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## **BUSHFIRE ASSESSMENT s.4.14 EP&A ACT 1979**

**Construction of New Dwelling  
Lot 11 DP1202684,  
132 Mafeking Road,  
Goonengerry, NSW**



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Land & Fire Assessments Pty Ltd  
For: Ted & Tanya Nabung  
Report No.: LFA21049  
Date: 19 October 2022**

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### Revision List

Revision No.	Revision Date	Report Title	Report Author	Field Survey By	Status
00	26.08.22	Bushfire Assessment, s.4.14 EP&A Act 1979, Construction of New Dwelling, Lot 11 DP1202684, 132 Mafeking Road, Goonengerry, NSW	Main Author: Paola Rickard (LFA - Senior Environmental Planner & BPAD – Level 3 Accredited Practitioner –no. BPAD21855)	Paola Rickard undertaken on the 01/02/2022	Draft
01	19.10.22				Final


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## Summary Compliance Table

Site Details	Lot 11 DP1202684, 132 Mafeking Road, Goonengerry, NSW 2482; Byron Shire Council (BSC) Local Government Area
Proposal	Construction of New Dwelling (as per Appendix B Plans)
Bushfire Prone Land Map	Vegetation Category 1 & Vegetation Category 3 - see Fig. 1
Planning context	s. 4.14 (1) of the <i>Environmental Planning and Assessment Act 1979</i>
Bushfire planning guideline and relevant chapter	Planning for Bushfire Protection 2019 (PBP): Chapter 7 - Residential Infill Development, Appendix 3 & Appendix 4
Application complies with 'Deemed - to Satisfy' (DtS) provisions	Yes, all DtS provisions met; however, BAL 40 applies to southern and western elevations of dwelling and BAL 29 applies to all other elevations.
Consultation with RFS Commissioner	Recommended in regard to the BAL 40 construction components
Compliance statement	This Assessment demonstrated that the proposed development complies with the <b>the relevant specifications and requirements</b> provided that the <b>Recommended Bushfire Compliance Consent Conditions</b> detailed in s.3 are implemented.
Full Name of Accredited Practitioner	Paola Rickard - Land & Fire Assessments Pty Ltd
Qualification	BPAD – Level 3 Accredited Practitioner - Accreditation no. BPAD-21855, valid to 2/08/2023
Date	19 October 2022
Signature	





- b. has been provided with a certificate by a person who is recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment stating that the development conforms to the relevant specifications and requirements.

(1A) If the consent authority is satisfied that the development does not conform to the relevant specifications and requirements, the consent authority may, despite subsection (1), grant consent to the carrying out of the development but only if it has consulted with the Commissioner of the NSW Rural Fire Service concerning measures to be taken with respect to the development to protect persons, property and the environment from danger that may arise from a bush fire.

Therefore, where an Infill Development proposal does comply with the acceptable solutions outlined in PBP, consultation by the consent authority with the Rural Fire Service (RFS) is not required. Conversely, if 'alternative solutions' are proposed to meet the requirements, the RFS will consider the proposal under section 4.14 and will provide advice to the consent authority.

Chapter 7 of PBP sets the specific objectives, and the specifications and requirements for Bushfire Protection Measures for Infill Development. These measures, summarised below, will be assessed for compliance in this assessment (where applicable):

- Asset Protection Zones/Separation Distance;
- Construction Standards (BAL determination only)
- Access;
- Services; and
- Landscaping and Maintenance

## 1.2 The Subject Site

The Subject Site or the Site is located at 132 Mafeking Road (Lot 11 DP1202684), Goonengerry, in the Byron Shire Local Government Area (refer to Figs. 1 to 5). The Site, which is 9,988m<sup>2</sup> in size, is located approx. 26 km west of Byron Bay and roughly 33km north east of the Lismore CBD.

Lot 11 DP1202684 was created in 2014. The Development Application (DA) consent (10.2009.385.3) for the subdivision that created Lot 11 DP1202684 prescribed a number of consent conditions that were subsequently enshrined on the title via Section 88B Instrument covenants. The following are of relevance to this proposal:

22) Section 88B Instrument

A Section 88B Instrument and 1 copy are to be submitted with the application for a subdivision certificate. The final plan of subdivision and accompanying Section 88B Instrument are to provide for:

(...)

d) Building Envelope

Restrictions to limit the building envelope on proposed Lot 11 to the nominated building envelope as identified on the Building Envelope Plan prepared by Landpartners dated 29/6/2007,

e) Construction Standards

Restrictions to be placed on Proposed Lot 11 requiring the dwelling to be constructed to a minimum Construction Standard under AS3959 – Construction of Buildings in Bushfire Prone Areas as follows:

- West and South – BAL-40
- North and East – BAL-29

(...)



In the consent modification dated 3/03/2014, the plan referred to in condition 22)d) is as amended by 'Figure 3 - Plan of Proposed Subdivision - Heath and McPhail Surveying- Feb 2014', which is reproduced as Fig. 2.

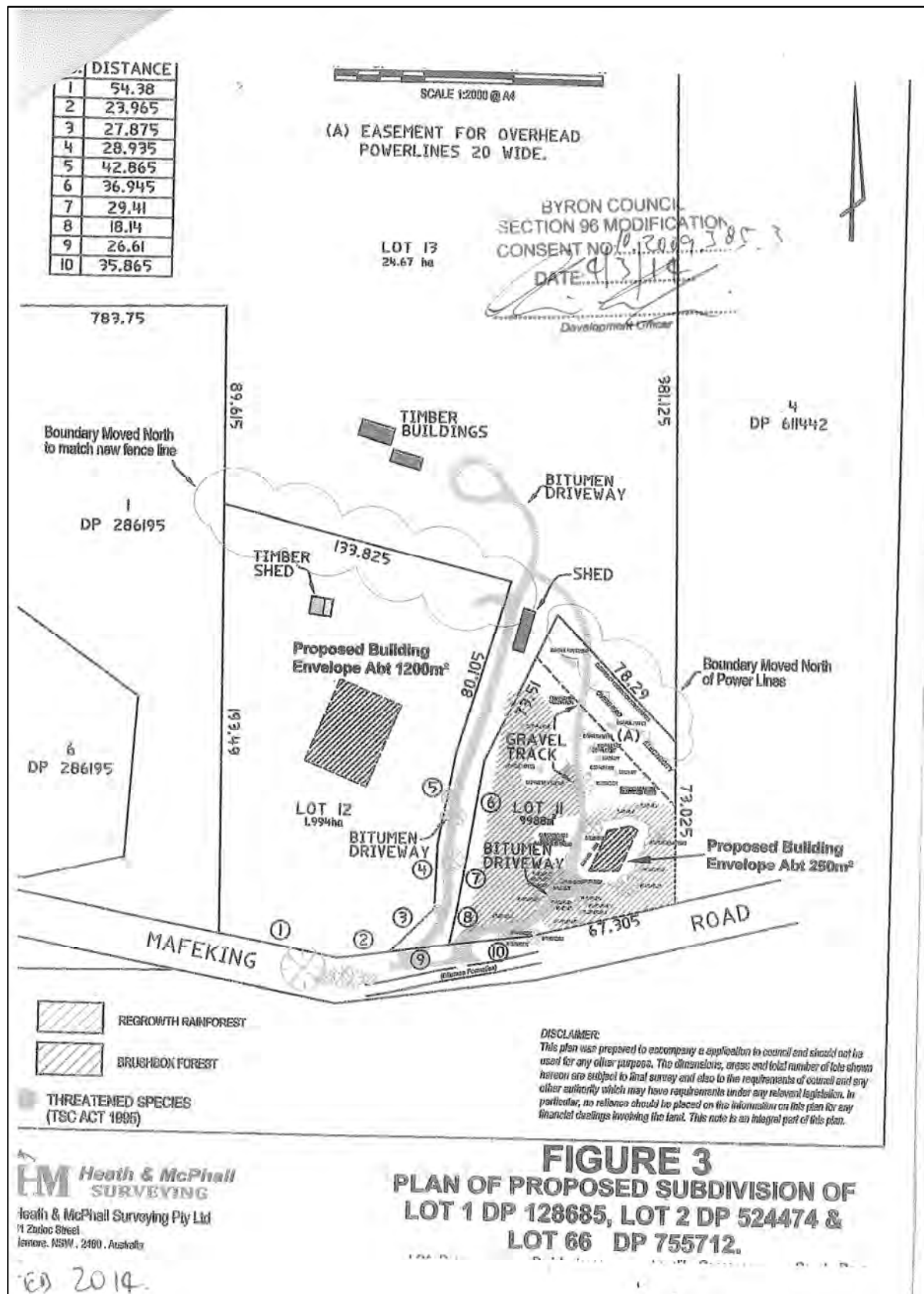


Figure 2. Copy of 'Figure 3 - Plan of Proposed Subdivision - Heath and McPhail Surveying- Feb 2014'





The approved building enveloped, as shown on Fig. 2, has accordingly been enshrined in the DP plan and restrictive covenants been placed on the title ensuring that the following is implemented:

- Item 8.1. 'No Dwelling shall be erected upon the subject Lot except within the area designated (E) upon the survey Plan'; and
- Item 8.2. 'The dwelling located upon Lot 11 shall be constructed to a minimum Construction Standard under AS3959 – Construction of Buildings in Bushfire Prone Areas as follows:
  - West and South – BAL- 40
  - North and East – BAL-29'

Portion of the DP plan is reproduced as Fig. 3 and the whole DP and the s.88B instrument are provided as Appendix A.

In addition, further requirements were placed in order to obtain the subdivision certificate. In particular, the requirement to prepare a Vegetation Management Plan, which is relevant to the implementation of the required Asset Protection Zones (APZ).

The Site consists of an elevated cleared knoll to the south west surrounded by vegetated downslopes to the north, west and south; and upslope to the east (as shown on Fig. 4). The vegetated slopes consist predominantly of Subtropical Rainforest vegetation. The Site is surrounded by Rainforest vegetation to the north and east and Brushbox Forest with dense rainforest understorey to the west and south west. To the north west and south beyond Mafeking Rd are cleared grassland areas. The locality consists of rural residential lifestyle lots.

Existing sealed driveway access and retaining walls are found on the Site, as shown on Fig. 5 current site survey plan. The property access has been constructed in accordance with the aforementioned subdivision approval, which required access compliance with PBP 2006.

Access is from Mafeking Road to the south. Site Elevation ranges from 210m AHD to the south east to 180m AHD to the south west (see Fig. 4). The majority of the Site is zoned DM (Deferred Matter) with a narrow strip along north-eastern boundary zoned RU2 Rural Landscape under the Byron Local Environmental Plan (LEP) 2014. For the portion zoned DM the previous zoning provision under LEP 1988 apply, namely 1(a) General Rural Zone.

An impact assessment was undertaken by Ecos Environmental Pty Ltd (August 2010) concerning the ecological impacts of a boundary adjustment and house site proposed for Lot 11, 134 Mafeking Rd Goonengerry. This assessment looked at, among others, the impacts of establishing the asset protection zone (APZ) including impact on regenerating flora and details of APZ tree removal (e.g. species, size, habitat values, hollows, trees remaining etc). The impact assessment found that only up to 5 Brush Box trees had to be removed to fulfil the APZ function intent. Since the subdivision was granted it is assumed that the impact of implementing the required APZ was deemed acceptable. Importantly, as shown on Fig. 5 current survey plan where the prescribed envelope has been identified as well as the vegetation dripline boundary, no further vegetation can be cleared as the subdivision consent also mandated protection and regeneration of the vegetation beyond the identified vegetation dripline.

Plates 1-13 show the Site, driveway access and the surrounding environment.

**Plate 1.** Looking south east at Mafeking Rd from the access driveway leading to the Site







**Plate 2.** Looking south west at Mafeking Rd from the sealed access driveway leading to the Site

**Plate 3.** Looking north along bitumen driveway



**Plate 4.** Looking south along driveway. Note dense rainforest vegetation and dominant Brushbox trees

**Plate 5.** Top of driveway



**Plate 6.** Looking north across clearing, which forms part of the subdivision prescribed APZ. No further vegetation can be cleared as the subdivision consent also mandated protection and regeneration of the vegetation beyond the identified vegetation dripline (see Fig. 5)







**Plate 7.** Looking north across clearing towards rainforest vegetation. This vegetation dripline is identified in the Fig. 5 survey plan

**Plate 8.** Flat cleared area where the proposed dwelling will be sited within the identified dwelling envelope and APZ extending to vegetation dripline



**Plate 9 (top).** Looking east and north east across identified dwelling envelope and APZ extending to vegetation dripline



**Plate 10 (left).** Rainforest on an upslope east of the proposed dwelling



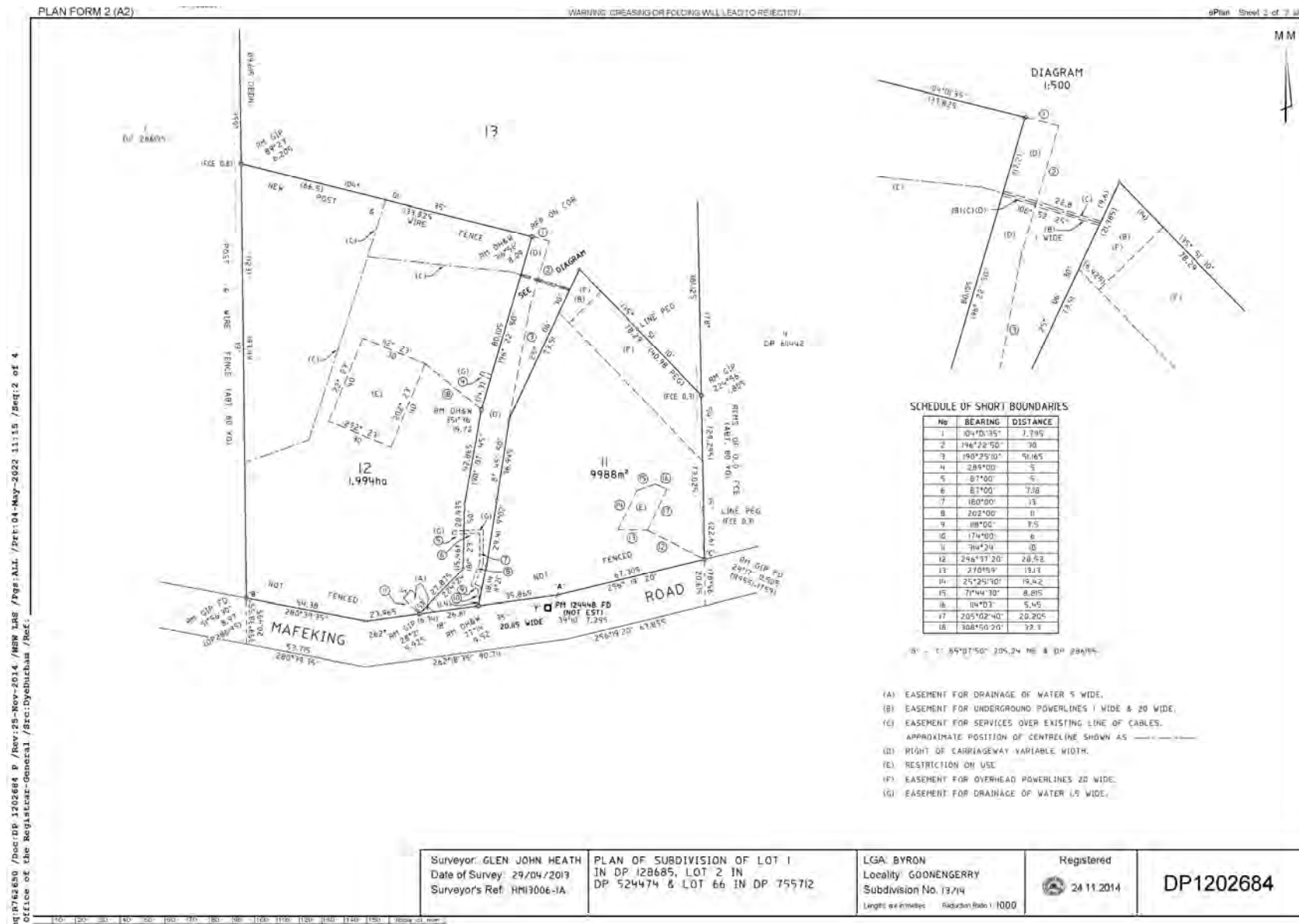


**Plate 11.** Further view of Rainforest vegetation on upslope to the east of proposed dwelling

**Plate 12.** Looking north to Rainforest vegetation from identified dwelling envelope and APZ extending to vegetation dripline

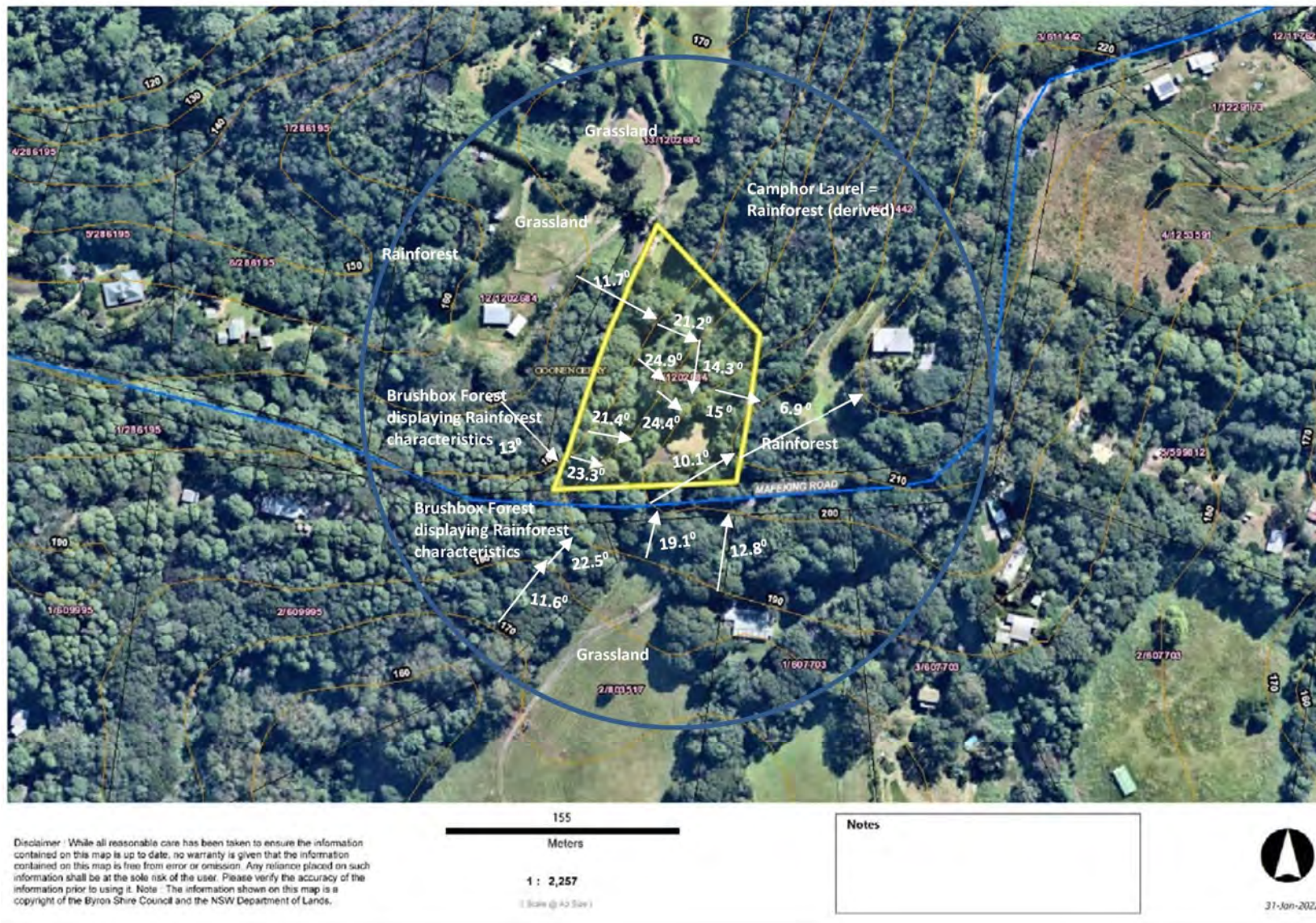


**Plate 13.** Rainforest understorey on the downslope to the south leading to Mafeking Rd



**Figure 3.** DP plan (1202684) for Lot 11 showing the approved building envelope (E). The whole DP and the s.88B instrument are provided as Appendix A

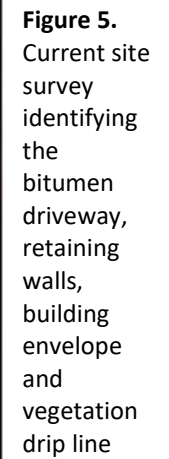




**Figure 4.** Subject site (yellow boundary), Site Assessment area (blue circle), Vegetation and managed land, Slope analysis using 10m contour intervals (arrows points up the slope) and field verified using Nikon Laser Rangefinder - assessment undertaken 01/02/2022. Source: BSC Intramaps







### 1.3 Proposed Development

It is proposed to construct a dwelling within the prescribed dwelling envelope identified in Figs. 3 & 5. The proposed residential dwelling will include three bedrooms and a carport. It will be built on a slab and entail concrete flat roof, concrete filled block columns, Axon and FC cladding, Modwood Flame shield deck as shown on the detailed plans reproduced in Appendix B.

