



Planning Enquiries  
Phone: 1300 787 624  
Web: [www.cardinia.vic.gov.au](http://www.cardinia.vic.gov.au)

# Application to AMEND a Planning Permit

If you need help to complete this form, read MORE INFORMATION at the end of this form.

 Any material submitted with this application, including plans and personal information, will be made available for public viewing, including electronically, and copies may be made for interested parties for the purpose of enabling consideration and review as part of a planning process under the *Planning and Environment Act 1987*. If you have any questions, please contact Council's planning department.

 This form cannot be used to:

- amend a permit or part of a permit if the Victorian Civil and Administrative Tribunal (VCAT) has directed under section 85 of the Act that the responsible authority must not amend that permit or that part of the permit (as the case requires); or
- amend a permit issued by the Minister under Division 6 of Part 4 of the Act (these applications must be made to the Minister under section 971 of the Act).

 Questions marked with an asterisk (\*) must be completed.

 Click for further information.

Clear Form

## The Land


Address of the land. Complete the Street Address and one of the Formal Land Descriptions.

### Street Address \*

Unit No.:	St. No.: 210	St. Name: SPLI ROCK ROAD
Suburb/Locality: BEACONSFIELD UPPER		Postcode: 3808

### Formal Land Description \*

Complete either A or B.

 This information can be found on the certificate of title.

If this application relates to more than one address, attach a separate sheet setting out any additional property details.


A	Lot No.: 1	<input type="radio"/> Lodged Plan	<input checked="" type="radio"/> Title Plan	<input type="radio"/> Plan of Subdivision	No.: TP163415
OR					
B	Crown Allotment No.:		Section No.:		
Parish/Township Name:					

## Planning Permit Details

### What permit is being amended?\*

Planning Permit No.: T210155 PA

## The Amended Proposal

 You must give full details of the amendment being applied for. Insufficient or unclear information will delay your application

### What is the amendment being applied for?\*

- Indicate the type of changes proposed to the permit.
- List details of the proposed changes.

If the space provided is insufficient, attach a separate sheet.


This application seeks to amend:

- |   |   |
|---|---|
| <input type="checkbox"/> What the permit allows           | <input checked="" type="checkbox"/> Plans endorsed under the permit |
| <input type="checkbox"/> Current conditions of the permit | <input type="checkbox"/> Other documents endorsed under the permit  |

Details:

AMENDED HOUSE PLANS

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 Provide plans clearly identifying all proposed changes to the endorsed plans, together with: any information required by the planning scheme, requested by Council or outlined in a Council checklist; and if required, include a description of the likely effect of the proposal.



## Development Cost i

### Estimate cost of development\*

If the permit allows **development**, estimate the cost difference between the development allowed by the permit and the development to be allowed by the amended permit.

Cost of proposed amended development:	–	Cost of the permitted development:	=	Cost difference (+ or –):
\$ 700,000		\$ UNKNOWN		\$ NA

Insert 'NA' if no development is proposed by the permit.

You may be required to verify this estimate.

## Existing Conditions i

### Describe how the land is used and developed now \*

For example, vacant, three dwellings, medical centre with two practitioners, licensed restaurant with 80 seats, grazing.

Have the conditions of the land changed since the time of the original permit application?  Yes  No

If yes, please provide details of the existing conditions.

Provide a plan of the existing conditions if the conditions have changed since the time of the original permit application. Photos are also helpful.

## Title Information i

### Encumbrances on title \*

Does the proposal breach, in any way, an encumbrance on title such as a restrictive covenant, section 173 agreement or other obligation such as an easement or building envelope?

- Yes (If 'yes' contact council for advice on how to proceed before continuing with this application.)
- No
- Not applicable (no such encumbrance applies).

Provide a full, current copy of the title for each individual parcel of land forming the subject site. The title includes: the covering 'register search statement', the title diagram and the associated title documents, known as 'instruments', for example, restrictive covenants.

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## Applicant and Owner Details i

Provide details of the applicant and the owner of the land.

### Applicant \*

The person who wants the permit.

Please provide at least one contact phone number \*

Where the preferred contact person for the application is different from the applicant, provide the details of that person.

### Owner \*

The person or organisation who owns the land

Where the owner is different from the applicant, provide the details of that person or organisation.

Name:	<input type="text"/>
<input type="text"/>	

<b>Contact information for applicant OR contact person below</b>		
Business phone:	<input type="text"/>	
Mobile phone:	<input type="text"/>	Fax: <input type="text"/>


<b>Contact person's details*</b>			Same as applicant <input type="checkbox"/>
Name:	<input type="text"/>		
Title:	First Name:	Surname:	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
Organisation (if applicable): <input type="text"/>			
Postal Address:		If it is a P.O. Box, enter the details here:	
Unit No.:	St. No.:	St. Name:	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
Suburb/Locality:		State:	Postcode:
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Name:			Same as applicant <input type="checkbox"/>
Title:	First Name:	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
Organisation (if applicable): <input type="text"/>			
Postal Address:		If it is a P.O. Box, enter the details here:	
Unit No.:	St. No.:	St. Name:	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
Suburb/Locality:		State:	Postcode:
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Owner's Signature (Optional): <input type="text"/>			Date: <input type="text"/>
			day / month / year

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## Declaration i

This form must be signed by the applicant\*

 Remember it is against the law to provide false or misleading information, which could result in a heavy fine and cancellation of the permit.

I declare that I am the applicant; that all the information in this application is true and correct; that all changes to the permit and plan have been listed as part of the amended proposal and that the owner (if not myself) has been notified of the permit application.

Signature: <input type="text"/>	Date: <input type="text" value="09.08.24"/>
	day / month / year

## Need help with the Application? i

If you need help to complete this form, read More Information at the end of this form or contact Council's planning department. General information about the planning process is available at [planning.vic.gov.au](http://planning.vic.gov.au)

Contact Council's planning department to discuss the specific requirements for his application and obtain a checklist. Insufficient or unclear information may delay your application.

Has there been a pre-application meeting with a council planning officer

<input checked="" type="radio"/> No	<input type="radio"/> Yes	If 'Yes', with whom?: <input type="text"/>
		Date: <input type="text"/>
		day / month / year

**REGISTER SEARCH STATEMENT (Title Search) Transfer of  
Land Act 1958**

VOLUME 09144 FOLIO 070

Security no : 124117315212T  
Produced 09/08/2024 03:56 PM

**LAND DESCRIPTION**

Lot 1 on Title Plan 163415U.  
PARENT TITLE Volume 07342 Folio 385  
Created by instrument G054638 03/03/1976

**REGISTERED PROPRIETOR**



**ENCUMBRANCES, CAVEATS AND NOTICES**



Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

**DIAGRAM LOCATION**

SEE TP163415U FOR FURTHER DETAILS AND BOUNDARIES

**ACTIVITY IN THE LAST 125 DAYS**

NUMBER		STATUS	DATE
AP146786P (S)	ADVERSE POSSESSION	Registered	23/04/2024

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 210 SPLIT ROCK ROAD BEACONSFIELD UPPER VIC 3808

**ADMINISTRATIVE NOTICES**

NIL



DOCUMENT END

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Document Type	<b>Plan</b>
Document Identification	<b>TP163415U</b>
Number of Pages (excluding this cover sheet)	<b>2</b>
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TITLE PLAN	EDITION 2	TP 163415U
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**LOCATION OF LAND**  
 PARISH: GEMBROOK  
 TOWNSHIP:  
 SECTION: C  
 CROWN ALLOTMENT: 28 (PT)  
 CROWN PORTION:  
 LAST PLAN REFERENCE:  
 DERIVED FROM: VOL.9144 FOL.070  
 DEPTH LIMITATION: NIL

NOTATIONS

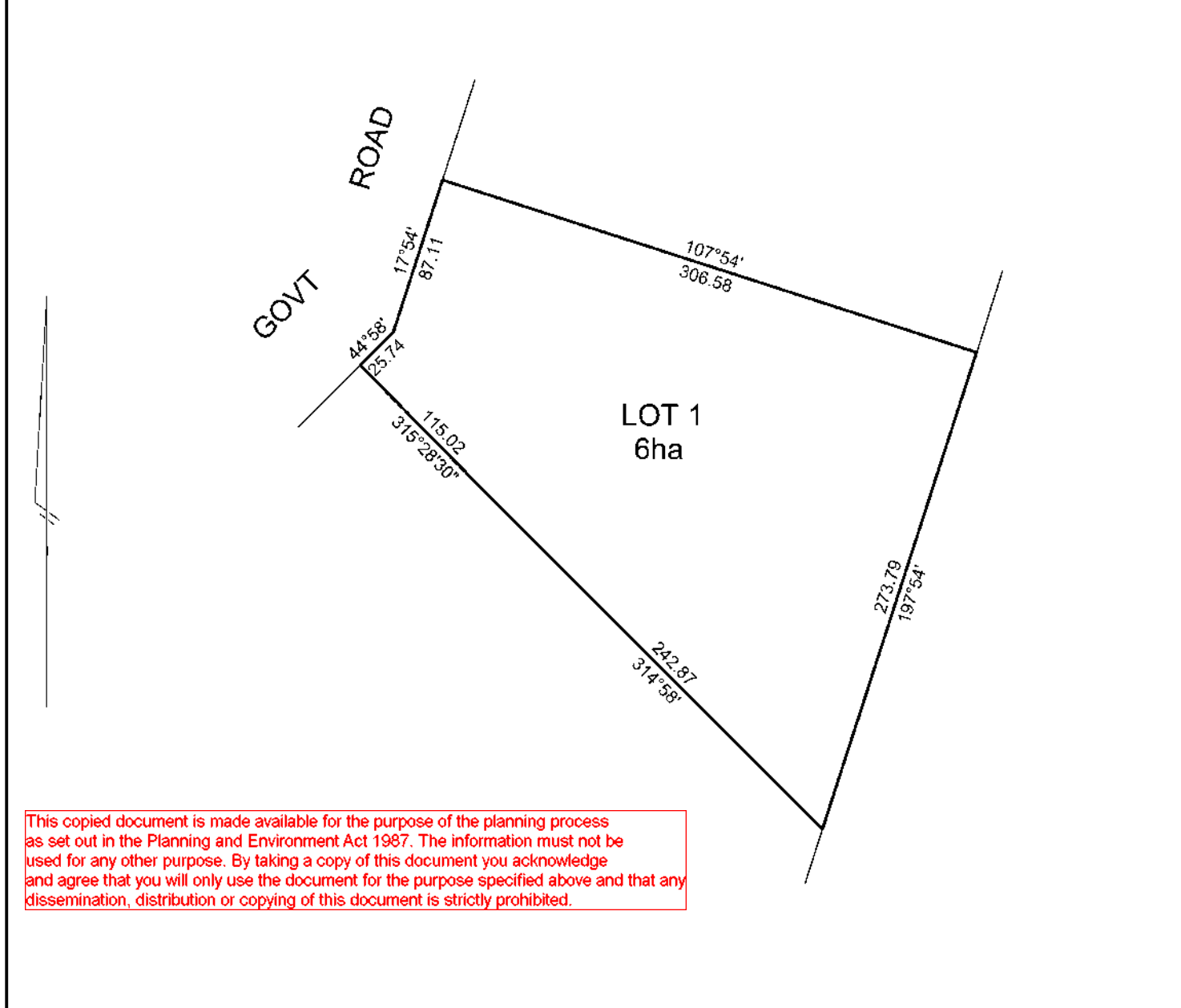
EASEMENT INFORMATION

E - ENCUMBERING EASEMENT R - ENCUMBERING EASEMENT (ROAD) A - APPURTENANT EASEMENT

THIS PLAN HAS BEEN PREPARED BY LAND VICTORIA FOR TITLE DIAGRAM PURPOSES

Easement Reference	Purpose	Width (Metres)	Origin	Land benefited / In favour of

Checked by:  
  
 Date: 24 / 09 / 1999  
 DB  
 Assistant Registrar of Titles



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9 August 2024

Town Planning Dept.  
Cardinia Shire Council PO Box 7  
Pakenham VIC 3810

**RE: PROPOSED RESIDENCE & SHED @ 210 SPLIT ROCK RD  
BEACONSFIELD UPPER 3808**

Dear Sir/Madam,

Please find the attached, relevant documentation for the purpose of amending the existing town planning permit T210155 PA at the above-mentioned address.

The land is currently occupied by an existing shed which is to be removed and Single storey dwelling & Shed are proposed.

The land is under

- ENVIRONMENTAL SIGNIFICANCE OVERLAY (ESO)
- BUSHFIRE MANAGEMENT OVERLAY (BMO)
- RURAL CONSERVATION ZONE (RCZ)

Please find attached –

1. Set of Architectural Planning Drawings.
2. Copy of Title & Plan of Subdivision
3. Signed Planning Permit Application form.
4. Arborist report
5. Bushfire Management Plan

Yours faithfully

**BUILDING DESIGNER – OFFICE MANAGER  
HARGREAVES DESIGN GROUP**



# Native Vegetation Removal Report

NVRR ID: 311\_20240328\_UR7

This report provides information to support an application to remove, destroy or lop native vegetation in accordance with the [Guidelines for the removal, destruction or lopping of native vegetation](#) (the Guidelines). This report **is not an assessment by DEECA** of the proposed native vegetation removal. Offset requirements have been calculated using modelled condition scores.

## Report details

**Date created:** 28/03/2024

**Local Government Area:** CARDINIA SHIRE

**Registered Aboriginal Party:** Bunurong

**Coordinates:** 145.44631, -37.99696

**Address:** 210 SPLIT ROCK ROAD BEACONSFIELD UPPER 3808

## Summary of native vegetation to be removed

Assessment pathway	Intermediate Assessment Pathway		
<b>Location category</b>	<b>Location 1</b> The native vegetation extent map indicates that this area is not typically characterised as supporting native vegetation. It does not meet the criteria to be classified as Location Category 2 or 3. The removal of less than 0.5 hectares of native vegetation in this area will not require a Species Offset.		
<b>Total extent including past and proposed removal (ha)</b> <i>Includes endangered EVCs (ha): 0</i>	<b>0.249</b>	<i>Extent of past removal (ha)</i>	<i>0</i>
		<i>Extent of proposed removal - Patches (ha)</i>	<i>0.249</i>
		<i>Extent of proposed removal - Scattered Trees (ha)</i>	<i>0.000</i>
<b>No. Large Trees proposed to be removed</b>	<b>10</b>	<i>No. Large Patch Trees</i>	<i>10</i>
		<i>No. Large Scattered Trees</i>	<i>0</i>
<b>No. Small Scattered Trees</b>	<b>0</b>		

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## Offset requirements if approval is granted

Any approval granted will include a condition to secure an offset, before the removal of native vegetation, that meets the following requirements:

General Offset amount <sup>1</sup>	0.222 General Habitat Units
Minimum strategic biodiversity value score <sup>2</sup>	0.468
Large Trees	10
Vicinity	Melbourne Water CMA or CARDINIA SHIRE LGA

NB: values within tables in this document may not add to the totals shown above due to rounding

The availability of third-party offset credits can be checked using the Native Vegetation Credit Register (NVCR) Search Tool - <https://nvcr.delwp.vic.gov.au>

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1. The General Offset amount required is the sum of all General Habitat Units in Appendix 1.

2. Minimum strategic biodiversity value score is 80 per cent of the weighted average score across habitat zones where a General Offset is required. Page 2



## Application requirements

Applications to remove, destroy or lop native vegetation must include all the below information. If an appropriate response has not been provided the application is not complete.

### Application Requirement 1 - Native vegetation removal information

If the native vegetation removal is mapped correctly, the information presented in this Native Vegetation Removal Report addresses Application Requirement 1.

### Application Requirement 2 - Topographical and land information

This statement describes the topographical and land features in the vicinity of the proposed works, including the location and extent of any ridges, hilltops, wetlands and waterways, slopes of more than 20% gradient, low-lying areas, saline discharge areas or areas of erosion.

The property slopes gently downhill from the north to south. There are no ridges, crests or hilltops, waterways, steep slopes, low lying areas, saline discharge areas or areas of existing erosion. There is a swampy riparian area to the south of the property approximately 65 metres from the proposed development.

### Application Requirement 3 - Photographs of the native vegetation to be removed

Application Requirement 3 is not addressed in this Native Vegetation Removal Report. All applications must include recent, timestamped photos of each Patch, Large Patch Tree and Scattered Tree which has been mapped in this report.

### Application Requirement 4 - Past removal

If past removal has been considered correctly, the information presented in this Native Vegetation Removal Report addresses Application Requirement 4.

### Application Requirement 5 - Avoid and minimise statement

This statement describes what has been done to avoid and minimise impacts on native vegetation and associated biodiversity values.

Existing access to the dwelling site has been proposed.  
No feasible opportunities to further avoid or minimise the impact on native vegetation without undermining the key objective of the proposal.  
See defensible space statement for details on dwelling and defensible space siting

### Application Requirement 6 - Property Vegetation Plan

This requirement only applies if an approved Property Vegetation Plan (PVP) applies to the property  
Does a PVP apply to the proposal?

No

### Application Requirement 7 - Defendable space statement

Where the removal of native vegetation is to create defendable space, this statement:

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- Describes the bushfire threat; and
- Describes how other bushfire risk mitigation measures were considered to reduce the amount of native vegetation proposed for removal (this can also be part of the avoid and minimise statement).

This statement is not required if, the proposed defensible space is within the Bushfire Management Overlay (BMO), and in accordance with the 'Exemption to create defensible space for a dwelling under Clause 44.06 of local planning schemes' in Clause 52.12-5.

The subject land is located in the Bushfire Management Overlay (BMO) which is a planning control that is applied where is the potential for extreme fire behaviour.

A Bushfire Management Statement (BMS) is being prepared by Nexus Planning which addresses the BMO requirements, documents the nature of the bushfire hazards influencing the site and provides justification for the bushfire protection measures that have been prescribed.

The measures that have been considered to reduce the amount of native vegetation removal for this proposal include the following:

- Siting the building in a location that takes advantage of a substantial existing clearing which minimises the vegetation removal required for construction and defensible space.
- Siting the building in a location that avoids the defensible space extending into the most continuous area of vegetation in the southern third of the land.
- The siting and defensible space has been provided based on achieving defensible space for BAL19 rather than BAL12.5 which would have required additional loss and the BMS prepared by Nexus Planning documents why it is necessary for the building to be provided with BAL19 defensible space despite BAL29 construction being applied.
- Providing defensible space for BAL19 coupled with BAL29 construction together with a bespoke approach to the tree canopy separation requirements of the BMO has also resulted in substantially more trees being retained than if the building was provided with BAL29 defensible space and construction and the standard 5 metre tree canopy separation requirement was applied.
- The existing driveway is to be used and upgraded as necessary to comply with the requirements of the BMO which avoids the need to remove vegetation to create a new driveway.

### **Application Requirement 8 - Native Vegetation Precinct Plan**

This requirement is only applicable if you are removing native vegetation from within an area covered by a Native Vegetation Precinct Plan (NVPP), and the proposed removal is not identified as 'to be removed' within the NVPP.

Does an NVPP apply to the proposal?

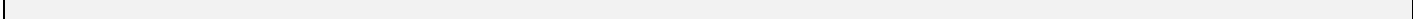
No

### **Application Requirement 9 - Offset statement**

This statement demonstrates that an offset is available and describes how the required offset will be secured. The Applicant's Guide provides information relating to this requirement.

Offsets will be purchased from an existing native vegetation credit site. A recent, no more than 6 month old, quotation from a Native Vegetation Credit Register accredited broker stating the offset is available will be supplied as part of the application. The cost of the offset is supplied and understood by the applicant.

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## Next steps

Applications to remove, destroy or lop native vegetation must address all the application requirements specified in the Guidelines. If you wish to remove the mapped native vegetation you are required to apply for approval from the responsible authority (e.g. local Council). This Native vegetation removal report must be submitted with your application and meets most of the application requirements. The following requirements need to be addressed, as applicable.

### **Application Requirement 3 - Photographs of the native vegetation to be removed**

Recent, dated photographs of the native vegetation to be removed **must be provided** with the application. All photographs must be clear, show whether the vegetation is a Patch of native vegetation, Patch Tree or Scattered Tree, and identify any Large Trees. If the area of native vegetation to be removed is large, provide photos that are indicative of the native vegetation.

Ensure photographs are attached to the application. If appropriate photographs have not been provided the application is not complete.

### **Application Requirement 6 - Property Vegetation Plan**

If a PVP is applicable, it must be provided with the application.

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## Appendix 1: Description of native vegetation to be removed

General Habitat Units for each zone (Patch, Scattered Tree or Patch Tree) are calculated by the following equation in accordance with the Guidelines.

**General Habitat Units = extent without overlap x condition score x general landscape factor x 1.5, where the general landscape factor = 0.5 + (strategic biodiversity value score/2)**

The General Offset amount required is the sum of all General Habitat Units per zone.

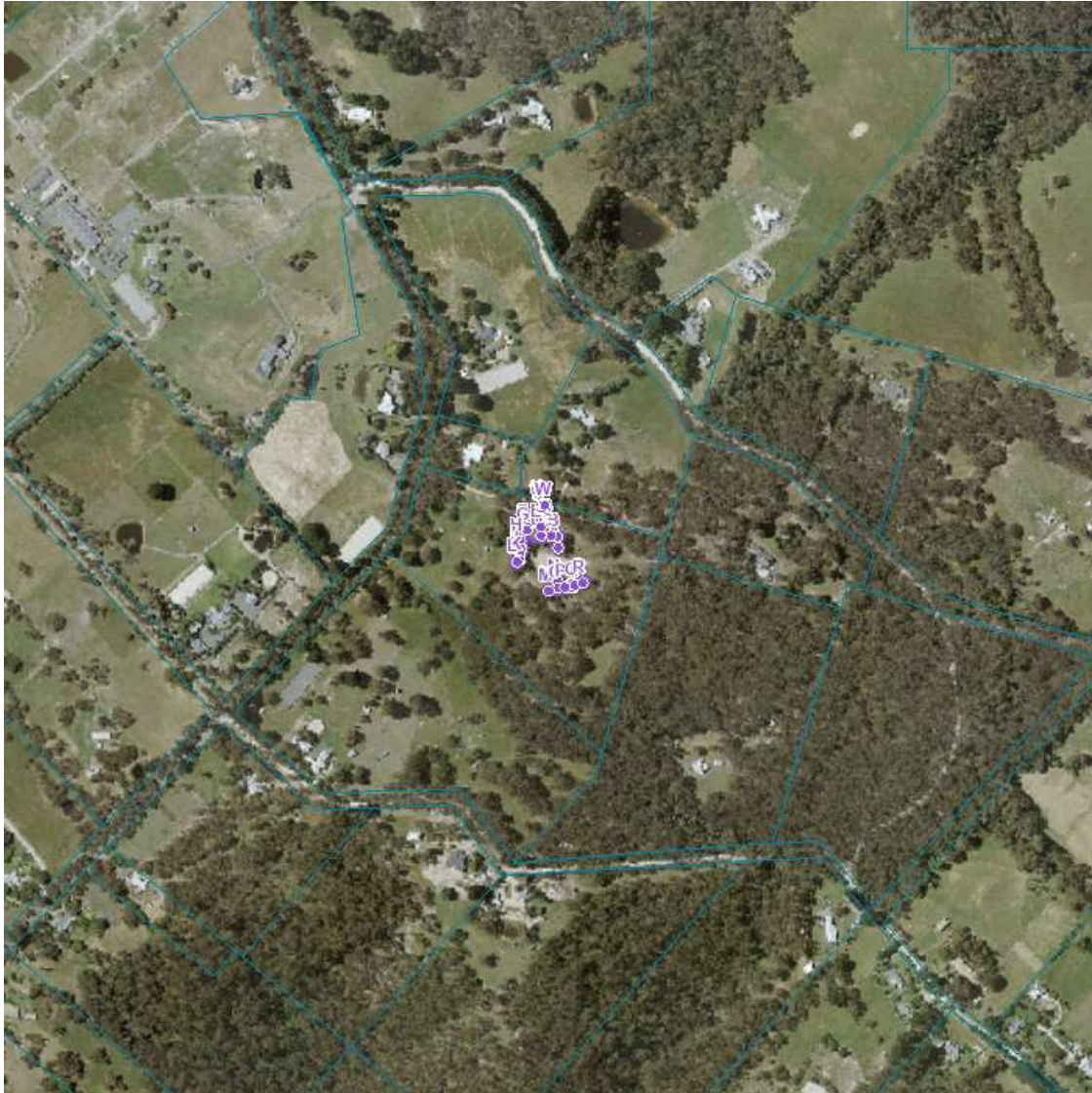
### Native vegetation to be removed

Information provided by or on behalf of the applicant			Information calculated by NVR Map							
Zone	Type	DBH (cm)	EVC code (modelled)	Bioregional conservation status	Large Tree(s)	Condition score (modelled)	Polygon extent (ha)	Extent without overlap (ha)	SBV score	General Habitat Units
1	Patch	-	HSF_0128, HSF_0016	Least Concern, Vulnerable	6	0.737	0.161	0.161	0.593	0.142
2	Patch	-	HSF_0016	Least Concern	3	0.780	0.071	0.071	0.570	0.066
3	Patch	-	HSF_0128	Vulnerable	1	0.720	0.016	0.016	0.570	0.014

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# Appendix 2: Images of mapped native vegetation

## 1. Property in context



- Proposed Removal
- Property Boundaries



200 m

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## 2. Aerial photograph showing mapped native vegetation



□ Proposed Removal



45 m

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### 3. Location Risk Map

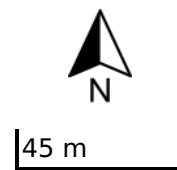
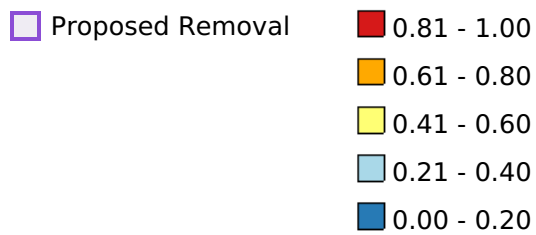
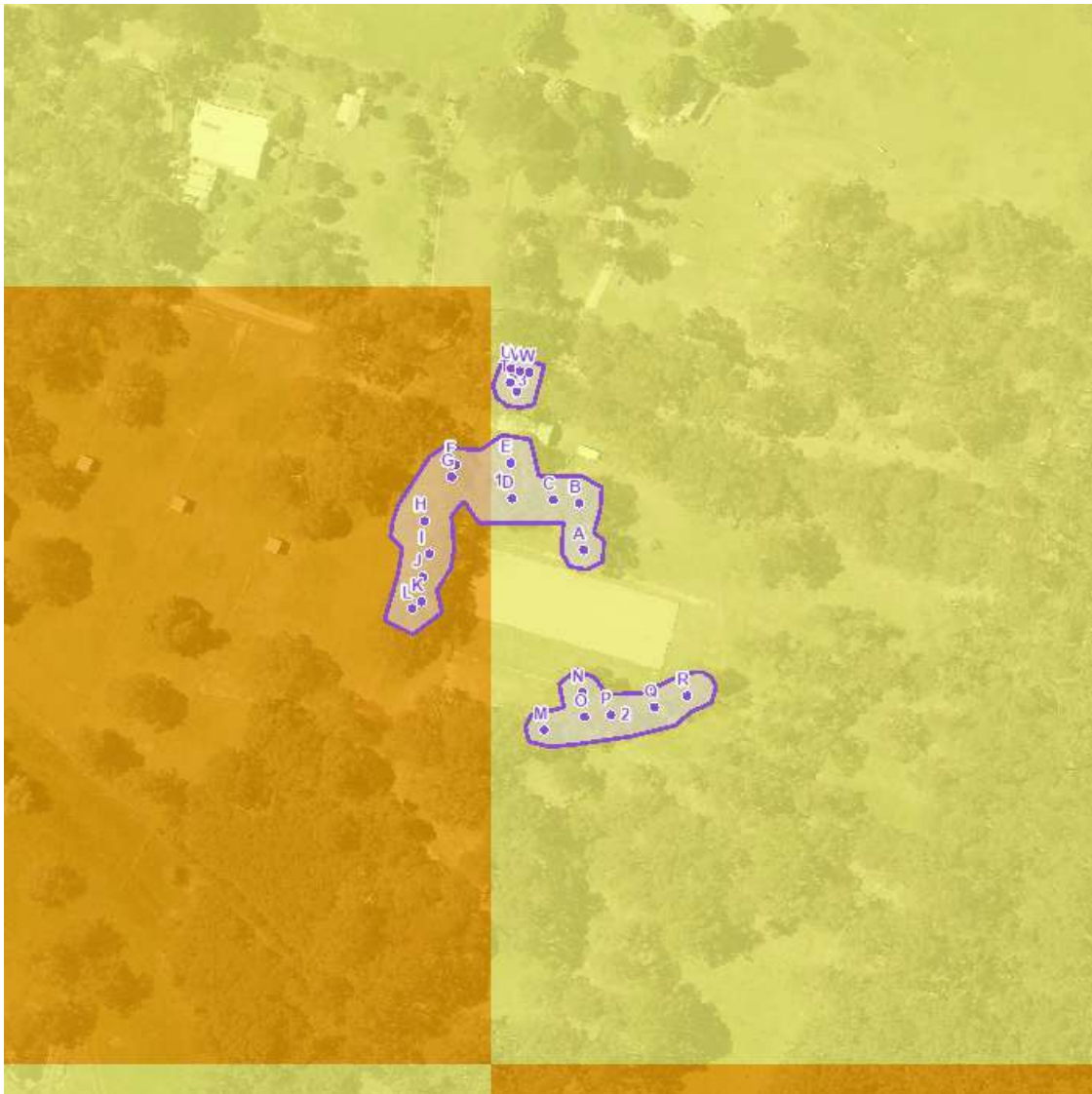


- Proposed Removal
- Location 1
- Location 2
- Location 3



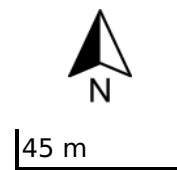
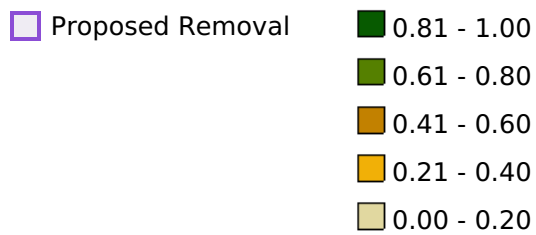
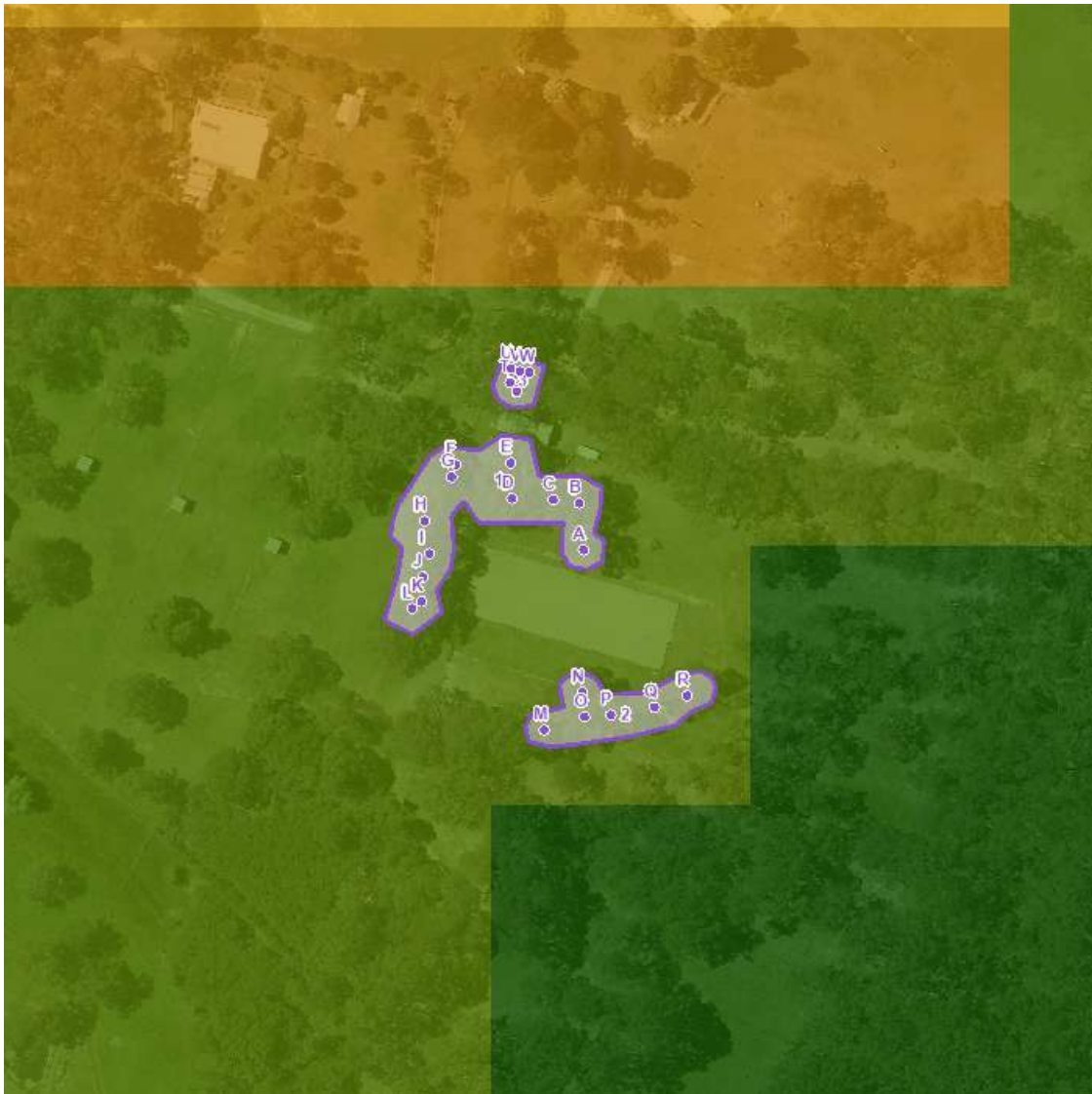
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#### 4. Strategic Biodiversity Value Score Map



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## 5. Condition Score Map



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## 6. Endangered EVCs

Not Applicable

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**GENERAL NOTES (NCC 2019 BCA Vol 2)**

- ALL MATERIALS AND WORK PRACTICES SHALL COMPLY WITH, BUT NOT LIMITED TO THE BUILDING REGULATIONS 2018, NATIONAL CONSTRUCTION CODE SERIES 2019, THE BUILDING CODE OF AUSTRALIA VOL 2 AND ALL RELEVANT CURRENT AUSTRALIAN STANDARDS (AS AMENDED) REFERRED TO THEREIN.
- UNLESS OTHERWISE SPECIFIED THE TERM BCA SHALL REFER TO NATIONAL CONSTRUCTION CODE SERIES 2019 BUILDING CODE OF AUSTRALIA VOLUME 2
- ALL MATERIALS AND CONSTRUCTION PRACTICE SHALL MEET THE PERFORMANCE REQUIREMENTS OF THE BUILDING CODE OF AUSTRALIA. WHERE AN ALTERNATIVE SOLUTION IS PROPOSED THEN, PRIOR TO IMPLEMENTATION OR INSTALLATION, IT FIRST MUST BE ASSESSED AND APPROVED BY THE RELEVANT BUILDING SURVEYOR AS MEETING THE PERFORMANCE REQUIREMENTS OF THE BCA.
- GLAZING INCLUDING SAFETY GLAZING SHALL BE INSTALLED TO A SIZE, TYPE & THICKNESS SO AS TO COMPLY WITH;
  - BCA PART 3.6 FOR CLASS 1 AND 10 BUILDINGS WITHIN A DESIGN WIND SPEED OF NOT MORE THAN N3, AND
  - BCA VOL 1 PART B1.4 FOR CLASS 2 TO 9 BUILDINGS
- WATERPROOFING OF WET AREAS, BEING BATHROOMS, SHOWERS, SHOWER ROOMS, LAUNDRIES, SANITARY COMPARTMENTS AND THE LIKE SHALL BE PROVIDED IN ACCORDANCE WITH AS 3740-2010: WATERPROOFING OF DOMESTIC WET AREAS.

