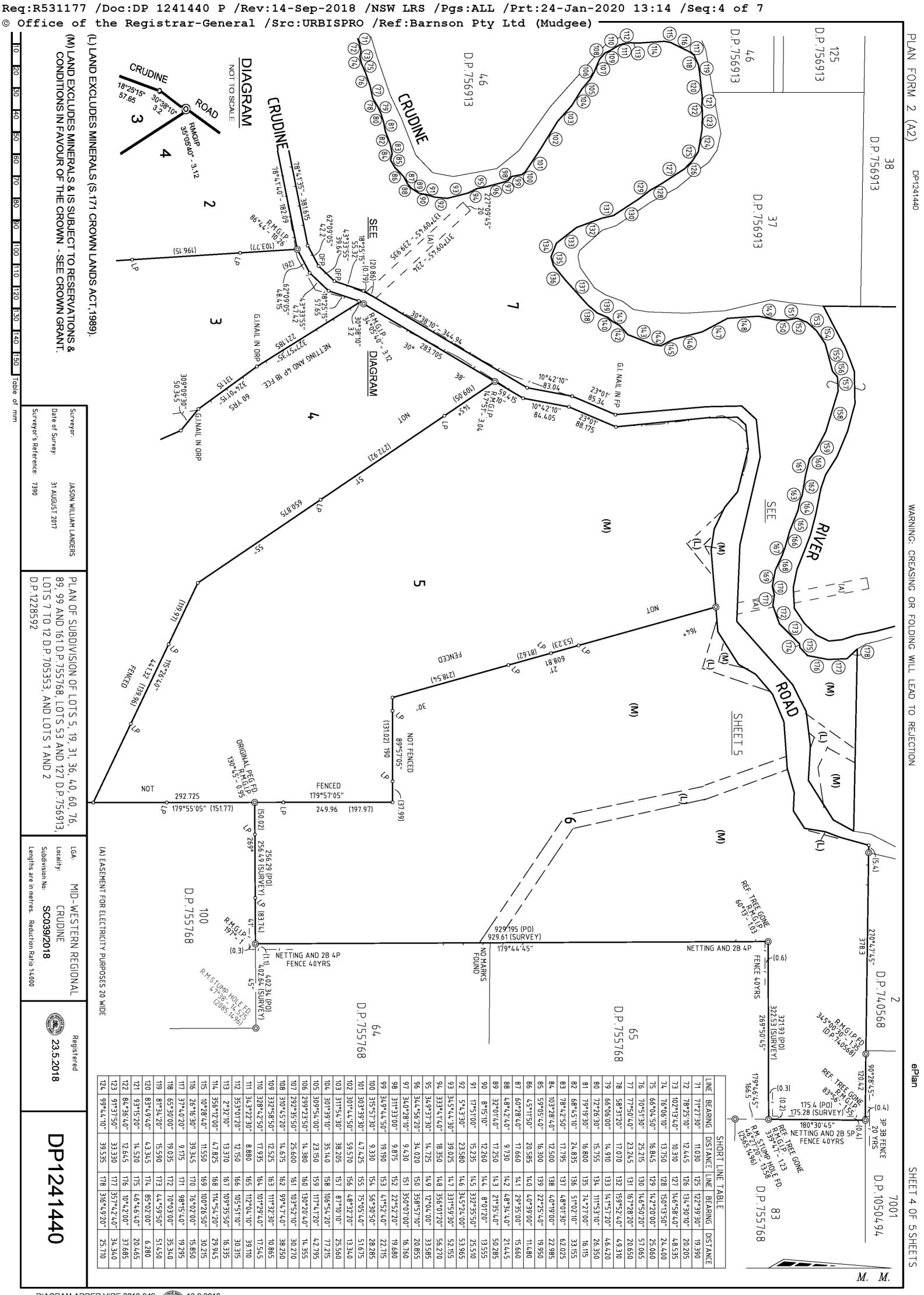


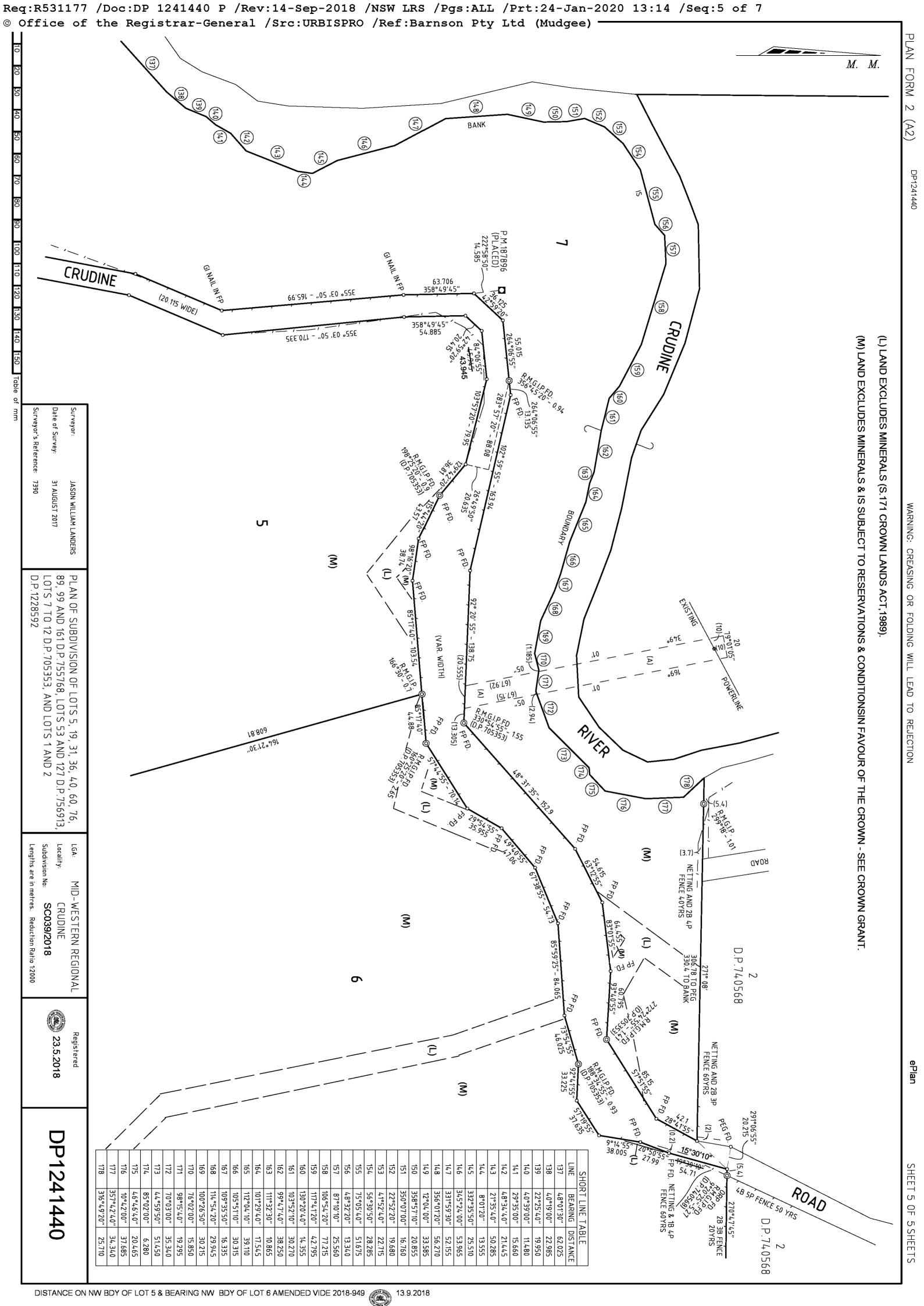
Appendix D – Deposited Plan











Req:R531177 /Doc:DP 1241440 P /Rev:14-Sep-2018 /NSW LRS /Pgs:ALL /Prt:24-Jan-2020 13:14 /Seq:6 of 7
© Office of the Registrar-General /Src:URBISPRO /Ref:Barnson Pty Ltd (Mudgee)