As a result of this assessment, the following is to be implemented:

1. The dwelling will need to be constructed to meet BAL 29 requirements for northern & eastern elevations and BAL 40 requirements for southern and western elevations as per AS3959:2018 Construction of buildings in bush fire prone land and the additional provisions of s. 7.6 of PBP2019 (see Appendix D).
2. The land surrounding the dwelling (envelope) to the vegetation boundary dripline, as shown in the Fig. 5 Survey Plan will need to be managed in perpetuity as an Inner Protection Area/ Asset Protection Zone. Refer to Appendix C for APZ management requirements.
3. The already approved driveway will accommodate compliant turning area in accordance with Appendix 3 of PBP, as per the dwelling plans reproduced in Appendix B.
4. A 10,000L minimum static water supply (SWS) for firefighting purposes within 4m of the property access is to be provided in the location shown in Appendix B.

### 1.4 Site Topography and Slope

The slope analysis is shown on Fig. 4. Site slope of the Classified vegetation surrounding the future proposed dwelling ranges from upslope to the east to 10-15° downslope to the north, and 10-20° to the south and west, with some sections exceeding 20° downslope. Site Elevation ranges from 180m AHD to the south west to 210m AHD to the south east.

### 1.5 Site & Surrounding Vegetation and Classification

As discussed in s. 1.2 and shown on Fig. 4, the Site consists of an elevated cleared knoll to the south west surrounded by vegetated downslopes to the north, west and south; and upslope to the east. The vegetated slopes consist predominantly of Subtropical Rainforest vegetation. The Site is surrounded by Rainforest vegetation to the north and east, and Brushbox Forest with dense rainforest understorey to the west and south west. To the north west and south beyond Mafeking Rd are cleared grassland areas.

Thus, the Classified Vegetation within the 140m assessment area radius (blue boundary) shown on Fig. 3 include:

- Rainforest to the north and east
- Brushbox (*Lophostemon confertus*) Forest to the west and south- this community is classified in the subdivision DA as Forest. However, due to the ongoing regeneration efforts, the Rainforest understorey, mid-storey and overstorey dominate the community and, in the case of a bushfire, the bushfire behaviour would be more akin to a Rainforest bushfire event as opposed to a Forest fire event. In addition, Keith (2004) identifies the Brushbox as indicative species within the main canopy of Subtropical Rainforests.

An impact assessment was undertaken by Ecos Environmental Pty Ltd (August 2010) concerning the ecological impacts of a boundary adjustment and house site proposed for Lot 11, 134 Mafeking Rd Goonengerry. This assessment looked at, among others, the impacts of establishing the asset protection zone (APZ) including impact on regenerating flora and details of APZ tree removal (e.g. species, size, habitat values, hollows, trees remaining etc). The impact assessment found that only up to 5 Brushbox trees had to be removed to fulfil the APZ function intent. Since the subdivision was granted it is assumed that the impact of implementing the required APZ was deemed acceptable.



Importantly, no further vegetation can be cleared as the subdivision consent also mandated protection and regeneration of the vegetation beyond the identified vegetation dripline, as shown on Fig. 5. Therefore, apart from the impact previously identified and mitigated by the implementation of an ongoing bush regeneration program, there are no other significant environmental features at the Site.

## 1.6. Risk Assessment and Consultant Qualifications

The proposal is surrounded by Rainforest vegetation, Mafeking Road and Grassland further to the south. Accordingly, the potential bushfire hazard is considered to be a medium to high bushfire risk. This report has been prepared by Paola Rickard.

The Fire Protection Association Australia (FPA) **has in place the Bushfire Planning and Design Accreditation Scheme (BPAD), which is recognised by the NSW Rural Fires Services (RFS).** Paola Rickard is a **BPAD - Level 3 Accredited Practitioner** (Accreditation no. BPAD 21855) and is listed on the FPA Australia web site register.

BPAD- Level 3 Accredited Practitioner can perform the following:

- *BPAD- Level 3 (Performance) recognises practitioners who develop planning, development and building applications by developing alternative design solutions to the prescribed bushfire management measures (excluding construction provisions) in accordance with local regulatory requirements in additions to the activities prescribed for Level 1 and Level 2 practitioners*

Paola holds a Graduate Diploma in Design for Bush Fire Prone Areas with Distinction from the University of Western Sydney and is a bronze corporate member of the Fire Protection Association Australia (FPA Australia). She is a participating member of the FPA Technical Advisory Committee (TAC) /20 Bushfire Safety. The TAC provides a nationally focussed forum for discussion between practitioners, fire services and regulators on the design and construction of property in areas prone to bushfires.

From 2015 to 2019, Paola was appointed as a BPAD member to the NSW Bushfire Working Group (NSWBWG) set up by FPA Australia. The NSWBWG provide a forum to discuss the application, interpretation and periodic review of NSW Government-based bushfire related regulatory requirements governing land use planning and building construction in areas subject to bushfire impact.

Paola also holds a Bachelor Degree in Applied Science, a Certificate in Bushland Regeneration, and is a member of the Australian Association Bush Regenerators. She has over 18 years of experience in flora surveys and vegetation management issues, and has been undertaking bushfire assessments since 2003.

Paola has attended the “NSW Consulting Planners Bushfire Training Course” in Sydney in 2003 and has attended the “Planning for Bushfire Protection Short Course” held by the University of Technologies (UTS) Sydney in 2007. She has obtained certification for the short course. In November 2010, Paola attended the “One-day Planning for Bushfire Prone Areas Update Course” conducted by the Centre for Local Government UTS, Sydney. Additionally, Paola has a ‘Basic Bush Fire Awareness’ certificate and has experience in fire control and planning while living on a rural land sharing community.



## 2. Bushfire Protection Measures for Residential Infill Development

### 2.1 Introduction

As noted in s.1.1, the provisions of PBP 2019 are applied to this proposal. PBP states that it must be demonstrated that the proposal satisfies the broad aim and objective of PBP, the specific objectives for the development type, and the performance criteria for the various proposed Bushfire Protection Measures (BPMs).

More specifically the objectives for ‘infill development’ (PBP Chapter 7) are:

- *provide a defensible space to enable unimpeded access for firefighting around the building;*
- *provide better bush fire outcomes on a redevelopment site than currently exists, commensurate with the scale of works proposed;*
- *design and construct buildings commensurate with the bush fire risk;*
- *provide access, services and landscaping to aid firefighting operations;*
- *not impose an increased bush fire management and maintenance responsibility on adjoining land owners; and*
- *increase the level of bush fire protection to existing dwellings based on the scale of the of the proposed work and level of bush fire risk*

The relevant BPMs criteria, acceptable solutions or performance - based solution with regard to Infill Development and Increased Residential Densities applicable to the proposed secondary dwelling are discussed in sections 2.2 to 2.4.

**Intent of measures:** to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities.

### 2.2 Asset Protection Zones/Separation Distance

Asset Protection Zones (APZs) are buffer areas between development and a bushfire hazard, which aim to protect human life and property. The APZ comprises an Inner Protection Area (IPA) and an Outer Protection Area (OPA). These areas are to be managed to reduce the bushfire hazard. Guidance concerning the general requirements for APZs and appropriate landscaping and property maintenance is provided in Appendix C of this report.

As noted, the Classified Vegetation is Rainforest, which is considered the potentially hazardous vegetation when determining the applicable APZ and Bushfire Attack Level for the Site. The vegetation and the slopes of the classified vegetation is shown on Fig. 4. Note that PBP requires assessment of vegetation formation within 140m of site or asset only.

The APZ is to be provided in accordance with the minimum APZ distances detailed in Tables A1.12.2 or A1.12.3 in Appendix 1 (PBP 2019). Since Byron Shire Council is located in FFDI 80 area, Table A1.12.3 is to be utilised. Similarly, when determining the applicable Bushfire Attack Level (BAL), Table A1.12.6 (PBP 2019) is to be utilised.

As discussed in s.1.2, review of the Development Application (DA10.2009.385.3) process that lead to the creation of this subdivision has been undertaken and the following was uncovered:

- There is a restriction on the title specifying the building envelope - Portion of the DP plan is reproduced as Fig. 3 and the whole DP and the s.88B instrument are provided as Appendix A

- The construction standards for the building have been specified, requiring the dwelling to be constructed to a minimum Construction Standard under AS3959 – Construction of Buildings in Bushfire Prone Areas as follows:
  - West and South – BAL-40
  - North and East – BAL-29
- The APZ seemed to have been acknowledged by virtue of mandating the binding envelope in a specific location and ensuring that no further clearing outside of the allowed footprint (i.e. the existing clearing) can occur

Accordingly, the land surrounding the dwelling (envelope) to the vegetation boundary dripline, as shown in Survey Plan (Fig. 5) will need to be managed in perpetuity as an APZ.

Construction Standards applicable to the proposed dwelling are further discussed in s.2.3 & s.2.3.2. Guidance concerning the general requirements for APZs and appropriate landscaping and property maintenance is provided in Appendix C of this report. Specifically, the provisions detailed in Table 1 are to be complied with.

**Table 1.** Performance criteria for landscaping (as per Table 7.4a of PBP)

Performance Criteria	Acceptable Solutions	Compliance
Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions	<ul style="list-style-type: none"> <li>• compliance with the NSW RFS ‘Asset protection zone standards’ (see Appendix 4 of PBP 2019);</li> <li>• a clear area of low-cut lawn or pavement is maintained adjacent to the house</li> <li>• the APZ is maintained as mown area with grass heights less than 100m (Table 7.9a grassland deeming provisions);</li> <li>• fencing is constructed in accordance with section 7.6; and</li> <li>• trees and shrubs are located so that:               <ul style="list-style-type: none"> <li>○ the branches will not overhang the roof;</li> <li>○ the tree canopy is not continuous; and</li> <li>○ any proposed windbreak is located on the elevation from which fires are likely to approach.</li> </ul> </li> </ul>	<p>Landscaping around the proposed dwelling will comply with requirements.</p> <p>No new fences are proposed.</p> <p>Future landscaping will comply with prescriptions</p>

In summary, the PBP performance requirements for APZs for infill development are that a defensible space is provided onsite and an APZ is provided and maintained for the life of the development. The proposal achieves both of these performance requirements.

## 2.3 Construction Standards

### 2.3.1 Construction Standards - General

According to PBP 2019, the National Construction Code (NCC) is a performance-based code which comprises the Building Code of Australia (BCA) as Volumes 1 and 2 and the Plumbing Code of Australia as Volume 3. The NCC contains performance requirements and Deemed-to-Satisfy provisions relating to the construction of buildings in bush fire prone areas. In NSW, these provisions apply to Class 1, 2 and 3 buildings, Class 4 parts of a building, Class 9 buildings that are SFPPs, and associated Class 10a buildings and decks.

The construction requirements of AS3959:2018 Construction of buildings in bush fire prone land the NASH Standard: Steel Framed Construction in Bushfire Areas 2014 are a Deemed-to-Satisfy (DtS) solution in the NCC, as varied in NSW, for buildings in designated bush fire prone areas.

Appendix 1 of PBP 2019 provides the required methodology for calculating the building construction standards referred to in AS3959 (Method 2) and the NASH Standard as bush fire attack levels (BALs). The level of building construction standard required is based on the FDI, type of vegetation, the effective slope and the size of APZ. The category of bushfire attack for the relevant FFDI (FFDI 80 applies to this proposal) depends on the vegetation formation of the hazard and the distance from the hazard. Set back distance to a given vegetation increases with slope steepness and available fuel load because slope and fuel load are determining factors in calculating fire intensity. Additionally, when flame characteristics are computed with slope, distance and height of radiation receiving point, the Radiant Heat Flux can be calculated for a receiver.

Thus, setback distances can be calculated to achieve a given Radiant Heat Flux threshold. The applicable Bushfire Attack Levels or BALs are as follows:

- ❖ **BAL-LOW** = risk is **very low**; no specific construction requirements
- ❖ **BAL-12.5** = risk is **low**, there is a risk of ember attack; construction elements are expected to be exposed to a radiant heat flux not greater than 12.5kW/m<sup>2</sup>
- ❖ **BAL-19** = risk is **moderate**, there is a risk of ember attack and burning debris ignited by windborne embers, and a likelihood of exposure to radiant heat; construction elements are expected to be exposed to a radiant heat flux not greater than 19kW/m<sup>2</sup>
- ❖ **BAL-29** = risk is **high**, there is an increased risk of ember attack and burning debris ignited by windborne embers, and a likelihood of exposure to an increased level of radiant heat; construction elements are expected to be exposed to a radiant heat flux not greater than 29kW/m<sup>2</sup>
- ❖ **BAL-40** = risk is **very high**, there is a much-increased risk of ember attack and burning debris ignited by windborne embers, and a likelihood of exposure to a high level of radiant heat, and some likelihood of direct exposure to flames from the fire front; construction elements are expected to be exposed to a radiant heat flux not greater than 40kW/m<sup>2</sup>
- ❖ **BAL-FZ** = risk is **extreme**. The flame zone is the area that has significant potential for sustained flame contact during a bush fire. The flame zone is determined by the calculated distance at which the radiant heat of the design fire exceeds 40kW/m<sup>2</sup>. The NCC references AS 3959 and the NASH Standard. **The NSW variation to the NCC excludes both AS 3959 and the NASH Standard as a Deemed to Satisfy solution for buildings that are required to be constructed to BAL-FZ as defined in AS 3959.**

### 2.3.2 Construction Standards - Prescribed

The Construction Standards Performance Criteria and acceptable solutions as per Table 7.4a of PBP 2019 are presented in Table 2. Compliance with acceptable solutions has been noted as applicable.

**Table 2.** Performance criteria for construction standards (as per Table 7.4a of PBP)

Performance Criteria	Acceptable Solutions	Compliance
The proposed building can withstand bush fire attack in the form of embers, radiant heat and flame contact.	BAL is determined in accordance with Tables A1.12.5 to A1.12.7; and	The approved building enveloped, as shown on Figs. 2 & 3, has been enshrined in the DP plan and restrictive covenants been placed on the title ensuring that the following is implemented (see Appendix A): <ul style="list-style-type: none"> <li>Item 8.1. 'No Dwelling shall be erected upon the subject Lot except within the area</li> </ul>



Performance Criteria	Acceptable Solutions	Compliance
	<p>construction provided in accordance with the NCC and as modified by section 7.5* (PBP 2019)</p> <p><i>*note the provisions of PBP s.7.5 are reproduced in Appendix C</i></p>	<p>designated (E) upon the survey Plan'; and</p> <ul style="list-style-type: none"> <li>Item 8.2. 'The dwelling located upon Lot 11 shall be constructed to a minimum Construction Standard under AS3959 – Construction of Buildings in Bushfire Prone Areas as follows:</li> <li><b>West and South – BAL 40</b></li> <li><b>North and East – BAL 29</b></li> </ul> <p>Additional construction requirements detailed in Appendix D are to be implemented</p> <p>The plans shown in Appendix B do not provide a full schedule of construction elements specifications to meet the standard. Nevertheless, full compliance with BAL 40* and BAL 29 and additional requirements are to be demonstrated in order to obtain the occupation certificate.</p> <p><b>*Importantly, BAL 40 components may be subject to flame contact and thus require specifically tested systems (or systems that have tested in accordance with required standard)</b></p>
Proposed fences and gates are designed to minimise the spread of bush fire.	<p>fencing and gates are constructed in accordance with section 7.6 (PBP 2019), namely:</p> <ul style="list-style-type: none"> <li>all fences in bush fire prone areas should be made of either hardwood or non-combustible material.</li> <li>However, in circumstances where the fence is within 6m of a building or in areas of BAL-29 or greater, they should be made of non-combustible material only</li> </ul>	<p>No new fences are proposed. However, if the boundary fences are to be replaced, they shall be made of non-combustible material</p>
Proposed Class 10a buildings are designed to minimise the spread of bush fire.	<p>Class 10a buildings are constructed in accordance with section 8.3.2, namely:</p> <ul style="list-style-type: none"> <li>There is no bush fire protection requirements for Class 10a buildings located more than 6m from a dwelling in bush fire prone areas.</li> <li>Where a Class 10a building is located within 6m of a dwelling it must be constructed in accordance with the NCC</li> </ul>	<p>Carport is integrated within dwelling and will meet the respective BAL</p>





## 2.4 Access

The Site is directly accessed from Mafeking Road to the south, which is a public through road. Property access roads need to comply with provisions specified in Table 7.4a of PBP 2019; these are reproduced on Table 3. Compliance with acceptable solutions has been noted as applicable.