**SUSTAINABILITY MEASURES FOR NEW CLASS 1 BUILDINGS.**

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ANY HOUSE ENERGY RATING (HERS) REPORT AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STAMPED PLANS ENDORSED BY THE ACCREDITED ENERGY RATER.

**SITE BUSHFIRE ATTACK ASSESSMENT.**

- REFERENCE DOCUMENT AS 3959-2018 CONSTRUCTION OF BUILDINGS IN BUSHFIRE PRONE AREAS.
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL AND ALL OTHER CONSULTANTS DRAWINGS/ DETAILS AND WITH ANY OTHER WRITTEN INSTRUCTIONS ISSUED IN THE COURSE OF THE CONTRACT.
  - SITE PLAN MEASUREMENTS IN MILLIMETRES - ALL OTHER MEASUREMENTS IN MILLIMETRES U.N.O.
  - FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
  - THE BUILDER SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE STABILITY AND GENERAL WATER TIGHTNESS OF ALL NEW AND/OR EXISTING STRUCTURES DURING ALL WORKS.
  - THE BUILDER AND SUBCONTRACTORS SHALL CHECK AND VERIFY ALL DIMENSIONS, SETBACKS, LEVELS AND SPECIFICATIONS AND ALL OTHER RELEVANT DOCUMENTATION PRIOR TO THE COMMENCEMENT OF ANY WORKS. REPORT ALL DISCREPANCIES TO THIS OFFICE FOR CLARIFICATION

**SITE CLASSIFICATION**

SITE CLASSIFICATION AS CLASS:	
REFER TO SOIL REPORT NO:	
BY:	

**STORMWATER**

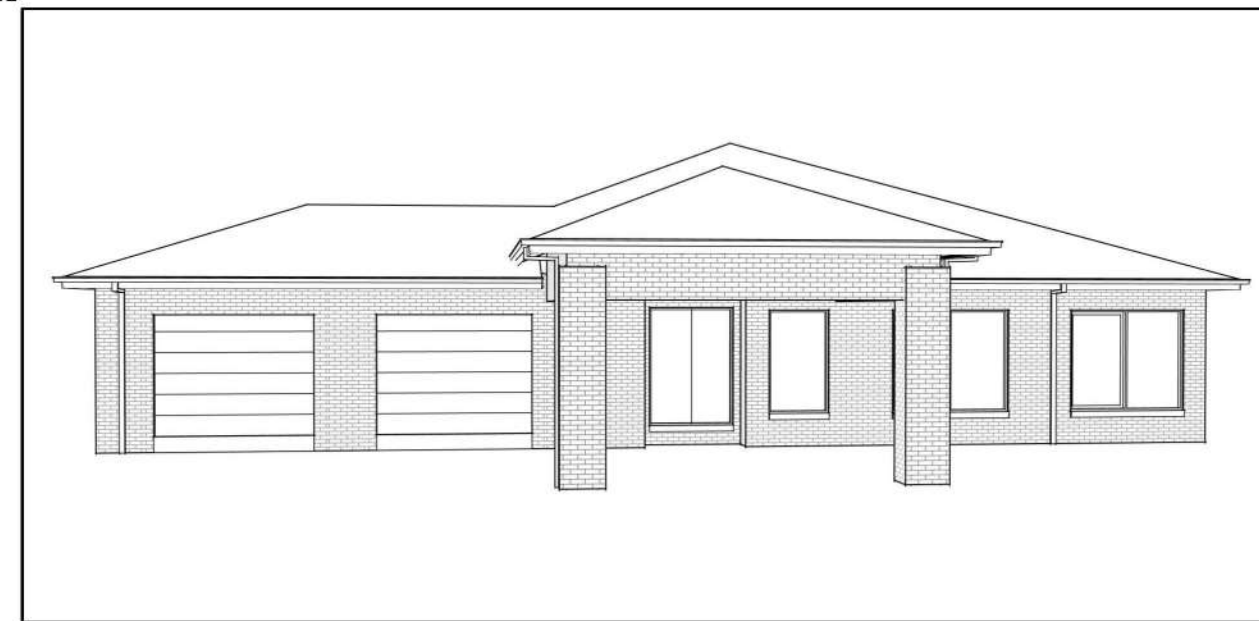
- 90mmØ (UPTO 250m2) OR 100mmØ (OVER 250m2) CLASS 6 UPVC STORMWATER LINE LAID TO A MINIMUM GRADE OF 1:100 AND CONNECTED TO THE LEGAL POINT OF STORMWATER DISCHARGE. PROVIDE INSPECTION OPENINGS AT 9000MM C/C AND AT EACH CHANGE OF DIRECTION. THE COVER TO UNDERGROUND STORMWATER DRAINS SHALL BE NOT LESS THAN
- 100MM UNDER SOIL
  - 50MM UNDER PAVED OR CONCRETE AREAS
  - 100MM UNDER UNREINFORCED CONCRETE OR PAVED DRIVEWAYS
  - 75MM UNDER REINFORCED CONCRETE DRIVEWAYS

**AUTHORITIES / CONSULTANTS**

MUNICIPALITY NAME:	
SEWERAGE AUTHORITY:	
CONSULTING STRUCTURAL ENGINEER:	
GEOTECHNICAL ENGINEER:	
THERMAL PERFORMANCE ASSESSOR:	

**STEP AND LANDINGS**

- STEP SIZES (OTHER THAN FOR SPIRAL STAIRS) TO BE:
  - RISERS (R) 190MM MAXIMUM AND 115MM MINIMUM
  - GOING (G) 355MM MAXIMUM AND 240MM MINIMUM
  - 2R + 1G = 700MM MAXIMUM AND 550MM MINIMUM
- WITH LESS THAN 125MM MAXIMUM GAP BETWEEN OPEN TREADS
- ALL TREADS, LANDINGS AND THE LIKE TO HAVE A SLIP-RESISTANCE CLASSIFICATION OF P3 OR R10 FOR DRY SURFACE CONDITIONS AND P4 OR R11 FOR WET SURFACE CONDITIONS, OR A NOSING STRIP WITH A SLIPRESISTANCE CLASSIFICATION OF P3 FOR DRY SURFACE CONDITIONS AND P4 FOR WET SURFACE CONDITIONS.
- PROVIDE BARRIERS WHERE CHANGE IN LEVEL EXCEEDS 1000MM ABOVE THE SURFACE BENEATH LANDINGS, RAMPS AND/OR TREADS. BARRIERS (OTHER THAN TENSIONED WIRE BALUSTRADES) TO BE:
  - 1000MM MIN. ABOVE FINISHED SURFACE LEVEL OF BALCONIES, LANDINGS OR THE LIKE, AND
  - 865MM MIN. ABOVE FINISHED SURFACE LEVEL OF STAIR NOSING OR RAMP, AND
  - VERTICAL WITH LESS THAN 125MM GAP BETWEEN, AND
  - ANY HORIZONTAL ELEMENT WITHIN THE BALUSTRADE BETWEEN 150MM AND 760MM ABOVE THE FLOOR MUST NOT FACILITATE CLIMBING WHERE CHANGES IN LEVEL EXCEEDS 4000MM ABOVE THE SURFACE BENEATH LANDINGS, RAMPS AND/OR TREADS.
- WIRE BARRIER CONSTRUCTION TO COMPLY WITH BCA PART 3.9.2.3 FOR CLASS 1 AND 10 BUILDINGS AND NCC 2019 BCA VOLUME 1 PART D2.16 FOR OTHER CLASSES OF BUILDINGS.
- TOP OF HAND RAILS TO BE 865MM MINIMUM ABOVE STAIR NOSING AND FLOOR SURFACE OF RAMPS.
- WINDOW SIZES NOMINATED ARE NOMINAL ONLY. ACTUAL SIZE MAY VARY ACCORDING TO MANUFACTURER. WINDOWS TO BE FLASHED ALL AROUND.
- WHERE THE BUILDING (EXCLUDES A DETACHED CLASS 10) IS LOCATED IN A TERMITE PRONE AREA THE AREA TO UNDERSIDE OF BUILDING AND PERIMETER IS TO BE PROVIDED WITH A TERMITE MANAGEMENT SYSTEM.
- CONCRETE STUMPS: UP TO 1400MM LONG TO BE 100MM X 100MM (1 NO. H.D. WIRE) 1401MM TO 1800MM LONG TO BE 100MM X 100MM (2 NO. H.D. WIRES) 1801MM TO 3000MM LONG TO BE 125MM X 125MM (2 NO. H.D. WIRES)
- 100MM X 100MM STUMPS EXCEEDING 1200MM ABOVE GROUND LEVEL TO BE BRACED WHERE NO PERIMETER BASE BRICKWORK PROVIDED.
- BUILDINGS IN MARINE OR OTHER EXPOSURE ENVIRONMENTS SHALL HAVE MASONRY UNITS, MORTAR AND ALL BUILT IN COMPONENTS AND THE LIKE COMPLYING WITH THE DURABILITY REQUIREMENTS OF TABLE 4.1 OF AS4773.1-2010 MASONRY IN SMALL BUILDINGS PART 1:DESIGN
- ALL STORMWATER TO BE TAKEN TO THE LEGAL POINT OF DISCHARGE TO THE RELEVANT AUTHORITIES APPROVAL.
- INSTALLATION OF ALL SERVICES SHALL COMPLY WITH THE RESPECTIVE SUPPLY AUTHORITY REQUIREMENTS.
- THE BUILDER AND SUBCONTRACTOR SHALL ENSURE THAT ALL STORMWATER DRAINS, SEWER PIPES AND THE LIKE ARE LOCATED AT A SUFFICIENT DISTANCE FROM ANY BUILDINGS FOOTING AND/OR SLAB EDGE BEAMS SO AS TO PREVENT GENERAL MOISTURE PENETRATION, DAMPNES, WEAKENING AND UNDERMINING OF ANY BUILDING AND ITS FOOTING SYSTEM.
- THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE BY THE CLIENT OF SJD HOMES ('THE DESIGNER') FOR THE PURPOSE EXPRESSLY NOTIFIED TO THE DESIGNER. ANY OTHER PERSON WHO USES OR RELIES ON THESE PLANS WITHOUT THE DESIGNER'S WRITTEN CONSENT DOES SO AT THEIR OWN RISK AND NO RESPONSIBILITY IS ACCEPTED BY THE DESIGNER FOR SUCH USE AND/OR RELIANCE.
- A BUILDING PERMIT IS REQUIRED PRIOR TO THE COMMENCEMENT OF THESE WORKS. THE RELEASE OF THESE DOCUMENTS IS CONDITIONAL TO THE OWNER OBTAINING THE REQUIRED BUILDING PERMIT.
- THE CLIENT AND/OR THE CLIENT'S BUILDER SHALL NOT MODIFY OR AMEND THE PLANS WITHOUT THE KNOWLEDGE AND CONSENT OF SJD HOMES EXCEPT WHERE A REGISTERED BUILDING SURVEYOR MAKES MINOR NECESSARY CHANGES TO FACILITATE THE BUILDING PERMIT APPLICATION AND THAT SUCH CHANGES ARE PROMPTLY REPORTED BACK TO SJD HOMES.
- THE APPROVAL BY THIS OFFICE OF A SUBSTITUTE MATERIAL, WORK PRACTICE, VARIATION OR THE LIKE IS NOT AN AUTHORISATION FOR ITS USE OR A CONTRACT VARIATION. ANY SAID VARIATIONS MUST BE ACCEPTED BY ALL PARTIES TO THE AGREEMENT AND WHERE APPLICABLE THE RELEVANT BUILDING SURVEYOR PRIOR TO IMPLEMENTING THE SAID VARIATION.



**CUSTOM**

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ISSUE	AMENDMENT DETAILS
A	INITIAL WORKING DRAWINGS ISSUED RD (29.08.24)
B	PORCH UPDATED JG (08.10.24)
C	PLAN & ELECTRICAL CHANGES RD (23.10.24)
D	
E	
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P	

**BUSHFIRE ATTACK LEVEL:- (BAL)**

**BAL-29** - INCREASING LEVELS OF EMBER ATTACK AND BURNING DEBRIS IGNITED BY WINDBORNE EMBERS TOGETHER WITH INCREASING HEAT FLUX BETWEEN 19 AND 29 kW m<sup>2</sup>

ALL HOMES TO COMPLY WITH AS 3959-2009 (BAL)

**WIND SPEED ASSESSMENT:**

MAXIMUM DESIGN GUST WIND SPEED FOR THIS SITE IS: **N3 - 33m/s**

**IMPORTANT NOTE:**

THE WIND SPEED CALCULATION IS TAKEN FROM THE JOB SPECIFIC SOIL REPORT (FRONT PAGE) STANDARD HOMES ARE DESIGNED TO SUIT A MINIMUM WIND GUST SPEED OF 33 m/s

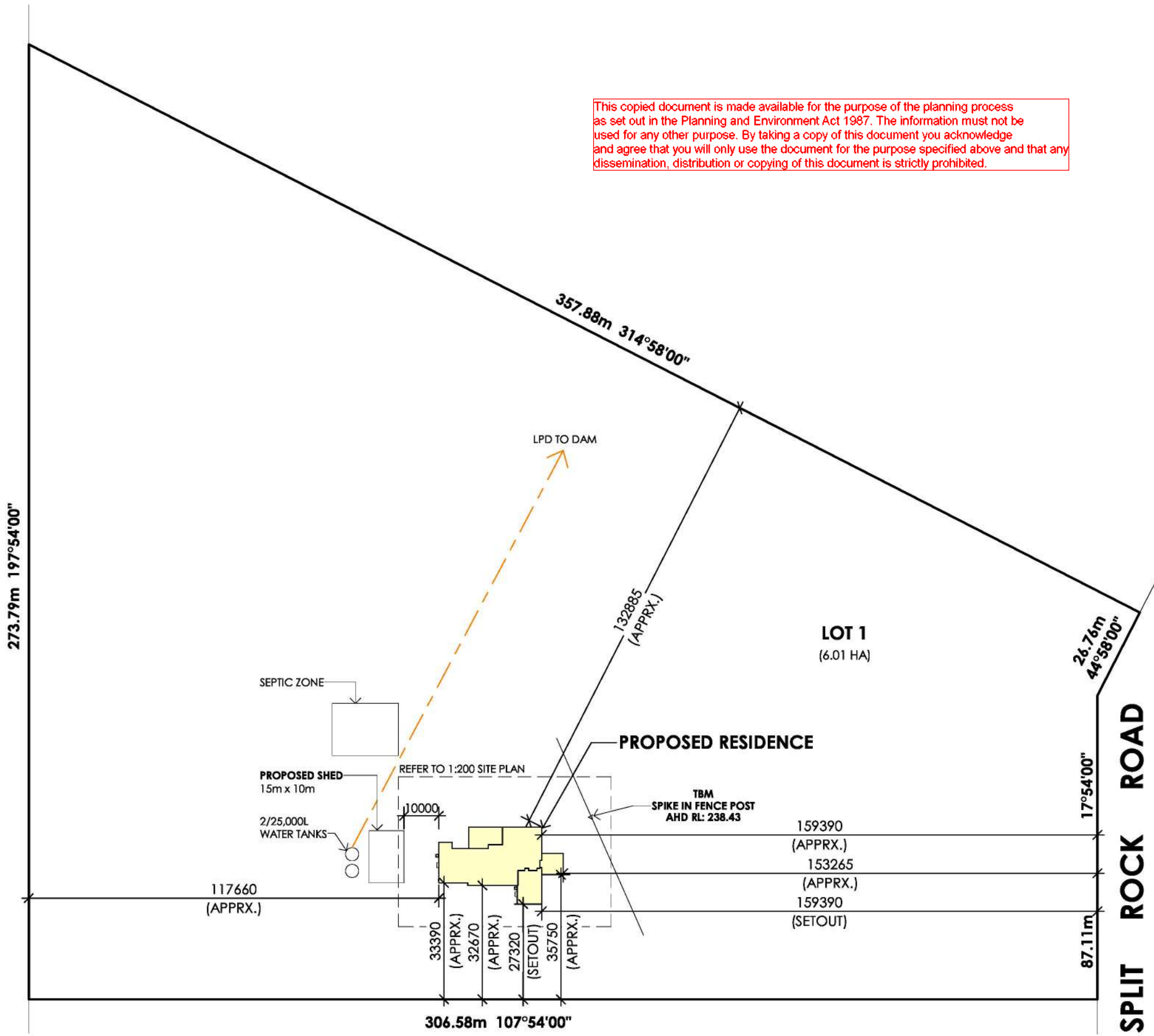
<p>433 Princes Hwy Officer VIC 3809 Ph: 9095 8000 Fax: 9095 8010 info@sjdhomes.com.au</p> <p>BL No. CDB-U 56523 © ALL RIGHTS RESERVED</p>	<p>PROPOSED: <b>HOUSE &amp; GARAGE</b></p>	<p>SIGNED BUILDER:</p>	<p>DRAWING TITLE: <b>GENERAL NOTES</b></p>
	<p>HOUSE TYPE: <b>CUSTOM</b></p>	<p>SIGNED OWNER:</p>	
<p>THIS WORK IS THE PROPERTY OF SJD HOMES AND ANY COPYING OR ALTERING OF THE DRAWING SHALL NOT BE UNDERTAKEN WITHOUT WRITTEN PERMISSION FROM SJD HOMES</p>		<p>DATE:</p>	<p>ISSUE DATE: 23.10.24</p>
		<p>SITE ADDRESS: <b>NO. 210, SPLIT ROCK ROAD BEACONSFIELD UPPER, 3808</b></p>	<p>SCALE: MASTER DATE: N/A</p>
			<p>DRAWN: RD CHECKED: TLG</p>
			<p>SHEET NO: 01 OF: 14</p>

- DRAINAGE NOTES:**
- SITE DRAINAGE SHALL COMPLY WITH NCC 3.1.2 DRAINAGE AND AS3500 NATIONAL PLUMBING DRAINAGE CODE.
  - BASE OF CUT GRADED TO SILT TRAP AT 1:100 MIN. DRAINS SHALL BE PROTECTED BY GRAVEL FILTERS.
  - TEMPORARY DOWNPIPES CONNECTED TO THE STORM WATER SYSTEM TO BE INSTALLED AS SOON AS ROOF COVER IS COMPLETED.
  - STORMWATER DRAINS ARE INDICATIVE ONLY. DRAINER TO CONNECT TO LEGAL POINT OF DISCHARGE AT THEIR DISCRETION
- ▲ GRADE SURFACE AWAY FROM HOUSE FOOTINGS (MINIMUM FALL 1:20).
  - GRATED INLET PIT CONNECTED TO STORMWATER SYSTEM DIRECTED TO LEGAL POINT OF DISCHARGE.
  - PROVIDE AG DRAIN AT BASE OF CUT GRADED TO SILT PIT AT 1:100 MIN.
  - SILT PIT CONNECTED TO AG DRAIN & DIRECTED TO LEGAL POINT OF DISCHARGE VIA STORMWATER SYSTEM

- BUSHFIRE REQUIREMENTS - BAL 29**
- FLOORS**  
CONCRETE SLAB ON GROUND OR FRAMED SUB FLOOR ENCLOSED BY EXTERNAL WALL OR FRAMES, SUB FLOOR ENCLOSED BY METAL MESH WITH FLOORING LESS THAN 400mm ABOVE GROUND LEVEL TO BE NON-COMBUSTIBLE, NATURALLY FIRE RESISTANT TIMBER OR PROTECTED ON THE UNDERSIDE WITH SARKING OR MINERAL WOOL INSULATION.
- WALLS**  
WALLS MADE FROM NON COMBUSTIBLE MATERIAL (eg MASONRY, BRICK VENEER, MUD BRICK, CONCRETE, AERATED CONCRETE) OR TIMBER OR STEEL FRAMED WALLS, SARKED ON THE OUTSIDE OF THE FRAME AND CLAD WITH 6mm FIBRE CEMENT SHEET EXTERNAL CLADDING OR STEEL SHEETING OR BUSHFIRE RESISTANT TIMBER.  
VENTS AND WEEPHOLES IN EXTERNAL WALLS SHALL BE SCREENED WITH MESH WITH A MAXIMUM APERTURE OF 2mm AND MADE OF CORROSION RESISTANT STEEL, BRONZE OR ALUMINIUM.
- WINDOWS**  
SHALL BE COMPLETED PROTECTED BY A BUSHFIRE SHUTTER OR COMPLETED SCREENED WITH STEEL, BRONZE OR ALUMINIUM, OR 5mm TOUGHENED GLASS WITH THE OPENABLE PORTION SCREENED.  
WINDOW FRAMES TO BE OF METAL OR METAL REINFORCED PVC-U, OR BUSHFIRE RESISTANT TIMBER  
ANY PORTION WITHIN 400mm OF GROUND LEVEL OR DECKING TO BE SCREENED.
- DOORS**  
DOOR FRAMES MUST BE BUSHFIRE RESISTANT TIMBER, METAL OR METAL REINFORCED PVC-U, AND SHALL BE TIGHT FITTING TO THE DOOR FRAME. PROVIDE WEATHER STRIPS, DRAUGHT EXCLUDERS/SEALS TO THE BASE OF SIDE HUNG DOORS.  
SIDE HUNG EXTERNAL DOORS SHALL BE COMPLETELY PROTECTED BY A BUSHFIRE SHUTTER AND DOORS SHALL BE NON COMBUSTIBLE OR A SOLID TIMBER DOOR HAVING A MIN THICKNESS OF 35mm FOR THE FIRST 400mm ABOVE THE THRESHOLD AND PROTECTED ON THE OUTSIDE BY A METAL FRAMED SCREEN WITH A MAX APERTURE OF 2mm, MADE OF BRONZE OR CORROSION RESISTANT STEEL.  
WHERE SIDE HUNG DOORS INCORPORATE GLAZING, THE GLAZING IS TO BE A MIN 6mm TOUGHENED GLASS. EXTERNAL HARDWARE MUST BE METAL.  
SLIDING DOORS SHALL BE COMPLETED PROTECTED BY A BUSHFIRE SHUTTER.  
WHERE SLIDING DOORS INCORPORATE GLAZING, THE GLAZING IS TO BE A MIN 6mm OF TOUGHENED GLASS. SLIDING DOORS MUST BE TIGHT FITTING IN THE FRAMES, OR:  
DOOR FRAMES TO BE OF METAL WITH EXTERNALLY FITTED HARDWARE FOR OPENING AND CLOSING OF THE DOOR TO BE METAL.  
GLAZING TO HAVE FRL OR /30/- EXCEPT WHERE FIXED AND OPENABLE PORTIONS ARE SCREENED WITH MESH WITH MAX APERTURE 2mm, MADE OF BRONZE OR CORROSION RESISTANT STEEL.  
WHERE GLAZING IS LESS THAN 400mm FROM GROUND, DECK ROOF OR AWNING, THAT PORTION OF GLAZING SHALL BE SCREENED EXTERNALLY.  
GARAGE DOORS MUST BE NON-COMBUSTIBLE MATERIAL OR MIN 6mm FIBRE CEMENT SHEET. PANEL LIFT DOOR IS TO BE FITTED WITH WEATHER STRIPS, DRAUGHT EXCLUDERS/SEALS OR GUIDE TRACKS WITH A MAX GAP OF 3mm.  
GARAGE DOORS MUST NOT INCLUDE VENTILATION SLOTS.
- ROOF**  
NON COMBUSTIBLE ROOF COVERING.  
ROOF WALL JUNCTIONS SEALED.  
ANY OPENINGS (SKYLIGHTS etc) FITTED WITH NON COMBUSTIBLE EMBER GUARDS.  
ROOF TO BE FULLY SARKED EXTENDING INTO GUTTERS AND VALLEYS.  
ANY LEAF OR GUTTER GUARDS TO BE NON COMBUSTIBLE.  
EAVES AND FASCIAS FROM BUSH FIRE RESISTING TIMBER OR METAL FIXED AT 450 CTRS.  
EAVE LINING TO BE BUSHFIRE RESISTING TIMBER OR 4.5mm FC SHEET  
JOINTS IN EAVES LINING, FASCIAS AND GABLES MAY BE SEALED WITH PLASTIC JOINING STRIPS OR TIMBER STORM MOULDS.
- VERANDAH & DECKS**  
SUPPORTS AND FRAMING TO BE BUSHFIRE RESISTING TIMBER OR NON COMBUSTIBLE MATERIAL. DECKING TO BE NON COMBUSTIBLE OR BUSHFIRE RESISTING TIMBER.  
ANY TIMBER RAFTERS TO BE LINED WITH A MINIMUM OF 6mm FC SHEET.
- WATER & GAS SUPPLY PIPES**  
ABOVE GROUND, EXPOSED WATER AND GAS PIPES SHALL BE METAL.

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- SITE CUT/FILL LEGEND & NOTES**
- DENOTES AREA OF SITE CUT
  - DENOTES AREA OF SITE FILL
- NOTE:**  
PENETRATIONS THROUGH THE SISALATION PAPER ARE TO BE TAPED AROUND CAREFULLY TO ENSURE ANY GAPS ARE SEALED.
- NOTE:**  
BUILDER RESERVES THE RIGHT TO ALTER THE SITE CUT HEIGHT TO THEIR DISCRETION, PENDING CONDITIONS ON SITE
- SITE CUT & FILL NOTE**  
PROVIDE SITE CUT OF 1000 mm & FILL 900 mm OVER BUILDING AREA & PROVIDE AN ADDITIONAL SCRAPE TO GARAGE AREA TO ACCOMODATE 86 mm STEPDOWN. NOTE: 45 ° BATTER ANGLE
- STORMWATER LAYOUT**  
STORMWATER DRAIN LAYOUT IS FOR INDICATIVE PURPOSES ONLY & WILL BE INSTALLED AS PER THE DRAINAGE SUB-CONTRACTORS DISCRETION.
- TERMITE TREATMENT REQUIRED**  
PROVIDE TERMITE TREATMENT IN ACCORDANCE WITH AS 3660
- EXTERNAL STEPS**  
PROVIDE STEPS OR BUILD UP SOIL AROUND EXTERNAL DOORS WHERE THRESHOLD OF THE DOOR EXCEEDS 190MM

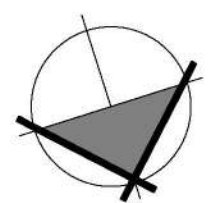


**SITE COVERAGE ANALYSIS**

BUILDING AREA	517.09 m <sup>2</sup>	0.86%
PERMEABLE AREA	59579.75 m <sup>2</sup>	99.14%
TOTAL SITE AREA	60096.84 m <sup>2</sup>	100%

**POWER FEED-IN TO DWELLING:**  
PROVIDE TWO PHASE POWER TO DWELLING

BUILDERS TO ALLOW FOR NBN CONNECTION (FIBRE OPTIC)



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**PROPOSED:**  
**HOUSE & GARAGE**

**HOUSE TYPE:**  
**CUSTOM**

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**SIGNED BUILDER:**  
.....  
**SIGNED OWNER:**  
.....  
**DATE:**  
.....

**SITE ADDRESS:**  
**NO. 210, SPLIT ROCK ROAD  
BEACONSFIELD UPPER, 3808**

**DRAWING TITLE:**  
**LOCALITY PLAN**

**ISSUE:** C  
**ISSUE DATE:** 23.10.24  
**SCALE:** 1 : 1250      **MASTER DATE:** N/A  
**DRAWN:** RD      **CHECKED:** TLG  
**SHEET NO:** 02      **OF:** 14

**DRAINAGE NOTES:**

- SITE DRAINAGE SHALL COMPLY WITH NCC 3.1.2 'DRAINAGE' AND AS3500 NATIONAL PLUMBING DRAINAGE CODE.
- BASE OF CUT GRADED TO SILT TRAP AT 1:100 MIN. DRAINS SHALL BE PROTECTED BY GRAVEL FILTERS.
- TEMPORARY DOWNPIPES CONNECTED TO THE STORM WATER SYSTEM TO BE INSTALLED AS SOON AS ROOF COVER IS COMPLETED.
- STORMWATER DRAINS ARE INDICATIVE ONLY. DRAINER TO CONNECT TO LEGAL POINT OF DISCHARGE AT THEIR DISCRETION.
- ▲ GRADE SURFACE AWAY FROM HOUSE FOOTINGS (MINIMUM FALL 1:20).
- GRATED INLET PIT CONNECTED TO STORMWATER SYSTEM DIRECTED TO LEGAL POINT OF DISCHARGE.
- PROVIDE AG DRAIN AT BASE OF CUT GRADED TO SILT PIT AT 1:100 MIN.
- SILT PIT CONNECTED TO AG DRAIN & DIRECTED TO LEGAL POINT OF DISCHARGE VIA STORMWATER SYSTEM

**LOT 1  
6.01HA**

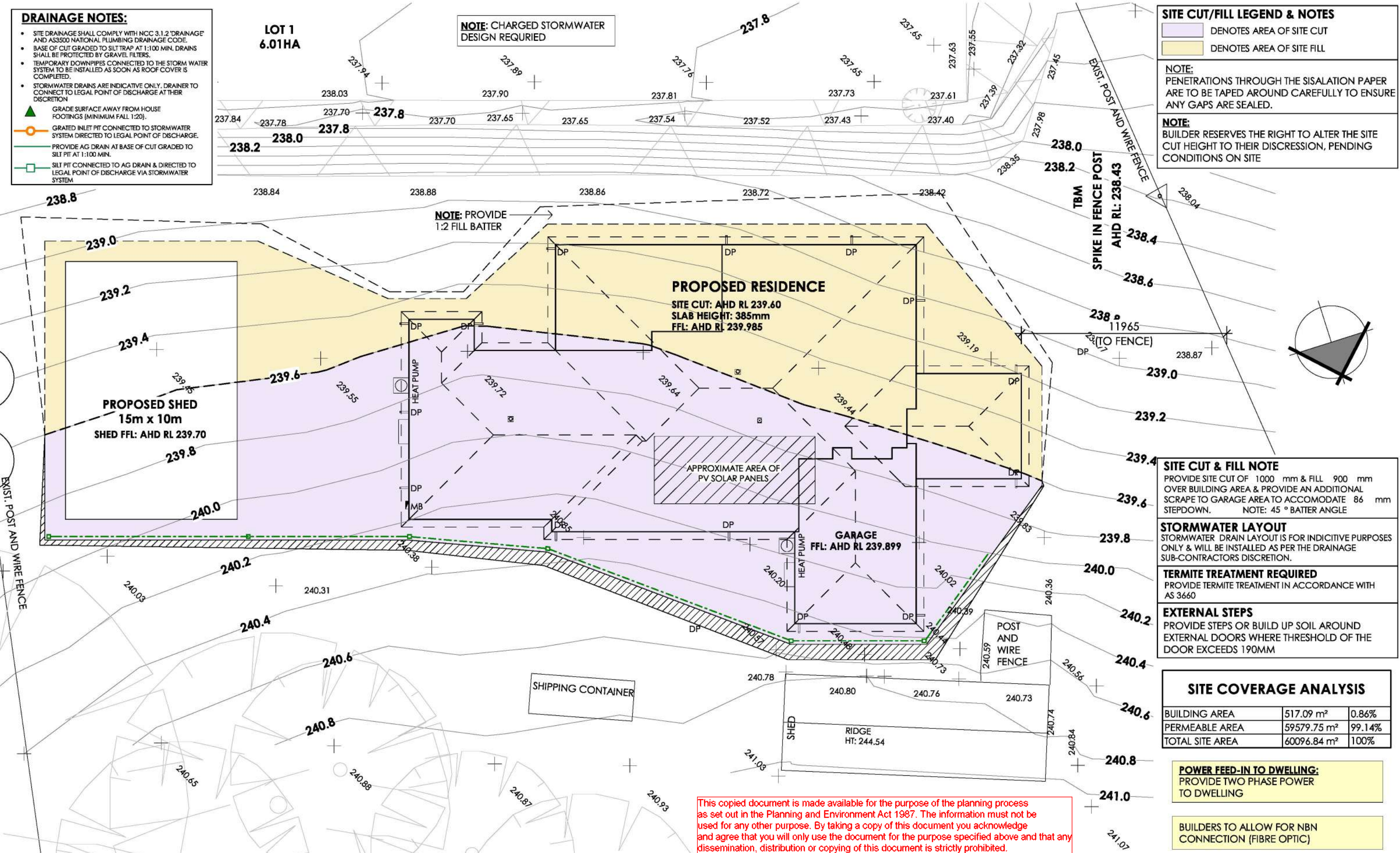
**NOTE: CHARGED STORMWATER DESIGN REQUIRED**

**SITE CUT/FILL LEGEND & NOTES**

- DENOTES AREA OF SITE CUT
- DENOTES AREA OF SITE FILL

**NOTE:**  
PENETRATIONS THROUGH THE SISALATION PAPER ARE TO BE TAPED AROUND CAREFULLY TO ENSURE ANY GAPS ARE SEALED.

**NOTE:**  
BUILDER RESERVES THE RIGHT TO ALTER THE SITE CUT HEIGHT TO THEIR DISCRETION, PENDING CONDITIONS ON SITE



**NOTE: PROVIDE 1:2 FILL BATTER**

**PROPOSED RESIDENCE**

SITE CUT: AHD RL 239.60  
SLAB HEIGHT: 385mm  
FFL: AHD RL 239.985

**PROPOSED SHED  
15m x 10m  
SHED FFL: AHD RL 239.70**

**GARAGE  
FFL: AHD RL 239.899**

SHIPPING CONTAINER

SHED  
RIDGE HT: 244.54

**SITE CUT & FILL NOTE**

PROVIDE SITE CUT OF 1000 mm & FILL 900 mm OVER BUILDING AREA & PROVIDE AN ADDITIONAL SCRAPE TO GARAGE AREA TO ACCOMMODATE 86 mm STEPDOWN. NOTE: 45 ° BATTER ANGLE

**STORMWATER LAYOUT**  
STORMWATER DRAIN LAYOUT IS FOR INDICATIVE PURPOSES ONLY & WILL BE INSTALLED AS PER THE DRAINAGE SUB-CONTRACTORS DISCRETION.