PEPOSITED PLAN ADMINISTRATION SHEET

Short 1 of 2 short/s

DEPOSITED PLAN A	ADMINISTRATION SHEET Sheet 1 of 2 sheet(s
Registered: 23.5.2018 Office Use Only	Office Use Only
Title System: TORRENS	DP1241440
Purpose: SUBDIVISION	
PLAN OF SUBDIVISION OF LOTS 5, 19, 31,	LGA: MID-WESTERN REGIONAL
36, 40, 60, 76, 89, 99 & 161 D.P.755768, LOTS 53 & 127 D.P.756913, LOTS 7 TO 12	Locality: CRUDINE
D.P.705353, & LOTS 1 & 2 D.P.1228592.	Parish: CRUDINE/TUNNABIDGEE
	County: ROXBURGH/WELLINGTON
Crown Lands NSW/Western Lands Office Approval	Survey Certificate
I,	JASON WILLIAM LANDERS of de Witt Consulting, 87 HERBERT STREET, GULGONG 2852
the allocation of the land shown herein have been given. Signature:	a surveyor registered under the Surveying and Spatial Information Act 2002, certify that :
Date:	*(a) The land shown in the plan was surveyed in accordance with the
File Number:	Surveying and Spatial Information Regulation 2012, is accurate and the survey was completed on
Office:	*(b) The part of the land shown in the plan (*being/*excluding
Subdivision Certificate	Information Regulation 2012. is accurate and the survey was
*Authorised Person/*General Manager/*Accredited Sertifier, certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed subdivision, new road or reserve set out t	completed on3\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Signature:	Signature Dated: .2.12.12.09
Accreditation number:	Surveyor ID: 8533
Consent Authority: MIONESTERN REGIONAL	Datum Line:'A' 'B'
Date of endorsement: 28 FGBRVARY Zo 18	Type: * Urban /*Rural
Subdivision Certificate number: Sco39 \ 2018	The terrain is *Level - Undulating/ *Steep - Mountainous
File number: PAOZCI ZOIG	* Strike through if inapplicable
*Strike through if inapplicable.	^ Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.
Statements of intention to dedicate public roads, public reserves and drainage reserves.	Plans used in the preparation of survey/compilation
	285.1496 2085.1496 2604.2091 598.1496 2525.1496 1354.1603 1334.1496 2565.1496 D.P.740568 1338.1496 2976.1496 D.P.705353 1507.1496 3104.1496 D.P.1228592 1672.1496 3103.1496 2043.1496 4406.1496 2044.1496 4049.1496 2084.1496 1632.2091
Circultura cools and Cooling COD Out and	If space is insufficient continue on PLAN FORM 6A
Signatures seals and Section 88B Statements should appear on PLAN FORM 6A	Surveyor's Reference: 7390

Req:R531177 /Doc:DP 1241440 P /Rev:14-Sep-2018 /NSW LRS /Pgs:ALL /Prt:24-Jan-2020 13:14 /Seq:7 of 7 © Office of the Registrar-General /Src:URBISPRO /Ref:Barnson Pty Ltd (Mudgee) ePlan

Office Use Only

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 2 of 2 sheet(s)

Office Use Only

Registered



23.5.2018

DP1241440

PLAN OF SUBDIVISION OF LOTS 5, 19, 31, 36, 40, 60, 76, 89, 99 & 161 D.P.755768, LOTS 53 & 127 D.P.756913, LOTS 7 TO 12 D.P.705353, & LOTS 1 & 2 D.P.1228592.

Subdivision Certificate number: 50039 2018

Date of Endorsement: 28 FEBRUARY 2018

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

- A schedule of lots and addresses See 60(c) SSI Regulation 2012
- Statements of intention to create and release affecting interests in accordance with section 88B Conveyancing Act 1919
- Signatures and seals see 195D Conveyancing Act 1919
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

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

- EASEMENT FOR ELECTRICITY PURPOSES 20 WIDE (A) 1.
- 2. POSITIVE COVENANT
- POSITIVE COVENANT 2.

LOT	STREET No.	STREET NAME	STREET TYPE	LOCALITY
1	114/	CRUDINE	ROAD	CRUDINE
2	1119	CRUDINE	ROAD	CRUDINE
3	1063	CRUDINE	ROAD	CRUDINE
4	1061	CRUDINE	ROAD	CRUDINE
5	1025	CRUDINE	ROAD	CRUDINE
6	945	CRUDINE	ROAD	CRUDINE
7	986	CRUDINE	ROAD	CRUDINE

DEON GILES MOORE

FAY MOORE

IAN DOUGLAS MOORE

If space is insufficient use additional annexure sheet

Surveyor's Reference: 7390



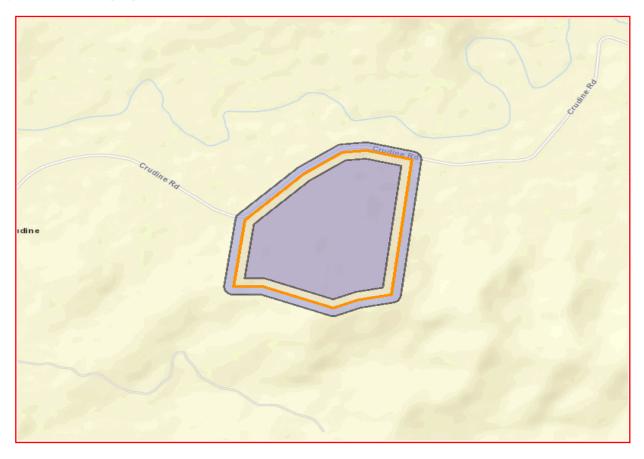
Appendix E - AHIMS

Your Ref/PO Number : Rashi

Client Service ID: 691558

Barnson
Date: 13 June 2022
Attention: Jack Massey

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



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

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

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

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

Important information about your AHIMS search

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

Email: ahims@environment.nsw.gov.au

Web: www.heritage.nsw.gov.au

ABN 34 945 244 274