**Table 3.** Performance criteria for property access roads (as per Table 7.4a of PBP)

Performance Criteria	Acceptable Solutions	Compliance
Firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.	property access roads are two-wheel drive, all-weather roads.	Yes - the current property access is sealed and meets requirements, which were already prescribed in DA10.2009.385.3 (see Plates 1 to 6)
the capacity of access roads is adequate for firefighting vehicles	the capacity of road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes), bridges and causeways are to clearly indicate load rating	Yes - the capacity of current access comply with requirements. No causeways or bridges are required
There is appropriate access to water supply	<ul style="list-style-type: none"> <li>hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005;</li> <li>There is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.</li> </ul>	<p>N/A</p> <p>Suitable access is proposed for the secondary dwelling as detailed in s.1.3 and Appendix B plans, which will meet the 4m distance to static water supply for a Category 1 fire appliance</p>
<p>Firefighting vehicles can access the dwelling and exit the property safely</p> <p>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.</p>	At least one alternative property access road is provided for individual dwellings or groups of dwellings that are located more than 200 metres from a public through road	The proposed dwelling is located close to Mafeking Rd and well within 200m from that road.
	There are no specific access requirements in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles.	N/A
	In circumstances where this cannot occur, the following requirements apply:	
	<ul style="list-style-type: none"> <li>minimum 4m carriageway width</li> </ul>	The property access has already been constructed to achieve the 4m width
	<ul style="list-style-type: none"> <li>in forest, woodland and heath situations, rural property roads have passing bays every 200m that are 20m long by 2m wide, making a minimum trafficable width of 6m, at the passing bay</li> </ul>	Not applicable as the property access is ~100m long
	<ul style="list-style-type: none"> <li>a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches</li> </ul>	Vertical clearance of 4m to any overhanging obstructions will be complied with



Performance Criteria	Acceptable Solutions	Compliance
	<ul style="list-style-type: none"> <li>property access must provide a suitable turning area in accordance with Appendix 3</li> </ul>	Yes - a compliant turning area in accordance with Appendix 3 of PBP is provided at the dwelling approach, as detailed in Appendix B
	<ul style="list-style-type: none"> <li>Curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress</li> </ul>	Yes - Current property access complies
	<ul style="list-style-type: none"> <li>The minimum distance between inner and outer curves is 6m</li> </ul>	Yes - Current property access complies
	<ul style="list-style-type: none"> <li>The crossfall is not more than 10 degrees.</li> </ul>	Yes - Current property access complies
	<ul style="list-style-type: none"> <li>Maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degree for unsealed roads</li> </ul>	Yes - Current property access complies
	<ul style="list-style-type: none"> <li>A development comprising more than three dwellings has formalised access by dedication of a road and not by right of way</li> </ul>	N/A

In summary, the property access road is deemed to comply with the performance criteria for property access roads as per PBP 2019.

## 2.5 Water, Gas and Electricity Supply

Provision of services to this development will comply with acceptable solutions to address performance criteria of PBP 2019 as shown in Table 4. Notably no reticulated water is provided to the proposed dwelling. Accordingly, only **the applicable water supply provisions are highlighted**.

**Table 4.** Performance criteria for water, gas and electricity supply (as per PBP).

Performance Criteria	Acceptable Solutions
<b>Water supplies</b>	
An adequate water supply is provided for firefighting purposes	<ul style="list-style-type: none"> <li>reticulated water is to be provided to the development, where available; and</li> <li>a static water supply is provided where no reticulated water is available</li> </ul>
water supplies are located at regular intervals; and the water supply is accessible and reliable for firefighting operations	<ul style="list-style-type: none"> <li>fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2005;</li> <li>hydrants are not located within any road carriageway; and</li> <li>reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads</li> </ul>
flows and pressure are appropriate	<ul style="list-style-type: none"> <li>fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005.</li> </ul>
the integrity of the water supply is maintained.	<ul style="list-style-type: none"> <li>all above-ground water service pipes external to the building are metal, including and up to any taps</li> </ul>
A static water supply is provided for firefighting purposes in areas where reticulated water is not available.	<ul style="list-style-type: none"> <li>where no reticulated water supply is available, water for firefighting purposes is provided in accordance with Table 5.3d (<b>that means that 10,000/L SWS is to be provided with required storz outlet in the location shown in Appendix B</b>); 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;</li> <li>ball valve and pipes are adequate for water flow and are metal;</li> <li>supply pipes from tank to ball valve have the same bore size to ensure flow volume;</li> <li>underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank;</li> </ul>



Performance Criteria	Acceptable Solutions
	<ul style="list-style-type: none"> <li>• a hardened ground surface for truck access is supplied within 4m;</li> <li>• above-ground tanks are manufactured from concrete or metal;</li> <li>• raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F of AS 3959);</li> <li>• unobstructed access can be provided at all times;</li> <li>• underground tanks are clearly marked;</li> <li>• tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters;</li> <li>• all exposed water pipes external to the building are metal, including any fittings;</li> <li>• where pumps are provided, they are a minimum 5hp or 3kW petrol or diesel-powered pump, and are shielded against bush fire attack; any hose and reel for firefighting connected to the pump shall be 19mm internal diameter; and</li> <li>• fire hose reels are constructed in accordance with AS/NZS 1221:1997, and installed in accordance with the relevant clauses of AS 2441:2005.</li> </ul>
<b>Electricity Services</b>	
Location of electricity services limits the possibility of ignition of surrounding bushland or the fabric of buildings.	<ul style="list-style-type: none"> <li>• Where practicable, electrical transmission lines are underground.</li> <li>• Where overhead electrical transmission lines are proposed: <ul style="list-style-type: none"> <li>○ lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and</li> <li>○ no part of a tree is closer to a power line than the distance set out in accordance with the specifications in ISSC3 <i>Guideline for Managing Vegetation Near Power Lines</i>.</li> </ul> </li> </ul>
<b>Gas Services</b>	
Location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	<ul style="list-style-type: none"> <li>• Reticulated or bottled is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities and metal piping is to be used.</li> <li>• All fixed gas cylinders are kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side.</li> <li>• connections to and from gas cylinders are metal;</li> <li>• polymer-sheathed flexible gas supply lines are not used; and</li> <li>• above-ground gas service pipes are metal, including and up to any outlets.</li> </ul>





### 3. Conclusion & Recommendations

This Bushfire Assessment report has been prepared by Land & Fire Assessments Pty Ltd in accordance with the relevant provisions of PBP 2019 on behalf of Ted & Tanya Nabung for Lot 11 DP1202684, 132 Mafeking Road, Goonengerry. Specifically, **it is proposed to achieve Byron Shire Council development consent for construction of new residential dwelling.**

PBP states that it must be demonstrated that the proposal satisfies the broad aim and objective of PBP, the specific objectives for the development type and the performance criteria for the various proposed Bushfire Protection Measures (BPMs). Specifically, it was found that:

- The DA consent (10.2009.385.3) for the subdivision that created Lot 11 DP1202684 prescribed a number of consent conditions that were subsequently enshrined on the title via Section 88B Instrument covenants. In particular, the building envelope and the construction standards were specified as conditions of the subdivision consent.
- The approved building envelope, as shown in Appendix A, has accordingly been enshrined in the DP plan and restrictive covenants been placed on the title ensuring that the following is implemented:
  - Item 8.1. 'No Dwelling shall be erected upon the subject Lot except within the area designated (E) upon the survey Plan'; and
  - Item 8.2. 'The dwelling located upon Lot 11 shall be constructed to a minimum Construction Standard under AS3959 – Construction of Buildings in Bushfire Prone Areas as follows:
    - West and South – BAL- 40
    - North and East – BAL-29'
- The APZ seemed to have been acknowledged by virtue of mandating the building envelope in a specific location and ensuring that no further clearing outside of the allowed footprint (i.e. the existing clearing) can occur. In addition, further requirements were placed in order to obtain the subdivision certificate. In particular, the requirement to prepare a Vegetation Management Plan, which is relevant on the implementation of the required Asset Protection Zones (APZ)
- The property access requirements were also prescribed and were implemented in order to obtain the subdivision certificate

Thus, this assessment demonstrates that if the provisions outlined in this report and summarised as follows are implemented, the proposed development **complies with the specific objectives for the development type (i.e. Chapter 7 for Infill Development) and the performance criteria for the various proposed Bushfire Protection Measures in accordance with PBP (2019).**

#### Recommended Bushfire Compliance Consent Conditions:

1. The proposal shall comply with the layout as outlined on the Appendix B Plans; and
2. **Asset Protection Zone -**
  - a. The land surrounding the dwelling (envelope) to the vegetation boundary dripline, as shown in the Fig. 5 Survey Plan will need to be managed in perpetuity as an Inner Protection Area/ Asset Protection Zone; and
  - b. The owner of the lot with an APZ/IPA shall:
    - i. ensure that the presence of fuel, which could become involved in a fire is minimised within the IPA; and
    - ii. be maintained as a mown area with grass heights less than 100mm; and
    - iii. remove all fine fuel at ground level which could be set alight by bushfire from within the inner protection area; and
    - iv. ensure that all plants and trees within the inner protection area:
      1. are located at least 2m from any part of the roofline of a dwelling and do not touch or overhang any building so that they will not ignite any building by direct flame contact or radiated heat emission; and



2. are well spread out and do not form a continuous canopy; and
  3. are not species that retain dead material or deposit excessive quantities of ground fuel in a short period; and
  4. garden beds of flammable shrubs are not located under trees and are no closer than 10m from an exposed window or door; and
  - v. ensure that no wood piles, large quantities of garden mulch or stacked flammable building materials are kept within the inner protection area; and
  - vi. shall maintain the inner protection area in perpetuity to ensure that:
    1. all trees are maintained so that a continuous canopy is not formed; and
    2. all trees have the lower limbs removed up to a height of 2m, and
    3. all regrowth of shrubs and bushes is regularly pruned back; and
    4. the IPA is regularly mowed and cleared of all fallen branches and leaf build up.
- 3. Construction Standards -**
- a. The dwelling will need to be constructed to meet BAL 29 requirements for northern & eastern elevations and BAL 40 requirements for southern and western elevations as per AS3959:2018 Construction of buildings in bush fire prone land and the additional provisions of s. 7.6 of PBP2019 (see Appendix D); and
  - b. The proposed dwelling plans shown in Appendix B do not provide schedule of construction elements specifications to meet the standard. Nevertheless, **full compliance with BAL 40\* and BAL 29 and additional requirements must be prescribed in the conditions of consent**, which will need to be complied with in order to obtain the required Occupation Certificate. **The NSW additional provisions, which apply to certain construction elements for the lower levels and for sarking for all BAL levels must also be complied with (refer to Appendix D).**
  - a. **\*Importantly, BAL 40 components may be subject to flame contact and thus require specifically tested systems (or systems that have tested in accordance with required standard); and**
- 4. Access -**
- a. The property access is to comply with the relevant requirements for property access roads as detailed on Table 3 including a compliant turning area in accordance with Appendix 3 of PBP, as shown on Appendix B Plans; and
- 5. Water Supply**
- a. Water supply provision is to comply with the relevant requirements set on Table 4, including provision of 10,000L static water supply

Furthermore, although this proposal complies with most of the acceptable solutions outlined in Chapter 7 of PBP, consultation by the consent authority with the Rural Fire Service is recommended in regard to the BAL 40 construction components.



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# Appendices

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## Appendix A – Deposited Plan and 88B Instrument



## CERTIFICATE ORDER SUMMARY

### Transaction Details

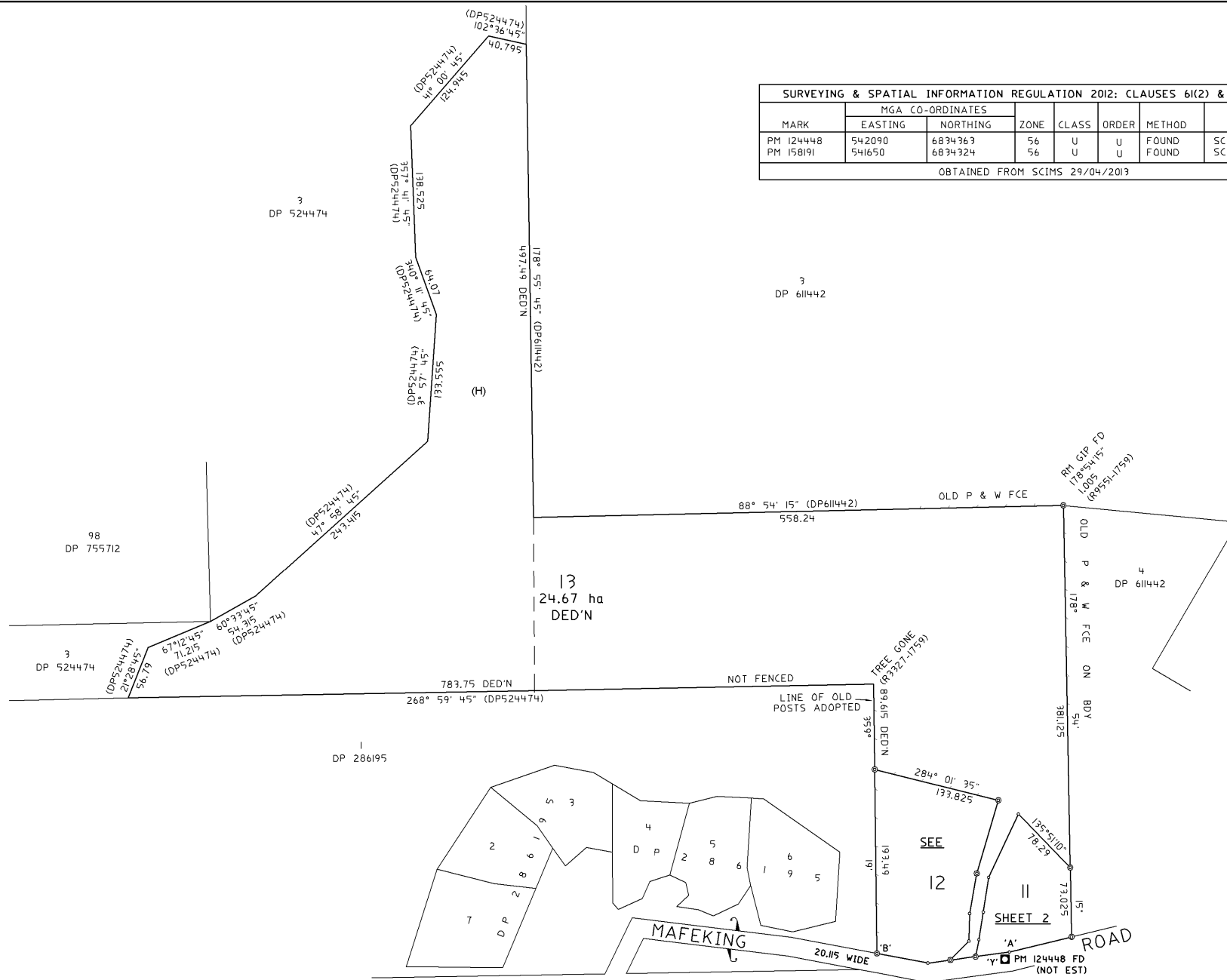
Date: 04/05/2022 11:15  
Order No. 72577431  
Certificate No: 111548220  
Your Reference: 0256 - Mafeking Rd  
Certificate Ordered: NSW LRS - Copy of Plan - Deposited Plan 1202684  
Available: Y  
Size (KB): 165  
Number of Pages: 4  
Scan Date and Time: 25/11/2014 12:00

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SURVEYING & SPATIAL INFORMATION REGULATION 2012: CLAUSES 61(2) & 35(D)(B)							
MARK	MGA CO-ORDINATES		ZONE	CLASS	ORDER	METHOD	ORIGIN
	EASTING	NORTHING					
PM 124448	542090	6834363	56	U	U	FOUND	SCIMS
PM 158191	541650	6834324	56	U	U	FOUND	SCIMS
OBTAINED FROM SCIMS 29/04/2013							



(H) Benefited by Right of Carriageway 10.06 wide - see J144876 (DP524474)

PM 158191 FD ■ 'X'  
(NOT EST)

## CONNECTIONS

'X' - 'Y'  
PM 158191 - PM 124448  
80°59'02" 447.925 ME & DP286195

PM 124448 - 'A'  
39°10' 7.295

PM 158191 - 'B'  
76°25'30" 316.745 ME & DP286195

Surveyor: GLEN JOHN HEATH  
Date of Survey: 29/04/2013  
Surveyor's Ref: HMI3006-1A

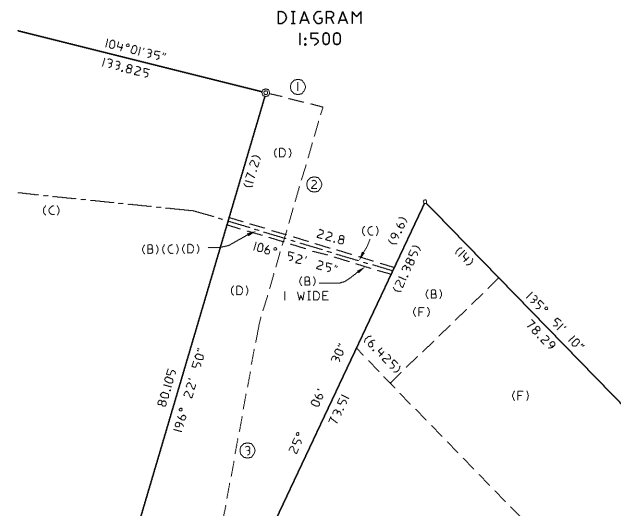
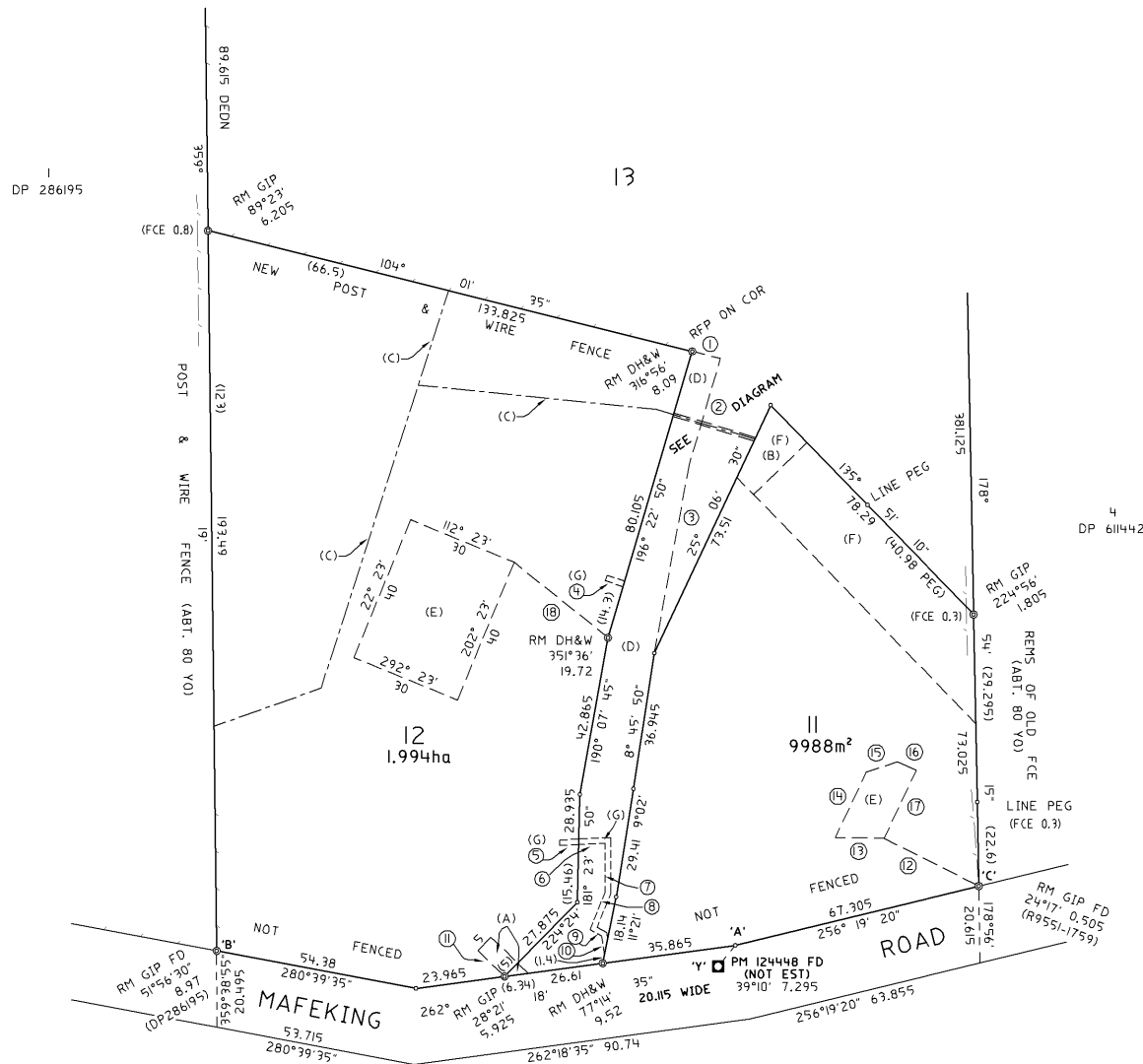
PLAN OF SUBDIVISION OF LOT 1  
IN DP 128685, LOT 2 IN  
DP 524474 & LOT 66 IN DP 755712

LGA: BYRON  
Locality: GOONENGERRY  
Subdivision No. 13/14  
Lengths are in metres. Reduction Ratio 1: 3000



Registered  
24.11.2014

DP1202684



SCHEDULE OF SHORT BOUNDARIES

No	BEARING	DISTANCE
1	104°01'35"	7.795
2	196°22'50"	30
3	190°25'10"	51.165
4	289°00'	5
5	87°00'	5
6	87°00'	7.18
7	180°00'	13
8	202°00'	11
9	118°00'	3.5
10	174°00'	6
11	314°24'	10
12	296°37'20"	28.52
13	270°59'	13.13
14	25°25'30"	19.42
15	71°44'30"	8.815
16	114°03'	5.45
17	205°02'40"	20.205
18	308°50'20"	32.3

'B' - 'C' 85°07'50" 205.24 ME &amp; DP 286195

- (A) EASEMENT FOR DRAINAGE OF WATER 5 WIDE.  
(B) EASEMENT FOR UNDERGROUND POWERLINES 1 WIDE & 20 WIDE.  
(C) EASEMENT FOR SERVICES OVER EXISTING LINE OF CABLES.  
APPROXIMATE POSITION OF CENTRELINE SHOWN AS - - - - -  
(D) RIGHT OF CARRIAGEWAY VARIABLE WIDTH.  
(E) RESTRICTION ON USE  
(F) EASEMENT FOR OVERHEAD POWERLINES 20 WIDE.  
(G) EASEMENT FOR DRAINAGE OF WATER 1.5 WIDE.