**TERMITE TREATMENT REQUIRED**  
PROVIDE TERMITE TREATMENT IN ACCORDANCE WITH AS 3660

**EXTERNAL STEPS**  
PROVIDE STEPS OR BUILD UP SOIL AROUND EXTERNAL DOORS WHERE THRESHOLD OF THE DOOR EXCEEDS 190MM

**SITE COVERAGE ANALYSIS**

BUILDING AREA	517.09 m <sup>2</sup>	0.86%
PERMEABLE AREA	59579.75 m <sup>2</sup>	99.14%
TOTAL SITE AREA	60096.84 m <sup>2</sup>	100%

**POWER FEED-IN TO DWELLING:**  
PROVIDE TWO PHASE POWER TO DWELLING

BUILDERS TO ALLOW FOR NBN CONNECTION (FIBRE OPTIC)

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**PROPOSED:  
HOUSE & GARAGE**

HOUSE TYPE:  
**CUSTOM**

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**SIGNED BUILDER:**  
.....  
**SIGNED OWNER:**  
.....  
**DATE:**  
.....

**SITE ADDRESS:**  
**NO. 210, SPLIT ROCK ROAD  
BEACONSFIELD UPPER, 3808**

**DRAWING TITLE:**  
**SITE PLAN**



ISSUE: C  
ISSUE DATE: 23.10.24  
SCALE: 1 : 200      MASTER DATE: N/A  
DRAWN: RD      CHECKED: TLG  
SHEET NO: 02A      OF: 14



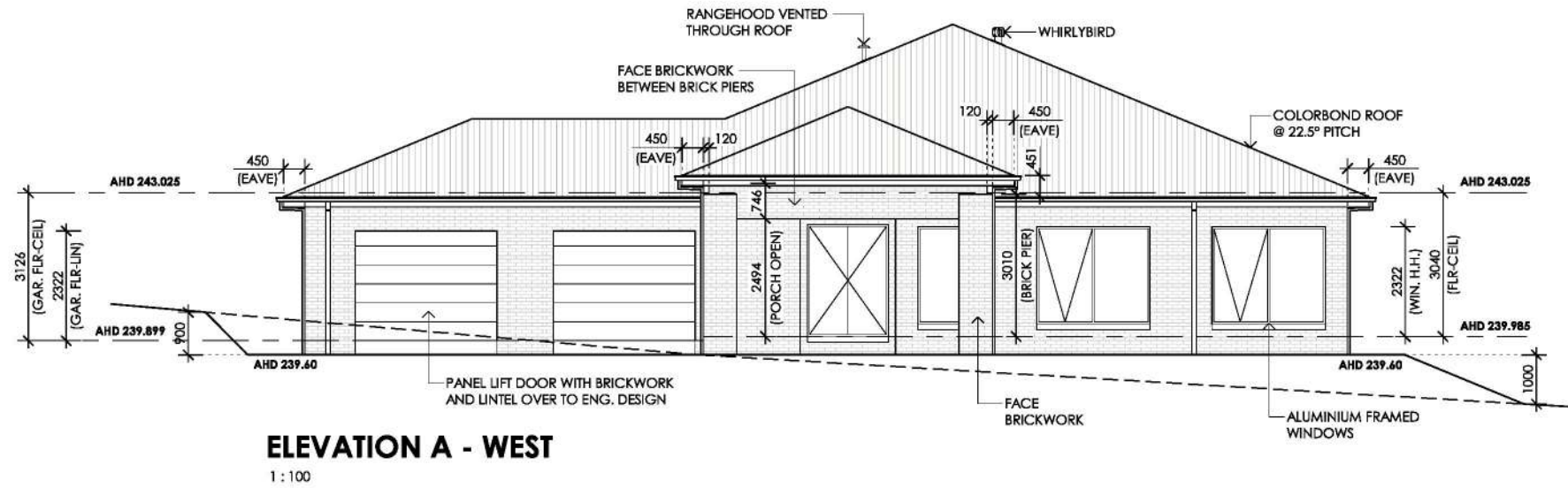


**EXTERNAL DOOR THRESHOLDS:**  
THRESHOLDS OF EXTERNAL DOORS TO BE NO GREATER THAN 230mm ABOVE THE ADJOINING SURFACE

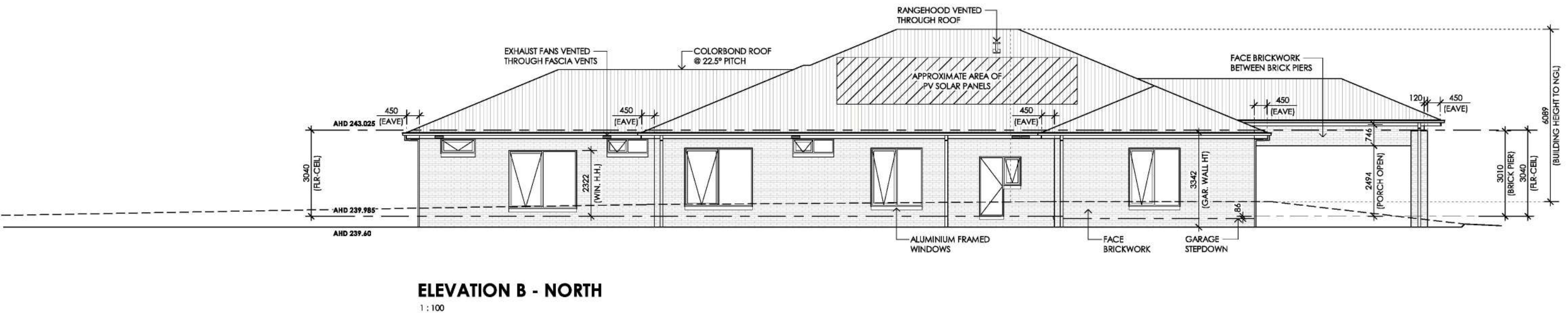
**DISCLAIMER:**  
GARAGE DOOR IS INDICATIVE ONLY AND IS NOT AN ACCURATE DEPICTION OF HOW MANY PANELS ARE ON DOOR

EXTERNAL MATERIAL SCHEDULE		
TYPE	DESCRIPTION/COLOUR	IMAGE
FACE BRICKWORK	JARRAH IRONSTONE	
ROOF, FASCIA/GUTTER, DOWNPIPES	COLORBOND ROOF, FASCIA/GUTTER AND DOWNPIPES IN 'IRONSTONE' COLOUR	
GARAGE DOOR	'WALLABY'	
WINDOW FRAMES	ALUMINIUM IN 'BLACK'	

**IMPORTANT NOTE:**  
PROPOSED SHED COLOURS TO MATCH HOUSE/DWELLING; IRONSTONE & DARK GREY



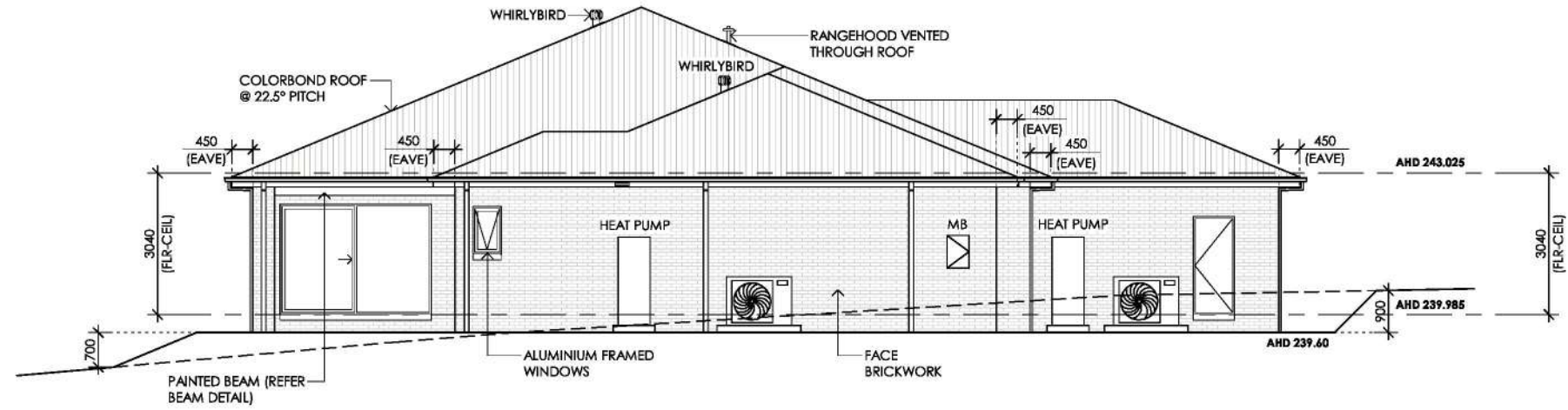
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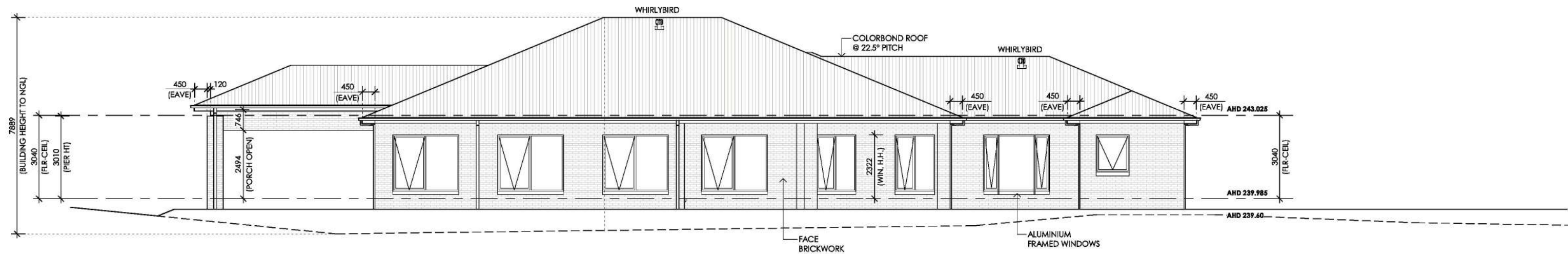
 <p>433 Princes Hwy Officer VIC 3809 Ph: 9095 8000 Fax: 9095 8010 info@sjdhomes.com.au</p> <p>BL No. CDB-U 56523 © ALL RIGHTS RESERVED</p>	<p>PROPOSED: <b>HOUSE &amp; GARAGE</b></p> <p>HOUSE TYPE: <b>CUSTOM</b></p>	<p><b>IMPORTANT NOTE: SHEET SIZE IS A2</b></p> <p>THIS WORK IS THE PROPERTY OF SJD HOMES AND ANY COPYING OR ALTERING OF THE DRAWING SHALL NOT BE UNDERTAKEN WITHOUT WRITTEN PERMISSION FROM SJD HOMES</p>	<p>SIGNED BUILDER: _____</p> <p>SIGNED OWNER: _____</p> <p>DATE: _____</p>	<p>SITE ADDRESS: <b>NO. 210, SPLIT ROCK ROAD BEACONSFIELD UPPER, 3808</b></p>	<p>DRAWING TITLE: <b>ELEVATIONS</b></p> <p>ISSUE: C</p> <p>ISSUE DATE: 23.10.24</p> <p>SCALE: 1 : 100      MASTER DATE: N/A</p> <p>DRAWN: JM      CHECKED: TLG</p> <p>SHEET NO: 04      OF: 14</p>
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**EXTERNAL DOOR THRESHOLDS:**  
 THRESHOLDS OF EXTERNAL DOORS TO BE  
 NO GREATER THAN 230mm ABOVE THE  
 ADJOINING SURFACE



**ELEVATION C - EAST**  
 1 : 100

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**ELEVATION D - SOUTH**  
 1 : 100

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	<p>HOUSE TYPE:  <b>CUSTOM</b></p>		<p>SIGNED OWNER:        _____</p>		<p>ISSUE: C        ISSUE DATE: 23.10.24        SCALE: 1 : 100    MASTER DATE: N/A        DRAWN: JM    CHECKED: TLG        SHEET NO: 04A    OF: 14</p>

**TIMBER FRAMING SCHEDULE** RLW : 7500  
**SINGLE STOREY OR UPPER STOREY LOADBEARING WALLS**  
**COLORBOND SHEET ROOF - TRUSSES @ 600 CTS**

MEMBER	SIZE	G	SPAN	CTRS
<b>WAFFLE POD CONCRETE SLAB FLOOR</b>				
Btm. plate	90x35	MGP10		
Top plate	2/90x35	MGP10		
Studs	90x35	MGP10		600
Jamb studs 1	90x45	MGP10		1800
Jamb studs 2	2/90x45	MGP10		3100
Wall bracing	IN ACCORDANCE WITH AS 1684-2010			
Noggings	70x35	MGP10		1350
Lintel 1	190x35	LVL15	2000	
Lintel 2	2/170x35	LVL15	2550	
Lintel 3	2/240x35	LVL15	3450	
Porch Beam	AS PER ENG.			

LINTELS IN LOWER STOREY WALLS OF A TWO STOREY TO ENGINEERS DESIGN  
**TRUSSED ROOF**  
 TIMBER FABRICATED AS PER MANUF. SPECIFICATIONS @ MAX 600 CTS

\* Sizes may be built up using vertical nail lamination

**NON LOADBEARING WALLS**

MEMBER	SIZE	G	SPAN	CTRS
<b>WAFFLE POD CONCRETE SLAB FLOOR</b>				
Btm. plate	90x35	MGP10		
Top plate	2/90x35	MGP10		
Studs	90x35	MGP10		600
Jamb studs 1	90x45	MGP10		1300

**EXTERNAL LINTEL SCHEDULE**  
 Upper Floor lintels - Based on 500mm of veneer over

Span (up to)	Size	Angle
1200mm	75x75x8	MS angle
2100mm	75x100x8	MS angle
3000mm	100x100x8	MS angle

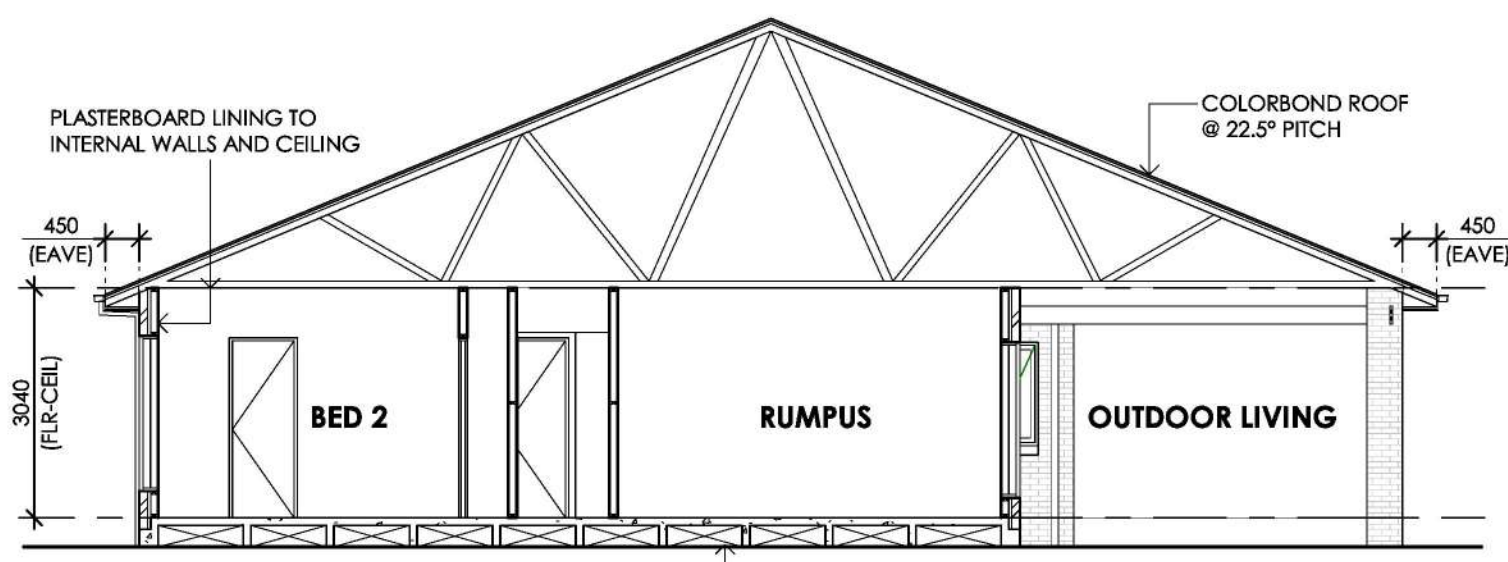
Lower Floor lintels - Based on 300mm of veneer over

Span (up to)	Size	Angle
1200mm	75x100x8	MS angle
2100mm	100x100x8	MS angle
3000mm	150x100x10	MS angle

First Dimension Vertical, 120mm min. end bearing to lintels

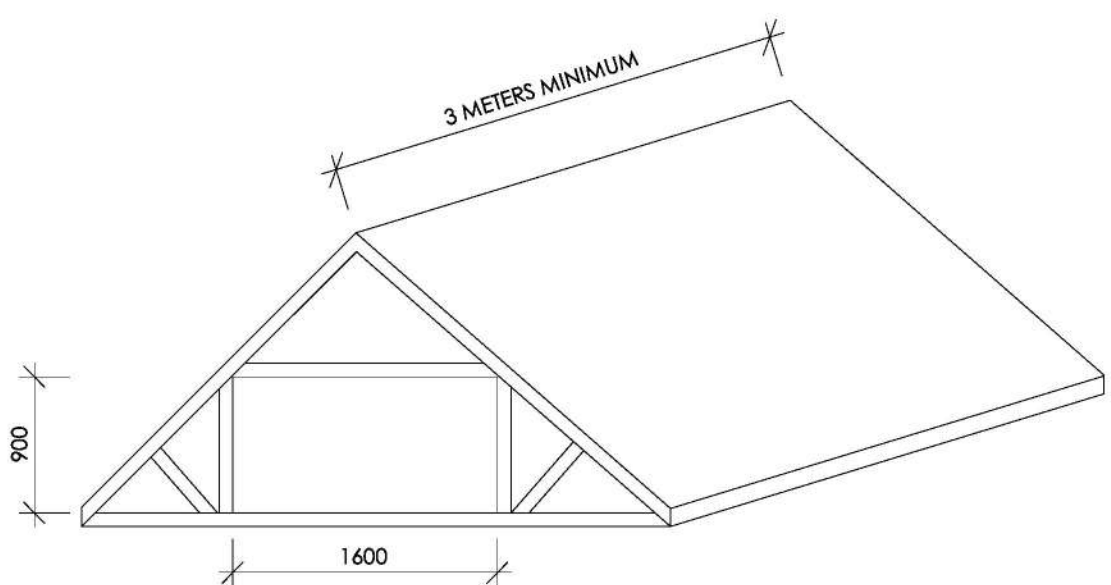
**6 STAR ENERGY REQ'MENTS:**

- REQUIREMENTS AS PER 6 STAR ENERGY RATING REPORT.
- INSULATION TO CEILING (INCLUDING GARAGE): **R5.0**
  - INSULATION TO EXTERNAL WALLS: **R2.5**
  - INSULATION TO GARAGE INTERNAL WALLS: **R2.0**
  - INSULATION TO WET AREAS: **R2.0HP**
  - SEAL GAPS & CRACKS AROUND ALL EXTERNAL DOOR & WINDOW FRAMES: **Y**
  - WEATHER SEALS TO ALL EXTERNAL DOORS: **Y**
  - WEATHER SEALS TO INTERNAL UTILITY DOORS: **Y**
  - REFER FLOOR PLAN & ELEVATIONS FOR DOUBLE GLAZED WINDOWS IF REQUIRED (DG): **Y**
  - WEATHER STRIP(S) TO FRONT ENTRY DOOR(S): **Y**
  - FULLY SEALED CEILING EXHAUST FANS: **Y**
  - AG SISILATION TO ALL EXTERNAL WALLS - STD INCLUSION
  - 100% SEALED ALUM. IMPR WINDOWS - STD INCLUSION
  - WINDOWS & SLIDING DOORS TO DETAILS AS PER ENERGY RATING REPORT

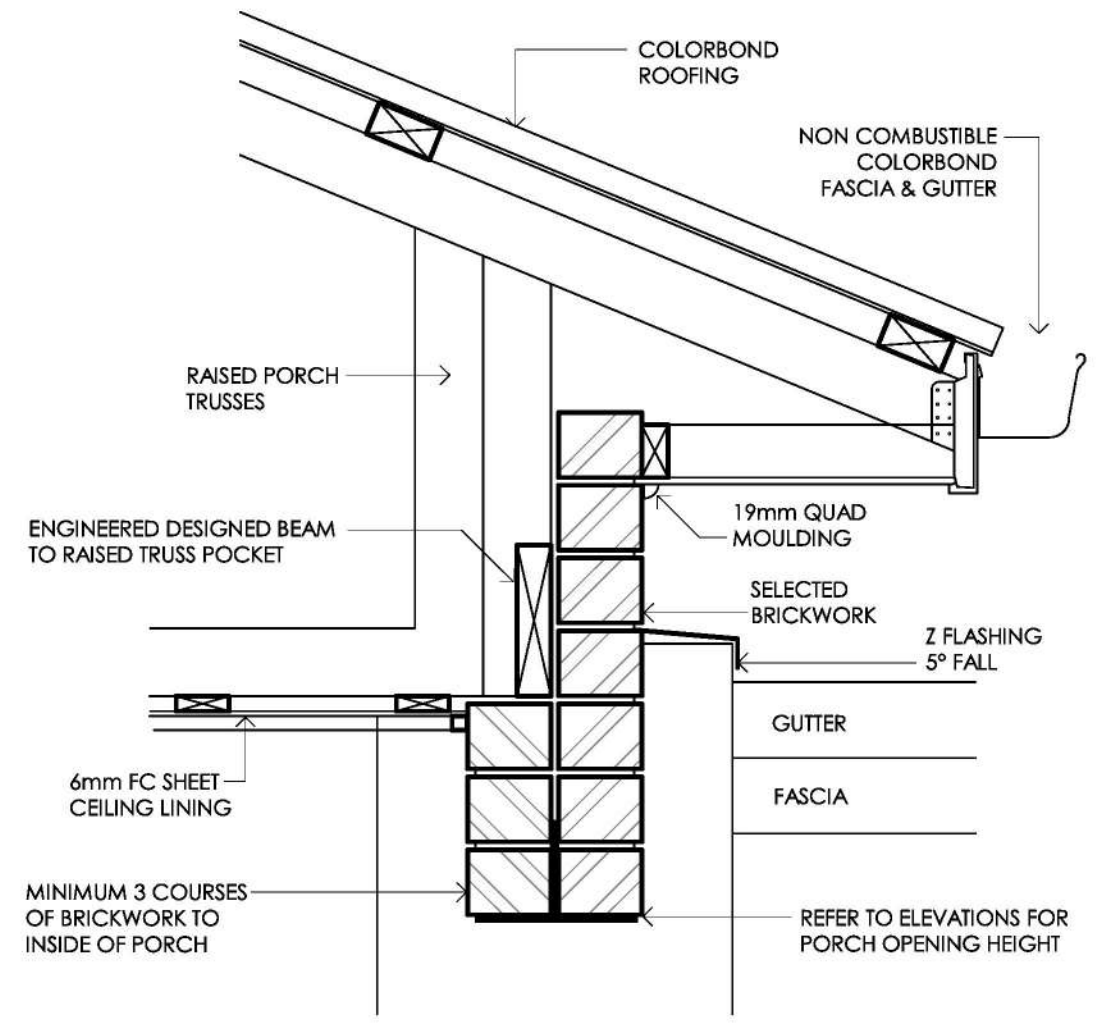


**SECTION X-X**  
 1 : 100

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**CLEAR TRUSS DETAIL**  
 SCALE 1:20



**PORCH BRICK INSET DETAIL**  
 SCALE 1:10

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PROPOSED:  
**HOUSE & GARAGE**

HOUSE TYPE:  
**CUSTOM**

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SIGNED OWNER:  
 \_\_\_\_\_

DATE:  
 \_\_\_\_\_

SITE ADDRESS:  
**NO. 210, SPLIT ROCK ROAD  
 BEACONSFIELD UPPER, 3808**

DRAWING TITLE:  
**SECTION**

ISSUE: C

ISSUE DATE: 23.10.24

SCALE: 1 : 100      MASTER DATE: N/A

DRAWN: RD      CHECKED: TLG

SHEET NO: 05      OF: 14

**IMPORTANT NOTE:** ALL ELECTRICAL ITEMS ARE IN APPROXIMATE LOCATIONS ONLY AND MAY BE VARIED TO SUIT TRUSS AND FRAME LOCATIONS

**HEATING/COOLING NOTE:** ALL DUCT LOCATIONS ARE INDICATIVE ONLY AND ARE SUBJECT TO CHANGE IN LINE WITH SUPPLIER'S SPECIFICATION AND HEATING/COOLING LAYOUT

**POWER FEED-IN TO DWELLING:** PROVIDE TWO PHASE POWER TO DWELLING

PROVIDE SEPARATE 32AMP CIRCUIT FOR INDUCTION COOKTOP (INCLUDING ISOLATOR SWITCH)

**NOTE:** PROVIDE POWER FOR SEPTIC

**ZONE 1**  
 1 - OUTLETS TO MASTER SUITE  
 1 - OUTLET TO BED 2  
 1 - OUTLET TO BED 3  
 1 - OUTLET TO BED 4  
 1 - OUTLET TO OFFICE  
 1 - OUTLET TO GUEST BED

**ZONE 2**  
 1 - OUTLET TO FAMILY  
 1 - OUTLET TO MEALS  
 1 - OUTLET TO RUMPUS

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ARTIFICIAL LIGHTING TABLE			
FLOOR AREA	354.75 m <sup>2</sup>	WATTAGE ALLOWED	1773.75 W
PORCH/OUT. AREA	93.8 m <sup>2</sup>	WATTAGE ALLOWED	375.2 W
GARAGE	68.54 m <sup>2</sup>	WATTAGE ALLOWED	205.62 W
<b>TOTAL AREA</b>	<b>517.09 m<sup>2</sup></b>	<b>ALLOWABLE WATTS</b>	<b>2354.57 W</b>
<b>HOUSE 5 W/m<sup>2</sup></b>		<b>NO. OF GLOBES USED</b>	<b>TOTAL WATTS</b>
LED GLOBES	6 W	0	0 W
LED DOWNLIGHTS	9 W	68	612 W
FLUORO TUBES	36 W	0	0 W
		<b>HOUSE TOTAL</b>	<b>612 W</b>
<b>POR./ OUT 4 W/m<sup>2</sup></b>			
LED GLOBES	6 W	0	0 W
LED DOWNLIGHTS	9 W	10	90 W
FLUORO TUBES	36 W	0	0 W
		<b>PORCH TOTAL</b>	<b>90 W</b>
<b>GARAGE 3 W/m<sup>2</sup></b>			
LED GLOBES	6 W	0	0 W
LED DOWNLIGHTS	9 W	0	0 W
FLUORO TUBES	36 W	4	144 W
		<b>GARAGE TOTAL</b>	<b>144 W</b>

**LIGHTING LEGEND**

- ⊙ CEILING LIGHT BATTEN HOLDER
- ⊗ IC4 90mm DOWNLIGHT
- ⊗ WALL STAIR LIGHT
- ⊙ EXTERNAL LIGHT POINT
- ⊗ HEATER/FAN & LIGHT - 2 GLOBE
- ⊗ HEATER/FAN & LIGHT - 4 GLOBE
- ⊗ JUNCTION BOX
- ⊗ CEILING FAN
- ⊗ CEILING FAN WITH LIGHT
- ⊗ PARA FLOOD LIGHT - SINGLE
- ⊗ PARA FLOOD LIGHT - DOUBLE
- ⊗ ROUND LED FLUORO
- ⊗ 1200 LONG LED BATTEN - SINGLE
- ⊗ 1200 LONG LED BATTEN - DOUBLE
- ⊗ WALL LIGHT BATTEN HOLDER
- ⊗ CEILING EXHAUST FAN
- ⊗ CEILING EXHAUST FAN SWITCHED WITH LIGHT
- ⊗ SUSPENDED PENDANT
- ⊗ MOTION SENSOR
- ⊗ DIMMER SWITCH

**HEAT/COOL LEGEND**

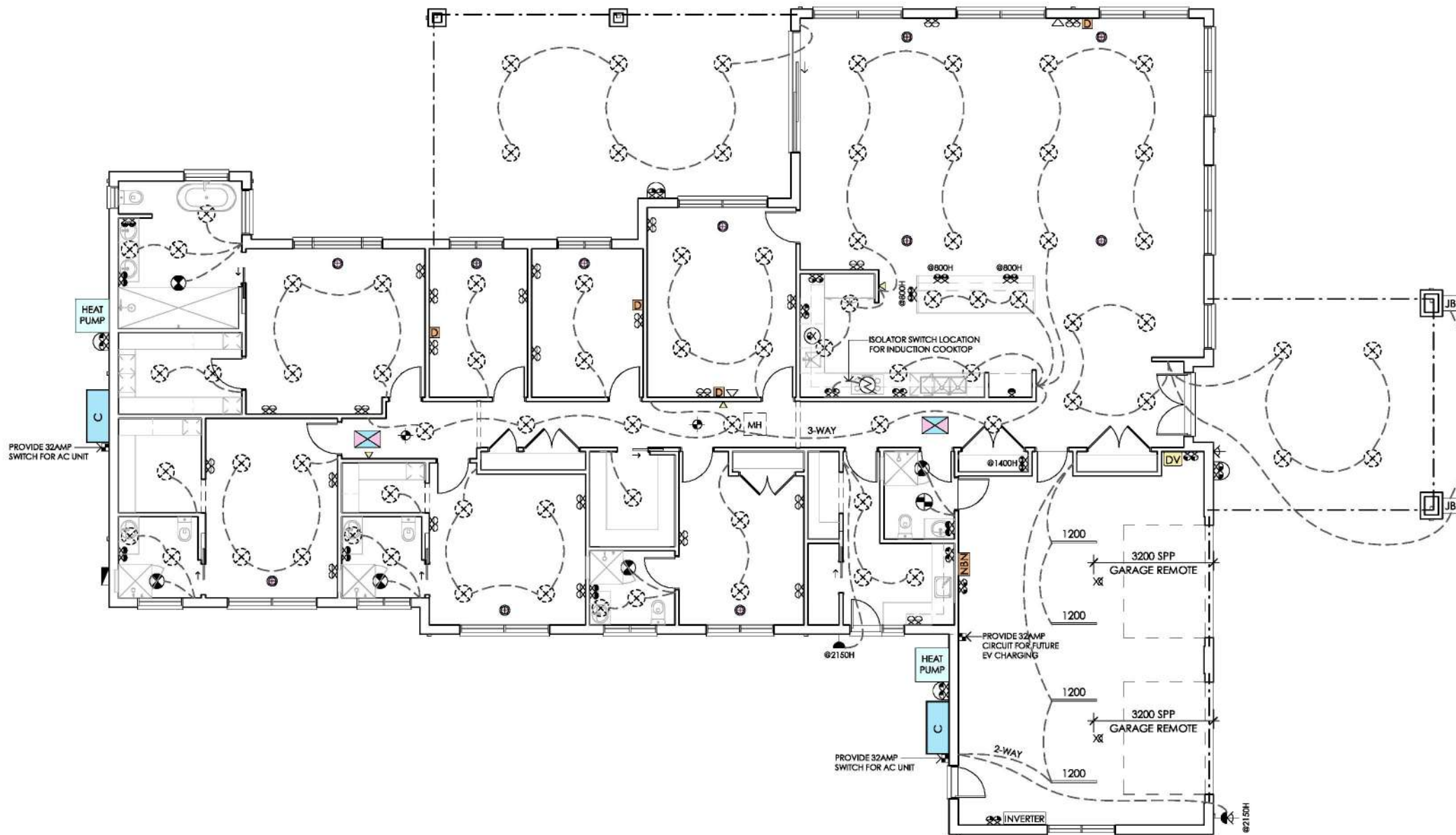
- ⊗ CEILING HEATING DUCT (APPROX)
- ⊗ DUCTED HEATING UNIT IN CEILING
- ⊗ CEILING HEAT/COOL DUCT
- ⊗ REV CYCLE DUCTED HEAT/COOL UNIT
- ⊗ THERMOSTAT
- ⊗ RA RETURN AIR
- ⊗ E EVAPORATIVE COOLING DUCT
- ⊗ EVAPORATIVE COOLING UNIT
- ⊗ C AC CONDENSER UNIT
- ⊗ H AC HEAD UNIT

**POWER LEGEND**

- ⊗ SINGLE GPO - 300mm
- ⊗ DOUBLE GPO - 300mm
- ⊗ SINGLE GPO - 1100mm
- ⊗ DOUBLE GPO - 1100mm
- ⊗ SINGLE GPO - 1400mm
- ⊗ DOUBLE GPO - 1400mm
- ⊗ SINGLE GPO - TO CEILING
- ⊗ DOUBLE GPO - TO CEILING
- ⊗ SINGLE GPO - HT VARIES
- ⊗ DOUBLE GPO - HT VARIES
- ⊗ SINGLE GPO - EXTERNAL
- ⊗ DOUBLE GPO - EXTERNAL
- ⊗ SINGLE GPO - FOR DISHWASHER
- ⊗ SINGLE GPO - FOR MICROWAVE
- ⊗ TELEVISION POINT
- ⊗ TELEPHONE POINT
- ⊗ METER BOX
- ⊗ SMOKE DETECTORS (INTERCONNECTED)
- ⊗ UBO & RHOD CONNECTIONS
- ⊗ DATA POINT WIRED TO NBN
- ⊗ NBN BOX

**DUCTED VACUUM**

- ⊗ DV DUCTED VACUUM UNIT & SGPO
- ⊗ DUCTED VACUUM OUTLET



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**HOUSE & GARAGE**

HOUSE TYPE:  
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**IMPORTANT NOTE: SHEET SIZE IS A2**

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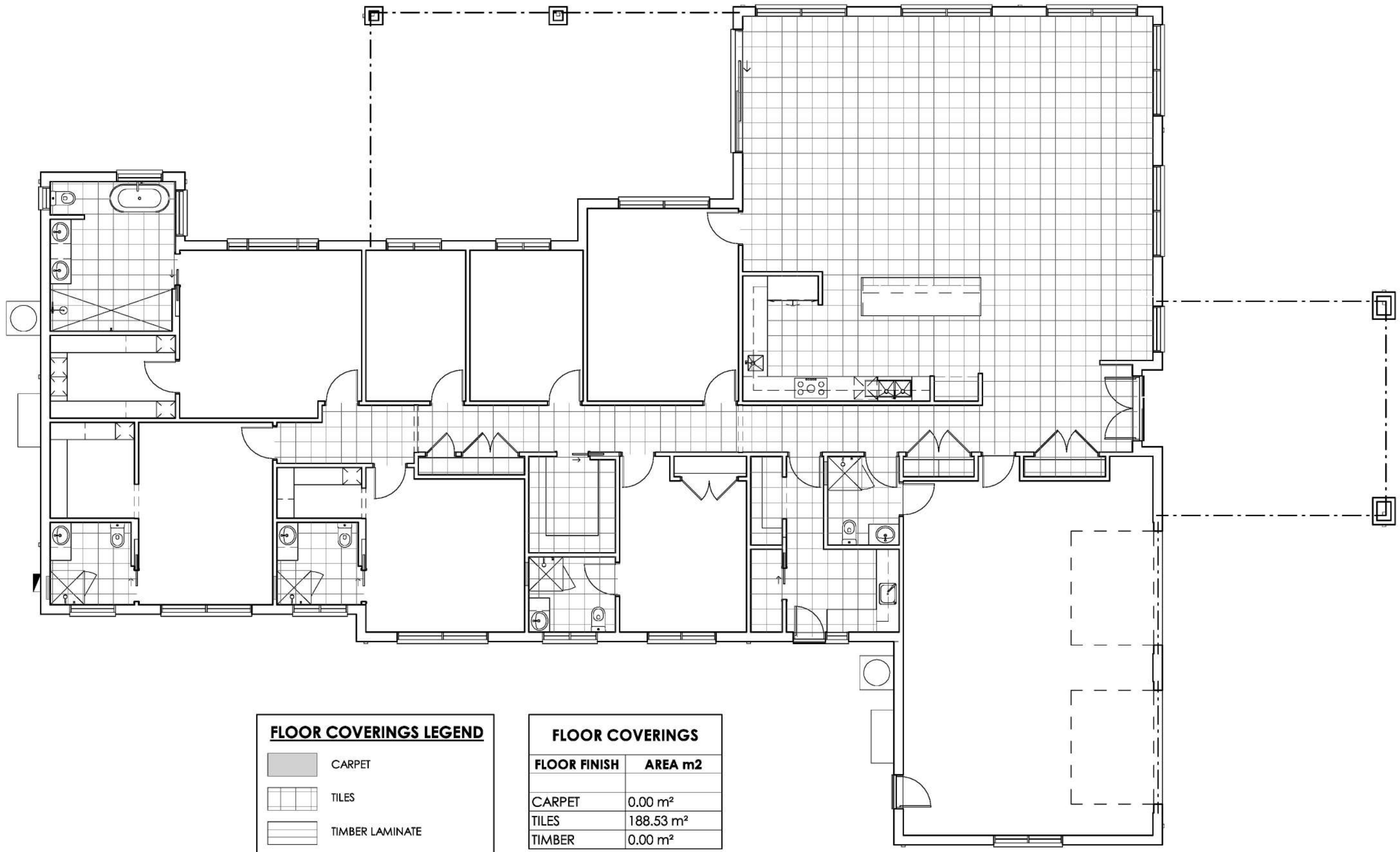
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ISSUE: C  
 ISSUE DATE: 23.10.24  
 SCALE: 1 : 100  
 DRAWN: JM  
 SHEET NO: 06




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**FLOOR COVERINGS LEGEND**

	CARPET
	TILES
	TIMBER LAMINATE

**FLOOR COVERINGS**

FLOOR FINISH	AREA m <sup>2</sup>
CARPET	0.00 m <sup>2</sup>
TILES	188.53 m <sup>2</sup>
TIMBER	0.00 m <sup>2</sup>



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**FLOOR COVERINGS**

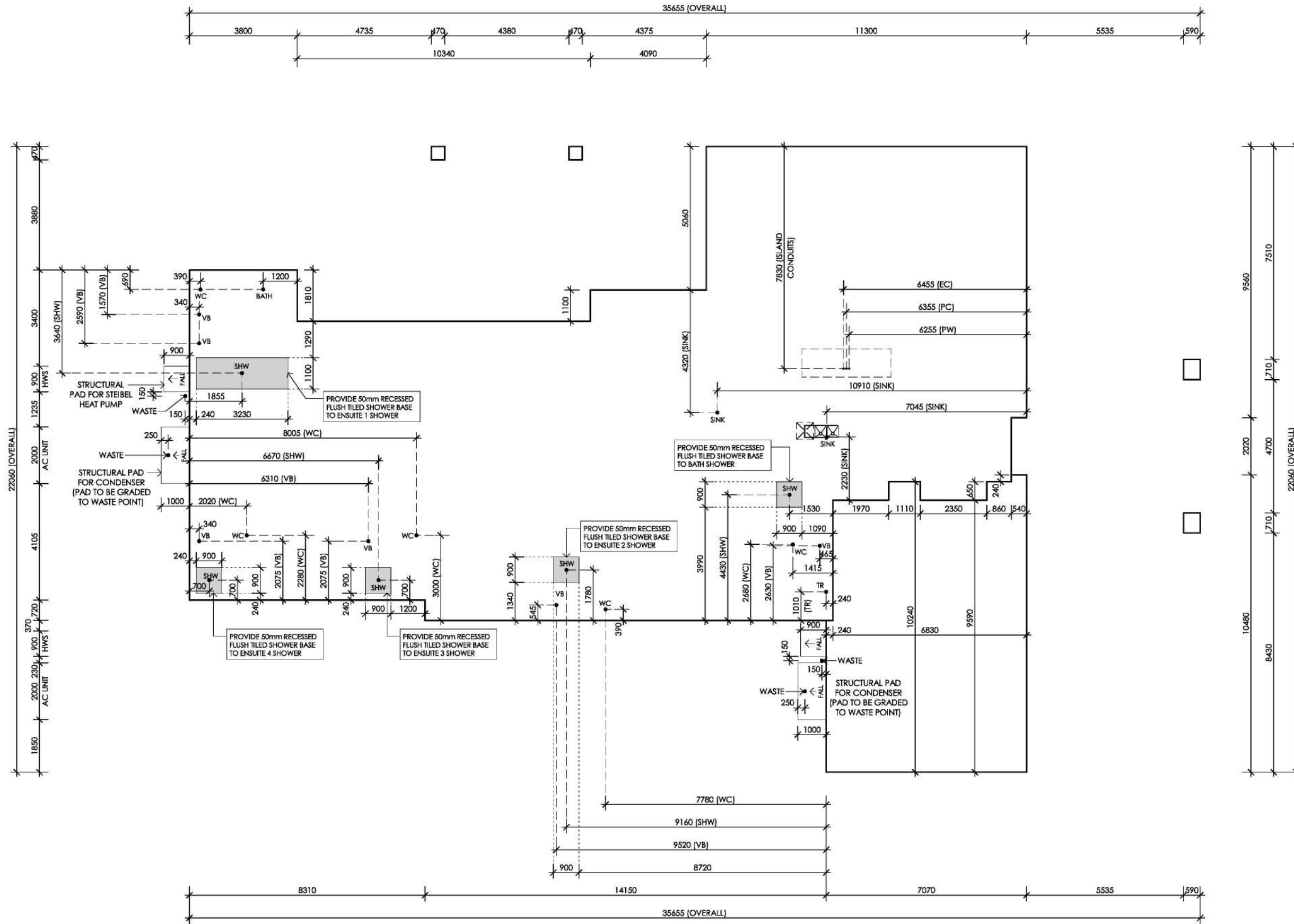
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ISSUE DATE: 23.10.24	CHECKED: TLG
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**IMPORTANT NOTE:**  
ALL DIMENSIONS ARE TO EXTERNAL WALLS

**IMPORTANT NOTE:**  
CONCRETERS TO CLEAR CONCRETE FROM TOP OF ALL WC, SHOWER AND BATH WASTE POINTS

**IMPORTANT NOTE:**  
CONCRETERS TO ENSURE APPROPRIATE FALL AWAY FROM HOUSE TO CONCRETE PADS FOR ALL SERVICES AND WATER TANKS WHERE APPLICABLE



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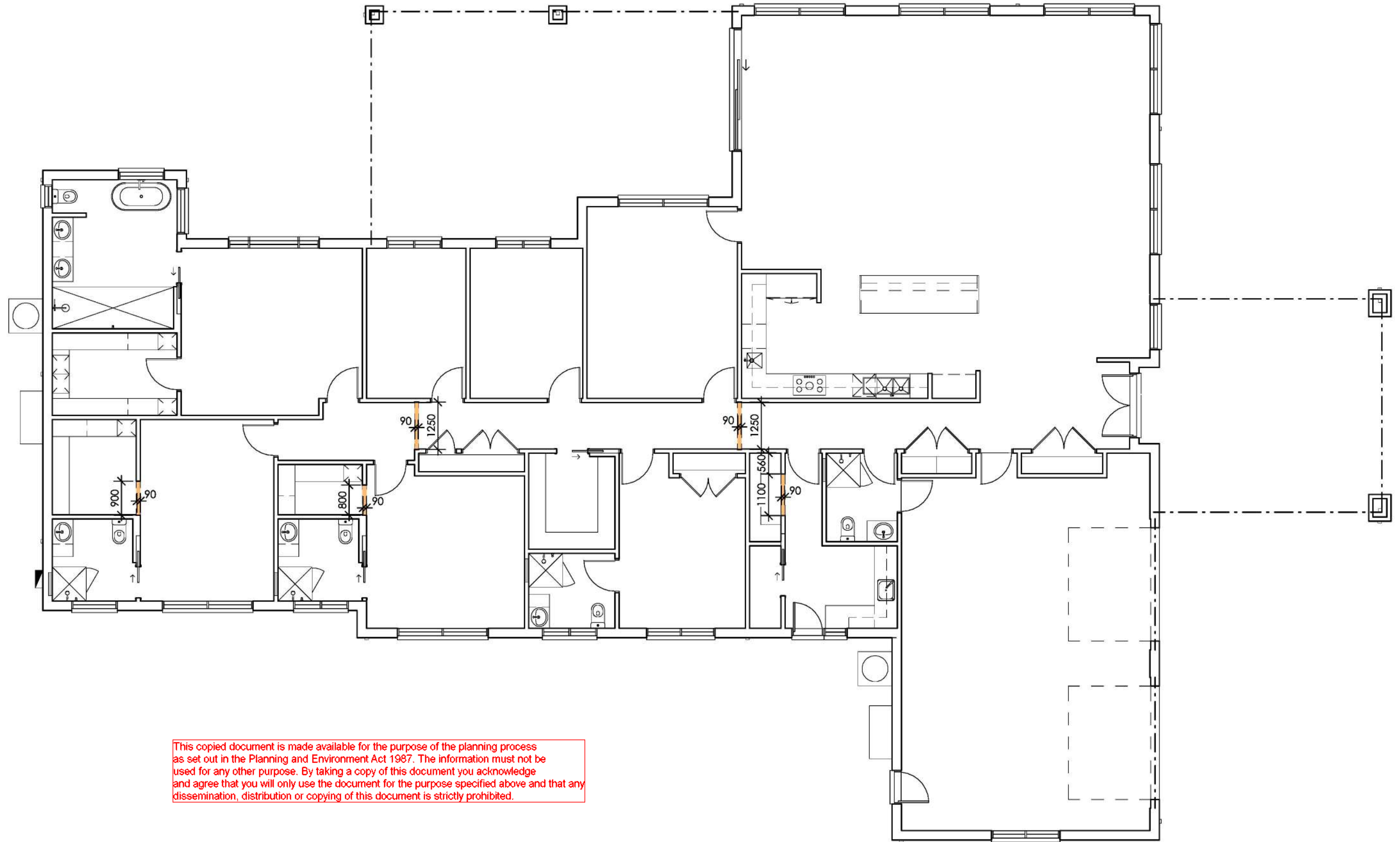
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**HOUSE TYPE:**  
**CUSTOM**

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 ISSUE: C  
 ISSUE DATE: 23.10.24  
 SCALE: 1 : 100  
 DRAWN: JM  
 SHEET NO: 08

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**BEACONSFIELD UPPER, 3808**  
 MASTER DATE: N/A  
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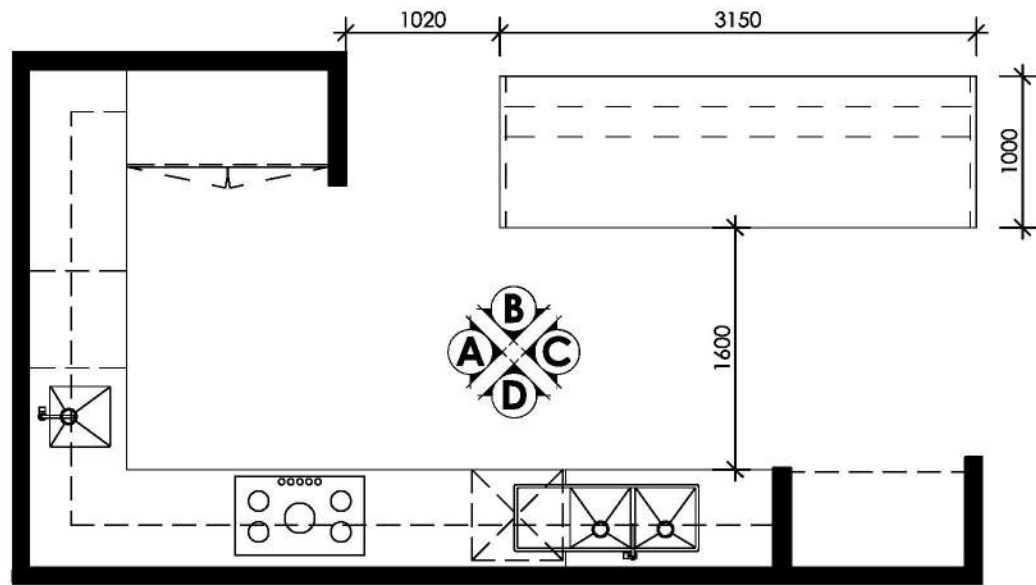
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**NO. 210, SPLIT ROCK ROAD  
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**DRAWING TITLE:**  
**BULKHEAD PLAN**

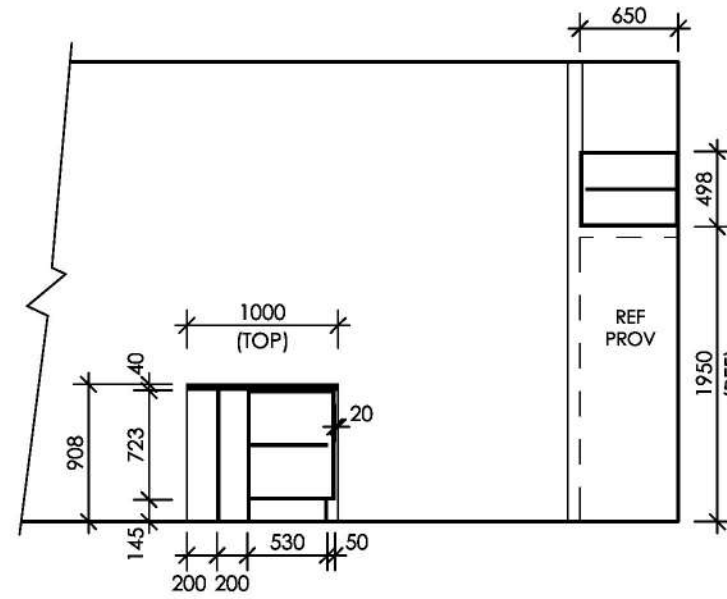
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**ISSUE DATE:** 23.10.24  
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**SHEET NO:** 09    **OF:** 14



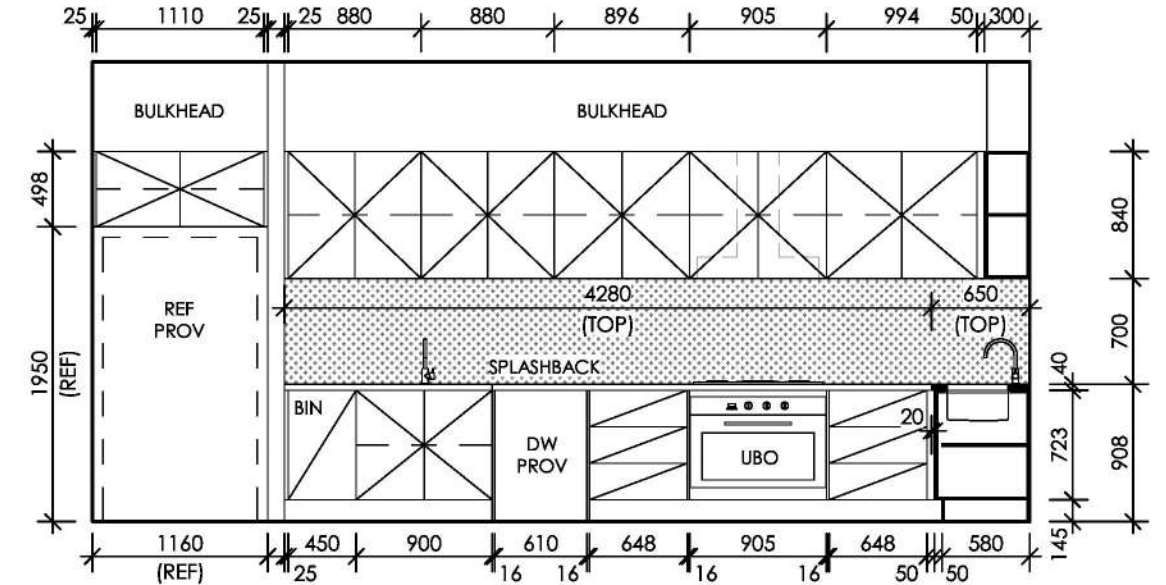


# KITCHEN

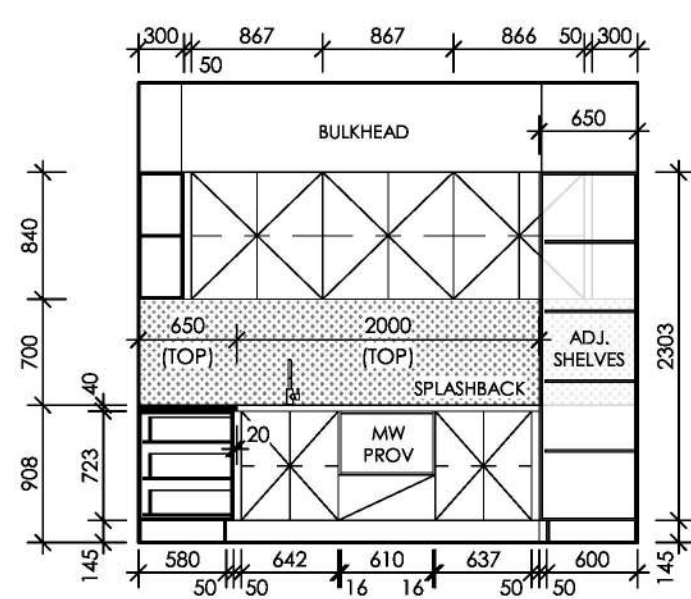
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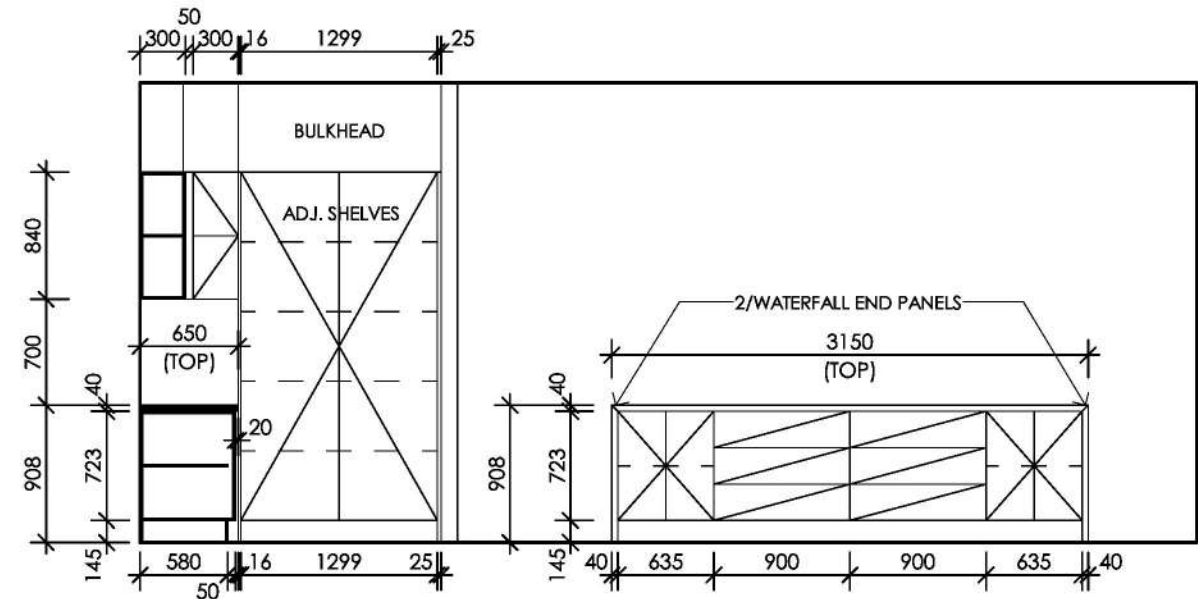
**ELEVATION A**



**ELEVATION B**



**ELEVATION C**



**ELEVATION D**

**GENERAL NOTES**

- DIMENSIONS OF TAPWARE/WATER/GAS POINTS ARE APPROXIMATE ONLY AND ARE AT THE DISCRETION OF THE PLUMBER
- CABINERY DIMENSIONS ARE APPROXIMATE ONLY AND MAY BE ALTERED BY CABINET MAKER TO SUIT
- KITCHEN/WIP INTERNAL ELEVATIONS ARE DIMENSIONED TO PLASTER, NOT FRAME
- CONFIRM SPECIFICATION OF TOILET FOR HEIGHT OF WATER POINT
- WALL TILING HEIGHTS ARE NOMINAL ONLY AND ARE SUBJECT TO SELECTED WALL TILE SIZE

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HOUSE TYPE:  
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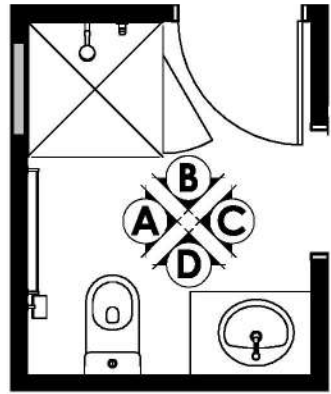
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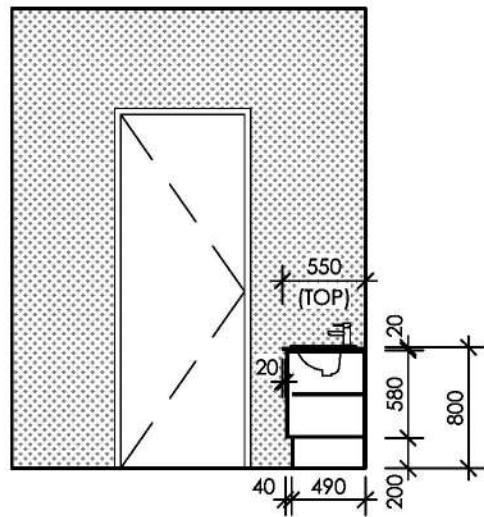
DRAWING TITLE:  
**KITCHEN INTERNALS**

ISSUE: C  
ISSUE DATE: 23.10.24  
SCALE: 1 : 50      MASTER DATE: N/A  
DRAWN: RD      CHECKED: TLG  
SHEET NO: 10      OF: 14

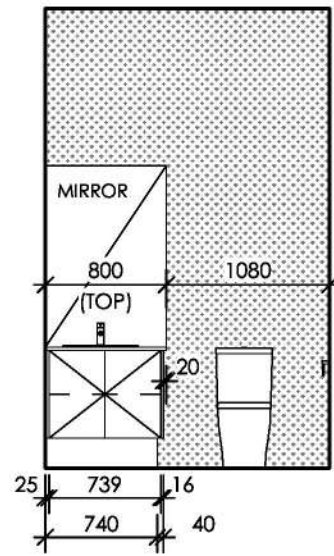


# BATHROOM

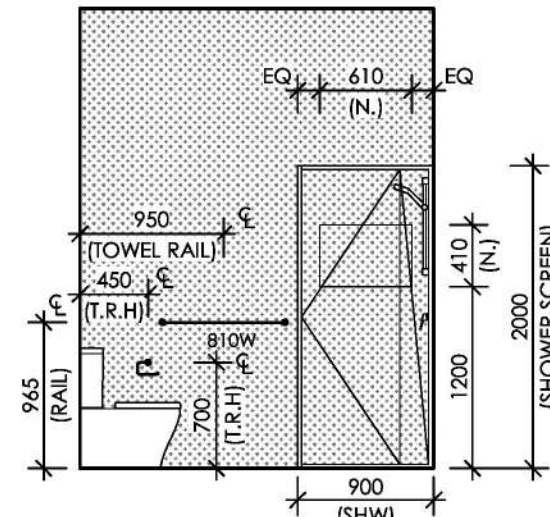
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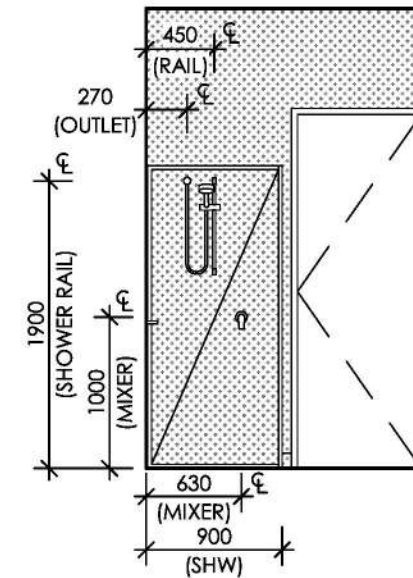
## ELEVATION A



## ELEVATION B



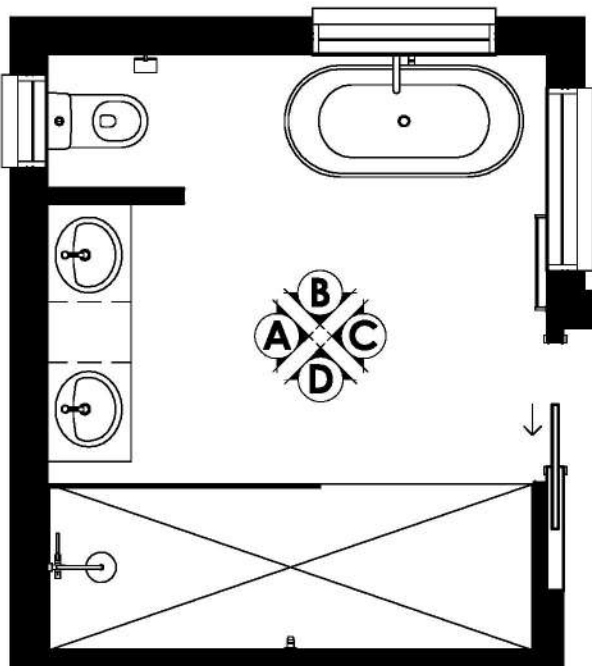
## ELEVATION C



## ELEVATION D

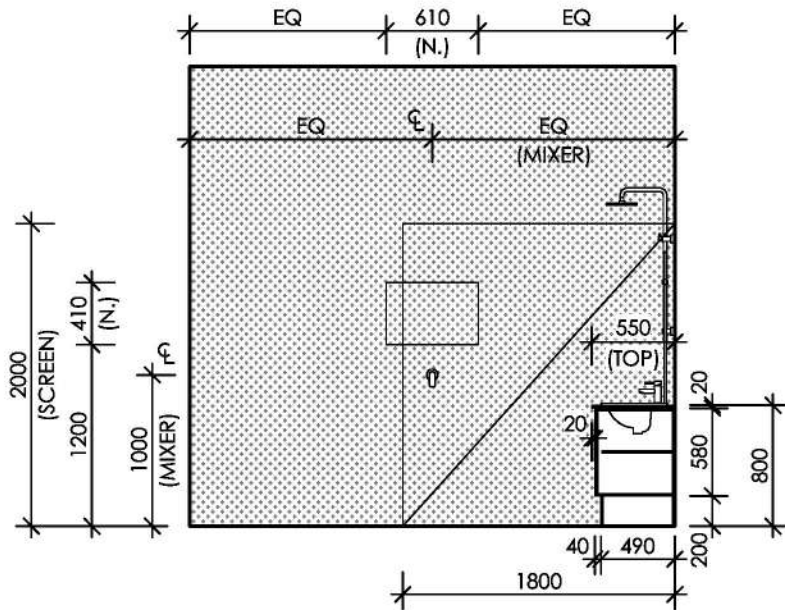
### GENERAL NOTES

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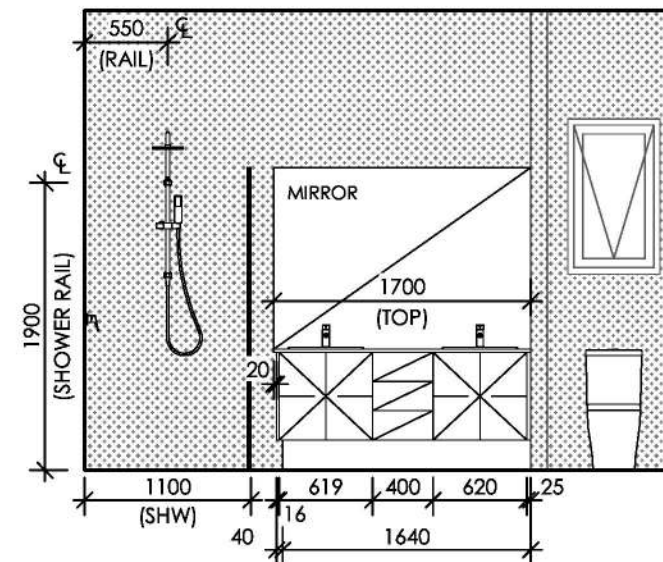