Surveyor: GLEN JOHN HEATH  
Date of Survey: 29/04/2013  
Surveyor's Ref: HMI3006-IA

PLAN OF SUBDIVISION OF LOT 1  
IN DP 128685, LOT 2 IN  
DP 524474 & LOT 66 IN DP 755712

LGA: BYRON  
Locality: GOONENGERRY  
Subdivision No. 13/14

Lengths are in metres. Reduction Ratio 1: 1000

Registered  
24.11.2014

DP1202684


PLAN FORM 6 (2012)

WARNING: Creasing or folding will lead to rejection

ePlan

# DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 2 sheet(s)

<p>Registered:  24.11.2014</p> <p>Title System: TORRENS</p> <p>Purpose: SUBDIVISION</p>	<p>Office Use Only</p> <p>Office Use Only</p> <p><b>DP1202684</b></p>
<p>PLAN OF SUBDIVISION OF LOT 1 IN DP 128685, LOT 2 IN DP 524474 &amp; LOT 66 IN DP 755712</p>	<p>LGA: BYRON</p> <p>Locality: GOONENGERRY</p> <p>Parish: JASPER</p> <p>County: ROUS</p>
<p>Crown Lands NSW/Western Lands Office Approval</p> <p>I, ..... (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.</p> <p>Signature: .....</p> <p>Date: .....</p> <p>File Number: .....</p> <p>Office: .....</p>	<p>Survey Certificate</p> <p>I, <u>GLEN JOHN HEATH</u> of <u>HEATH &amp; McPHAIL PTY LTD</u> <u>PO BOX 502 THE CHANNON NSW 2480</u> a surveyor registered under the <i>Surveying and Spatial Information Act</i> 2002, certify that:</p> <p><del>*(a) The land shown in the plan was surveyed in accordance with the</del> <del><i>Surveying and Spatial Information Regulation 2012</i>, is accurate</del> <del>and the survey was completed on .....</del></p> <p><del>*(b) The part of the land shown in the plan (*being/*excluding A.....</del> <del><u>LOT 11 &amp; 12 AND CONNECTIONS</u>..... )</del> was surveyed in accordance with the <i>Surveying and Spatial</i> <i>Information Regulation 2012</i>, is accurate and the survey was completed on, <u>29/04/2013</u> the part not surveyed was compiled in accordance with that Regulation.</p> <p><del>*(c) The land shown in this plan was compiled in accordance with the</del> <del><i>Surveying and Spatial Information Regulation 2012</i>.</del></p> <p>Signature: <u>Glen Heath</u> Dated: <u>18/10/13</u></p> <p>Surveyor ID: <u>1278</u></p> <p>Datum Line: <u>PM158191 - PM124448</u></p> <p>Type: <del>Urban</del> Rural</p> <p>The terrain is <del>*Level-Undulating</del> /<del>*Steep Mountainous</del></p> <p>*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.</p>
<p>Subdivision Certificate</p> <p>I, <u>JOHN LEONARD SAMUELS</u> *Authorised Person/*General Manager/*Accredited Certifier, certify that the provisions of s.109J of the <i>Environmental Planning and</i> <i>Assessment Act 1979</i> have been satisfied in relation to the proposed subdivision, new road or reserve set out herein.</p> <p>Signature: <u>[Signature]</u></p> <p>Accreditation number: .....</p> <p>Consent Authority: <u>BYRON SHIRE COUNCIL</u></p> <p>Date of endorsement: <u>20.3.2014</u></p> <p>Subdivision Certificate number: <u>13/14</u></p> <p>File number: <u>15-2009-385-1</u></p> <p>*Strike through if inapplicable.</p>	<p>Plans used in the preparation of survey/compilation.</p> <p>DP 128685 DP 286195 DP 524474 DP 611442 R3327-1759 R9551-1759 R9784-1603</p> <p>If space is insufficient continue on PLAN FORM 6A</p>
<p>Statements of intention to dedicate public roads, public reserves and drainage reserves.</p> <p>Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A</p>	<p>Surveyor's Reference: HMI3006-1A</p>



DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 2 of 2 sheet(s)

Registered: 24.11.2014

Office Use Only

Office Use Only

DP1202684

PLAN OF SUBDIVISION OF LOT 1  
IN DP 128685, LOT 2 IN  
DP 524474 & LOT 66 IN DP 755712

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.

Subdivision Certificate number: 13/14

Date of endorsement: 20.3.2014

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

1. EASEMENT FOR DRAINAGE OF WATER 5 WIDE.
2. EASEMENT FOR DRAINAGE OF WATER 1.5 WIDE.
3. EASEMENT FOR UNDERGROUND POWERLINES 1 WIDE & 20 WIDE.
4. EASEMENT FOR OVERHEAD POWERLINES 20 WIDE.
5. EASEMENT FOR SERVICES OVER EXISTING LINE OF CABLES.
6. RIGHT OF CARRIAGEWAY VARIABLE WIDTH.
7. RESTRICTIONS ON USE.
8. RESTRICTIONS ON USE.

AUSTRALIA AND NEW ZEALAND  
BANKING GROUP LIMITED ACN 11 005  
357 522 by its Attorney under Power of  
Attorney Book No. 4465 No. 246

Sign LAL. N. RAMANAYAKE

Name LAL. RAMANAYAKE

Acting/Manager Securities

Witnessed by:

Sign HIMALI KURUVITAARACHCHI

Name HIMALI KURUVITAARACHCHI

SCHEDULE OF STREET ADDRESSES

LOT	STREET No	STREET NAME	STREET TYPE	LOCALITY
11	132	MAFEKING	ROAD	GOONENGERRY
12	134B	MAFEKING	ROAD	GOONENGERRY
13	134A	MAFEKING	ROAD	GOONENGERRY

R Gray

ROBERT JOHN CLELAND GRAY

If space is insufficient use additional annexure sheet

Surveyor's Reference: HMI3006-1A

Repay

## CERTIFICATE ORDER SUMMARY

### Transaction Details

Date: 04/05/2022 11:15

Order No. 72577431

Certificate No: 111548221

Your Reference: 0256 - Mafeking Rd

Certificate Ordered: NSW LRS - Copy of Plan or Plan Documents - Deposited Plan - 88B 1202684

Available: Y

Size (KB): 100

Number of Pages: 5

Scan Date and Time: 25/11/2014 14:05

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Dye & Durham Property Pty Ltd an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with section 96B(2) of the Real Property Act 1900.

ePlan

**Instrument setting out terms of Easements, Restrictions on Use and Positive Covenants intended to be created or released pursuant to Section 88B Conveyancing Act 1919.**

Lengths are in metres

(Sheet 1 of 5 sheets)

Plan:

Plan of Subdivision covered by Subdivision Certificate

No. 13/14 Dated 20 March 2014

**DP1202684**

**Full name and address  
of the owner of the land:**

**Robert John Gray**  
134 Mafeking Road, GOONENGERRY NSW 2482

**Full name and address of  
mortgagee:**

**Australia and New Zealand Banking Group Limited**, of  
Level 4C, 833 Collins Street, DOCKLANDS VIC 3008.

**Part 1 (Creation)**

Number of item shown in the intention panel on the plan	Identity of easement, restriction or positive covenant to be created and referred to in the plan.	Burdened lot(s) or parcel(s):	Benefited lot(s), road(s), bodies or Prescribed Authorities:
1	Easement for drainage of water 5 wide.	Lots 12 & 13	Byron Shire Council
2	Easement for drainage of water 1.5 wide.	Lot 12 Lot 13	Lot 11 & 13 Lot 11
3	Easement for underground powerlines 1 wide & 20 wide.	Lots 11 & 13	Essential Energy
4	Easement for overhead powerlines 20 wide.	Lot 11	Essential Energy
5	Easement for services over existing line of cables.	Lot 12 Lot 13	Lots 11 & 13 Lot 11
6	Right of Carriageway variable width.	Lot 13	Lot 12
7	Restrictions on use	Lot 11, 12 & 13	Byron Shire Council
8	Restrictions on use	Lot 11 Lot 12	Byron Shire Council Lot 13

*R. Gray*



ePlan

**Instrument setting out terms of Easements, Restrictions on Use and Positive Covenants intended to be created or released pursuant to Section 88B Conveyancing Act 1919.**

Lengths are in metres

(Sheet 2 of 5 sheets)

Plan:

Plan of Subdivision covered by Subdivision Certificate

No. 13114 Dated 20 March 2014

**DP1202684**

**Part 2 (Terms)**

3. Terms of Easement for Underground Powerlines 1 wide & 20 wide thirdly referred to in abovementioned plan.

The terms as stated in Part B of Essential Energy memorandum AG189384 shall be used.

4. Terms of Easement for Overhead Powerlines 20 wide fourthly referred to in abovementioned plan.

The terms as stated in Part A of Essential Energy memorandum AG189384 shall be used.

6. Terms of Right of Carriageway Variable width sixthly referred to in abovementioned plan

The terms as stipulated in Schedule 8 of the Conveyancing Act 1919 shall be used.

In addition to the above terms the cost of maintenance and repairs to the access driveway shall be split evenly between the burdened and benefitted lots.

7. Terms of Restrictions on Use seventhly referred to in abovementioned plan

No cats or dogs of any kind shall be raised, bred or kept upon the subject land or any part thereof.

8. Terms of Restrictions on Use eighthly referred to in abovementioned plan

1. No dwelling shall be erected upon the subject Lot except within the area designated (E) upon the survey plan.

2. The dwelling located upon Lot 11 shall be constructed to a minimum Construction Standard under AS3959 - Construction of Buildings in Bushfire Prone Areas as follows:

- West and South - BAL - 40
- North and East - BAL - 29

*Alfay*

ePlan

**Instrument setting out terms of Easements, Restrictions on Use and Positive Covenants intended to be created or released pursuant to Section 88B Conveyancing Act 1919.**

Lengths are in metres

(Sheet 3 of 5 sheets)

Plan:

Plan of Subdivision covered by Subdivision Certificate

**DP1202684**

No.13/14 Dated 20 March 2014

Name of entity empowered to release, vary or modify the restriction on use seventhly referred to in the abovementioned plan.

Byron Shire Council

Name of entity empowered to release, vary or modify the restriction on use eighthly referred to in the abovementioned plan.

The prescribed Authority or owner of the Lot benefited at that time.

SIGNED in my presence  
by **Robert John Gray** who is personally known  
to me:



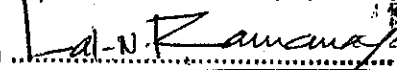
Signature of Proprietor

  
Signature of Witness

**BRIAN BENE**  
Name of Witness (BLOCK LETTERS)

AUSTRALIA AND NEW ZEALAND  
BANKING GROUP LIMITED ACN 11 005  
357 522 by its Attorney under Power of  
Attorney Book No. 4465 No. 246

Executed by the Australia and New Zealand Banking Group Limited  
by the authorised persons whose signatures )  
appears below pursuant to Section 127 )  
of the Corporations Act 2001. )

  
Name **LAL N. RAMANAYAKE**  
Acting/Manager Securities

Signature of authorised person:

Witnessed by:  
Signature of authorised person:

Sign 

Name of authorised person:

Name of authorised person

Name **DAVID DUNN**

4/833 Collins Street, Dockland, 3008

Position of authorised officer

Position of authorised officer



ePlan

**Instrument setting out terms of Easements, Restrictions on Use and Positive Covenants Intended to be created or released pursuant to Section 88B Conveyancing Act 1919.**

Lengths are in metres

(Sheet 4 of 5 sheets)

Plan:

Plan of Subdivision covered by Subdivision Certificate

No. 13/14 Dated 20 March 2014

**DP1202684**

Executed by **BYRON SHIRE COUNCIL** by the )  
authorised person whose signature appears )  
below )

  
.....  
Signature of authorised person

JOHN LEONARD SAMUELS  
.....  
Name of authorised person

*R. Gray*



ePlan

**Instrument setting out terms of Easements, Restrictions on Use and Positive Covenants intended to be created or released pursuant to Section 88B Conveyancing Act 1919.**

Lengths are in metres

(Sheet 5 of 5 sheets)

Plan:

Plan of Subdivision covered by Subdivision Certificate

No.13/14 Dated 20 March 2014

**DP1202684**

I certify that the authorised officer of the prescribed authority signing below who is personally known to me or as to whose identity I am otherwise satisfied signed this instrument in my presence.

.....  
Signature of authorised officer

.....  
Signature of Witness

.....  
Name of Authorised officer

.....  
Name of Witness

.....  
Position of authorised officer

.....  
Address of Witness

**EXECUTED BY ESSENTIAL ENERGY**

by its duly appointed attorney under  
power of attorney Book 4641 No. 640  
in the presence of:


  
Signature of attorney

PETER BEREICUA  
GENERAL MANAGER  
NETWORK OPERATIONS  
ESSENTIAL ENERGY  
Name and title of attorney

  
Signature of witness

MICHELLE AKININ  
DIVISIONAL ASSISTANT

ESSENTIAL ENERGY  
Name of witness

  
Signature of attorney

KEN STONESTREET  
CHIEF ENGINEER  
ESSENTIAL ENERGY  
Name and title of attorney

8 Buller Street  
Port Macquarie NSW

REGISTERED



24.11.2014

*AG*

## Appendix B – Proposal Plans



PROPOSED NEW RESIDENCE FOR:

T & T NABUNG

AT: LOT 11 - 132 MAFEKING ROAD  
GOONENGERRY 2482

DRAWING INDEX	
101	Cover Sheet
102.2	3D Perspectives
103	3D Model
104	Location Plan
200	Site Plan
201	Shadow Diagrams
202	Stormwater and erosion management plan
301	Ground Floor Plan
303	Elevations
304	Elevations
305	Section
311	Upper Roof Plan
701	Internal Elevations
801	Electrical Plan - Ground Floor

GENERAL NOTES:

1.

All dimensions in millimetres.
2.

Dimensions take preference to scale and are to structure not finish.
3.

Check and verify dimensions and confirm any existing dimensions marked.
4.

Work shall comply with the National Construction Code and all relevant current Australian Standards. Any outdated Standards listed in these notes are to be taken to refer to the current edition.
5.

Manufacturers specification means a current approved specification for use under the conditions applicable.  
UNO = Unless Noted Otherwise.  
DPC = Damp Proof Course.  
OMP = Outer Most Point.
7.

It is at the Builders discretion to position bulkheads or service panels under floor framing to accommodate plumbing services

SITE WORKS

- a. Site to be excavated and or filled to levels shown.
- b. Footings shall be placed as per builders spec or engineers details.
- c. Footings to found in non-expansive natural material having a minimum allowable bearing capacity of 100kPa.
- d. Ground surface to be sloped 1:20 (min) away from building for 900mm (min) and to a point where ponding will not occur near the building.
- e. Dish drains and ag-pipes to be provided as indicated to facilitate drainage of water away from building into drainage system.

POOL FENCING

All pool fencing shall be a min. 1200mm high and inaccordance with AS 1926.1

RETAINING WALLS

- a. All retaining walls are to comply with Council policy on retaining walls and embankments on residential building sites.
- b. Position of retaining walls may vary and must be verified by builder prior to commencement.
- c.Any variation at construction stage to comply with Council policy.

These plans are to be read in conjunction with any structural and civil engineering computations and drawings

All buildings shall be protected against termite attack in accordance with AS 3660.1 and a durable notice shall be left in the meter box indicating type of barrier and required periodical inspections

Smoke detectors to be hard wired with emergency back-up and comply with AS3786

Wind speed as nominated on bracing plan or soil test

Provide lift-off hinges to WC or open out door or min. 1200mm clearance from door to pan.

All construction materials supplied must take into account proximity to coastal or industrial environments, in accordance with manuf. specifications

These plans are protected by copy right and are the property of the author.

All works shall comply with but not limited to the National Construction Code and the australian standards listed below.