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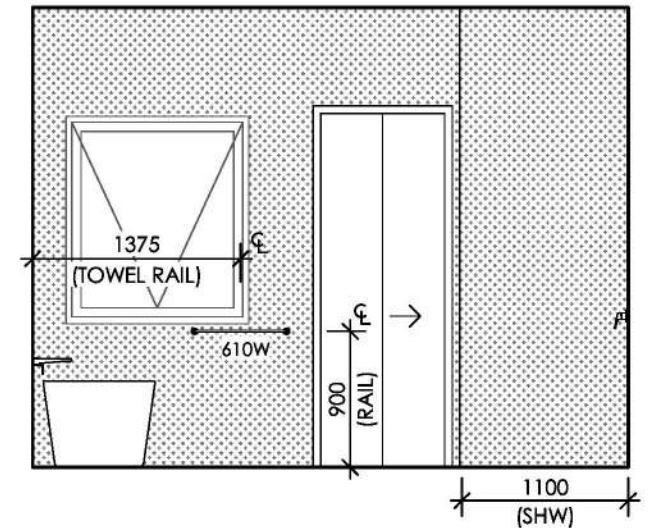
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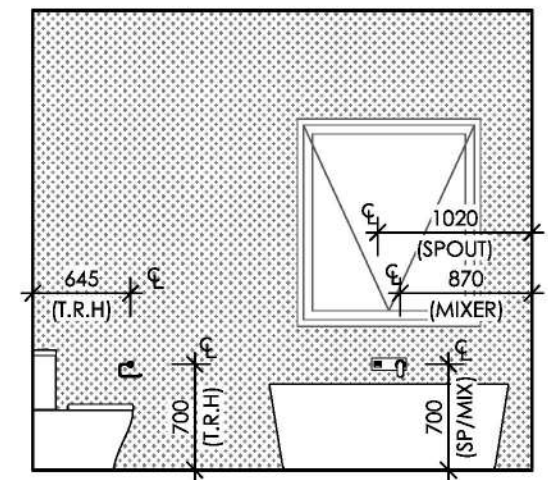
## ELEVATION B



## ELEVATION C



## ELEVATION A



## ELEVATION D

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**NO. 210, SPLIT ROCK ROAD  
BEACONSFIELD UPPER, 3808**

DRAWING TITLE:  
**INTERNAL ELEVATIONS**

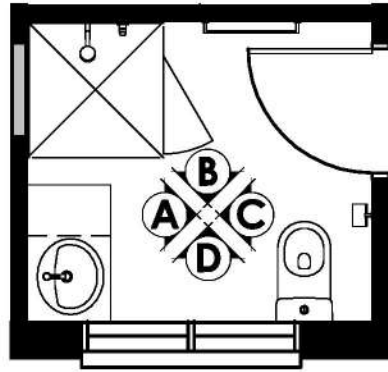
ISSUE: C

ISSUE DATE: 23.10.24

SCALE: 1 : 50      MASTER DATE: N/A

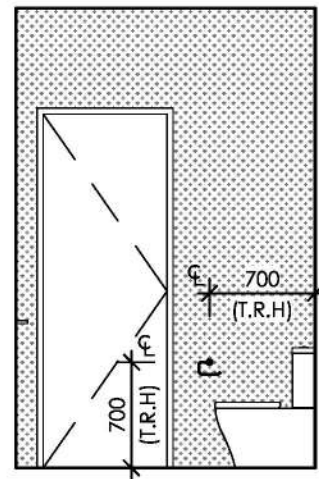
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SHEET NO: 11      OF: 14

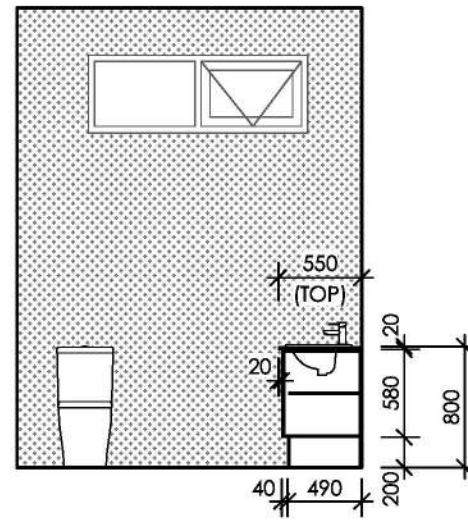


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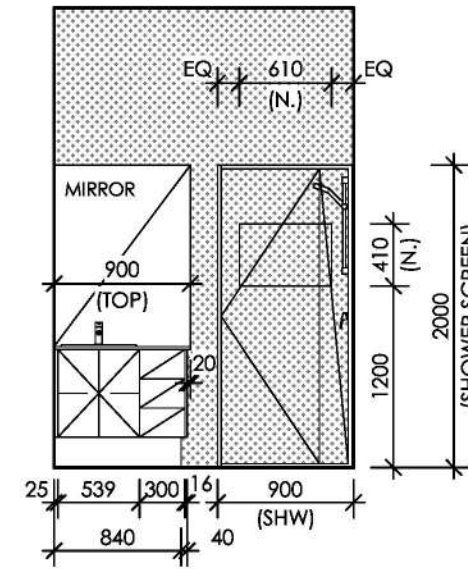
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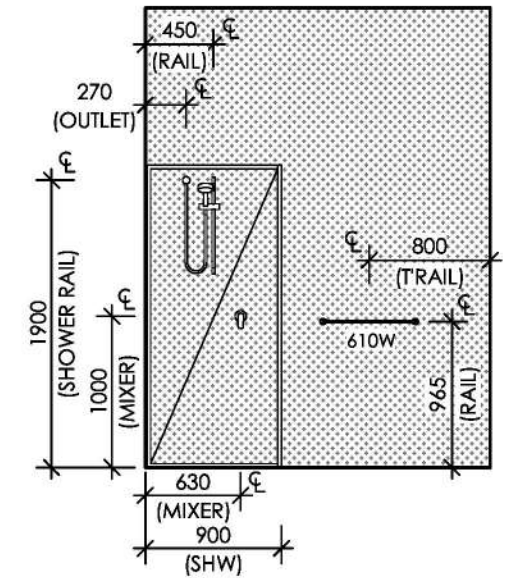
**ELEVATION A**



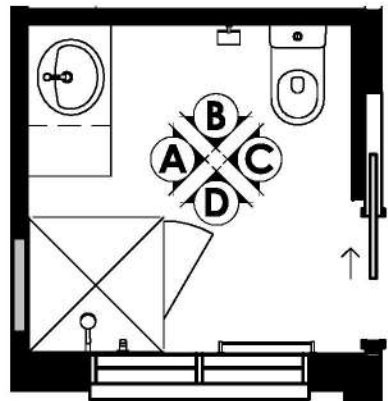
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**ELEVATION C**

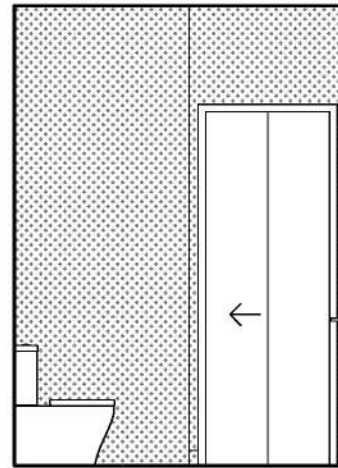


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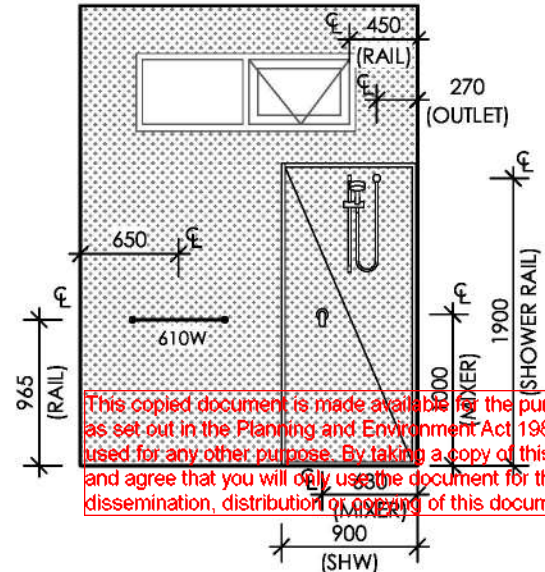


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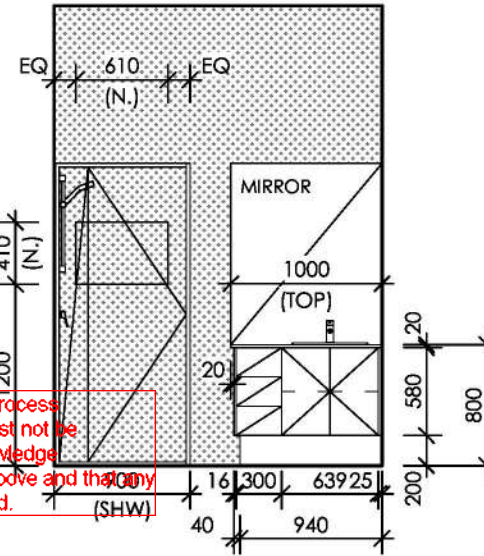
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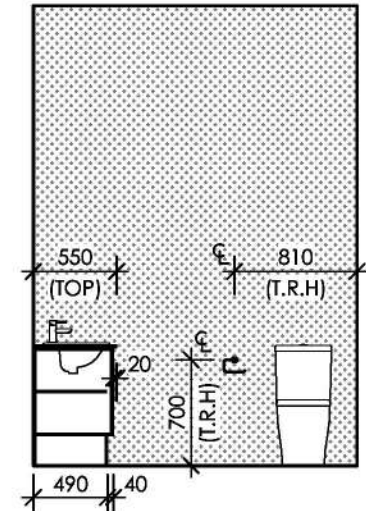
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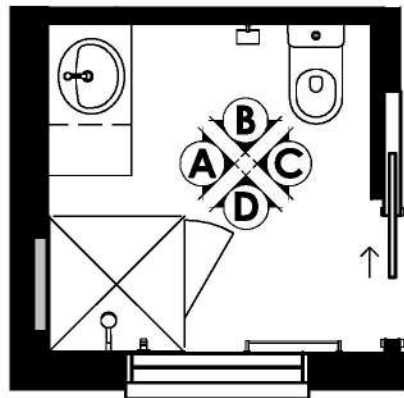
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**ELEVATION C**

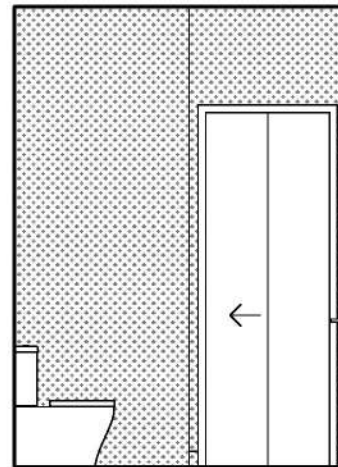


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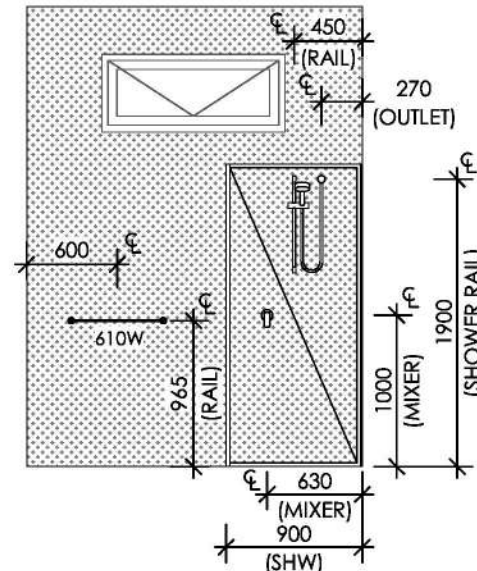


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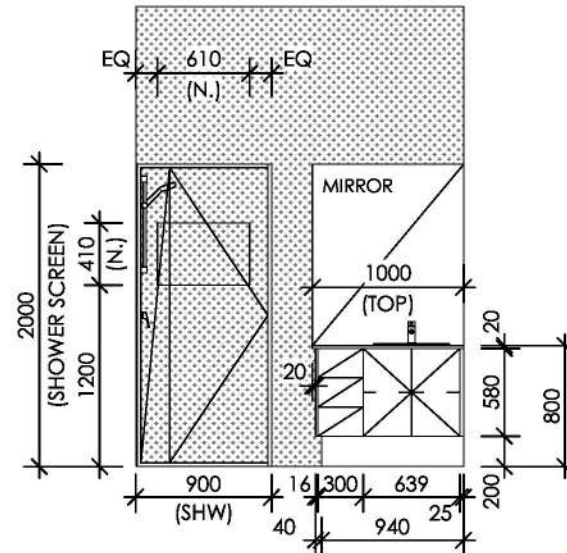
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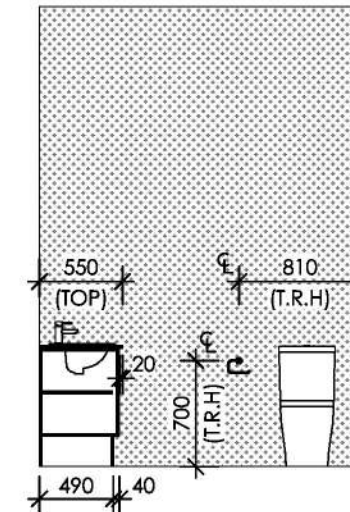
**ELEVATION A**



**ELEVATION B**



**ELEVATION C**



**ELEVATION D**

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**NO. 210, SPLIT ROCK ROAD  
BEACONSFIELD UPPER, 3808**

DRAWING TITLE:  
**INTERNAL ELEVATIONS**

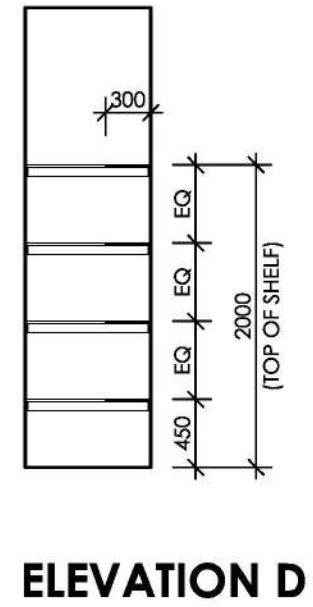
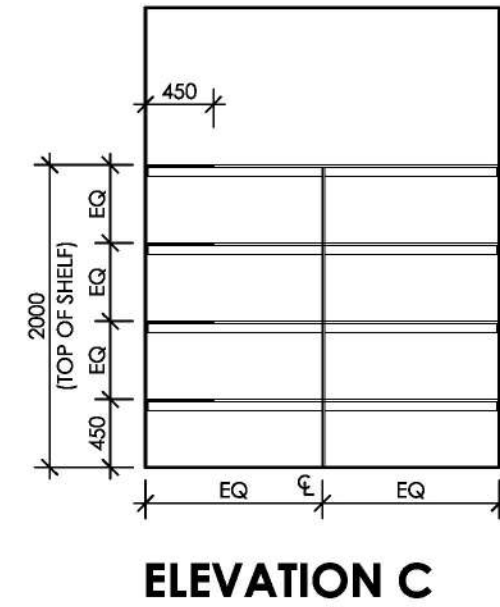
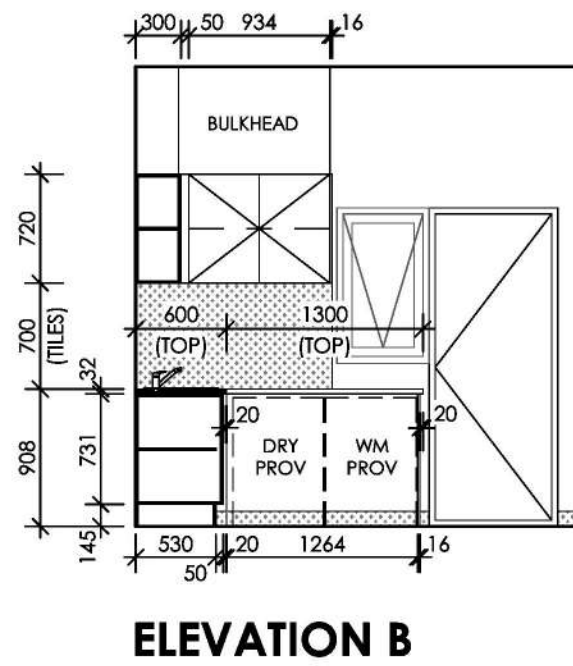
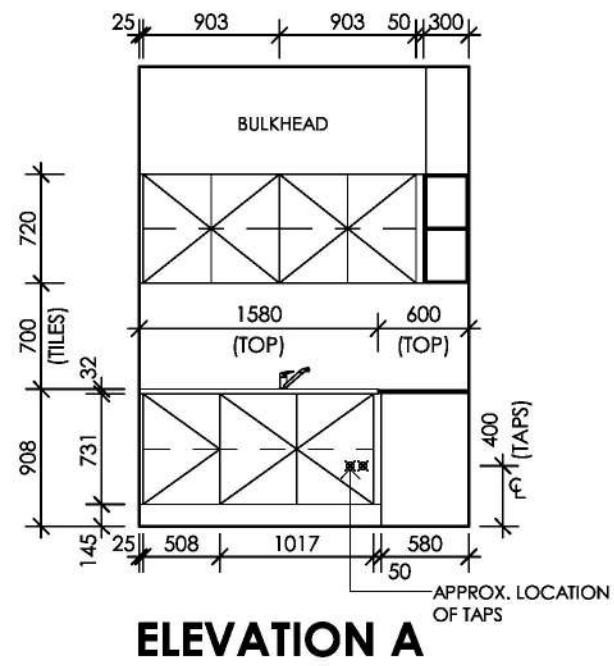
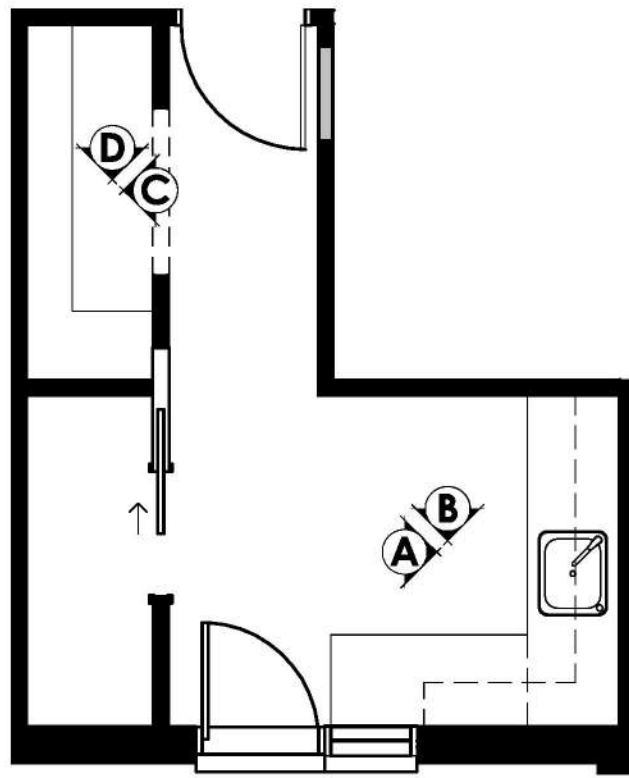
ISSUE: C

ISSUE DATE: 23.10.24

SCALE: 1 : 50      MASTER DATE: N/A

DRAWN: RD      CHECKED: TLG

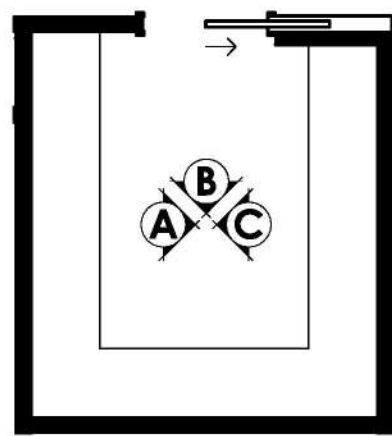
SHEET NO: 12      OF: 14



**LAUNDRY/WIL**

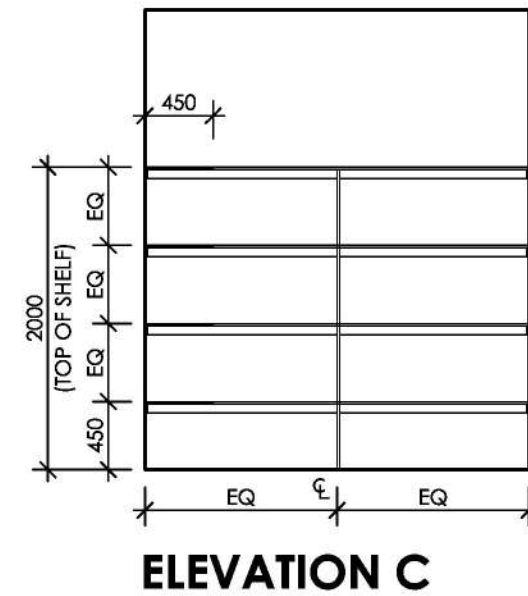
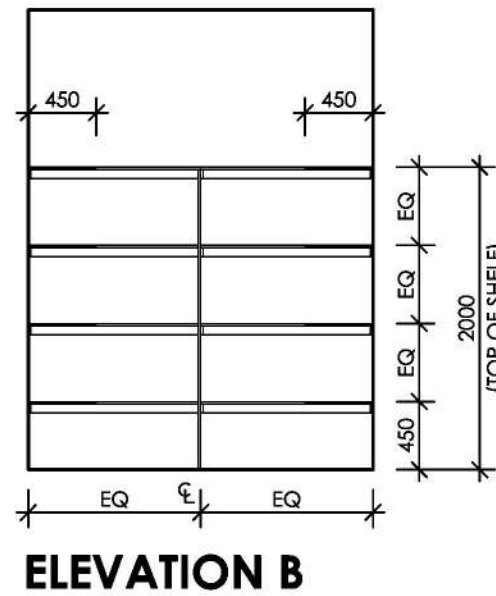
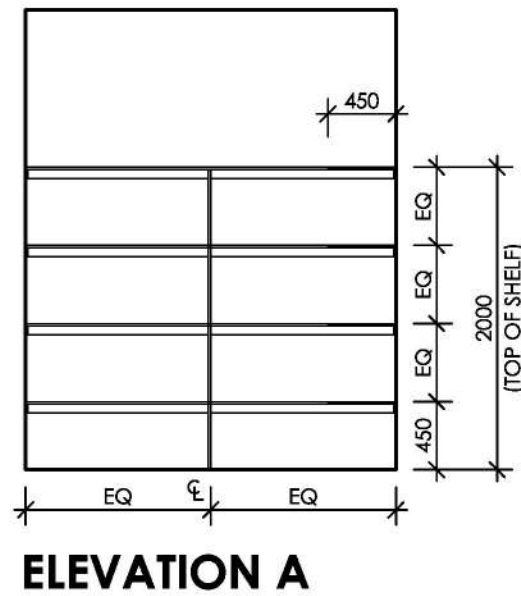
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**WIL**

1 : 50



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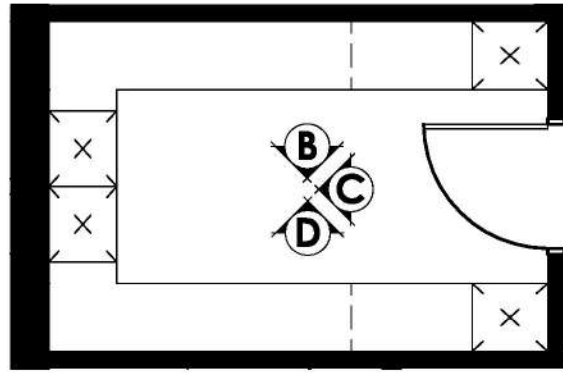
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BEACONSFIELD UPPER, 3808**

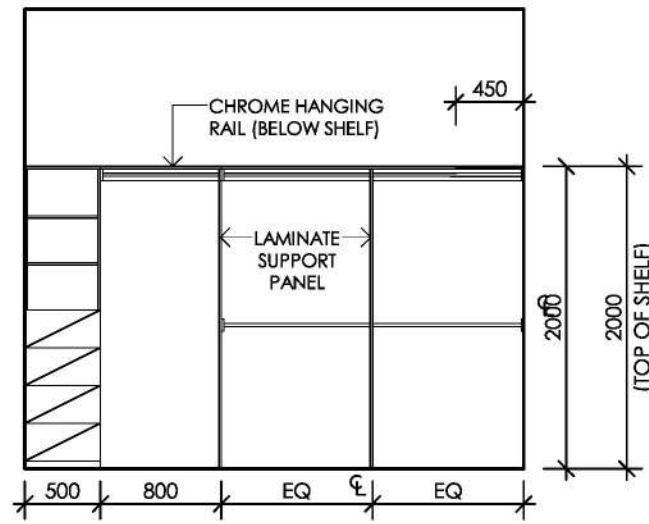
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**INTERNAL ELEVATIONS**

ISSUE: C  
ISSUE DATE: 23.10.24  
SCALE: 1 : 50      MASTER DATE: N/A  
DRAWN: RD      CHECKED: TLG  
SHEET NO: 13      OF: 14

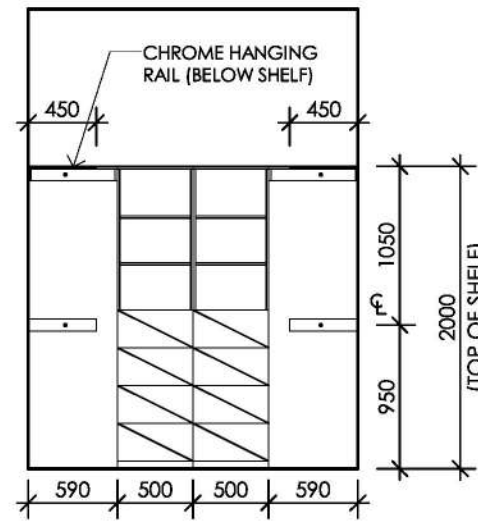


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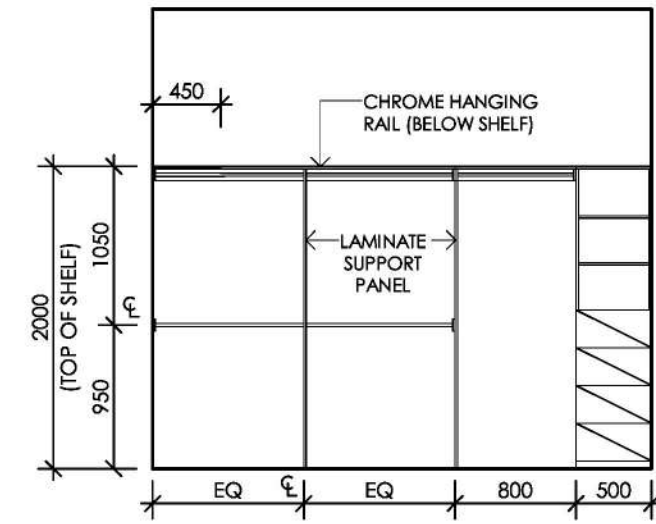
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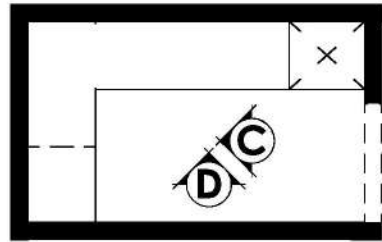
**ELEVATION B**



**ELEVATION C**

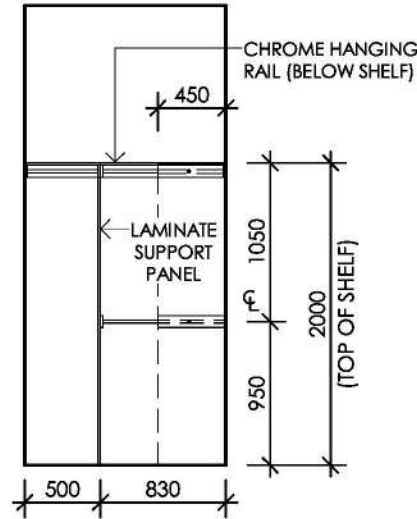


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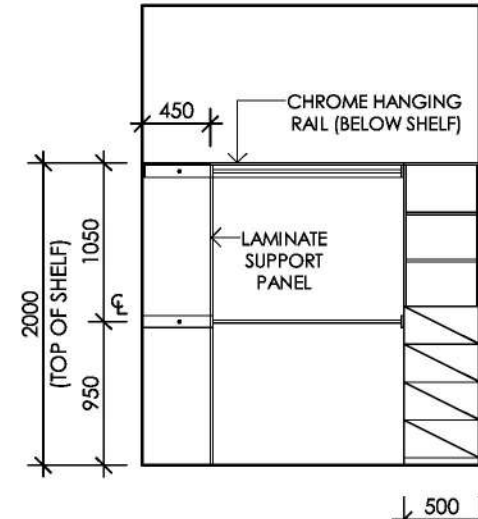


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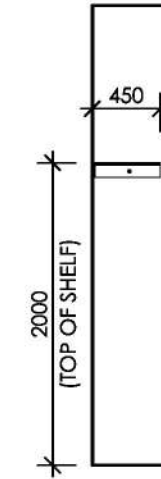
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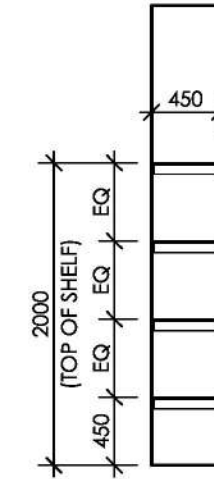
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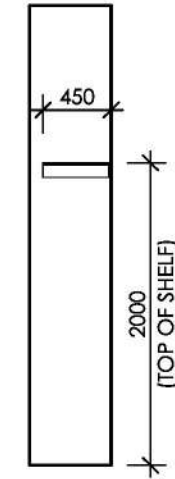
**ELEVATION D**



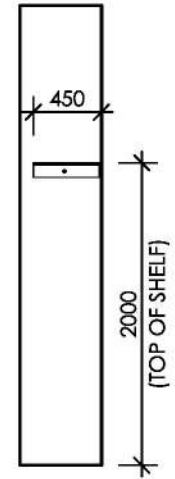
**ROBE**  
(TYPICAL)



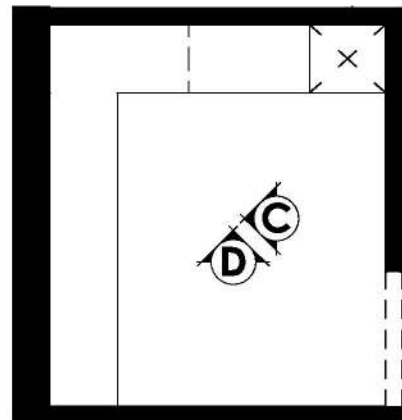
**LINEN**  
(TYPICAL)



**BROOM**  
(TYPICAL)

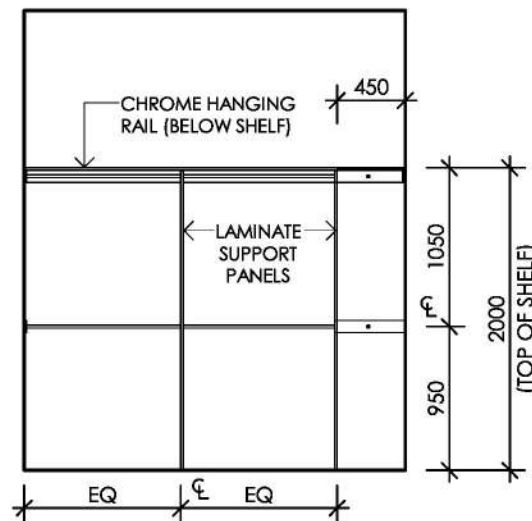


**COAT**  
(TYPICAL)

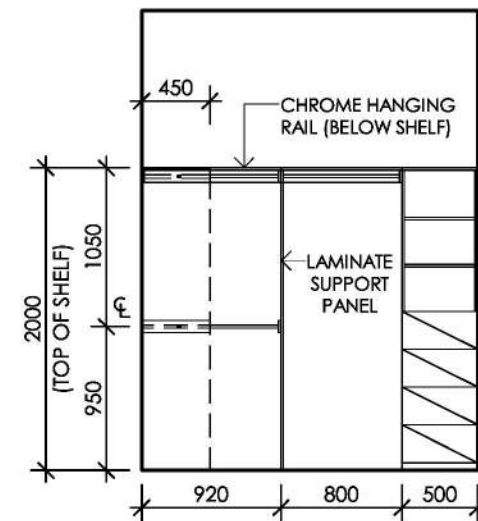


**WIR 4**

1 : 50



**ELEVATION C**



**ELEVATION D**

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HOUSE TYPE:  
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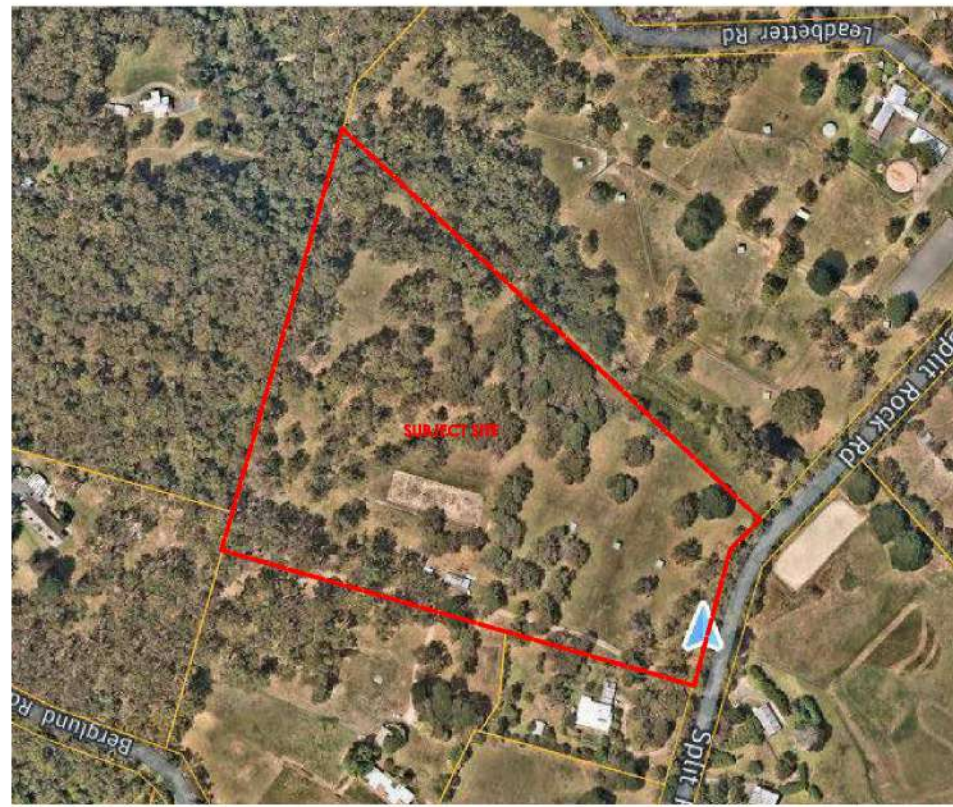
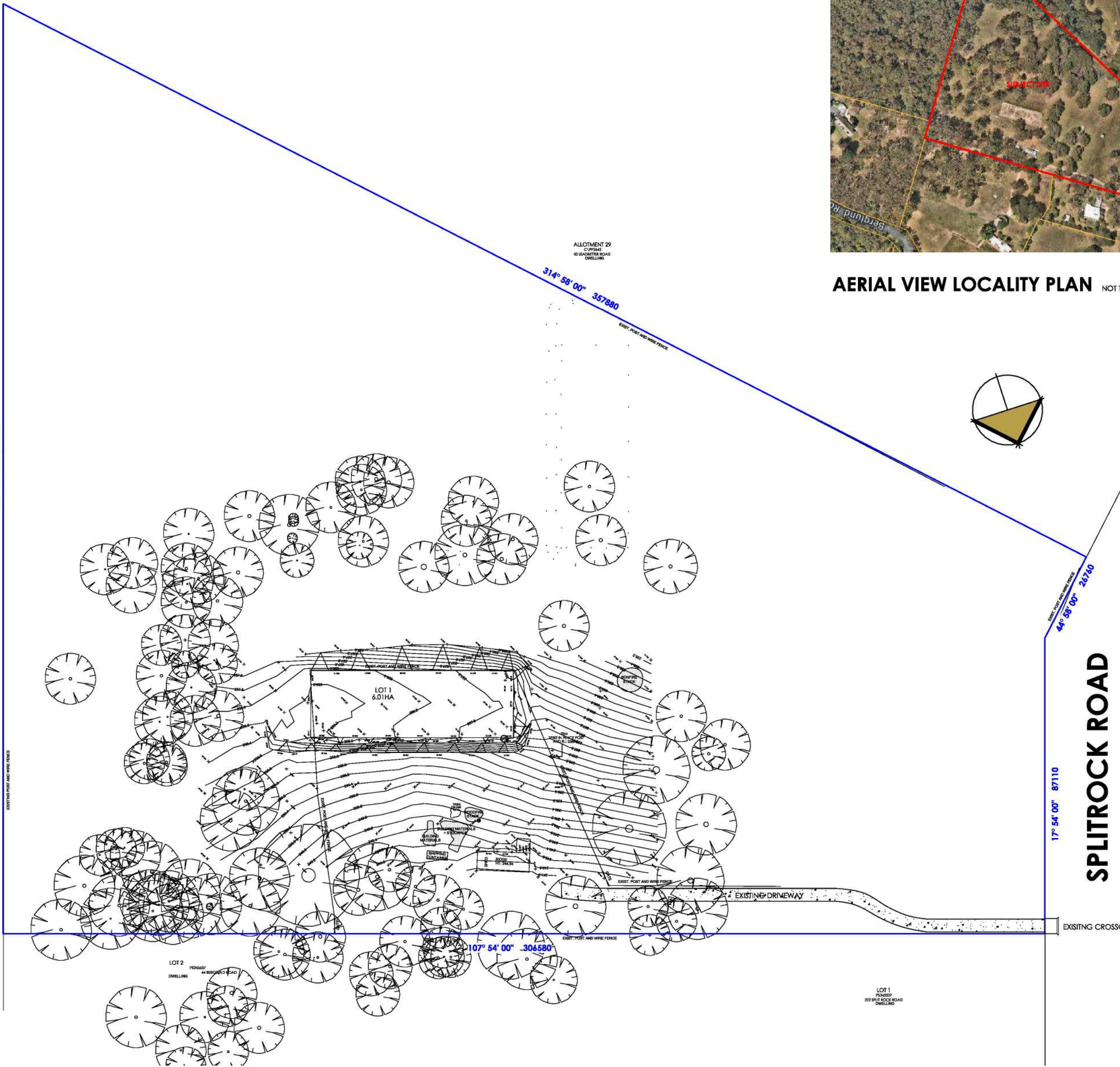
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CLIENT:  
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SITE ADDRESS:  
**NO. 210, SPLIT ROCK ROAD  
BEACONSFIELD UPPER, 3808**

DRAWING TITLE:  
**INTERNAL ELEVATIONS**

ISSUE: C  
ISSUE DATE: 23.10.24  
SCALE: 1 : 50      MASTER DATE: N/A  
DRAWN: RD      CHECKED: TLG  
SHEET NO: 14      OF: 14



**AERIAL VIEW LOCALITY PLAN** NOT TO SCALE



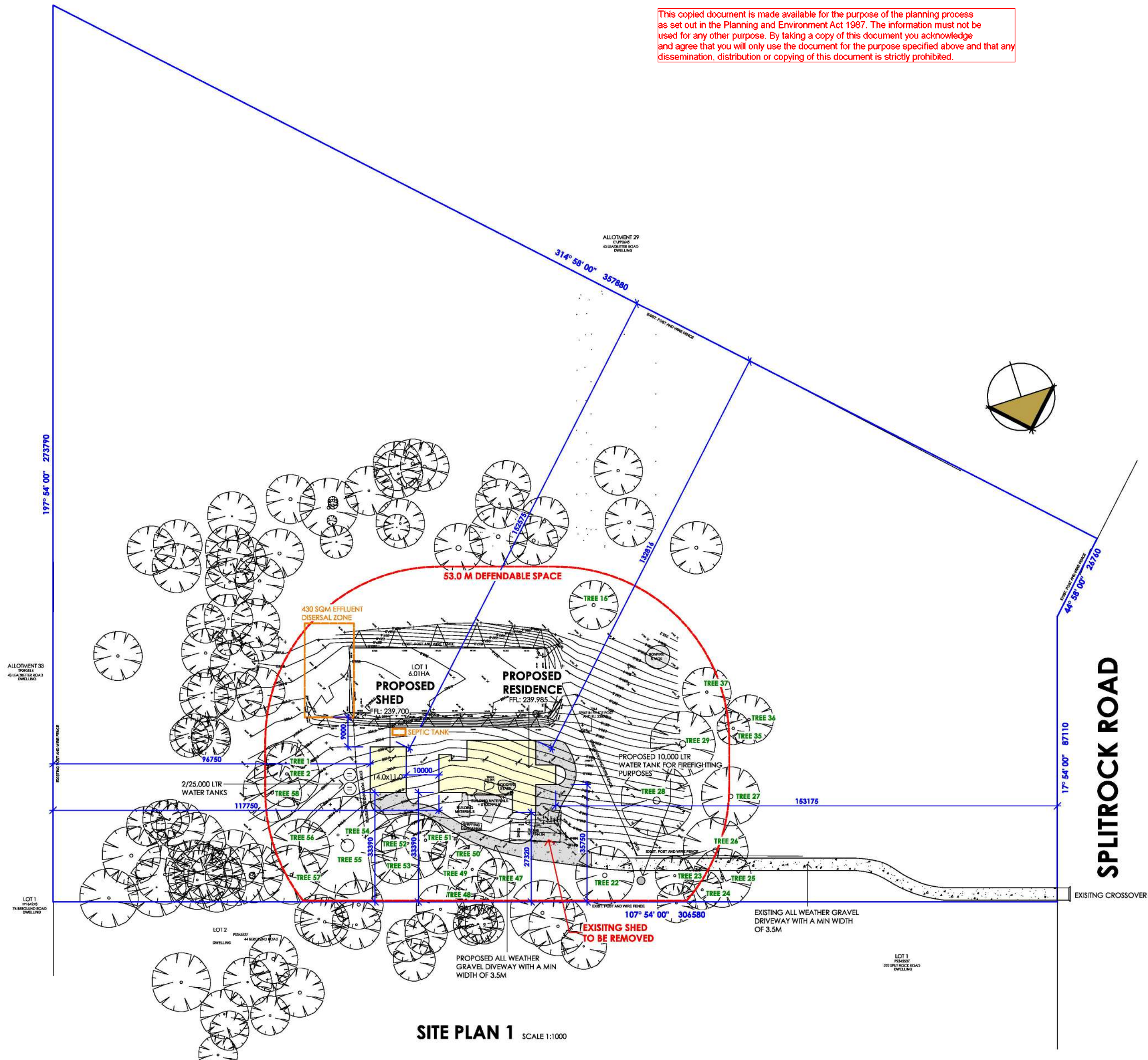
**SITE PHOTOS**

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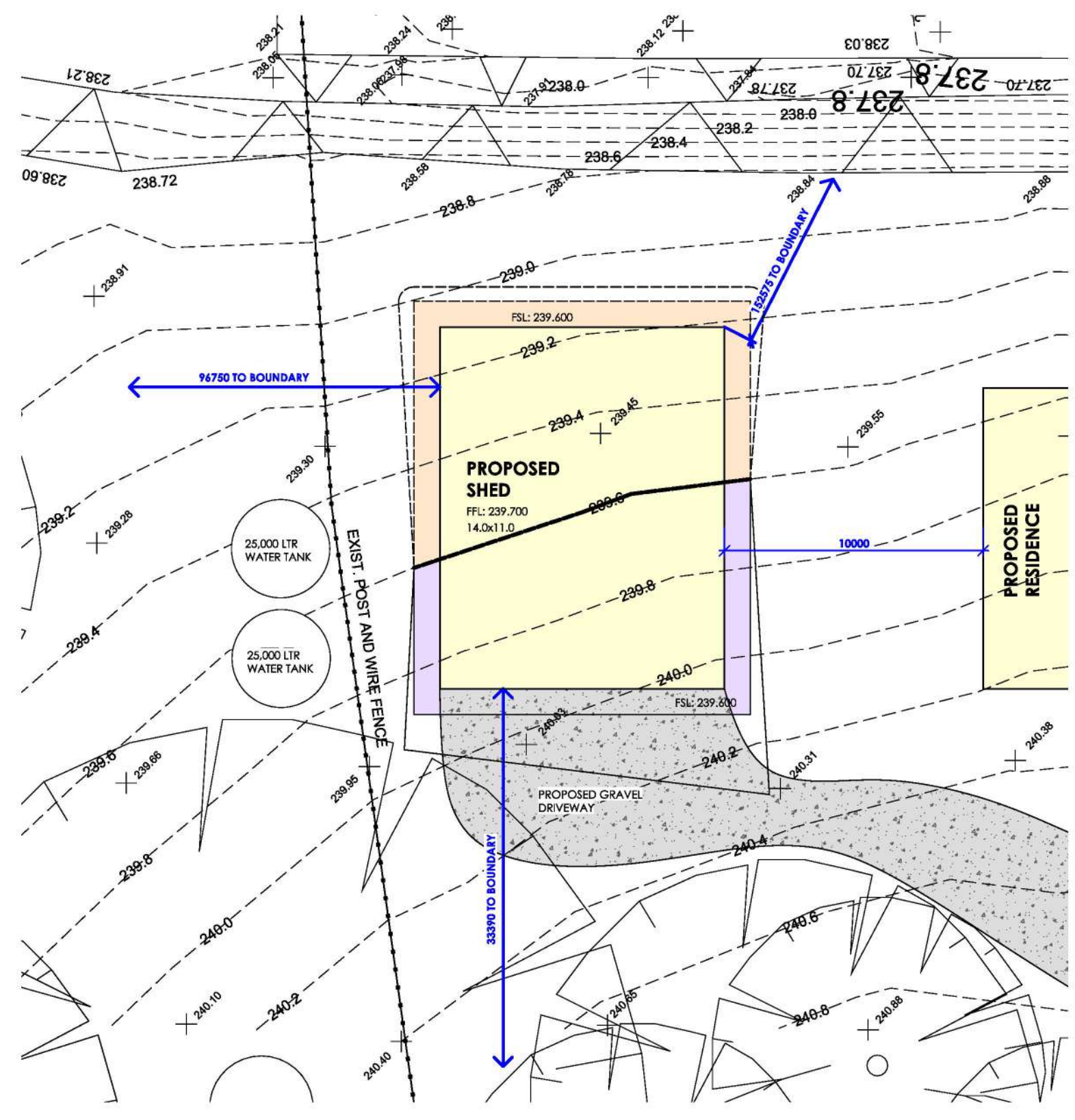
<b>BUSHFIRE REQUIREMENTS - BAL 29</b>	
<b>BUSHFIRE ATTACK LEVEL 29</b>	
<b>FLOORS</b>	CONCRETE SLAB ON GROUND OR FRAMED SUB FLOOR ENCLOSED BY EXTERNAL WALL OR FRAMED SUB FLOOR ENCLOSED BY METAL MESH WITH FLOORING LESS THAN 400mm ABOVE GROUND LEVEL TO BE NON-COMBUSTIBLE NATURALLY FIRE RESISTANT TIMBER OR PROTECTED ON THE UNDERSIDE WITH SARKING OR MINERAL WOOL INSULATION.
<b>WALLS</b>	WALLS MADE FROM NON-COMBUSTIBLE MATERIAL (eg MASONRY, BRICK/ENNER, MUD BRICK, CONCRETE, AERATED CONCRETE) OR TIMBER OR STEEL FRAMED WALLS SARKED ON THE OUTSIDE OF THE FRAME AND CLAD WITH 6mm FIBRE CEMENT SHEET EXTERNAL CLADDING OR STEEL SHEETING OR BUSHFIRE RESISTANT TIMBER. VENTS & WEATH-HOLES IN EXTERNAL WALLS SHALL BE SCREENED WITH MESH WITH MAXIMUM APERTURE OF 2mm & MADE OF CORROSION RESISTANT STEEL, BRONZE OR ALUMINIUM.
<b>WINDOWS</b>	SHALL BE COMPLETELY PROTECTED BY A BUSHFIRE SHUTTER OR COMPLETELY SCREENED WITH STEEL, BRONZE OR ALUMINIUM MESH OR 5mm TOUGHENED GLASS WITH THE OPENABLE PORTION SCREENED. WINDOW FRAMES TO BE OF METAL OR METAL REINFORCED PVC-U, OR BUSHFIRE RESISTING TIMBER. ANY PORTION WITHIN 400mm OF GROUND LEVEL OR DECKING TO BE SCREENED.
<b>DOORS</b>	DOOR FRAMES MUST BE BUSHFIRE RESISTANT TIMBER, METAL OR METAL REINFORCED PVC-U AND SHALL BE TIGHT FITTING TO THE DOOR FRAME. PROVIDE WEATHER STRIPS, DRAUGHT EXCLUDERS/SEALS TO THE BASE OF SIDE HUNG DOORS. SIDE HUNG EXTERNAL DOORS SHALL BE COMPLETELY PROTECTED BY A BUSHFIRE SHUTTER OR DOORS SHALL BE NON-COMBUSTIBLE OR A SOLID TIMBER DOOR HAVING A MIN THICKNESS OF 35mm FOR THE FIRST 400mm ABOVE THE THRESHOLD AND PROTECTED ON THE OUTSIDE BY A METAL FRAMED SCREEN WITH MAX APERTURE OF 2mm, MADE OF BRONZE OR CORROSION RESISTANT STEEL. WHERE SIDE HUNG DOORS INCORPORATE GLAZING, THE GLAZING IS TO BE MIN 6MM TOUGHENED GLASS. EXTERNAL HARDWARE MUST BE METAL. SLIDING DOORS SHALL BE COMPLETELY PROTECTED BY A BUSHFIRE SHUTTER. WHERE SLIDING DOORS INCORPORATE GLAZING, THE GLAZING IS TO BE MIN 6MM TOUGHENED GLASS. SLIDING DOORS MUST BE TIGHT FITTING IN THE FRAMES. OR DOOR FRAMES TO BE OF METAL WITH EXTERNALLY FITTED HARDWARE FOR OPENING AND CLOSING OF DOOR TO BE METAL. GLAZING TO HAVE FRL OF -/30/- EXCEPT WHERE FIXED & OPENABLE PORTIONS ARE SCREENED WITH MESH WITH MAX APERTURE 2mm, MADE OF BRONZE OR CORROSION RESISTANT STEEL. WHERE GLAZING IS LESS THAN 400mm FROM GROUND, DECK ROOF OR AWNING, THAT PORTION OF GLAZING SHALL BE SCREENED EXTERNALLY. GARAGE DOORS MUST BE NON-COMBUSTIBLE MATERIAL OR MIN 6mm FIBRE CEMENT SHEET. PANEL LIFT DOOR IS TO BE FITTED WITH WEATHER STRIPS, DRAUGHT EXCLUDERS/SEALS OR GUIDE TRACKS WITH A MAX GAP OF 3mm. GARAGE DOORS MUST NOT INCLUDE VENTILATION SLOTS.
<b>ROOF</b>	NON-COMBUSTIBLE ROOF COVERING. ROOF WALL JUNCTIONS SEALED. ANY OPENINGS(SKYLIGHTS etc) FITTED WITH NON-COMBUSTIBLE EMBER GUARDS. ROOF TO BE FULLY SARKED EXTENDING INTO GUTTERS AND VALLEYS. ANY LEAF OR GUTTER GUARDS TO BE NON-COMBUSTIBLE. EAVES FASCIA FROM BUSH FIRE RESISTING TIMBER OR METAL FIXED AT 450 CTRS. EAVE LINING TO BE BUSH FIRE RESISTING TIMBER OR 4.5mm FC SHEET JOINTS IN EAVES LININGS, FASCIAS AND GABLES MAY BE SEALED WITH PLASTIC JOINING STRIPS OR TIMBER STORM MOULDS.
<b>VERANDAHS &amp; DECKS</b>	SUPPORTS & FRAMING TO BE BUSH FIRE RESISTING TIMBER OR NON-COMBUSTIBLE MATERIAL. DECKING TO BE NON-COMBUSTIBLE OR BUSHFIRE RESISTING TIMBER. ANY TIMBER RAFTERS TO BE LINED WITH MINIMUM OF 6mm FC SHEET.
<b>WATER &amp; GAS SUPPLY PIPES</b>	ABOVE GROUND, EXPOSED WATER AND GAS PIPES SHALL BE METAL.
<b>WHERE APPLICABLE THE PROPOSED DEVELOPMENT MUST COMPLY WITH ANY BUSHFIRE MANAGEMENT PLAN REQUIREMENT.</b>	

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**SITE PLAN 1** SCALE 1:1000



**SITE PLAN 2** SCALE 1:200

**TOWN PLANNING REQUIRED**

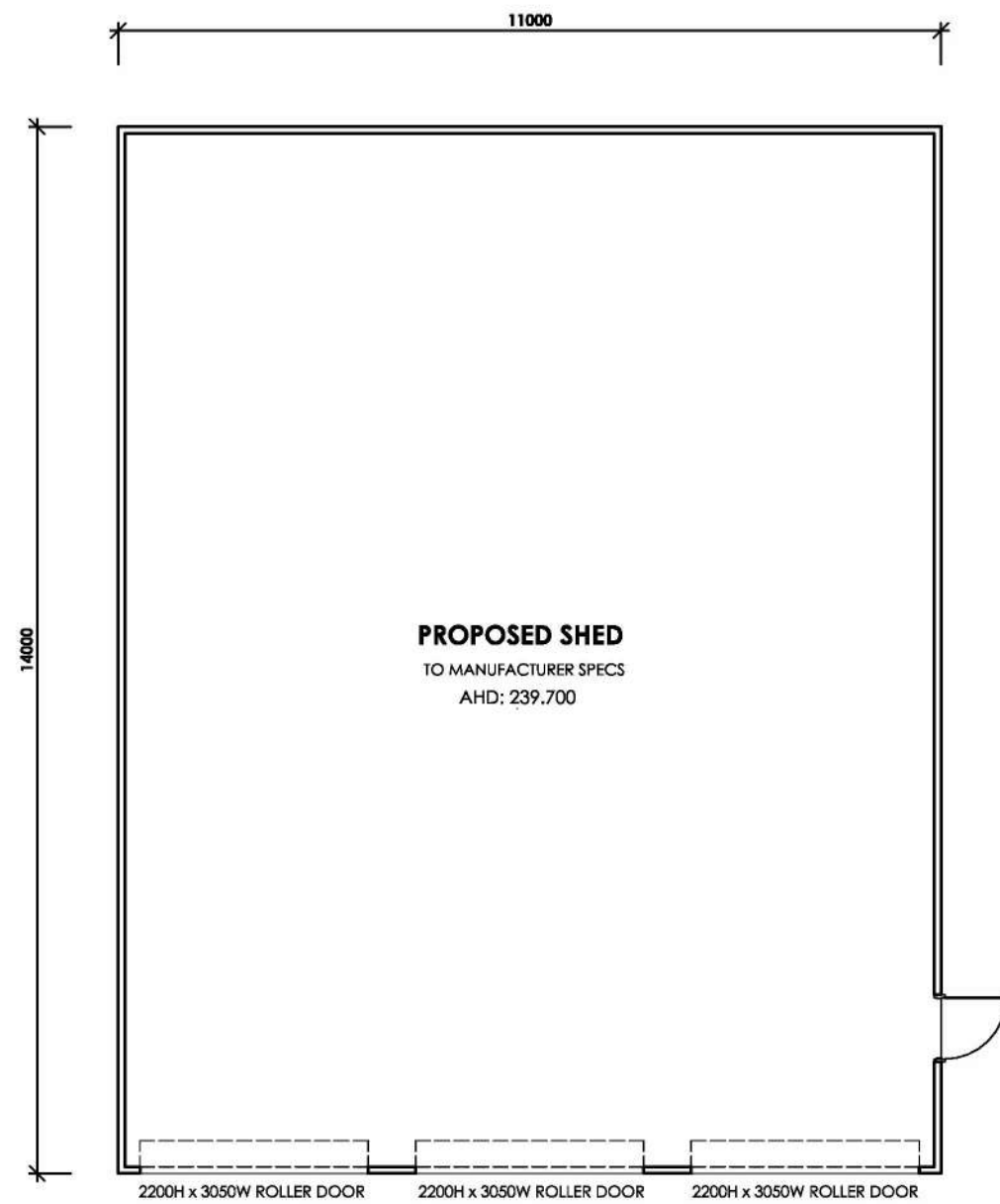
**SITE CUT/FILL LEGEND & NOTES**

- Denotes area of site cut
- Denotes area of site fill

**SITE CUT & FILL NOTE**  
 PROVIDE SITE CUT OF 550mm & FILL 600mm OVER BUILDING AREA & PROVIDE AN ADDITION SCRAPE TO GARAGE TO ACCOMMODATE A 0 mm STEPDOWN NOTE: 45° BATTER ANGLE

SITE ANALYSIS		
GARDEN AREA REQ. FOR GRZ & NRZ ZONES ONLY: 400-500m2 = 25%   501-650m2 = 30%   650m2+ = 35%		
GARDEN AREA	58081.76 m <sup>2</sup>	96.65%
NON-COMPLIANT GARDEN AREA	0.00 m <sup>2</sup>	0.00%
TOTAL PERMEABLE SPACE	58081.76 m <sup>2</sup>	96.65%
SITE COVER	671.09 m <sup>2</sup>	1.12%
PAVED AREA	0.00 m <sup>2</sup>	0.00%
DRIVEWAY AREA	1344.00 m <sup>2</sup>	2.24%
TOTAL HARD COVER	2015.09 m <sup>2</sup>	3.35%
SITE AREA	60096.85 m <sup>2</sup>	100.00%

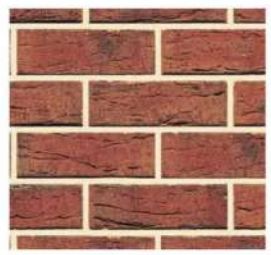



A B

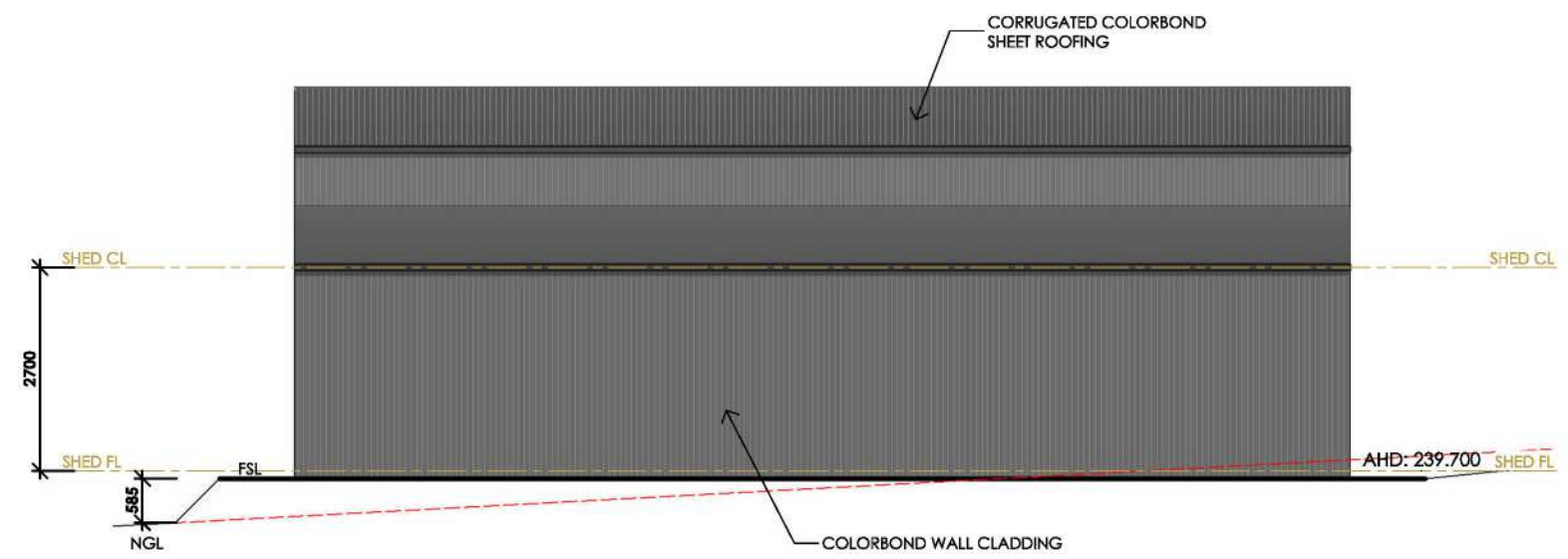


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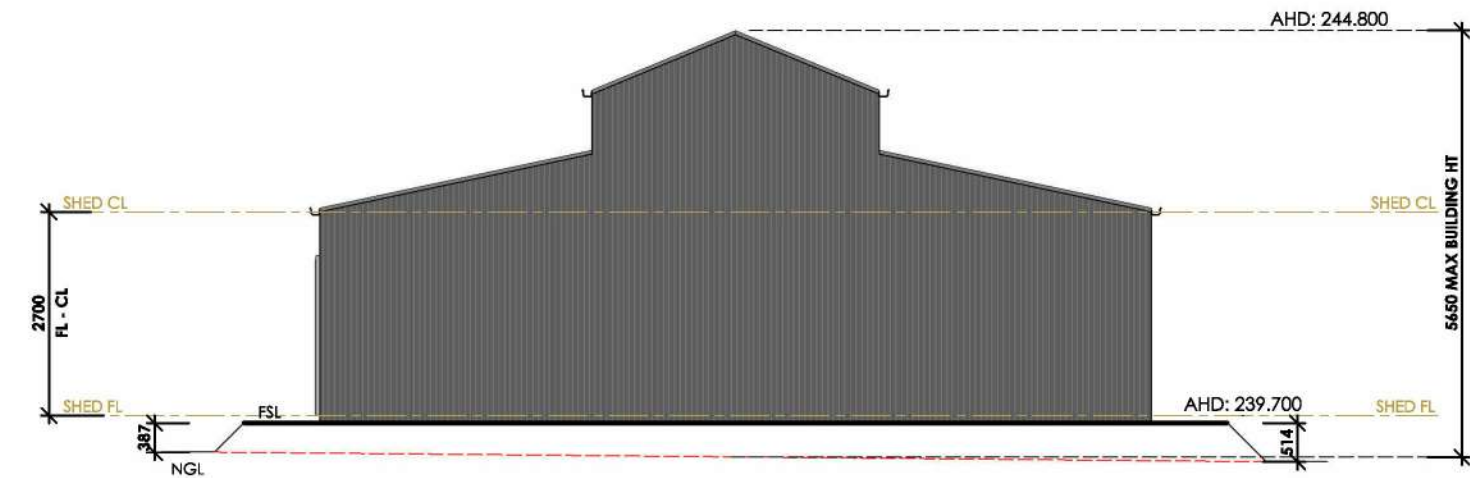
AREAS TABLE		
AREAS	(m <sup>2</sup> )	(SQ)
PROPOSED SHED	154.00 m <sup>2</sup>	16.58
TOTAL OTHER	154.00 m <sup>2</sup>	16.58
GRAND TOTAL	154.00 m <sup>2</sup>	16.58

D/C

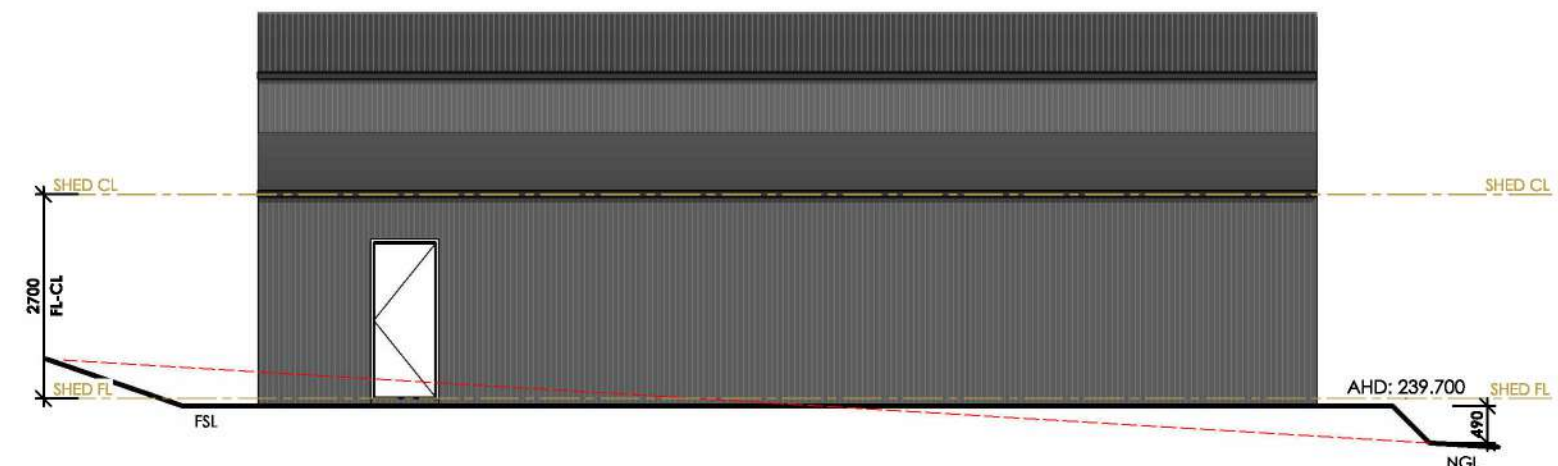
COLOUR/MATERIAL SCHEDULE			
			
BRICKWORK COLOUR: JARRAH/RED OR SIMILAR	WINDOW & DOOR FRAMES COLOUR: BLACK OR SIMILAR	FASCIA/GUTTER/DOWN PIPES COLOUR: DARK GREY OR SIMILAR	DWELLING ROOF & SHED COLOUR: DARK GREY OR SIMILAR