AS 1288 - 2006 GLASS IN BUILDINGS SELECTION AND INSTALLATION

AS 1562 - 2006 DESIGN AND INSTALLATION OF SHEET ROOF AND WALL CLADDING

AS 1684 - 2010 NATIONAL TIMBER FRAMING CODE

AS 2049 - 2002 ROOF TILES

AS 2050 - 2002 INSTALLATION OF ROOF TILES

AS 2870 - 2011 RESIDENTIAL SLAB AND FOOTINGS - CONSTRUCTION

AS /NZS 2904 - 1995 DAMP-PROOF COURSES AND FLASHINGS

AS 3600 - 2009 CONCRETE STRUCTURES

AS 3660 - 2000 BARRIERS FOR SUBTERRANEAN TERMITES

AS 3700 - 2011 MASONRY STRUCTURES

AS 3740 - 2010 WATERPROOFING OF WET AREAS IN RESIDENTIAL BUILDINGS

AS 4055 - 2006 WIND LOADING FOR HOUSES

AS 4100 - 1998 STEEL STUCTURES

CLIENT SIGNATURES:

TILED DECKS:

Tiled decks over livable areas are to be, in the following order over the floor joists - 19mm compressed FC sheet, with one layer of parchem emerproof 750 with a second layer of sand seed with a DFT of 1300 micron, installed to manuf. specifications, and floor tiles over, all corners to have 20mm mastic sealant under parchem emerproof 720

SAFTEY GLAZING TO BE USED IN THE FOLLOWING CASES:

- a. All rooms - within 500mm vertical of the floor
- b. Bathrooms within 1500mm vertical of the floors
- c. Fully glazed doors
- d. Shower screens
- e. Within 300mm of a door and <1200mm above floor level
- f. window sizes are nominal only, actual sizes will vary with manufacturer, flashing all round

STAIR REQUIREMENTS

Min. tread 240mm, Min.riser 115mm, Max. riser 190mm. Space between open treads Max. 125mm. Treads to be a non slip surface. Balustrades : min. 1000mm above landings with max. opening of 125mm and in accordanced with NCC 3.9.1. For stainless steel balustrade, refer to table 3.9.2.1 (Wire balustrade construction - required wire tension and maximum permissible deflection) of the NCC

REINFORCED CONCRETE

- AS PER ENGINEERS DETAILS

BLOCKWORK

- AS PER ENGINEERS DETAILS

BRICKWORK

- a. Brickwork to conform to AS 3700 2011 Masonry in buildings
- b. Walls to have a continuous cavity kept clear of mortar droppings.
- c. Brick foundation walls under timber floors to have vents at 7500 sq mm per metre length of external wall. (Approx. 1 brick sized vent every 2 metres.)
- d. Provide wall ties at 600mm spacings both vertical and horizontal and within 300mm of articulation joints. Brick ties to be galvanised.

STEELWORK

- AS PER ENGINEERS DETAILS

FRAMING TIMBER

- AS PER AS 1684. 2010 National timber framing code

WET AREA SURFACES

- a. Floor surfaces to bath & laundry shall be impervious, with junctions between wall and floor flashed to prevent moisture penetration into walls.
- b. All wet areas to comply with NCC 3.8.1 and AS 3740. Splashbacks shall be impervious for 150mm above sinks, troughs and hand basins within 75mm of the wall.
- c. Ceramic tiles or other approved impervious material to walls above showers to 1800mm min above floor.

LEGEND

WIR	Walk in Robe	SD	Ionisation Smoke Alarm
L'DRY	Laundry	LB	Load Bearing
ENS	Ensuite	CJ	Construction Joint
PWD	Powder Room	AHD	Australian Height Datum
BRM	Broom Cupboard	FFL	Finished Floor Level
UBO	Under Bench Oven	AS	Australian Standards
WO	Wall Oven Tower	BCA	Building Code of Australia
OHC	Over Head Cupboard	TBC	To Be Confirmed
DW	Dishwasher	DEB	Deep Edge Beam
MW	Microwave	LBW	Load Bearing Wall
B.BAR	Breakfast Bar	RL	Relative Level
FW	Floor Waste	NGL	Natural Ground Level
HWS	Hot Water System	DP	Down Pipe
TAP	Ext. 12mm Hose Cock	SHS	Square Hollow Section

DESIGN LOADS

- a. All sizes of timber members deduced from AS 1684
- b. All remaining sizes of items deduced from Australian Domestic Construction Manual or relevant manufacturers specification.
- c. Sizes of timber members may vary upon ordering requirements but must remain within the guidelines of the said reference material.

MATERIALS AND CONSTRUCTION

AS APPLICABLE - REFER DWG FOR MATERIALS USED.

All material shall be new UNO. Reused items to be checked for soundness etc. prior to use.

Cover Sheet

USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY DISCREPENCIES TO ECO ESSENCE HOMES . FAILURE TO DO SO WILL VOID DESIGNERS RESPONSIBILITIES. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS AND NCC.

REAL PROPERTY DESCRIPTION		PROJECT ADDRESS:				CLIENT:		BUILDER:		DESIGN:		ISSUE:		<div><div>Elevation 2</div><div>Elevation 3</div><div>Elevation 4</div><div>Elevation 1</div></div>	
PLAN NUMBER: DP1202684		LOT 11 # 132 Mafeking Road Goonengerry, NSW 2482				T & T NABUNG		<div>Eco-Essence Homes</div>		NEW RESIDENCE		F			
LOCAL AUTH: BYRON SHIRE								ADDRESS: 80 Wommin Bay Road, Chinderah NSW 2487		FACADE:					
AREA: 9988m2		JOB NO: 0256		DATE: 19/10/2022		DRAWN: BC		CHECKED: BC		SCALE:					
										ABN: 16141022371 NSW LIC: 227643C QBCC LIC: 1181578		STAGED PLAN: CONTRACT			



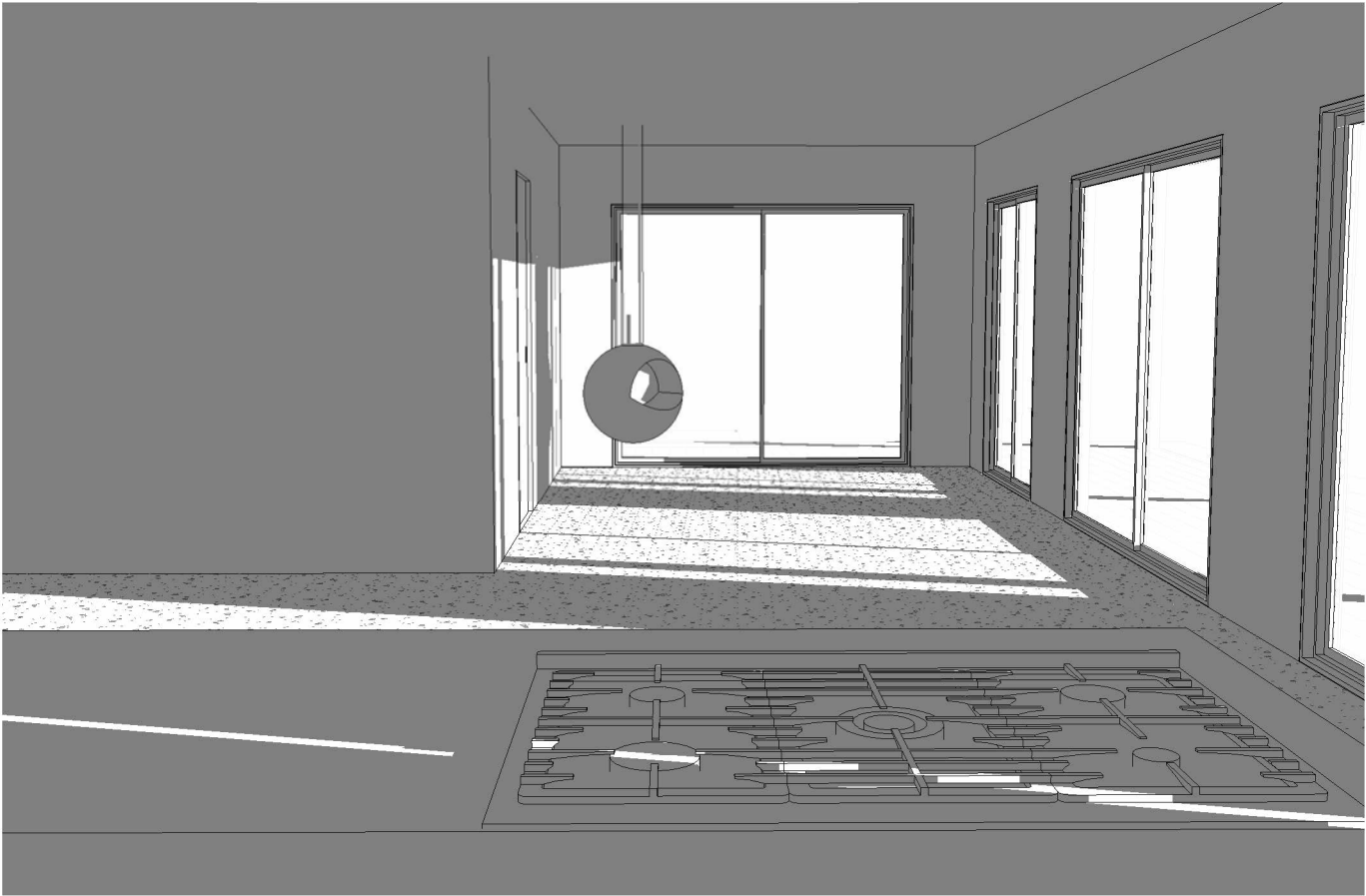


### 3D Perspectives

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							ADDRESS: 80 Wommin Bay Road, Chinderah NSW 2487		FACADE:			C 20/07/22 PRELIMINARY PLANS ISSUED		
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JOB NO: 0256				DATE: 19/10/2022	DRAWN: BC	CHECKED: BC	SCALE:	DWG NO: 102	A3					

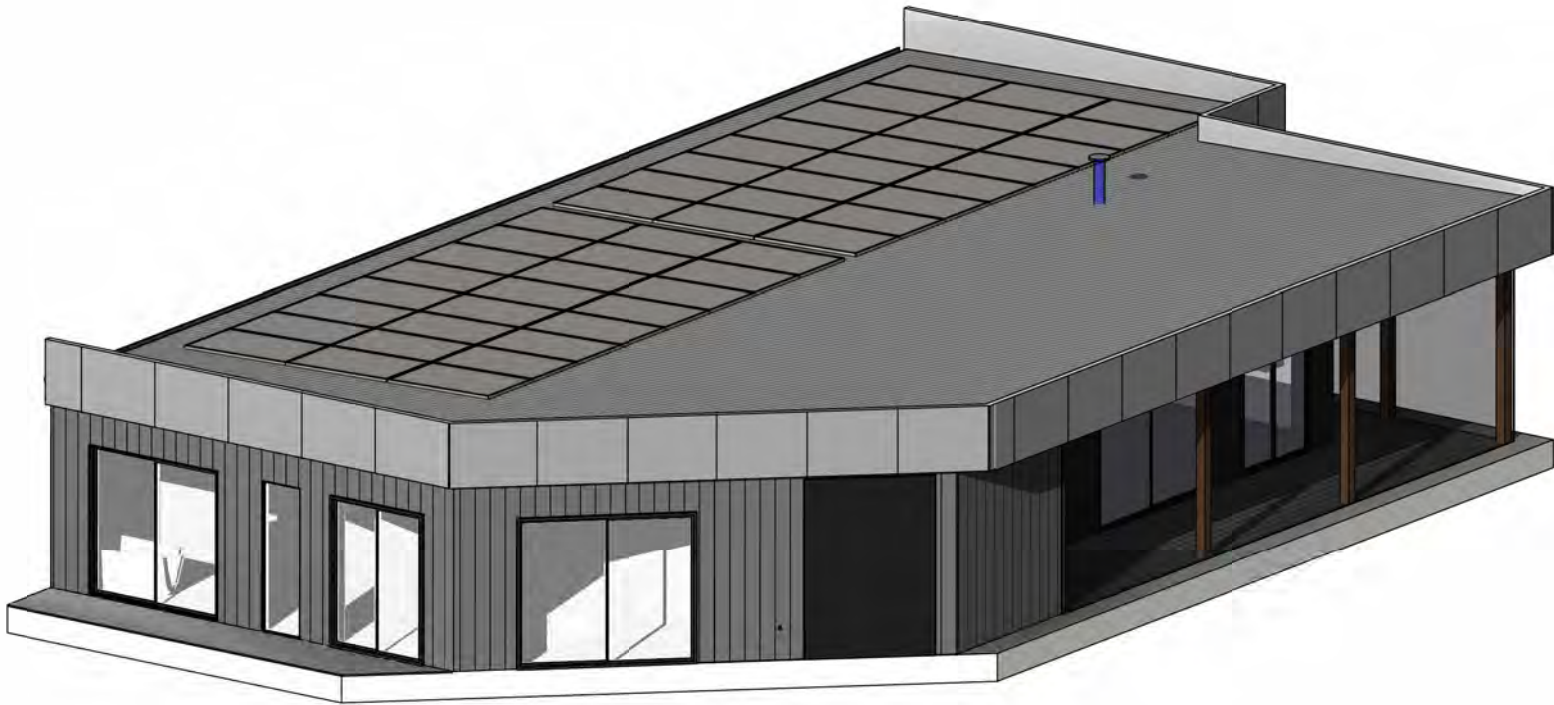
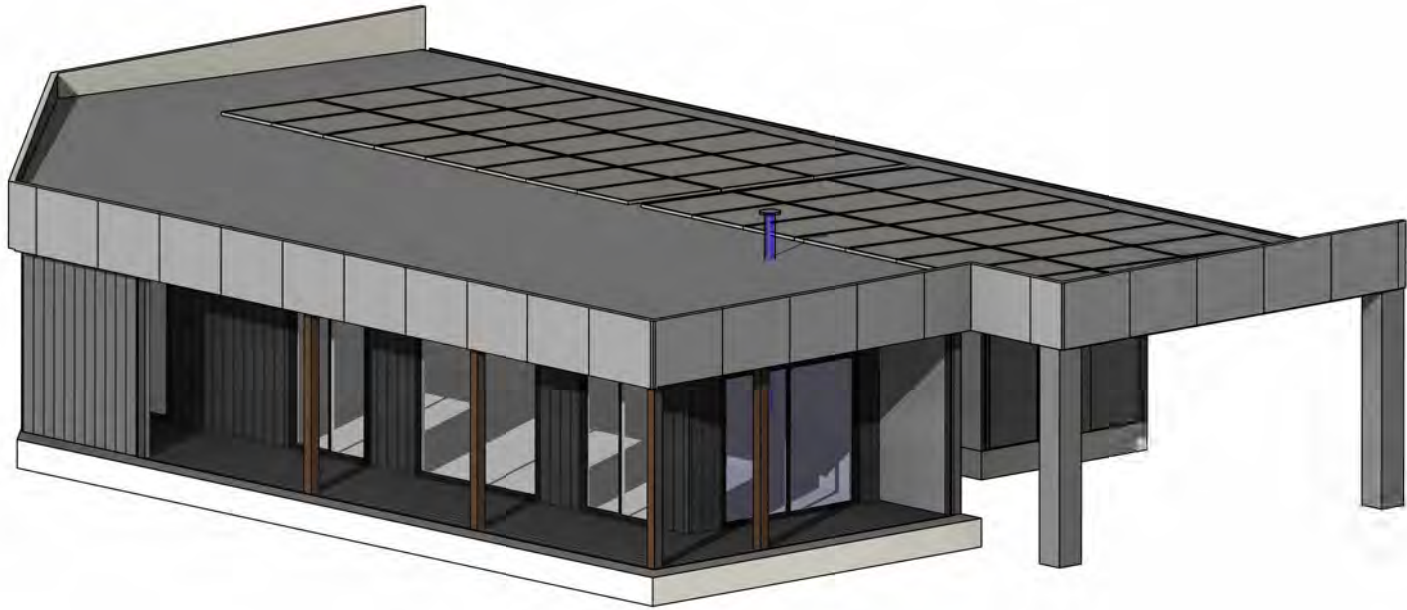
CLIENT SIGNATURES:



### 3D Perspectives

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PLAN NUMBER: DP1202684		LOT 11 # 132 Mafeking Road Goonengerry, NSW 2482				T & T NABUNG				<div><div>Eco-Essence Homes</div><div>ADDRESS: 80 Wommin Bay Road, Chinderah NSW 2487 PHONE : 07 5520 0720 WEB: <a href="http://www.ecoessencehomes.com.au">www.ecoessencehomes.com.au</a></div><div>ABN: 16141022371 NSW LIC: 227643C QBCC LIC: 1181578</div></div>				NEW RESIDENCE				F								A 04/04/22 PRELIMINARY PLANS ISSUED											
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### 3D Model

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PLAN NUMBER: DP1202684		LOT 11 # 132 Mafeking Road Goonengerry, NSW 2482				T & T NABUNG				<div><div>Eco-Essence Homes</div><div>ADDRESS: 80 Wommin Bay Road, Chinderah NSW 2487 PHONE : 07 5520 0720 WEB: www.ecoessencehomes.com.au</div><div>ABN: 16141022371 NSW LIC: 227643C QBCC LIC: 1181578</div></div>				NEW RESIDENCE		F					
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		CONTRACT																			
JOB NO: 0256		DATE: 19/10/2022		DRAWN: BC		CHECKED: BC		SCALE:		DWG NO: 103		A3									



CLIENT SIGNATURES:



Area - Built Upon Area		
Name	Area	% of Site Total
Area	9772.99 m <sup>2</sup>	99%
Building Foorprint	208.70 m <sup>2</sup>	2%
	9981.63 m <sup>2</sup>	100%
Grand total	9981.63 m <sup>2</sup>	

## Location PPlan

1 : 500

## Location Plan

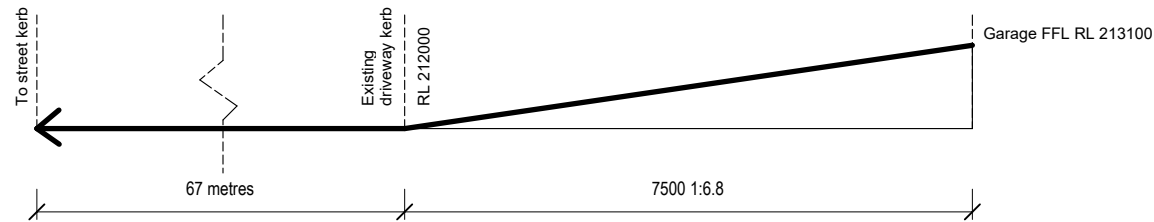
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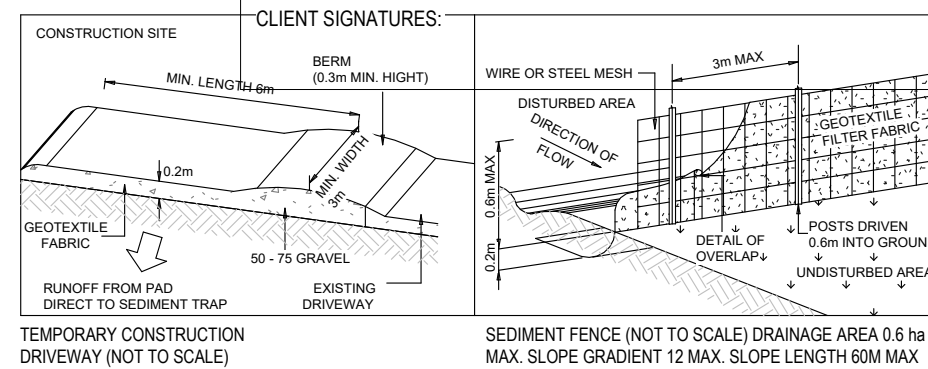
**NOTE:** FINAL POSITIONS OF DOWNPIPES, METERBOX, TAPS, AC ODU, WATERTANK, GAS BOTTLES AND HOT WATER SYSTEM, MAY DIFFER TO PLAN DUE TO SITE CONDITIONS.

**ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE HAZARD AREA. REFER TO BUSHFIRE REPORT FOR "BAL" RATING**

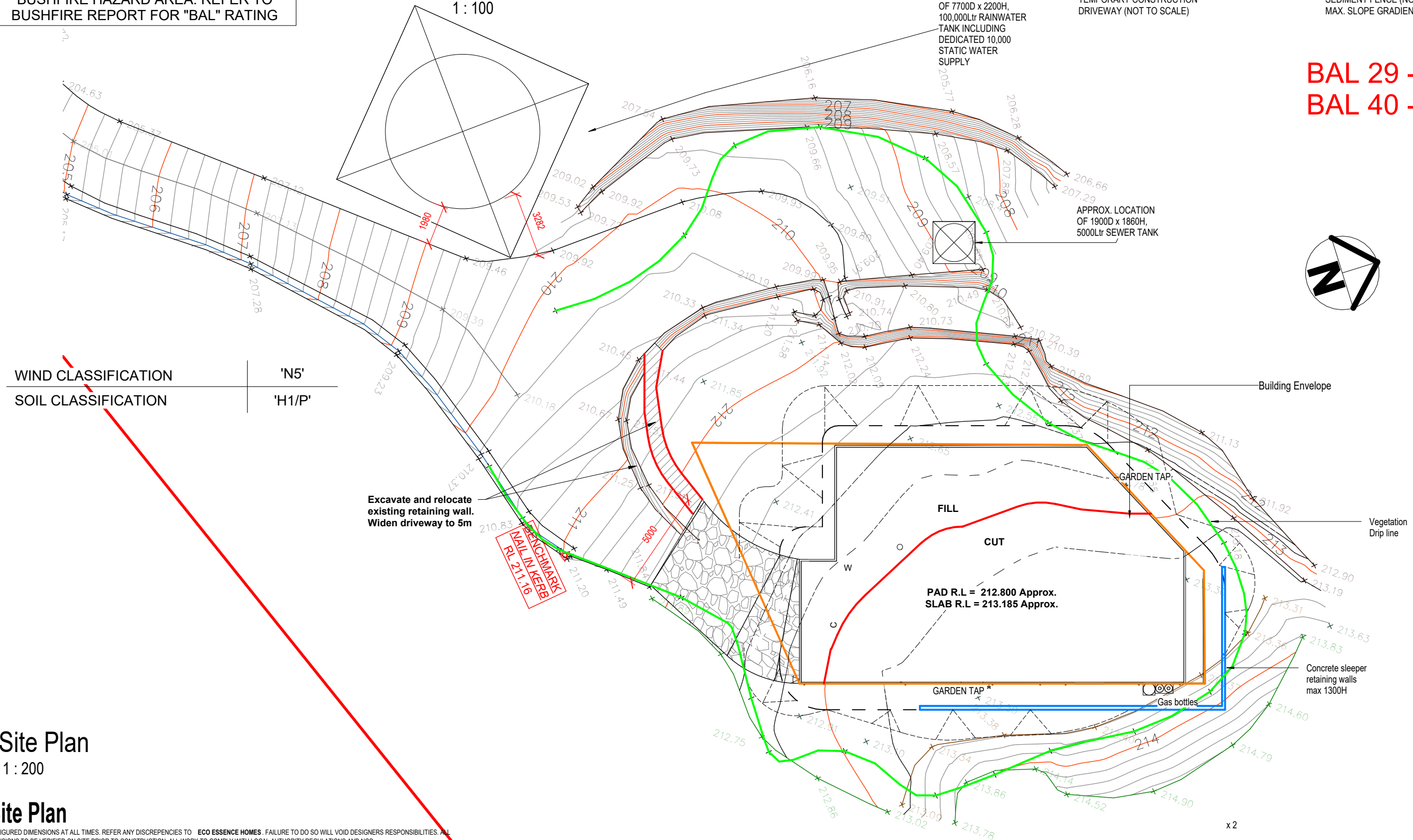


# Driveway Section

1 : 100



BAL 29 - N & E  
BAL 40 - S & W



# Site Plan

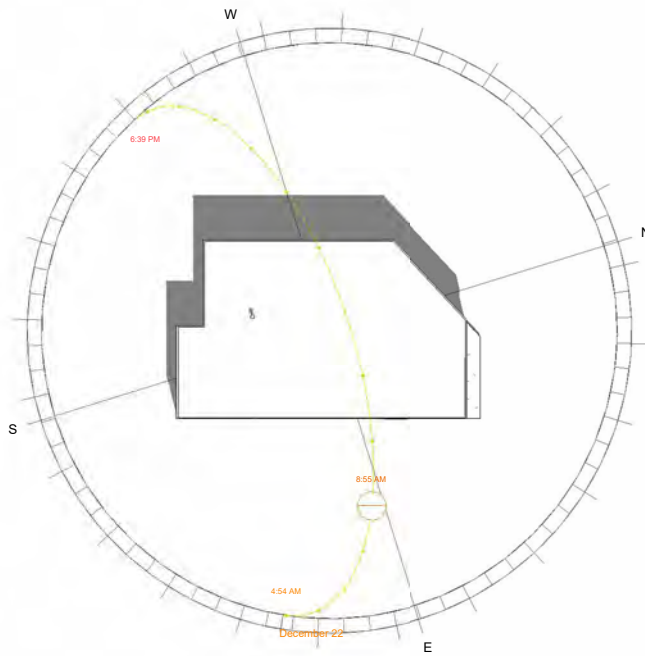
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# Site Plan

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	<div>JOB NO: 0256</div>	<div>DATE: 19/10/2022</div>	<div>DRAWN: BC</div>	<div>CHECKED: BC</div>	<div>SCALE: As indicated</div>	<div>DWG NO: 200</div>	<div>A3</div>	<div>C 20/07/22 PRELIMINARY PLANS ISSUED</div>							
							<div>D 09/08/22 PRELIMINARY PLANS ISSUED</div>								
							<div>E 19/08/22 PRELIMINARY PLANS ISSUED</div>								
							<div>F 19/10/22 CONTRACT PLANS ISSUED</div>								

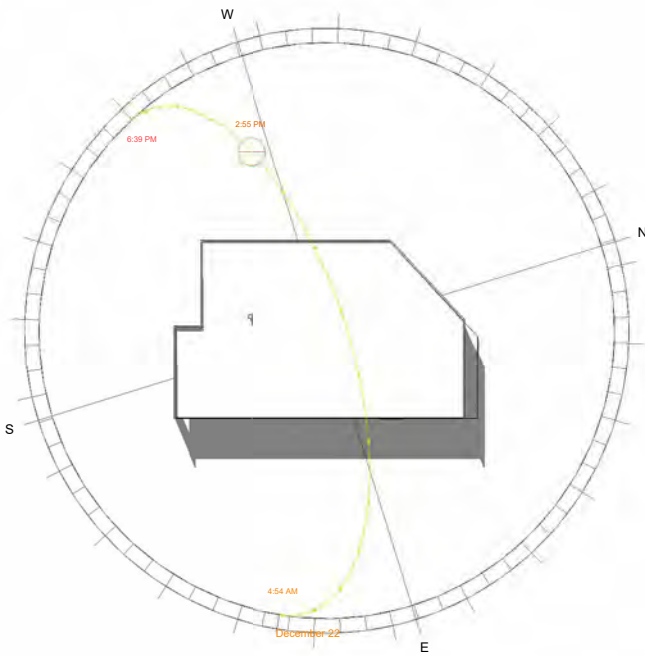
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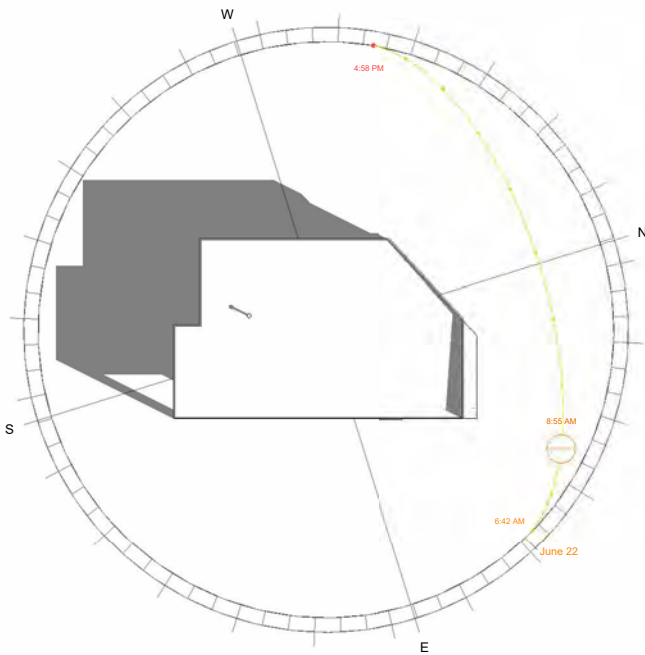
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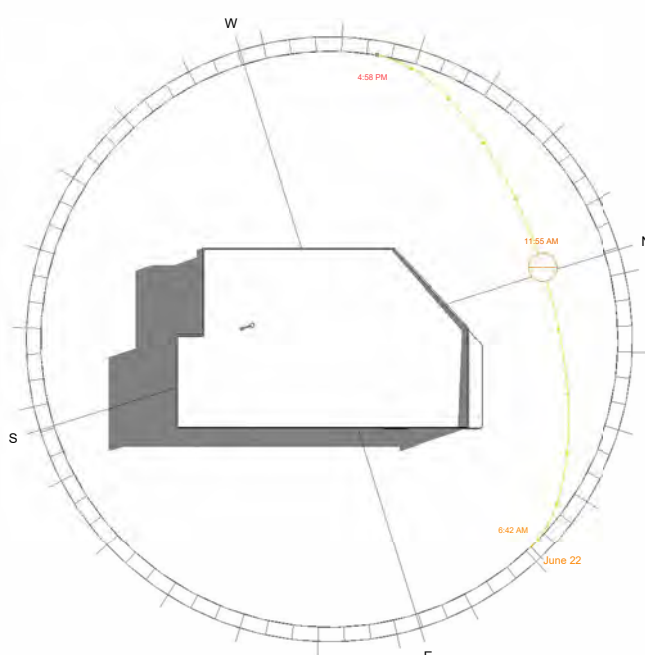
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1 : 500



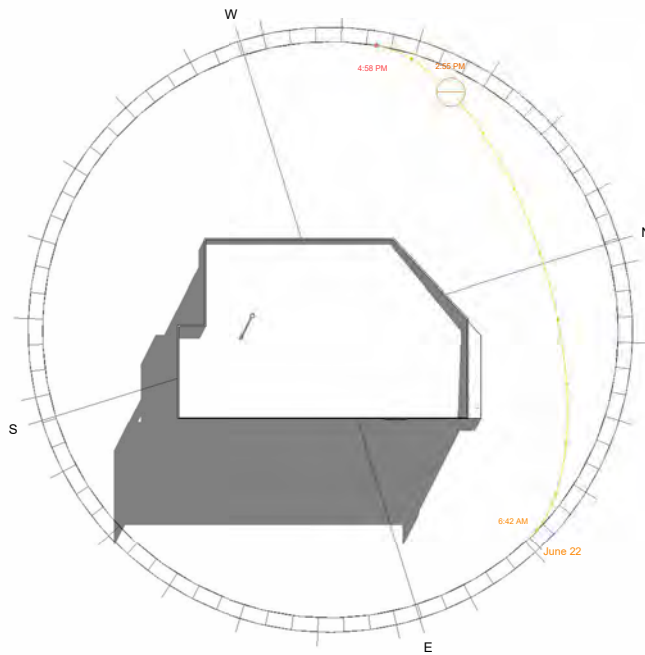
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1 : 500



June 22 9am  
1 : 500



June 22 12pm  
1 : 500

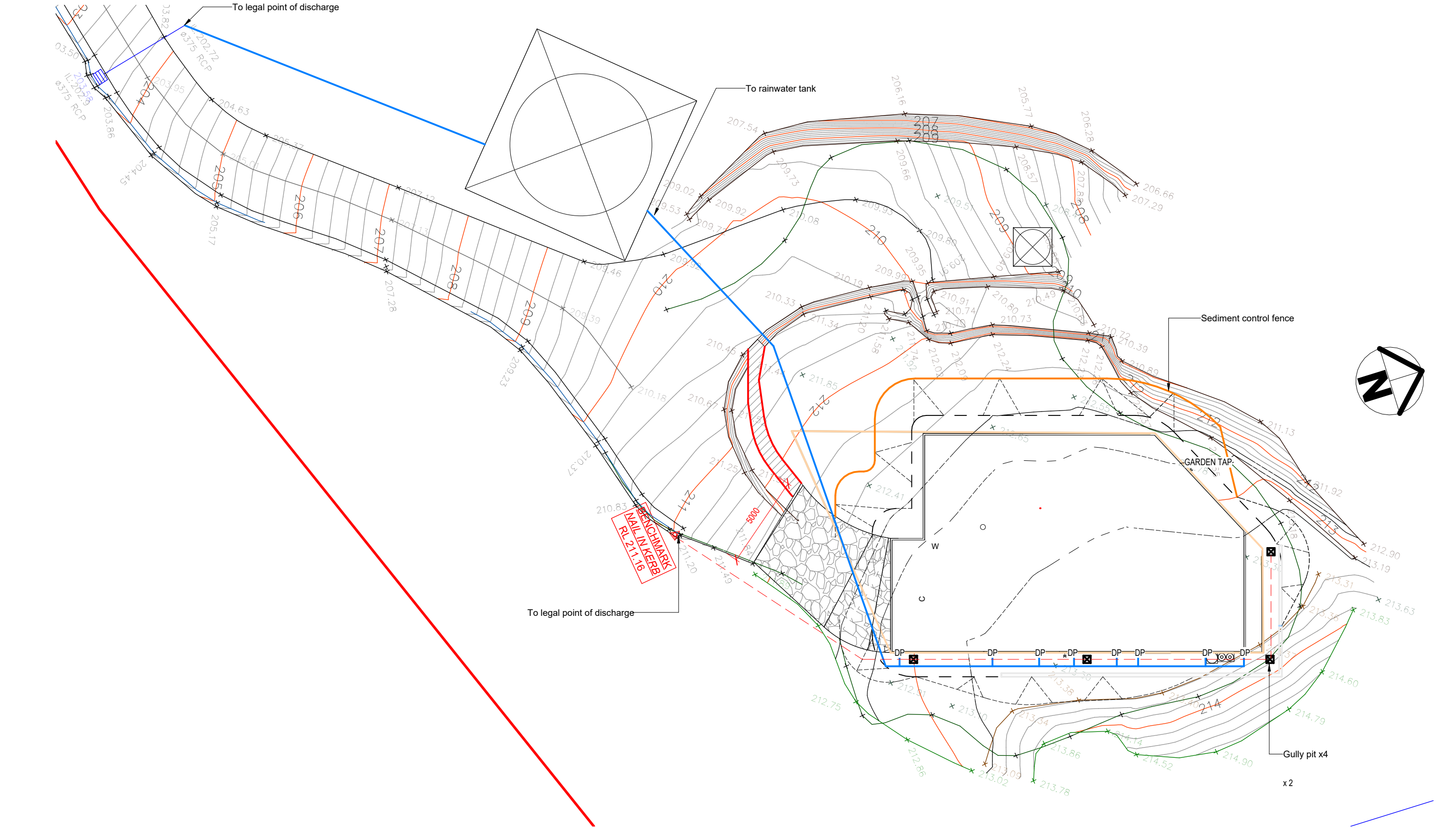


June 22 3pm  
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Shadow Diagrams


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REAL PROPERTY DESCRIPTION	PROJECT ADDRESS:			CLIENT:			PROJECT:			ISSUE:	A 04/04/22 PRELIMINARY PLANS ISSUED		<div>Elevation 2</div> <div>Elevation 3</div> <div>Elevation 4</div> <div>Elevation 1</div>
	LOT 11 # 132 Mafeking Road			T & T NABUNG			NEW RESIDENCE				B 10/05/22 PRELIMINARY PLANS ISSUED		
	Goonengerry, NSW 2482			BUILDER:			STAGED PLAN:				C 20/07/22 PRELIMINARY PLANS ISSUED		
							CONTRACT				D 09/08/22 PRELIMINARY PLANS ISSUED		
											E 19/08/22 PRELIMINARY PLANS ISSUED		
PLAN NUMBER: DP1202684										F	F 19/10/22 CONTRACT PLANS ISSUED		
LOCAL AUTH: BYRON SHIRE													
AREA: 9988m2													



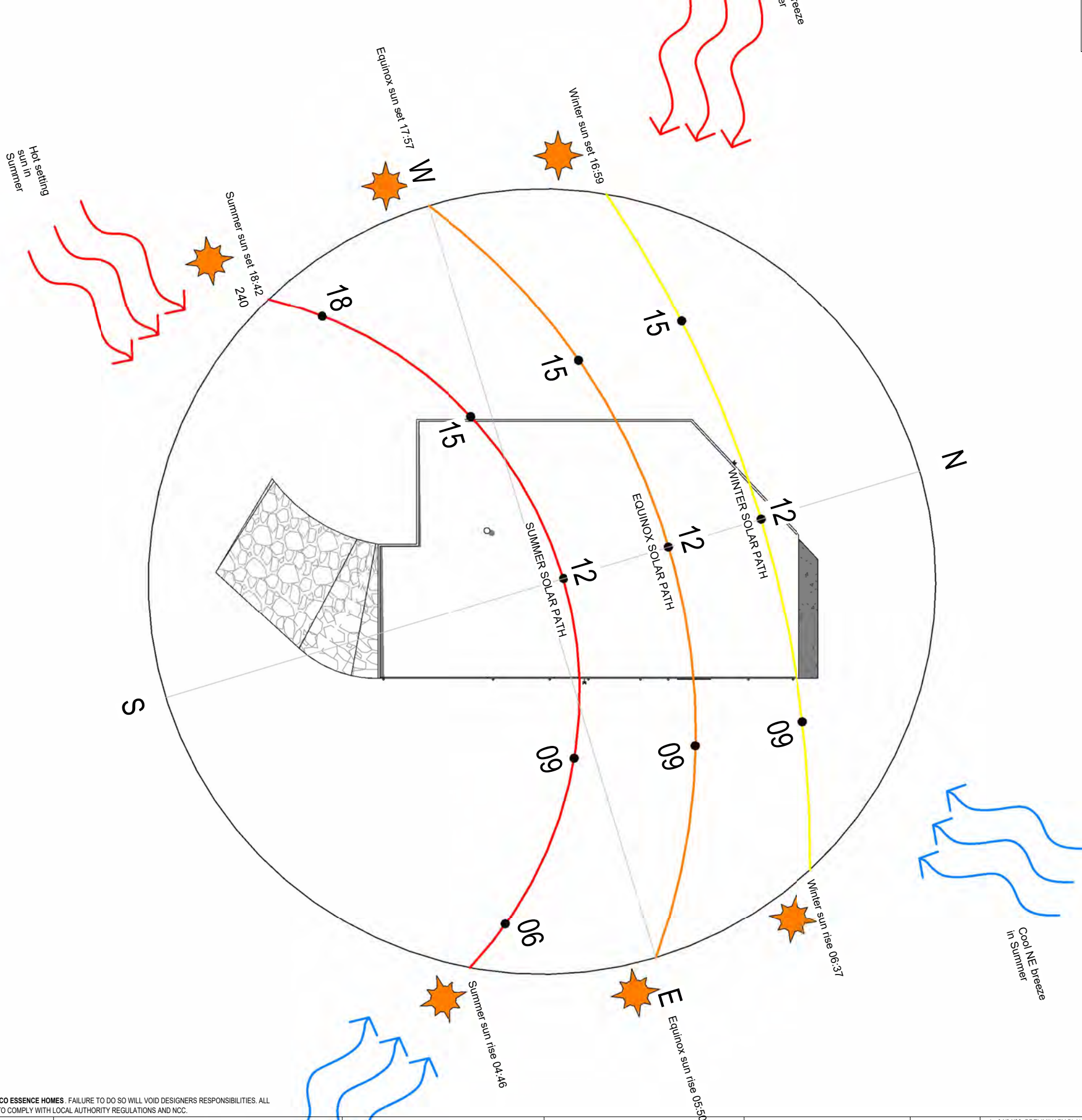
# Stormwater and erosion management plan