ELEVATION A - (EAST)



ELEVATION B - (SOUTH)

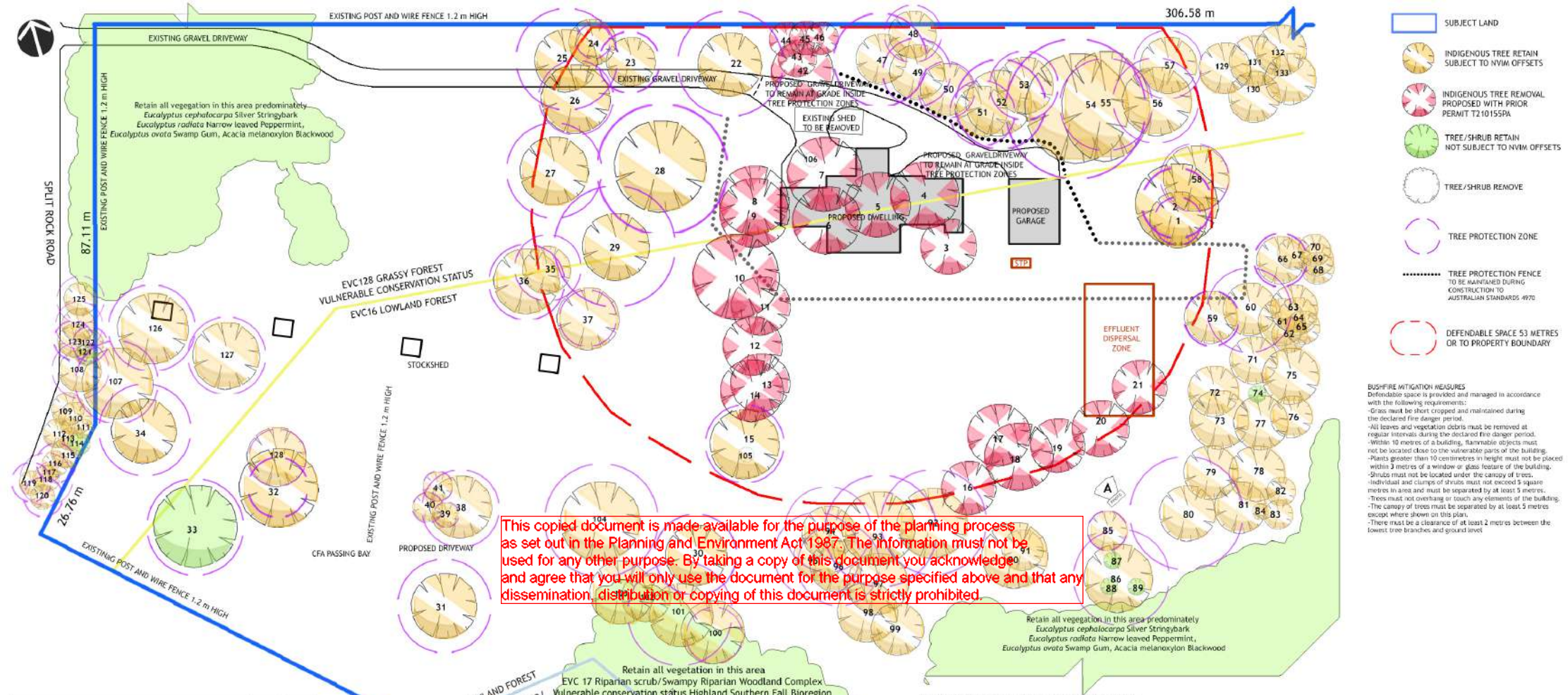


ELEVATION C - (WEST)



ELEVATION D - (NORTH)

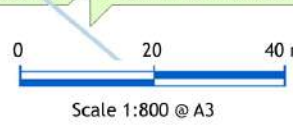




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- SUBJECT LAND
- INDIGENOUS TREE RETAIN SUBJECT TO NVM OFFSETS
- INDIGENOUS TREE REMOVAL PROPOSED WITH PRIOR PERMIT T210155PA
- TREE/SHRUB RETAIN NOT SUBJECT TO NVM OFFSETS
- TREE/SHRUB REMOVE
- TREE PROTECTION ZONE
- TREE PROTECTION FENCE TO BE MAINTAINED DURING CONSTRUCTION TO AUSTRALIAN STANDARDS 4970
- DEFENDABLE SPACE 53 METRES OR TO PROPERTY BOUNDARY

**BUSHFIRE MITIGATION MEASURES**  
 Defensible space is provided and managed in accordance with the following requirements:  
 - Grass must be short cropped and maintained during the declared fire danger period.  
 - All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.  
 - Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.  
 - Plants greater than 10 centimetres in height must not be placed within 3 metres of a window or glass feature of the building.  
 - Shrubs must not be located under the canopy of trees.  
 - Individual clumps of shrubs must not exceed 5 square metres in area and must be separated by at least 5 metres.  
 - Trees must not overhang or touch any elements of the building.  
 - The canopy of trees must be separated by at least 5 metres except where shown on this plan.  
 - There must be a clearance of at least 2 metres between the lowest tree branches and ground level.



**ASSESSMENT PATHWAY**

TOTAL EXTENT OF PAST PLUS PROPOSED NATIVE VEGETATION REMOVAL	Intermediate
LOCATION CATEGORY	Location 1
GENERAL OFFSET AMOUNT (general habitat units)	0.222
MINIMUM STRATEGIC BIODIVERSITY VALUE SCORE	0.468
STRATEGIC BIODIVERSITY SCORE OF ALL MAPPED NATIVE VEGETATION	0.593
	0.570

Table 2: BIODIVERSITY OFFSET REQUIREMENTS. REFER ACCOMPANYING NATIVE VEGETATION REMOVAL REPORT ID 311\_2024.0328.UR7 FOR FULL DETAILS

No.	Species	Common name	DBH m	TPZ m	Tree Retain	Tree Remove	Remarks
1	<i>Eucalyptus ovata</i>	Swamp Gum	42	5.04	1		
2	<i>Eucalyptus ovata</i>	Swamp Gum	64	7.68	1		
3	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	94	11.31	1		4/7/80
4	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	87	10.44	1		
5	<i>Eucalyptus radiata</i>	Silver Stringybark	65	7.81	1		4/4/48
6	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	88	10.56	1		
7	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	72	8.64	1		
8	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	67	8.03	1		20/15/45
9	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	85	10.2	1		
10	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	110	13.16	1		75/80
11	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	66	7.92	1		
12	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	69	7.15	1		
13	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	56	6.72	1		
14	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	79	9.48	1		23/38
15	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	73	8.74	1		
16	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	96	11.76	1		
17	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	83	9.96	1		
18	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	67	8.03	1		31/33/48
19	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	56	6.72	1		
20	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	90	10.8	1		
21	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	97	11.64	1		
22	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	97	11.64	1		
23	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	57	6.84	1		
24	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	27	3.24	1		
25	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	94	11.28	1		
26	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	68	8.16	1		
27	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	87	10.44	1		45/17 narrow lower branch ladder leaf
28	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	86	10.32	1		
29	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	110	13.2	1		
30	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	75	9.0	1		
31	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	86	10.32	1		Remove saplings in this area < 10 years old exempt
32	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	55	6.6	1		
33	<i>Eucalyptus radiata</i>	Narrow Leaved Peppermint	90	10.8	1		

No.	Species	Common name	DBH m	TPZ m	Tree Retain	Tree Remove	Remarks
34	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	81	9.66	1		
35	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	60	7.2	1		
36	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	55	6.6	1		
37	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	50	5.4	1		
38	<i>Acacia melanoxylon</i>	Blackwood	45	5.4	1		
39	<i>Acacia melanoxylon</i>	Blackwood	30	3.6	1		
40	<i>Acacia melanoxylon</i>	Blackwood	30	3.6	1		
41	<i>Acacia melanoxylon</i>	Blackwood	30	3.6	1		
42	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	52	6.24	1		
43	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	50	6.0	1		
44	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	38	4.56	1		
45	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	56	6.72	1		48/28 crown dieback
46	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	47	5.64	1		
47	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	80	9.6	1		
48	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	50	6.0	1		
49	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	60	7.2	1		
50	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	50	6.0	1		
51	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	58	6.96	1		
52	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	78	9.36	1		
53	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	60	7.2	1		
54	<i>Eucalyptus obliqua</i>	Mansonia	132	15.84	1		100/20/50
55	<i>Eucalyptus obliqua</i>	Mansonia	78	9.36	1		
56	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	75	9.0	1		
57	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	60	7.2	1		
58	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	60	7.2	1		
59	<i>Eucalyptus ovata</i>	Swamp gum	48	5.76	1		45/17 narrow lower branch ladder leaf

No.	Species	Common name	DBH m	TPZ m	Tree Retain	Tree Remove	Remarks
67	<i>Eucalyptus ovata</i>	Swamp gum	40	4.80	1		
68	<i>Eucalyptus ovata</i>	Swamp gum	40	4.80	1		
69	<i>Eucalyptus ovata</i>	Swamp gum	35	4.20	1		
70	<i>Eucalyptus ovata</i>	Swamp gum	40	4.80	1		
71	<i>Eucalyptus ovata</i>	Swamp gum	42	5.04	1		
72	<i>Eucalyptus ovata</i>	Swamp gum	35	4.20	1		
73	<i>Eucalyptus ovata</i>	Swamp gum	54	6.48	1		40/30
74	<i>Eucalyptus ovata</i>	Swamp gum	15	1.8	1		< 10 years old exempt
75	<i>Eucalyptus ovata</i>	Swamp gum	55	6.6	1		
76	<i>Leptospermum continentale</i>	Pinky Teatrop	15	1.80	1		
77	<i>Eucalyptus ovata</i>	Swamp gum	62	7.44	1		48/40
78	<i>Eucalyptus ovata</i>	Swamp gum	58	6.96	1		48/40
79	<i>Eucalyptus ovata</i>	Swamp gum	57	6.84	1		48/40
80	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	100	12.00	1		95/30
81	<i>Eucalyptus ovata</i>	Swamp gum	35	4.20	1		
82	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	28	3.36	1		
83	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	60	7.2	1		
84	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	18	2.16	1		15/10
85	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	32	3.84	1		
86	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	82	9.84	1		60/50
87	<i>Acacia melanoxylon</i>	Blackwood	5	—	1		< 10 years old exempt
88	<i>Acacia melanoxylon</i>	Blackwood	5	—	1		< 10 years old exempt
89	<i>Acacia melanoxylon</i>	Blackwood	5	—	1		< 10 years old exempt
90	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	44	5.28	1		< 10 years old exempt
91	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	100	12.00	1		< 10 years old exempt
92	<i>Eucalyptus obliqua</i>	Mansonia	52	6.24	1		
93	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	70	8.40	1		
94	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	28	3.36	1		
95	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	60	7.2	1		
96	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	60	7.2	1		
97	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	35	4.20	1		remove lower branch ladder leaf
98	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	64	7.68	1		40/80/30
99	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	100	12.00	1		
100	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	47	5.64	1		

No.	Species	Common name	DBH cm	TPZ m	Tree Retain	Tree Remove	Remarks
101	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	92	11.04	1		
102	<i>Acacia melanoxylon</i>	Blackwood	50	6.00	1		40/30 4.5m to fence
103	<i>Acacia melanoxylon</i>	Blackwood	50	6.00	1		4/2/23 3.5m to fence
104	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	105	12.60	1		
105	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	5	—	1		< 10 years old exempt
106	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	19	2.28	1		< 10 years old exempt
107	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	70	8.40	1		65/15/15
108	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	51	6.12	1		45/25 RR
109	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	64	7.68	1		32/40 RR
110	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	33	3.96	1		33 RR
111	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	10	1.20	1		10 RR
112	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	55	6.60	1		35/25/35 RR
113	<i>Acacia melanoxylon</i>	Blackwood	20	2.40	1		
114	<i>Acacia floribunda</i>	Coastal wattle	11	1.32	1		10/5 RR
115	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	40	4.80	1		RR
116	<i>Acacia melanoxylon</i>	Blackwood	31	3.72	1		
117	<i>Acacia melanoxylon</i>	Blackwood	12	1.44	1		Major RR
118	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark	45	5.40	1		RR
119	<i>Acacia melanoxylon</i>	Blackwood	35	4.20	1		RR
120	<i>Acacia melanoxylon</i>	Blackwood	35	4.20	1		RR
121	<i>Acacia floribunda</i>	Coastal wattle	15	1.80	1		RR
122	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	24	2.88	1		RR
123	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	32	3.84	1		RR
124	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	42	5.04	1		RR
125	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	42	5.04	1		RR
126	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	75	9.00	1		RR
127	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	68	8.16	1		RR
128	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	50	6.00	1		RR
129	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	53	6.36	1		RR
130	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	45	5.4	1		RR
131	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	45	5.4	1		RR
132	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	42	5.04	1		RR
133	<i>Eucalyptus radiata</i>	Narrow L. Peppermint	42	5.04	1		RR

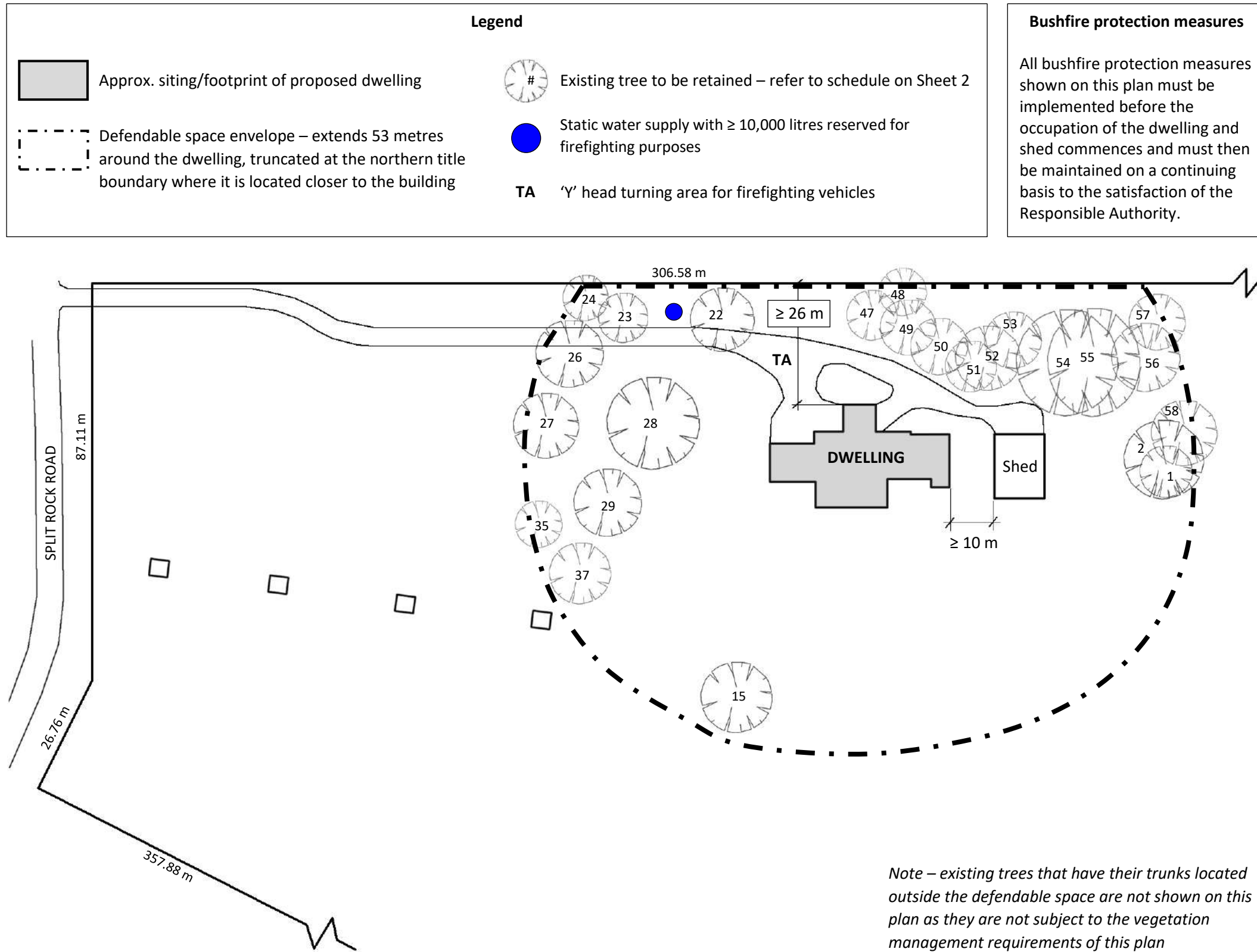


PHOTOGRAPH A Patch of vegetation in defensible space 9/02/2021 Nearmap

VEGETATION ASSESSMENT / LANDSCAPE PLAN  
 210 SPLIT ROCK ROAD  
 BEACONSFIELD UPPER  
 18 NOVEMBER 2024  
 T210155PA



Table 3: Vegetation assessment 210 Split Rock Rd Beaconsfield Upper 27 March 2024  
 \*Environmental weed. RR = remarks diameter trees on road reserves  
 < 10 years old exempt denotes trees that are less than 10 years old exempt CLAUSE 52.17  
 \* Protection Zone shows only for trees in close proximity to development.



Note – existing trees that have their trunks located outside the defendable space are not shown on this plan as they are not subject to the vegetation management requirements of this plan

**Legend**

- Approx. siting/footprint of proposed dwelling
- Defendable space envelope – extends 53 metres around the dwelling, truncated at the northern title boundary where it is located closer to the building
- Existing tree to be retained – refer to schedule on Sheet 2
- Static water supply with ≥ 10,000 litres reserved for firefighting purposes
- TA** 'Y' head turning area for firefighting vehicles

**Bushfire protection measures**

All bushfire protection measures shown on this plan must be implemented before the occupation of the dwelling and shed commences and must then be maintained on a continuing basis to the satisfaction of the Responsible Authority.

**Construction – Bushfire Attack Level (BAL)**

The construction of the dwelling must comply with the requirements for a Bushfire Attack Level (BAL) of **BAL-29** in accordance with Sections 3 and 7 of AS.3959-2018 – *Construction of buildings in bushfire-prone areas.*

**Removal of existing trees**

All trees at the date of this plan that have their trunks located in the defendable space must be removed unless shown on this plan to be retained.

**Defendable space/vegetation management**

Vegetation located in the defendable space envelope, including vegetation that is landscaped or naturally regenerated, must be modified and managed to comply with the following requirements:

1. Grass must be short cropped and maintained during the declared fire danger period.
2. All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
3. Within 10 metres the dwelling and shed, flammable objects must not be located close to the vulnerable parts of the building.
4. Plants greater than 10 centimetres in height must not be placed within 3 metres of a window or glass feature of the dwelling and shed.
5. Shrubs must not be located under the canopy of trees.
6. Individual and clumps of shrubs must not exceed 5 square metres in area and must be separated by at least 5 metres.
7. Trees must not overhang or touch any elements of the dwelling or shed.
8. The canopy of trees must be separated by at least 5 metres – except between existing trees shown on this plan to be retained and listed on Sheet 2 of this plan.
9. There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

**Existing trees to be retained in the defensible space**

The following existing trees are to be retained in the defensible space envelope and are not subject to the 5 metre tree canopy separation requirement – except that any future trees located in the defensible space must have its canopy separated from these trees by at least 5 metres:

Tree #	Genus/species	Common name
1-2	<i>Eucalyptus ovata</i>	Swamp Gum
15	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark
22-24	<i>Eucalyptus radiata</i>	Narrow L. Peppermint
26 & 27	<i>Eucalyptus radiata</i>	Narrow L. Peppermint
28	<i>Eucalyptus obliqua</i>	Messmate Stringybark
29	<i>Eucalyptus radiata</i>	Narrow L. Peppermint
35	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark
37	<i>Eucalyptus radiata</i>	Narrow L. Peppermint
47-53	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark
54 & 55	<i>Eucalyptus obliqua</i>	Messmate Stringybark
56-58	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark

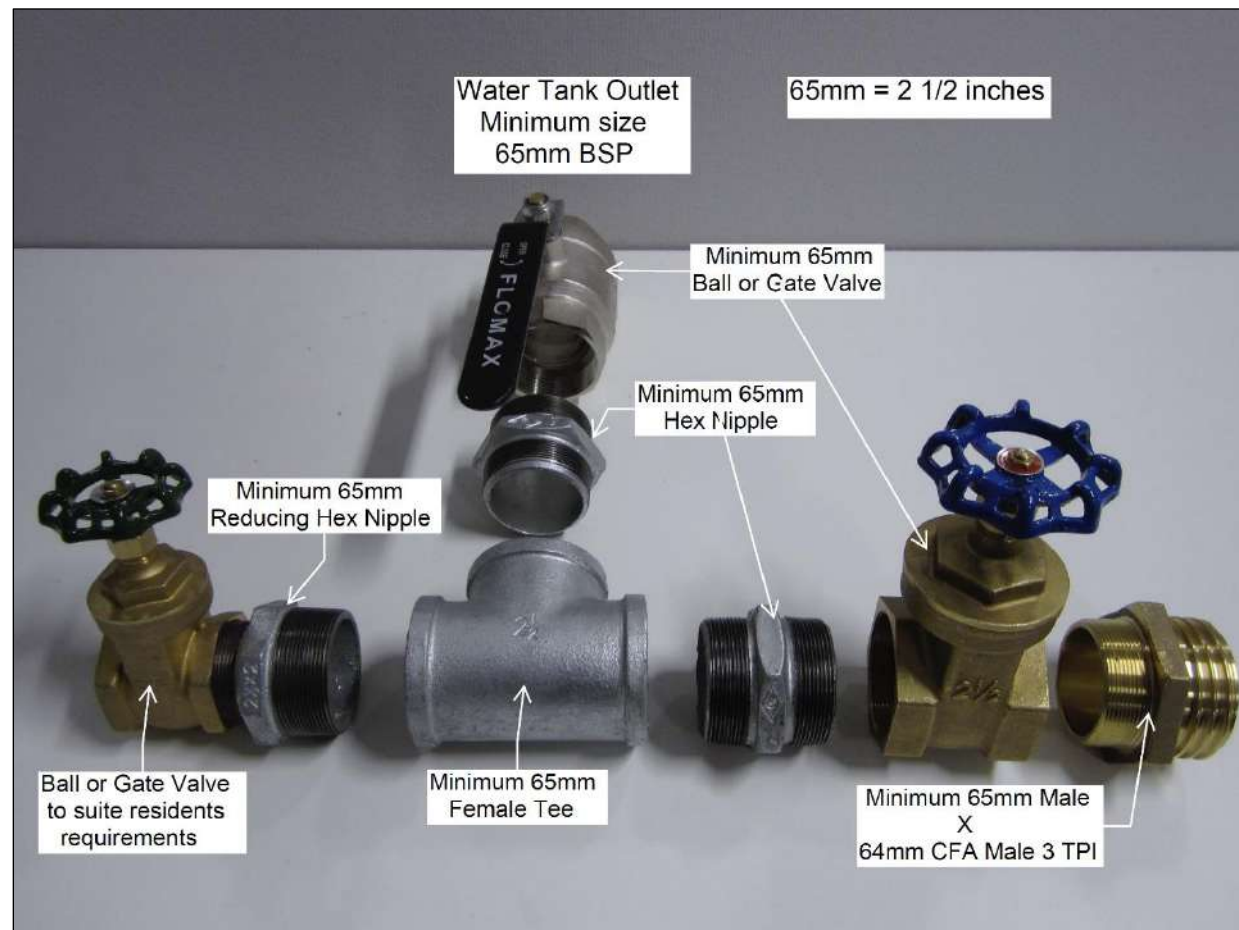
Note – The above tree data is sourced from a plan titled 'Vegetation assessment/landscape plan 210 Split Rock Road Beaconsfield Upper' prepared by Jane Burke dated 27 March 2024.

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**Static water supply reserved for firefighting and property protection purposes**

A static water supply must be provided that complies with the following requirements:

1. A minimum of 10,000 litres of water must be reserved for firefighting and property protection purposes in an above-ground metal or concrete water tank.
2. The tank and outlet must be located within 60 metres of the dwelling, within 4 metres of the driveway and generally in the location shown on Sheet 2 of this plan.
3. If the water is in the same tank as other water supplies a separate outlet must be reserved for firefighting water supplies.
4. A ball or gate valve (British Standard Pipe (BSP) 65 mm) and coupling (64 mm CFA 3 thread per inch male fitting) must be provided and must face towards the driveway.
5. All water pipes and fittings must be a minimum of 65 mm nominal bore (excluding the CFA coupling).
6. An additional ball or gate valve that suits the requirements of the occupants of the building must be provided.
7. All fixed above-ground water pipes and fittings required for firefighting purposes must be made of corrosive resistant metal.
8. The CFA outlet must face the driveway and access to both outlets must not be obstructed.



This diagram is sourced from CFA's publication 'FSG LUP 006 Land Use Planning – Tank Connections Explained, Bushfire Management Overlay (BMO)', CFA 5 August 2014

**Vehicle access**

The design and construction of the vehicle access to the dwelling and the static water supply reserved for firefighting and property protection purposes must comply with the following requirements:

1. All-weather construction.
2. A load limit of at least 15 tonnes.
3. Provide a minimum trafficable width of 3.5 metres.
4. Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically.
5. Curves must have a minimum inner radius of 10 metres.
6. The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres.
7. Dips must have no more than a 1 in 8 (12.5 per cent) (7.1 degrees) entry and exit angle.
8. A turning area for firefighting vehicles must be provided close to the dwelling and generally in the position shown on Sheet 1 of this plan, comprising a Y head turning area that meets the specifications of Austroad Design for an 8.8 metre Service Vehicle.



# Bushfire Management Statement

Incorporating:

- a Bushfire Hazard Landscape Assessment
- a Bushfire Hazard Site Assessment
- a response to Clauses 44.06 and 53.02 of the Cardinia Planning Scheme
- a Bushfire Management Plan

Proposed development of a single dwelling and shed at  
210 Split Rock Road, Beaconsfield Upper VIC 3808

**Version 2, 25 April 2024**

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<b>Document type</b>	Bushfire Management Statement – incorporating a Bushfire Hazard Landscape Assessment, a Bushfire Hazard Site Assessment, a response to the requirements of Clauses 44.06 and 53.02 of the Planning Scheme and a Bushfire Management Plan (BMP)			
<b>Bushfire hazard map</b>	Designated Bushfire Prone Area	Yes	Bushfire Management Overlay	Yes
<b>Address</b>	210 Split Rock Road, Beaconsfield Upper VIC 3808 – Lot 1, TP163415			
<b>Proposal</b>	Development of a single dwelling incorporating a garage under the main roofline			
<b>Client</b>	[REDACTED]			
<b>Responsible authority</b>	Cardinia Shire Council			
<b>Report author</b>	[REDACTED] Director Nexus Planning	BPAD Accredited Practitioner Level 2 – VIC Accreditation # BPAD46250	[REDACTED]	[REDACTED]
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## Document control

Version	Date	Comments	Approved by
1	10/10/2021	Original version	[REDACTED]
2	25/4/2024	Amended to reflect a new building design and siting	[REDACTED]

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## Executive summary

<b>Subject land and proposal</b>	
Address	210 Split Rock Road, Beaconsfield Upper VIC 3808 – Lot 1, TP163415
Lot size (approx.)	6.01 hectares
Proposal	Development of a single dwelling with a garage under the main roofline and a shed
<b>Planning regulations</b>	
Planning Scheme	Cardinia
Zoning & overlays	Rural Conservation Zone Schedule 2, Bushfire Management Overlay, Environmental Significance Overlay Schedule 1
Bushfire provisions	Clause 44.06 (VC253, 14/12/2023) and Clause 53.02 (VC253, 14/12/2023)
Application pathway	Pathway 2 (BMO Technical Guide) – Clause 53.02-4
Alternative measures	None
<b>Bushfire hazard and water supplies</b>	
Primary hazard/s	Forest – downslope 5-10 degrees
Water supplies	This copied document is made available for the purpose of the planning process as set out in the Planning and Environment Act 1987. The information must not be used for any other purpose. By taking a copy of this document you acknowledge and accept that any dissemination, distribution or copying of this document is strictly prohibited. Reticulated is not available in the area.
Prescribed bushfire protection measures	This copied document is made available for the purpose of the planning process as set out in the Planning and Environment Act 1987. The information must not be used for any other purpose. By taking a copy of this document you acknowledge and accept that any dissemination, distribution or copying of this document is strictly prohibited.
Siting & defensible space envelope	Achieves the minimum separation and defensible space for <b>BAL-29</b> to the north and <b>BAL-19</b> in all other directions in accordance with Table 2 to Clause 53.02-5
Vegetation management	In accordance with Table 6 to Clause 53.02-5 – except the 5 metre tree canopy separation requirement has been modified to facilitate the retention of most of the existing trees located in the defensible space
Construction	Construction of the building to comply with the requirements for <b>BAL-29</b> and in accordance with Table 2 to Clause 53.02-5 and Sections 3 and 7 of AS.3959-2018 – <i>Construction of buildings in bushfire-prone areas</i>
Water supply	10,000 litres of static water reserved for firefighting and property protection purposes in an above ground metal or concrete water tank that incorporates fire authority fittings in accordance with the requirements of Table 4 to Clause 53.02-5
Access	Access to the dwelling and the static water supply by firefighting and other emergency service vehicles in accordance with Table 4 and 5 to Clause 53.02-5
<b>Conclusion</b>	
The proposal complies with all the Approved measures of Clause 53.02-4 demonstrating that the bushfire risk will be reduced to an acceptable level through the implementation of the prescribed bushfire protection measures.	

## Terminology

AS.3959-2018/ AS.3959	Australian Standard AS 3959:2018 Construction of buildings in bushfire-prone areas
BMO	Bushfire Management Overlay – Clause 44.06 of the Planning Scheme
BMO Technical Guide	Technical Guide Planning Permit Applications Bushfire Management Overlay, September 2017 (Department of Environment, Land, Water and Planning)
Bushfire	An unplanned fire burning in vegetation; also referred to as wildfire. <sup>1</sup>
Bushfire attack	Attack by wind, burning embers, radiant heat or flame generated by a bushfire. <sup>2</sup>
Bushfire-prone area (BPA)	An area that is subject to, or likely to be subject to, bushfire attack <sup>3</sup> and as designated pursuant to Section 192A of the <i>Building Act 1993</i> .
Bushfire Attack Level (BAL)	A means of measuring the severity of a building’s potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per metre squared, and the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire. <sup>4</sup>
CFA	Country Fire Authority (Relevant Fire Authority)
Classified vegetation	Vegetation that has been classified in accordance with Clause 2.2.3 <sup>5</sup> [of AS.3959-2018] and Tables 1–2 or 3 of Clause 53.02–5 of the Planning Scheme.
Defendable space	An area of land around a building where vegetation is modified and managed to reduce the effects of flame contact and radiant heat associated with bushfire. <sup>6</sup>
Effective slope	The slope under that classified vegetation which most influences the bushfire attack. <sup>7</sup>
Ember attack	Attack by smouldering or flaming windborne debris that is capable of entering or accumulating around a building, and that may ignite the building or other combustible materials and debris. <sup>8</sup>
Low threat vegetation	Vegetation that is excluded from the bushfire assessment in accordance with Clause 2.2.3.2 of AS.3959-2018.
Modified vegetation	A vegetation type listed in Tables 1 and 2 to Clause 53.02-5 that is different from the other vegetation types in AS.3959-2018 and Tables 1 & 2 to Clause 53.02-5 because it has been altered from its natural state. <sup>9</sup>
Site	That part of the allotment of land on which a building stands or is to be erected. <sup>10</sup>

<sup>1</sup> Standards Australia, 18 December 2020 – Clause 1.5.1

<sup>2</sup> Standards Australia, 18 December 2020 – Clause 1.5.2

<sup>3</sup> Standards Australia, 18 December 2020 – Clause 1.5.3

<sup>4</sup> Standards Australia, 18 December 2020 – Clause 1.5.4

<sup>5</sup> Standards Australia, 18 December 2020 – Clause 1.5.7

<sup>6</sup> Clause 73.01 of the Planning Scheme

<sup>7</sup> Standards Australia, 18 December 2020 – Clause 1.5.11

<sup>8</sup> Standards Australia, 18 December 2020 – Clause 1.5.12

<sup>9</sup> Derived from DELWP, September 2017

<sup>10</sup> Standards Australia, 18 December 2020 – Clause 1.5.30

## Table of Contents

Section	Description	Page
	<b>Executive summary</b>	<b>3</b>
	<b>Terminology</b>	<b>4</b>
<b>1</b>	<b>Purpose and scope of this report</b>	<b>6</b>
<b>2</b>	<b>Introduction</b>	<b>6</b>
2.1	Bushfire hazard identification, National Construction Code and AS.3959-2018	6
2.2	Subject land	7
2.3	Proposal	9
<b>3</b>	<b>Bushfire planning policy and provisions</b>	<b>9</b>
3.1	BMO permit triggers/exemptions	10
3.2	Planning Policy Framework	10
3.3	Clause 44.06 – Bushfire Management Overlay (BMO)	11
3.4	Clause 53.02 – Bushfire Planning	12
<b>4</b>	<b>Bushfire Hazard Landscape Assessment</b>	<b>13</b>
<b>Map 1</b>	<b>Bushfire Hazard Landscape Assessment Map</b>	<b>15</b>
<b>5</b>	<b>Bushfire Hazard Site Assessment</b>	<b>16</b>
5.1	Introduction	16
5.2	Vegetation classification	16
5.3	Distance of the site from classified vegetation	27
5.4	Effective slope under the classifiable vegetation	27
5.5	Road access and water supplies	28
<b>Map 2</b>	<b>Bushfire Hazard Site Assessment Map</b>	<b>29</b>
<b>6</b>	<b>Assessment of bushfire planning provisions</b>	<b>30</b>
6.1	Introduction	30
6.2	Clause 53.02-4.1 – Landscape, siting and design objectives	31
6.3	Clause 53.02-4.2 – Defendable space and construction objective	35
6.4	Clause 53.02-4.3 – Water supply and access objectives	39
<b>Map 3</b>	<b>Bushfire Management Plan</b>	<b>42</b>
<b>7</b>	<b>Conclusion</b>	<b>44</b>
<b>8</b>	<b>Recommended planning permit conditions</b>	<b>44</b>
<b>9</b>	<b>Obligations for the owner/occupier</b>	<b>45</b>
<b>10</b>	<b>Report limitations and important advice and recommendations</b>	<b>45</b>
<b>11</b>	<b>References</b>	<b>47</b>

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## 1 Purpose and scope of this report

This report is a Bushfire Management Statement that has been prepared to accompany an amended planning application for the development of a single dwelling and shed in the Bushfire Management Overlay at 210 Split Rock Road, Beaconsfield Upper. The report will be used to inform an assessment of the proposal by the CFA and a decision on the application by the responsible authority. The report incorporates four elements – with first three responding to the *Application requirements* of Clause 44.06-3:

- A Bushfire Hazard Landscape Assessment which describes the bushfire hazard more than 150 metres from the site (**Map 1**).
- A Bushfire Hazard Site Assessment which describes the bushfire hazard within 150 metres of the proposed development (**Map 2**).
- A Bushfire Management Statement which describes how the proposed development responds to the requirements in Clauses 44.06 and 53.02 of the Planning Scheme.
- A Bushfire Management Plan ('BMP') which describes the bushfire protection measures that will be incorporated into the completed development and which the owner/occupier is obliged to maintain on a continuing basis (**Map 3**).