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REAL PROPERTY DESCRIPTION		PROJECT ADDRESS:			CLIENT:		PROJECT:			ISSUE:		A 04/04/22 PRELIMINARY PLANS ISSUED		Elevation 2  Elevation 3 Elevation 4 Elevation 1					
PLAN NUMBER: DP1202684		LOT 11 # 132 Mafeking Road Goonengerry, NSW 2482			T & T NABUNG		NEW RESIDENCE			F		B 10/05/22 PRELIMINARY PLANS ISSUED							
LOCAL AUTH: BYRON SHIRE												C 20/07/22 PRELIMINARY PLANS ISSUED							
AREA: 9988m2		DWG NO: 202			SCALE: 1 : 200		DATE: 19/10/2022		DRAWN: BC		CHECKED: BC		JOB NO: 0256		THIS DESIGN IN PART OR WHOLE IS SUBJECT TO COPYRIGHT © ECO ESSENCE HOMES		A3		



CLIENT SIGNATURES:



# Sun and Wind paths

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REAL PROPERTY DESCRIPTION	PROJECT ADDRESS:		CLIENT:		BUILDER:		DESIGN:		ISSUE:		<div><div>Elevation 2</div><div>Elevation 3</div><div>Elevation 4</div><div>Elevation 1</div></div>							
	PLAN NUMBER: DP1202684		LOT 11 # 132 Mafeking Road		T & T NABUNG		Eco-Essence Homes		NEW RESIDENCE									
	LOCAL AUTH: BYRON SHIRE		Goonengerry, NSW 2482		ADDRESS: 80 Wommin Bay Road, Chinderah NSW 2487		FACADE:		F									
	AREA: 9988m2		JOB NO: 0256		DATE: 19/10/2022		DRAWN: BC		CHECKED: BC				SCALE: 1 : 200		DWG NO: 203		A3	
								ABN: 16141022371 NSW LIC: 227643C QBCC LIC: 1181578		STAGED PLAN: CONTRACT								



BAL 29 - N & E  
BAL 40 - S & W  
BAL 40 - TO ENTIRE ROOF STRUCTURE

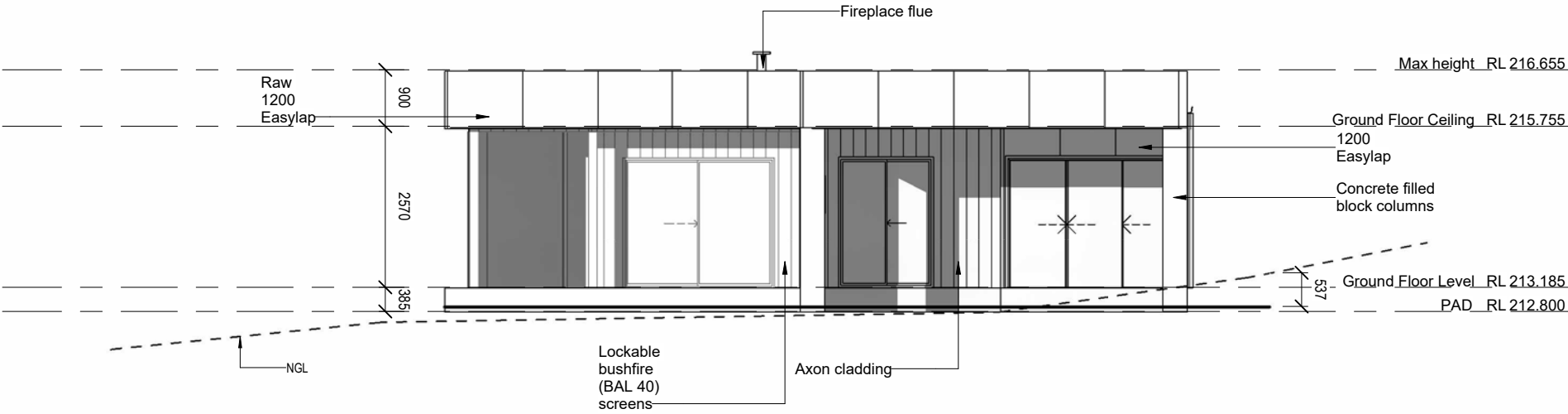
Area Schedule	
Back Deck	5.80 m <sup>2</sup>
Carport	35.91 m <sup>2</sup>
Enclosed Sunroom	36.86 m <sup>2</sup>
Main House	128.89 m <sup>2</sup>
Porch	1.24 m <sup>2</sup>
Grand total	208.70 m <sup>2</sup>



NOTE: MIRRORED GLASS TO ALL WINDOWS AND SLIDING DOORS

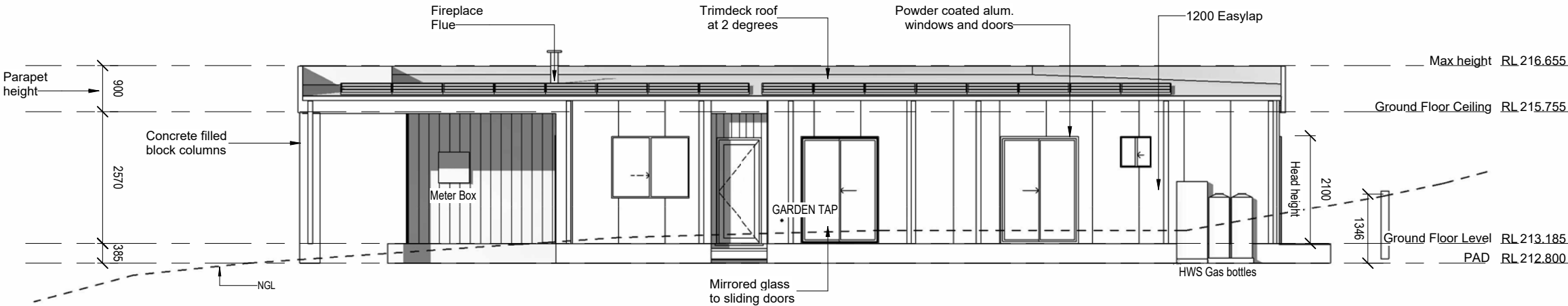
NOTE: ALL EXTERIOR WINDOWS + DOORS ALUMINIUM

NOTE: ALL WINDOWS BRADNAMS CERTIFIED TO BAL40



Elevation 2 (South)  
1 : 100

BAL 29 - N & E  
BAL 40 - S & W  
BAL 40 - TO ENTIRE ROOF STRUCTURE



Elevation 1 (East)  
1 : 100

Elevations

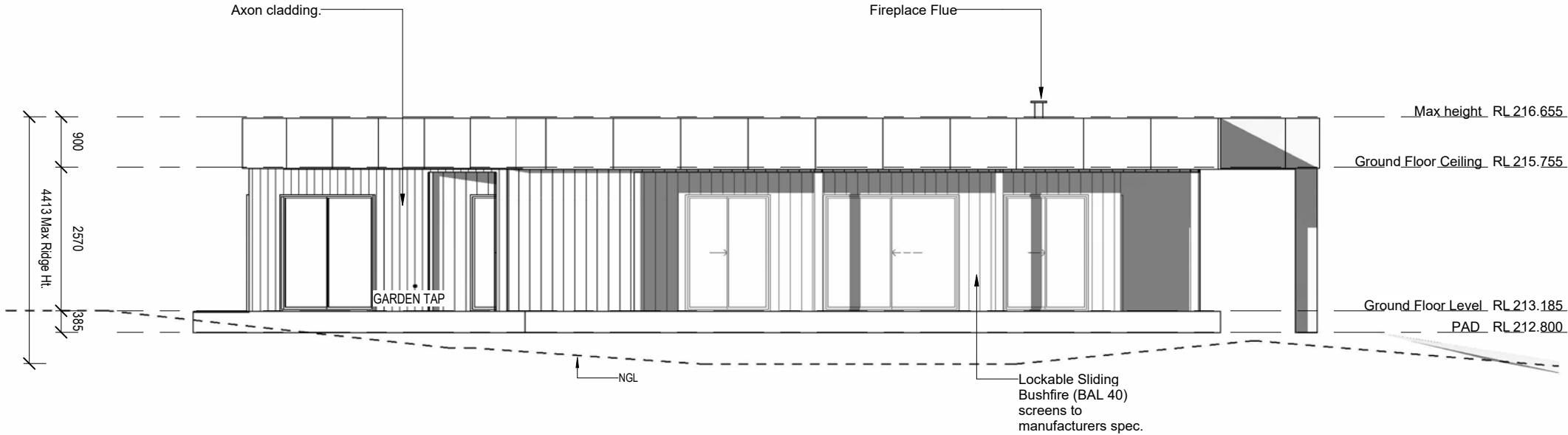
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REAL PROPERTY DESCRIPTION	PROJECT ADDRESS:				CLIENT:				PROJECT:				ISSUE:	A 04/04/22 PRELIMINARY PLANS ISSUED				Elevation 3				
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	LOCAL AUTH: BYRON SHIRE				BUILDER:				STAGED PLAN:					C 20/07/22 PRELIMINARY PLANS ISSUED								
AREA: 9988m2	LOT 11 # 132 Mafeking Road Goonengerry, NSW 2482				DRAWN: BC				CHECKED: BC				JOB NO: 0256				THIS DESIGN IN PART OR WHOLE IS SUBJECT TO COPYRIGHT © ECO ESSENCE HOMES				A3	Elevation 1
	DATE: 19/10/2022				SCALE: 1 : 100				DWG NO: 303													

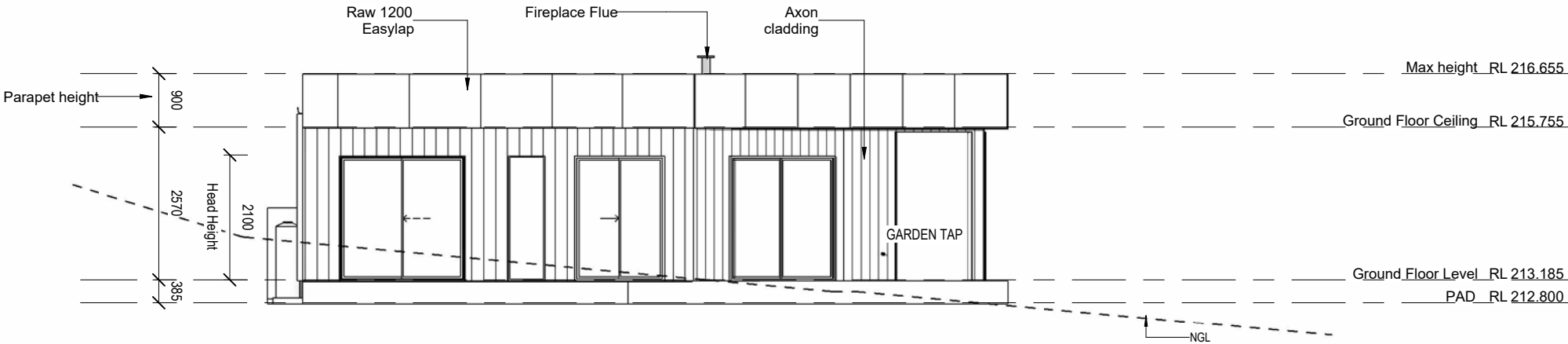
**NOTE:** ALL WINDOWS + DOORS IN CLADDED WALLS TO HAVE 89x38 HARDIES AXENT TRIMS TO PERIMETER.

**NOTE:** MIRRORED GLASS TO ALL WINDOWS AND SLIDING DOORS

**NOTE:** ALL WINDOWS BRADNAMS CERTIFIED TO BAL40



Elevation 3 (West)  
1 : 100



BAL 29 - N & E  
BAL 40 - S & W  
BAL 40 - TO ENTIRE ROOF STRUCTURE

Elevation 4 (North)  
1 : 100

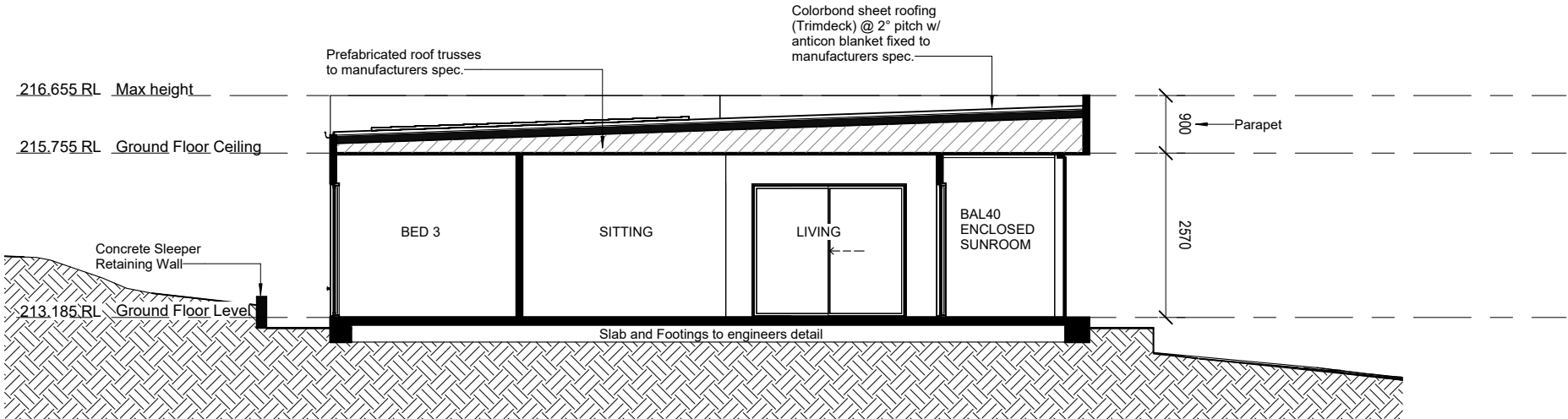
Elevations

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REAL PROPERTY DESCRIPTION		PROJECT ADDRESS:				CLIENT:				PROJECT:				ISSUE:		<div>Elevation 2</div> <div>Elevation 3</div> <div>Elevation 4</div> <div>Elevation 1</div>			
PLAN NUMBER: DP1202684		LOT 11 # 132 Mafeking Road				T & T NABUNG				NEW RESIDENCE				F					
LOCAL AUTH: BYRON SHIRE		Goonengerry, NSW 2482				BUILDER:				STAGED PLAN:									
										CONTRACT									
AREA: 9988m2		DWG NO: 304	SCALE: 1 : 100	DATE: 19/10/2022	DRAWN: BC	CHECKED: BC	JOB NO: 0256	THIS DESIGN IN PART OR WHOLE IS SUBJECT TO COPYRIGHT © ECO ESSENCE HOMES				A3							

- NOTES:**
- SELECTED ROOF FIXED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
  - ROOF BATTENS FIXED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
  - ROOF TRUSSES TO MANUFACTURERS SPECIFICATION
  - BRACING OF TRUSSES TO BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
  - ALL TIMBER SIZES TO CONFORM WITH NCC STANDARDS
  - SLAB & FOOTINGS TO ENGINEERS DETAIL
  - FLOORING MEMBERS TO ENGINEERS/MANUFACTURERS DETAIL

- INSULATION NOTES:**
- WALL INSULATION - R2.0 TO ALL EXTERNAL WALLS EXCLUDING GARAGE WALLS. INTERNAL GARAGE WALLS TO BE INSULATED
  - CEILING INSULATION - R3.5 CEILING BATTS EXCLUDING DECKS.
  - SARKING TO ALL EXTERNAL WALLS
  - ANTICON TO ROOF



## Section

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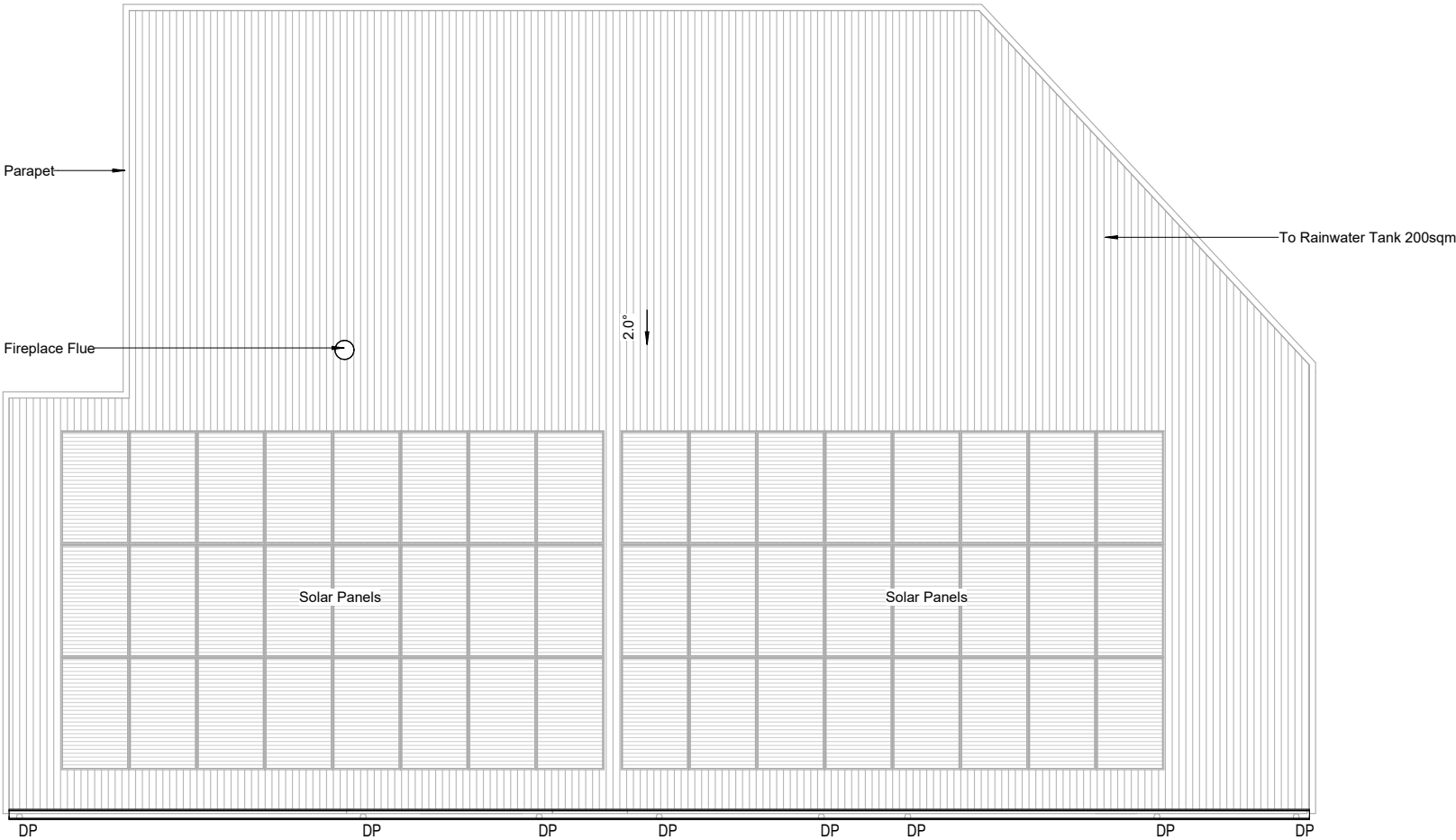
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	Goonengerry, NSW 2482			BUILDER:			STAGED PLAN:				C 20/07/22 PRELIMINARY PLANS ISSUED	
							CONTRACT				D 09/08/22 PRELIMINARY PLANS ISSUED	
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AREA: 9988m2												

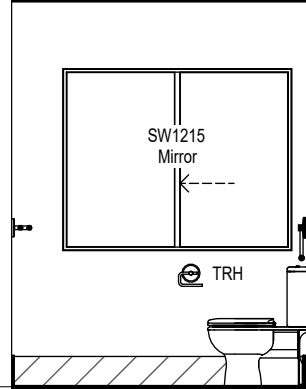


Upper Roof Plan

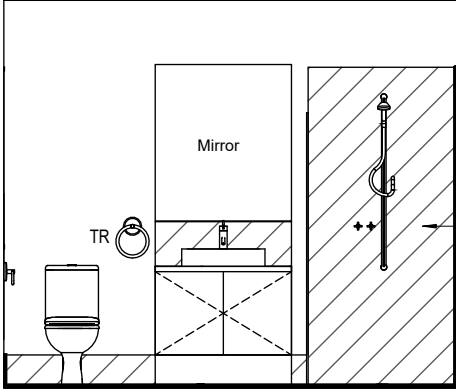
USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY DISCREPENCIES TO **ECO ESSENCE HOMES**. FAILURE TO DO SO WILL VOID DESIGNERS RESPONSIBILITIES. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS AND BCA. ANY 3D PERSPECTIVES ARE FOR ILLUSTRATION PURPOSES ONLY.

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PLAN NUMBER: DP1202684																	F 19/10/22 CONTRACT PLANS ISSUED				Elevation 1	
LOCAL AUTH: BYRON SHIRE																						
AREA: 9988m2																						
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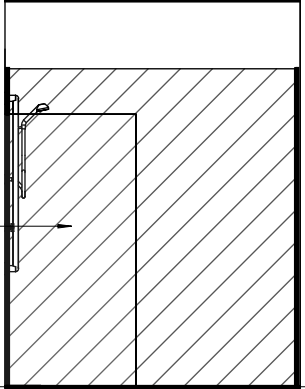




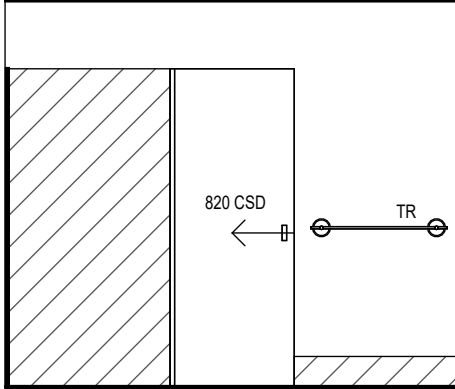
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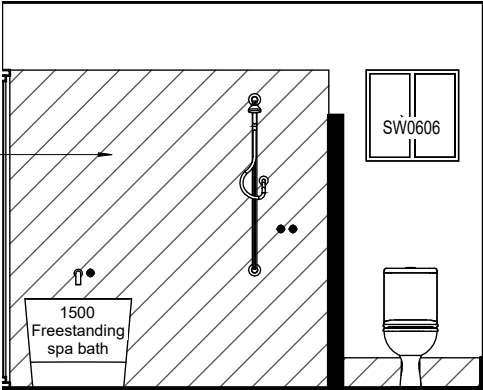
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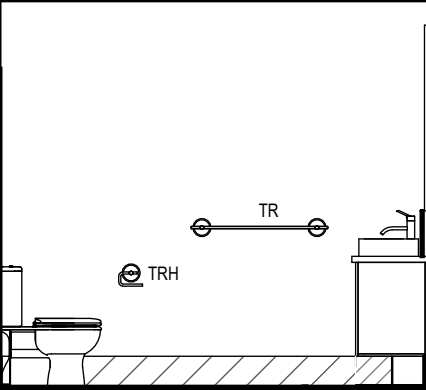
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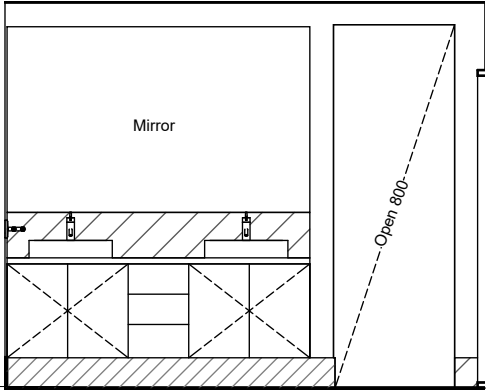
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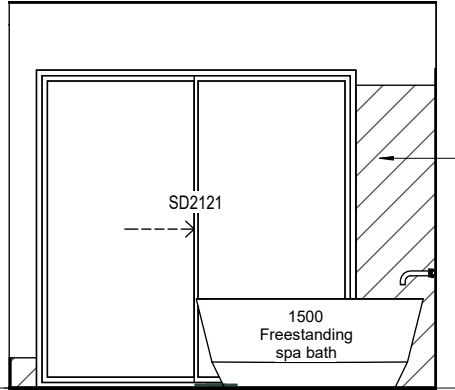
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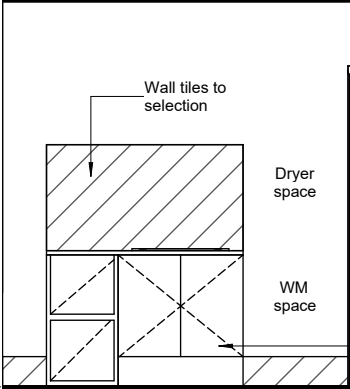
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<div>REAL PROPERTY DESCRIPTION</div> <div>PLAN NUMBER: DP1202684</div> <div>LOCAL AUTH: BYRON SHIRE</div> <div>AREA: 9988m2</div>	PROJECT ADDRESS: <div>LOT 11 # 132 Mafeking Road Goonengerry, NSW 2482</div>		CLIENT: <div>T &amp; T NABUNG</div> <div>BUILDER:</div>				PROJECT: <div>NEW RESIDENCE</div> <div>STAGED PLAN: CONTRACT</div>			<div>ISSUE:</div> <div>F</div>	A 04/04/22 PRELIMINARY PLANS ISSUED	<div>Elevation 2</div> <div><div><div></div></div></div> <div>Elevation 3</div> <div>Elevation 4</div> <div>Elevation 1</div>
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## Appendix C - APZs Requirements and Landscaping

### C.1 General Requirement for Asset Protection Zones

Asset Protection Zones (APZs) are buffer areas between development and a fire hazard, which aim to protect human life and property. The APZ comprises an Inner Protection Area (IPA) and an Outer Protection Area (OPA). These areas are to be managed to reduce the bushfire hazard. The general requirements for APZs are described in Tables 1C and 2C.

**Table 1C.** Inner Protection Area (IPA) General Requirements

Specifications and Management	
<b>Location</b>	The IPA extends from the edge of the OPA to the development.
<b>Purpose</b>	Ensures that the presence of fuel, which could become involved in fire, is minimised.
<b>Depth</b>	Varies from 10 to 100 metres.
<b>Fuel Loading</b>	Minimum fine fuel at ground level, which could be set alight by bushfire.
<b>Vegetation Requirements</b>	Do not touch or overhang the building; Are well spread out and do not form a continuous canopy; Are not species that retain dead material or deposit excessive quantities of ground fuel in a short period; and Are located far enough away from the house so that they will not ignite the house by direct flame contact or radiated heat emissions.
<b>Uses Within the Area</b>	Tennis courts, swimming pools and gardens are permitted. Woodpiles, wooden sheds, combustible material storage areas, large quantities of garden mulch, stacked flammable building materials are not permitted.
<b>Maintenance</b>	This Area should be regularly mowed and all fuel removed e.g. fallen branches, leaf build-up.

**Table 2C.** Outer Protection Area (OPA) General Requirements

Specifications and Management	
<b>Location</b>	Located adjacent to the hazard. Originally the OPA would have formed part of the bushfire hazard but becomes an area where the fuel loadings are reduced.
<b>Purpose</b>	Reduction of fuel in this area substantially decreases the intensity of an approaching fire and restricts the pathway of crown fuels; reducing the level of direct flame, radiant heat and ember attack on the IPA.
<b>Depth</b>	Varies from 0 to 25 metres.
<b>Fuel Loading</b>	Fine fuel loads should be kept to a level where the fire intensity expected will not impact on adjacent developments. In the absence of any policy to the contrary, 8 tonnes per hectare of fuel is commonly used. In grasslands, fuel height should be maintained below 10 centimetres.
<b>Vegetation Requirements</b>	Any trees and shrubs should be maintained in such a manner that the vegetation is not continuous.
<b>Maintenance</b>	This Area should be regularly mowed and all excess fuels should be removed e.g. fallen branches, leaf build-up.

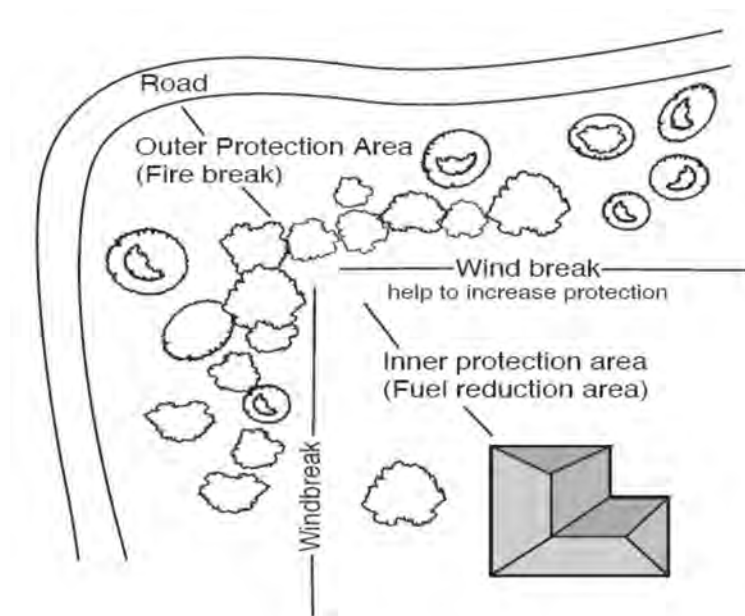
The RFS has also developed “Standards for Asset Protection Zones” which should be consulted for APZ specifications. Standards for Asset Protection Zones can be downloaded from <[https://www.rfs.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0010/13321/Standards-for-Asset-Protection-Zones.pdf](https://www.rfs.nsw.gov.au/__data/assets/pdf_file/0010/13321/Standards-for-Asset-Protection-Zones.pdf)>



## C.2 Landscaping and Property Maintenance

### C.2.1 Landscaping Features & Principles

Bushland vegetation provides the fuel which feeds wildfires; however, by providing adequate separation distance between the bush and buildings will effectively prevent the spread of bushfire.



Still vegetation is not always the foe when it comes to bushfires and it is possible to use managed vegetation as a tool to reduce fire risk. According to many practitioners and researchers (Ramsay & Rudolph 2006; CFA 2004; RFS 2006; Queensland Government 2000; RFS undated), a well-designed garden can reduce bushfire hazard near buildings. In summary, homes and garden can blend with the natural environment and be landscaped to minimise the impact of fire at the same time.

**Figure 1C.** Example of landscaped design aimed at minimising the impact of fire. Source RFS (undated)

According to the RFS (undated), this can be achieved by providing an effective Asset Protection Zone (APZ), which incorporates features such as fire-resistant plants, radiant heat barriers and windbreaks in the landscape layout as shown on Fig. 1C. The key features required when using landscaping as tool to reduce bushfire risk are summarised as follows (Ramsay & Rudolph 2006; RFS undated; RFS 2006):

- Plants with low flammability are selected (eg. broad leaves with high moisture and mineral content, smooth-trunk species with high branches, etc.)
- Vegetation does not provide a continuous path to the house
- Vegetation is located far enough away from the asset so that plants will not ignite the asset by direct flame contact or radiant heat emission
- Planted (or cleared) vegetation is into clumps rather than continuous rows
- Planted or retained species possesses attributes which makes them a good barrier against bushfire and wind attack
- Low branches are pruned two metres from the ground to prevent a ground fire from spreading into trees
- Lawn is planted and maintained around the future dwellings as this will slow the fire and reduce fire intensity. Alternatively, non-flammable pathways directly around the dwelling are provided
- Shrubs and other plants do not directly abut the dwelling. Where this does occur, gardens should contain low-flammability plants and non-flammable ground cover such as pebbles and crush tile
- Brush type fencing and planting “pencil pine” type trees next to buildings are avoided, as these are highly flammable.

Therefore, the features noted above and the principles listed in the following section should be applied to the landscaping and property maintenance for future dwellings.



### **C.2.2 Vegetation Management**

Vegetation management is the responsibility of individual landowners and should, as per PBP, include:

- *Maintaining a low cut lawn;*
- *Keeping areas around the garden free of fuel;*
- *Utilising non-combustible fencing materials;*
- *Breaking up tree and shrub canopies by defining garden beds;*
- *Using non-flammable mulch;*
- *Ensuring tree branches do not overhang roofs;*
- *Ensuring tree canopies are not continuous; and*
- *Installing windbreaks in the direction from which fires are likely to approach.*

### **C.2.3 Property Maintenance**

Property maintenance should, as per PBP, include:

- *Removal of material such as litter from the roof and gutters;*
- *Ensure painted surfaces are in good condition with decaying timbers being given particular attention to prevent the lodging of embers within gaps;*
- *Check pumps and water supplies are available and in working order;*
- *Driveways are in good condition with trees not being too close and forming an obstacle during smoky conditions;*
- *Check tiles and roof lines for broken tiles or dislodged roofing materials;*
- *Screens on windows and doors are in good condition without breaks or holes in flyscreen material and frames are well fitting into sills and window frames;*
- *Drenching or spray systems are regularly tested before the commencement of the fire season;*
- *Hoses and hose reels are not perished and fittings are tight and in good order;*
- *Doors are fitted with draught seals and well maintained;*
- *Mats are of non-combustible material or in areas of low potential exposure; Woodpiles, garden sheds and other combustible materials are located downslope and well away from the house; and*
- *Trees and other vegetation in the vicinity of power lines and tower lines should be managed and trimmed in accordance with the specifications in “Vegetation Safety Clearances” issued by Energy Australia (NS179 April 2002).*

## Appendix D - Additional Construction Requirements s.7.5 & 7.6 PBP 2019

In NSW additional construction requirements applies above the AS3959 prescriptions. These additional prescriptions detailed in s.7.5 & s.7.6 of PBP (2019) are reproduced as follows.

### **7.5 Additional construction requirements**

To ensure the performance criteria for construction standards given in section 7.4 can be met, PBP adopts additional measures over and above AS 3959 and NASH Standard as follows: construction measures for ember protection at BAL-12.5 and BAL-19 provided by AS 3959; construction measures for development in BAL-FZ; and requirements over and above the performance criteria contained within AS 1530.8.1 and AS 1530.8.2 apply in regards to flaming.

#### **7.5.1 Ember protection**

Based on the findings from the 2009 Victorian Bush Fires Royal Commission, PBP aims to maintain the safety levels previously provided by AS 3959:1999 in relation to ember protection at lower Bush Fire Attack Levels.

In particular, the areas addressed are in relation to:

- sarking;
- subfloor screening;
- floors;
- verandas, decks, steps, ramps and landings;
- timber support posts and beams; and
- fascias and bargeboards.

#### **7.5.2 NSW State Variations under G5.2(a) (i) and 3.10.5.0(c)(i) of the NCC**

Certain provisions of AS 3959 are varied in NSW based on the findings of the Victorian Bush Fires Royal Commission and bush fire industry research.

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;

- clause 3.10 of AS 3959 is deleted and any sarking used for BAL-12.5, BAL-19, BAL-29 or BAL-40 shall:
  - be non-combustible; or
  - comply with AS/NZS 4200.1, be installed on the outside of the frame and have a flammability index of not more than 5 as determined by AS 1530.2; and
- clause 5.2 and 6.2 of AS 3959 is replaced by clause 7.2 of AS 3959, except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL; and
- clause 5.7 and 6.7 of AS 3959 is replaced by clause 7.7 of AS 3959, except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL; and
- fascias and bargeboards bargeboards, in BAL-40, shall comply with:
  - clause 8.4.1(b) of AS 3959; or
  - clause 8.6.6 of AS 3959.

#### **7.5.3 Construction in the flame zone**

The flame zone is the area that has significant potential for sustained flame contact during a bush fire. The flame zone is determined by the calculated distance at which the radiant heat of the design fire exceeds 40kW/m<sup>2</sup>.

The NCC references AS 3959 and the NASH Standard. The NSW variation to the NCC excludes both AS 3959 and the NASH Standard as a Deemed to Satisfy solution for buildings that are required to be constructed to BAL-FZ as defined in AS 3959.

Although Chapter 9 of AS 3959 and the NASH Standard has not been adopted, they should still be used as a basis for a performance-based solution demonstrating compliance with the performance requirements of the NCC and PBP for construction in the flame zone.

All flame zone developments should be sited and designed to minimise the risk of bush fire attack. Buildings should be designed and sited in accordance with appropriate siting and design principles to ensure the safest protection from bush fire impacts.

#### **7.5.4 Flaming**

Materials that allow flaming can be problematic and are not supported by the NSW RFS for the following reasons:

- flaming materials increase the exposure of other elements of construction and the adjoining structure to flame contact after a bush fire front has passed; and
- flaming materials will potentially increase the exposure of occupants of the building to radiant heat, direct flame contact, smoke after a bush fire front has passed.

This increase in exposure can contribute to the risk of loss of life and compromise the ability of residents to defend their property and egress from the building once the bush fire front has passed.

In addition, it can reduce the ability of occupants to make safe and effective decisions about their safety.

Where there is potential for materials of construction to ignite as a result of bush fire attack, the proposed building solution generally fails the construction performance criteria for residential infill development.

For development which may be subject to flame contact (BAL-40 and BAL-FZ), systems tested in accordance with AS 1530.8.1 and AS 1530.8.2 respectively will be considered, except that there is to be no flaming of the specimen except for:

- window frames that have passed the criteria of AS 1530.8.1 and AS 1530.8.2, may be approved provided their flaming is not considered to compromise the safety of other elements of the building; and
- use of other minor elements which allow flaming may be considered provided they do not compromise the integrity of the fire safety of the building (examples include address numbers, house names, decorative artwork, etc).

Flaming of other more significant elements of the building (such as aesthetic wall cladding) is considered to pose an unacceptable risk and will not be supported.

#### **7.6 Fences and gates**

Fences and gates in bush fire prone areas may play a significant role in the vulnerability of structures during bush fires. In this regard, all fences in bush fire prone areas should be made of either hardwood or non-combustible material.

However, in circumstances where the fence is within 6m of a building or in areas of BAL-29 or greater, they should be made of non-combustible material only