This proposal is required to address the requirements of Clause 53.02-4 – *Bushfire protection objective*.

This version of the report (Version 2 and incorporating Version 4 of the Bushfire Management Plan) is based on a substantially different design response to the one that was assessed in Version 1 including but not limited to changes to the siting, size and design of the dwelling and its vehicle access and water supply arrangements and the incorporation of a proposed shed. The report also reflects changes to the extent of vegetation located on the subject land and a change to the address of the land (previously known as 44 Berglund Road Upper Beaconsfield).

## 2 Introduction

### 2.1 Bushfire hazard identification, National Construction Code and AS.3959-2018

The Planning Scheme identifies the subject land is mapped in the Bushfire Management Overlay (BMO)<sup>11</sup>. The BMO is a planning provision used to guide the development of land in areas of high bushfire hazard where there is the potential for extreme bushfire behaviour, such as crown fire and extreme ember attack and radiant heat<sup>12</sup>.

The subject land is also located in a designated Bushfire Prone Area (BPA)<sup>13</sup> pursuant to Section 192A of the *Building Act 1993*. Pursuant to Regulation 156 of the *Building Regulations 2018* where a planning permit is issued and a site assessment for the purpose of determining the bushfire attack level for the site has been considered as part of the application for planning permit, the relevant building surveyor must accept the site assessment for the purpose of determining the BAL of the site and the construction requirements that are applicable to the building. In these circumstances there is no need to undertake a separate bushfire site assessment at time of obtaining a building permit.

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<sup>11</sup> DELWP, 24 April 2024

<sup>12</sup> DELWP, September 2017

<sup>13</sup> DELWP, 24 April 2024

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Australian Standard AS 3959:2018 – Construction of buildings in bushfire-prone areas (AS.3959-2018)<sup>14</sup> is used in both the planning system (through the BMO) and the building system (through the BPA and the National Construction Code 2022<sup>15</sup>) to determine the level of bushfire attack on buildings in bushfire prone areas and to determine the appropriate construction response to mitigate these effects.

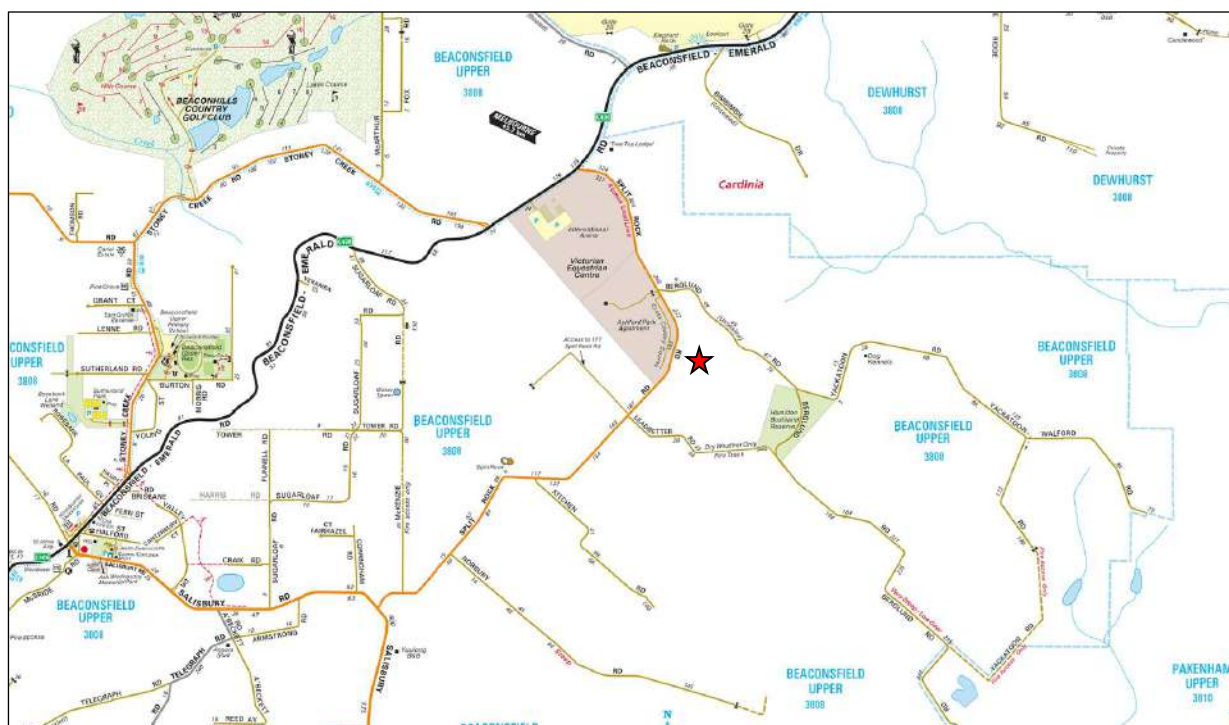
## 2.2 Subject land

The subject land is Lot 1, TP163415 and is known as 210 Split Rock Road, Beaconsfield Upper. The land is located in a rural area approximately 12 kilometres from Cockatoo to the north-east and approximately 13 kilometres from Berwick to the south-west.

The land has an area of 6.01 hectares and is vacant except for a shed located to the north of the site for the proposed dwelling, three horse shelters and a menage located to the south of the site for the proposed dwelling.

A locality plan and photos of the site are provided in **Figure 1** and **Plates 1-2** below and with additional photos presented in **Section 5**.

**Figure 1: Locality plan**



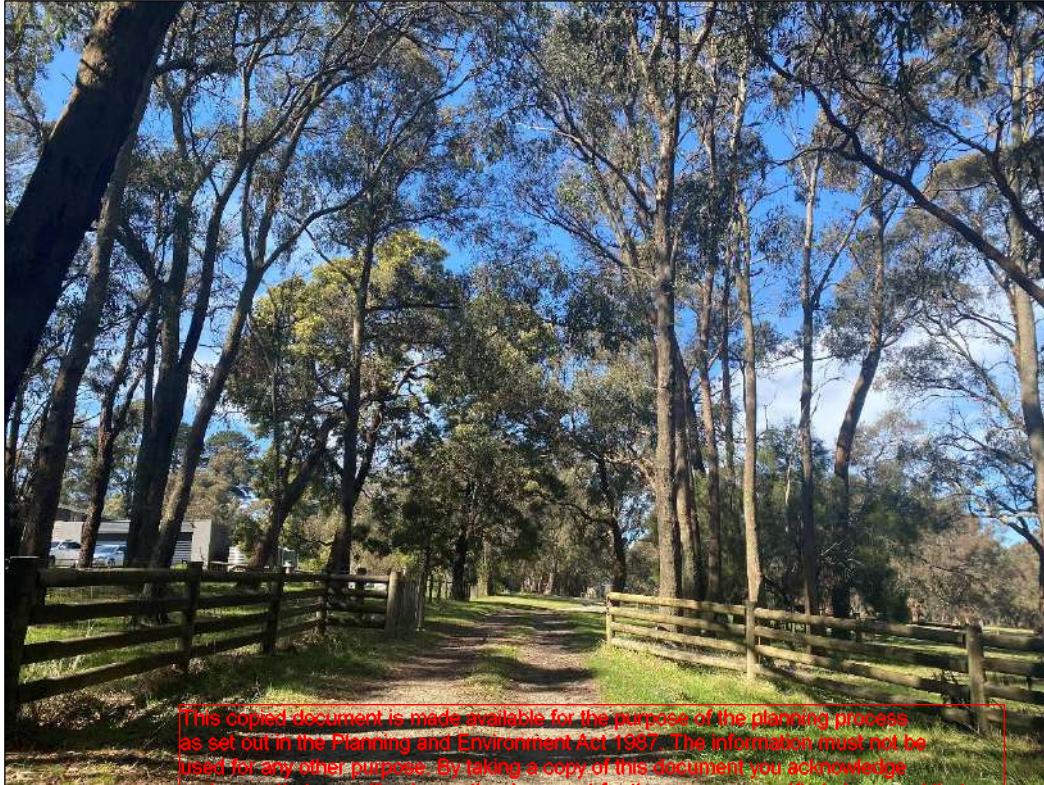
Base map for above figure sourced from Melways Interactive Map, <http://online.melway.com.au/melway/>. The approximate location of the subject land is identified by the red star.

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<sup>14</sup> Standards Australia, 18 December 2020

<sup>15</sup> ABCB, 2022

**Plate 1** Existing driveway access to the subject land – a new crossover and driveway will be constructed approximately 85 metres to the south of this driveway



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**Plate 3** View north from the menage to the site for the proposed dwelling



## 2.3 Proposal

The following summary of the proposal is to be read in conjunction with the plans referenced below and the Bushfire Management Plan (BMP) presented as **Map 3** at the end of **Section 6** which was prepared by the author of this report.

<b>Buildings/works (subject to BMO)</b>	Development of a single storey, five bedroom (including study) dwelling that incorporates a garage and porte cochere under the main roofline. The building is to be constructed slab on ground with a 22.5 degree pitched Colorbond roof. The walls of the building are to be constructed of face brickwork. It is also proposed to develop an 11 m x 14 m Colorbond shed setback 10 metres from the eastern wall of the proposed dwelling
<b>Classification</b>	Class 1a and Class 10a (Vol. 2 of the National Construction Code 2022 <sup>16</sup> )
<b>Plans supplied for assessment</b>	SJD Homes – Job/Project No: not specified, Sheets 02, 02A, 03, 04 & 04A dated 10.01.24 Hargreaves Design Group – Job No. 23-05445 – Sheets 1-3, Date: 26/03/24
<b>Siting &amp; defensible space envelope</b>	Achieves the minimum separation and defensible space for <b>BAL-29</b> to the north and <b>BAL-19</b> in all other directions in accordance with Table 2 to Clause 53.02-5
<b>Vegetation management</b>	In accordance with Table 6 to Clause 53.02-5 – except the 5 metre tree canopy separation requirement has been modified to facilitate the retention of most of the existing trees located in the defensible space
<b>Construction</b>	Construction of the building to comply with the requirements for <b>BAL-29</b> and in accordance with Table 2 to Clause 53.02-5 and Sections 3 and 7 of AS.3959-2018 – <i>Construction of buildings in bushfire-prone areas</i>
<b>Water supply</b>	10,000 litres of static water reserved for firefighting and property protection purposes in an above ground metal or concrete water tank that incorporates fire authority fittings in accordance with the requirements of Table 4 to Clause 53.02-5
<b>Access</b>	Access to the dwelling and the static water supply by firefighting and other emergency service vehicles in accordance with Table 4 and 5 to Clause 53.02-5

## 3 Bushfire planning policy and provisions

This section of the report provides an overview of the nature and operation of the key bushfire planning policies and provisions of the Planning Scheme and starts with an identification of the relevant permit triggers and exemptions under the BMO provisions.

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<sup>16</sup> ABCB, 2022

## 3.1 BMO permit triggers/exemptions

The proposed development triggers a planning permit under the provisions of the BMO pursuant to Clause 44.06-2 as the buildings and works are associated with the use of the land for accommodation which includes a dwelling and by extension usual outbuildings – and the shed is not exempt as it has a floor area exceeding 100 sqm.

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## 3.2 Planning Policy Framework

### 3.2.1 Clause 71.02-3 – Integrated decision making

Clause 71.02-3 includes the following statement:

The Planning Policy Framework operates together with the remainder of the scheme to deliver integrated decision making. Planning and responsible authorities should endeavour to integrate the range of planning policies relevant to the issues to be determined and balance conflicting objectives in favour of net community benefit and sustainable development for the benefit of present and future generations. However, in bushfire affected areas, planning and responsible authorities must prioritise the protection of human life over all other policy considerations.

### 3.2.2 Clause 13.02-1S – Bushfire planning

Clause 13.02-1S – *Bushfire planning* of the Planning Policy Framework applies to all planning and decision making relating to land which is within a designated bushfire prone area, subject to a BMO or that is proposed to be used or developed in a way that may create a bushfire hazard. The Objective of this policy is:

To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.

The strategies of this policy that are particularly relevant to an application of this type and scale include:

#### **Protection of human life**

Give priority to the protection of human life by (inter alia):

- Prioritising the protection of human life over all other policy considerations.

#### **Bushfire hazard identification and assessment**

Identify bushfire hazard and undertake appropriate risk assessment by (inter alia):

- Ensuring that strategic planning documents, planning scheme amendments, planning permit applications and development plan approvals properly assess bushfire risk and include appropriate bushfire protection measures.
- Not approving development where a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied or bushfire protection measures can be adequately implemented.

The BMO is intended to give effect to State Planning Policy Clause 13.02-1S – *Bushfire planning*. The purpose of the BMO is achieved through demonstrating compliance with Clause 53.02 – *Bushfire planning* (Clause 53.02).

### 3.2.3 Local planning policy

There are no bushfire-specific local planning policies in the Casey Planning Scheme.

## 3.3 Clause 44.06 – Bushfire Management Overlay (BMO)

### 3.3.1 Purpose of the BMO

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.

To identify areas where the bushfire hazard warrants bushfire protection measures to be implemented.

To ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.

### 3.3.2 Application requirements

Clause 44.06-3 specifies that unless a schedule to the overlay specifies different requirements, an application must be accompanied by:

- A **bushfire hazard site assessment** including a plan that describes the bushfire hazard within 150 metres of the proposed development. The description of the hazard must be prepared in accordance with Section 2.2.3 to 2.2.5 of AS3959:2018 Construction of buildings in bushfire prone areas (Standards Australia) excluding paragraph (a) of 2.2.23.2. Photographs or other techniques may be used to assist in describing the bushfire hazard.
- A **bushfire hazard landscape assessment** including a plan that describes the bushfire hazard of the general locality more than 150 metres from the site. Photographs or other techniques may be used to assist in describing the bushfire hazard. This requirement does not apply to a dwelling that includes all of the approved measures specified in Clause 53.02-3.
- A **bushfire management statement** describing how the proposed development responds to the requirements in this clause and Clause 53.02. If the application proposes an alternative measure, the bushfire management statement must explain how the alternative measure meets the relevant objective.

If in the opinion of the responsible authority any part of these requirements is not relevant to the assessment of an application, the responsible authority may waive, vary or reduce the requirement.

This report addresses the above requirements.

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### 3.3.3 Clause 44.06-4 – Requirements of Clause 53.02

Clause 44.06-4 specifies (in part) that an application must meet the requirements of Clause 53.02 unless the application meets all of the requirements specified in a schedule to this overlay. The subject land is not affected by a schedule to the BMO and accordingly the proposal must meet the requirements of Clause 53.02.

### 3.3.4 Clause 44.06-5 – Mandatory condition

In accordance with Clause 44.06-5 a permit to construct a building or construct or carry out works must include the following condition:

“The bushfire protection measures forming part of this permit or shown on the endorsed plans, including those relating to construction standards, defensible space, water supply and access, must be maintained to the satisfaction of the responsible authority on a continuing basis. This condition continues to have force and effect after the development authorised by this permit has been completed.”

### 3.3.5 Clause 44.06-6 – Referral of applications

Pursuant to Clause 44.06-6 and Clause 66.03 an application under the BMO is required to be referred to the Relevant Fire Authority – in this case the CFA. The CFA are a “Recommending referral authority” for this kind of application.

## 3.4 Clause 53.02 – Bushfire Planning

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### 3.4.1 Purpose of Clause 53.02

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.

To ensure that the location, design and construction of development appropriately responds to the bushfire hazard.

To ensure development is only permitted where the risk to life, property and community infrastructure from bushfire can be reduced to an acceptable level.

To specify location, design and construction measures for a single dwelling that reduces the bushfire risk to life and property to an acceptable level.

### 3.4.2 Application of Clause 53.02

In accordance with the *Application* of Clause 53.02 the requirements of Clause 53.02-3 apply to this proposal.

### 3.4.3 Operation of Clause 53.02

In accordance with the *Operation* of Clause 53.02 the provisions contain:

- **Objectives.** An objective describes the outcome that must be achieved in a completed development.
- **Approved measures (AM).** An approved measure meets the objective.
- **Alternative measures (AltM).** An alternative measure may be considered where the responsible authority is satisfied that the objective can be met. The Responsible Authority may consider other unspecified alternative measures.
- **Decision guidelines.** The decision guidelines set out the matters that the responsible authority must consider before deciding on an application, including whether any proposed alternative measure is appropriate.

A schedule to Clause 44.06 may specify a different approved measure, additional alternative measure or additional decision guidelines.

If a schedule to Clause 44.06 specifies an approved measure different from an approved measure set out in this clause, the requirement in the schedule applies.

## 4 Bushfire Hazard Landscape Assessment

This section is to be read in conjunction with **Map 1** which is presented at the end of this section.

An assessment of the landscape bushfire hazard is a critical step in assessing whether the bushfire risk can be reduced to an acceptable level and in demonstrating compliance with the objectives of Clause 53.02. It also informs decisions about the nature and adequacy of the bushfire protection measures for a given development.

The features of the wider landscape that can influence the scale and impact of fire include:

- The extent, type, arrangement and continuity of vegetation.
- Topographical features.
- The length of time a fire has to grow and develop.

The influence of the landscape on the bushfire risk at a specific site can also vary considerably and depends on a range of factors including:

- The proximity and relationship of the site to areas which may be capable of extreme fire behaviour.
- Changes in vegetation and slope characteristics within 150 metres of the site which may mitigate the bushfire intensity at the site level.
- The proximity of the site to urban areas or other areas where land is managed in a minimal fuel condition which may mitigate the bushfire intensity at the site level and potentially provide shelter from the effects of bushfire.

**Map 1** describes the key features of the landscape bushfire hazard within at least 8 kilometres that are relevant to the subject land:

- Location and land use patterns
- Proximity to urban or township area
- Significant landscape features, vegetation and topography
- Recent bushfire and planned burn history

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- Availability of infrastructure to support a response to a bushfire event

With reference to the BMO Technical Guide<sup>17</sup> it is submitted that this site is not located in a complex location that requires a response to the ‘further information for more complex locations’.

The BMO Technical Guide sets out four bushfire landscape typologies – with Broader Landscape Type One representing the lowest risk landscape through to Broader Landscape Type Four which represents the most extreme risk landscape. The BMO Technical Guide explains that this approach to ranking landscape typologies is intended to streamline and provide more consistent decision making based on the risk from the landscape beyond the site<sup>18</sup>.

It has been assessed that the subject land is located in an area that is most closely aligned to the typology of ‘**Broader Landscape Type Three**’ which is described as having the following characteristics:

*“The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site.*

*Bushfire can approach from more than one aspect.*

*The site is located in an area that is not managed in a minimum fuel condition.*

*Access to an appropriate place that provides shelter from bushfire is not certain.”*

The landscape typologies in the BMO Technical Guide represent a continuum of landscape risk and it is assessed that the landscape risk influencing the subject land is at the lower end of what is assumed for Type Three landscapes. In particular the primary reason why the area doesn’t fall within Landscape Type Two is the criteria that requires “access is readily available to a place that provides shelter from bushfire.” Given the highly fragmented nature of the bushfire hazard within at least 1 kilometre it is also assessed that the subject land is located in an area where the credible fire scenarios for the site will be within the parameters of the BMO/AS.3959-2018 design fire. Notwithstanding this, there is the potential for the land to be subject to significant ember attack.

**Section 6.2** of the report also draws conclusions from the Bushfire Hazard Landscape Assessment and describes whether the risk associated with this hazard can be reduced to an acceptable level.

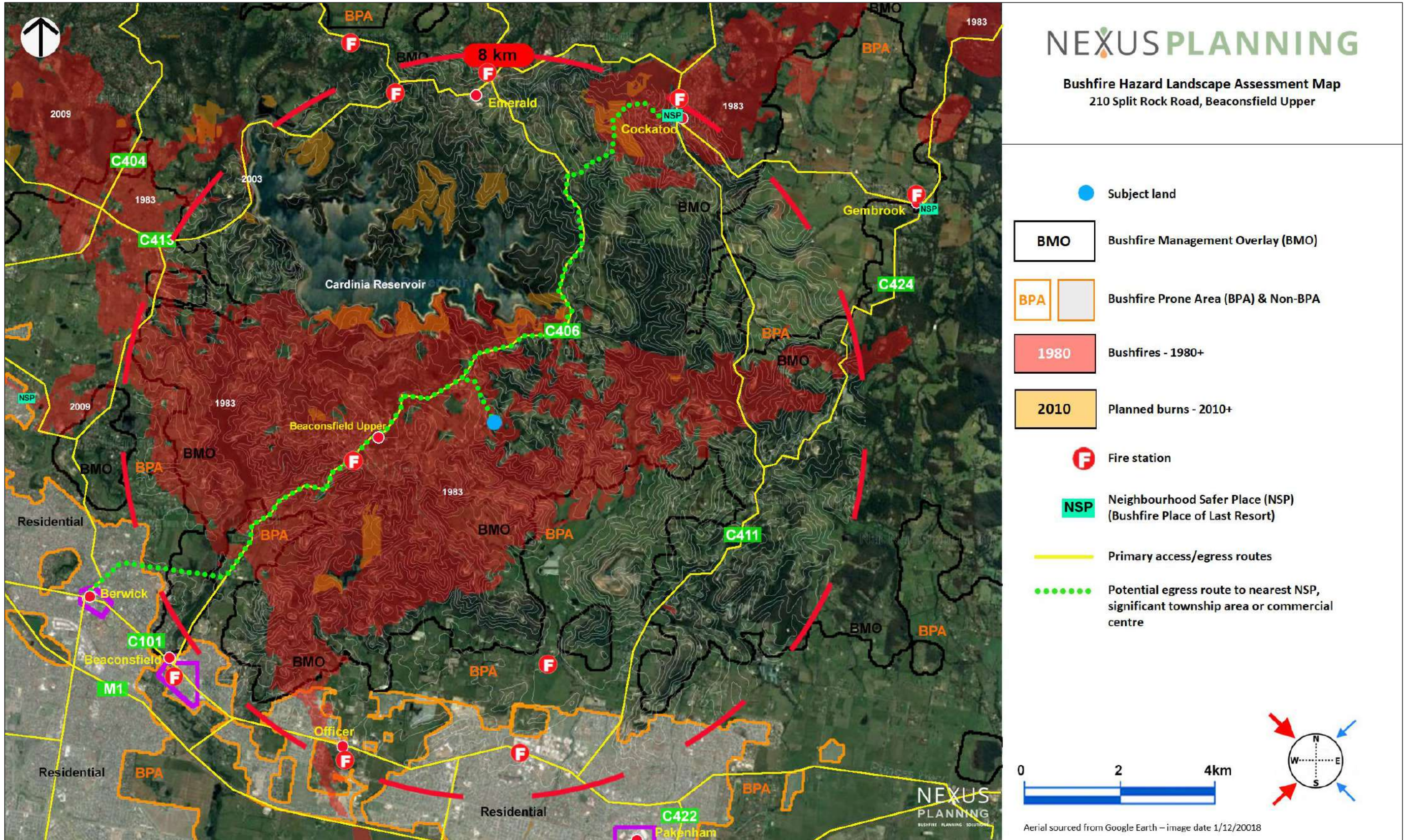
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<sup>17</sup> p.11 & p.12

<sup>18</sup> DELWP, September 2017, p.11

# Map 1: Bushfire Hazard Landscape Assessment Map



## 5 Bushfire Hazard Site Assessment

### 5.1 Introduction

This part of the report is to be read in conjunction with **Map 2** which is presented at the end of this section. This assessment has been informed by an inspection of the subject land and surrounding land carried out by the author of this report on 30 August 2021.

As noted in the *Technical Guide Planning Permit Applications Bushfire Management Overlay (BMO Technical Guide)*<sup>19</sup> the Bushfire Hazard Site Assessment provides factual information about the bushfire hazard, it informs the defendable space and construction requirements and is informed by the methodology contained in *Australian Standard AS 3959:2018 – Construction of buildings in bushfire-prone areas* (AS.3959-2018).

In accordance with the *Application requirements* of Clause 44.06-3 and the provisions of Clause 53.02:

- The bushfire hazard has been assessed for a distance of 150 metres from the site.
- The description of the hazard has been prepared in accordance with Clauses 2.2.3 to 2.2.5 of AS.3959-2018, excluding paragraph (a) of Clause 2.2.3.2.
- The vegetation classification, defendable space and construction have been determined with reference to Table 2 to Clause 53.02-5 (Table 2).

This section of the report also includes details about the road access and water supplies available to the land.

### 5.2 Vegetation classification (Clause 2.2.3, AS.3959-2018)

In accordance with Clause 2.2.3.1 of AS.3959-2018, the vegetation has been classified in accordance with Table 2.3 and Figures 2.3 and 2.4(A) to 2.4(G) of AS.3959-2018 and Table 2 to Clause 53.02-5. Where there is more than one vegetation type, each type has been classified separately with the worst-case scenario applied – which is not necessarily the predominant vegetation.

Note – a substantial number of existing trees have been removed from the subject land since the time of my inspection of the land and accordingly some of the photos presented in this report may depict trees that are no longer present on the land.

#### 5.2.1 Forest vegetation (Group A)

Vegetation extending from the north to the south-west of the site, through east, has been classified in Group A – Forest and is most closely aligned to the description for Open Forest 03:

*Trees up to 30 m high; 30–70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.*<sup>20</sup>

<sup>19</sup> DELWP, September 2017, p.20

<sup>20</sup> Standards Australia, 18 December 2020

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As noted on **Map 2** there are areas within this bushland that have a fuel structure that is more consistent with Woodland (on the adjoining land to the north and north-east and the parts of the subject land located outside the gully) and Scrub (riparian vegetation on the subject land and adjoining land to the south-west) – however for simplicity the more conservative classification of Forest has been applied to all this vegetation.

In relation to the small group of Eucalypts located to the north-north-east of the dwelling (where the effective slope has been classified as flat) the classification of this vegetation as Forest is particularly conservative as the grass is maintained in a short cropped condition with no understorey fuels and given the use, development and maintenance of the adjoining land for rural residential purposes it is likely that management will continue in the future.

Representative photos of this vegetation type located proximate to the site are provided in **Plates 3-11** below.

**Plate 3** Group of Eucalypts located on the adjoining land to the north-north-east (looking south-east from the adjoining land towards the subject land)



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**Plate 4** Vegetation to the north-east of the site on adjoining land – east of Plate 3



**Plate 5** Vegetation to the north-east of the site on the subject land (outside the defensible space)



**Plate 6** Vegetation on the adjoining land to the east-north-east of the site



**Plate 7** Bushland on adjoining land to the east of the site



**Plate 8** View west through the bushland to the south-east of the site on the subject land (outside the defendable space)



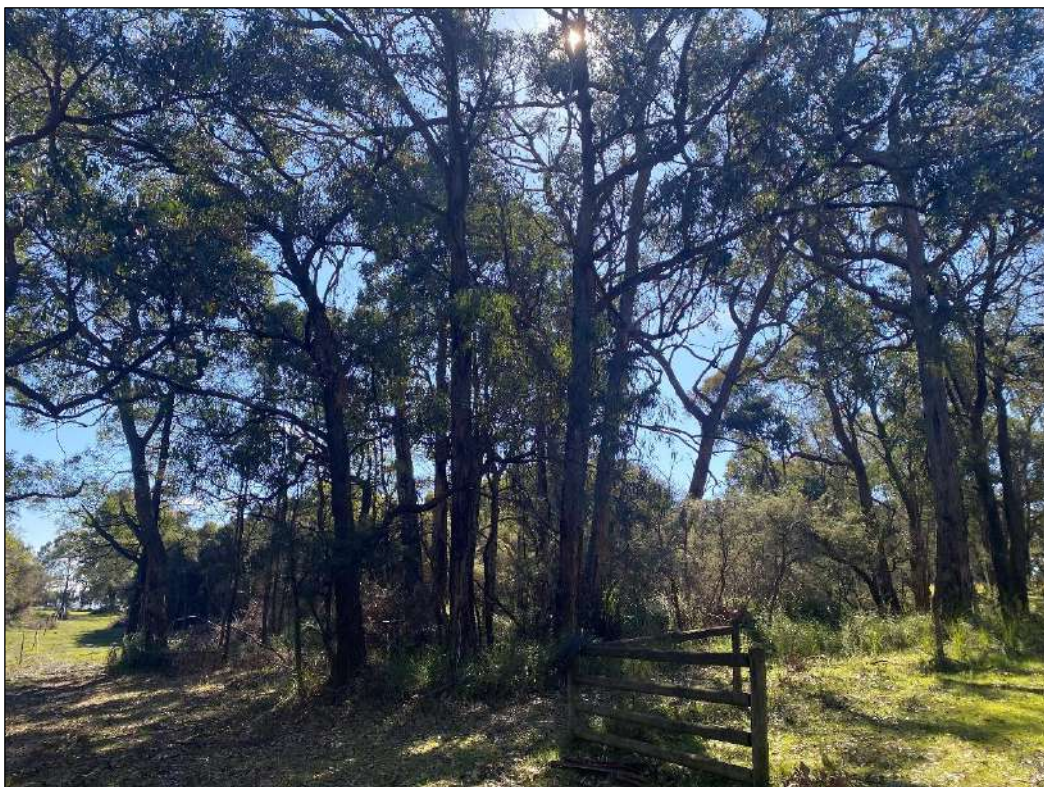
**Plate 9** Bushland on the subject land to the south of the site – outside the defendable space (viewed from the south side of the vegetation)



**Plate 10** Bushland to the south of the site – south of the vegetation depicted in Plate 9



**Plate 11** Bushland on the subject land to the south-west of the site – looking north-west





## 5.2.2 Grassland – Group G vegetation

Areas of pasture generally to the north and south-west of the site has been classified in Group G – Grassland which has the following characteristics for all Grassland types:

*All forms (except tussock and moorlands), including situations with shrubs and trees, if the overstorey foliage is less than 10%. Includes pasture and cropland.*

*NOTE: Grassland managed in a minimal fuel condition and non-curing cropland is regarded as low threat vegetation for the purposes of Clause 2.2.3.2.<sup>21</sup>*

Representative photos of this vegetation type located proximate to the site are provided in **Plates 12-14** below.

**Plate 12** View north across the Grassland to the north-north-west of the site



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<sup>21</sup> Standards Australia, 18 December 2020

**Plate 13** View north across the Grassland to the north of the site



**Plate 14** View south across the Grassland to the south-west of the site



## 5.2.3 Low threat vegetation

It has been assessed that all unshaded areas within the 150 metre assessment area on **Map 2** are excludable as low threat vegetation that satisfies one or more of the following exclusions under Clause 2.2.3.2 of AS.3959-2018<sup>22</sup>:

- (a) *Vegetation of any type that is more than 100 m from the site.*
- (b) *Single areas of vegetation less than 1 ha in area and not within 100 m of other areas of vegetation being classified vegetation.*
- (c) *Multiple areas of vegetation less than 0.25 ha in area and not within 20 m of the site, or each other or of other areas of vegetation being classified.*
- (d) *Strips of vegetation less than 20 m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 m of the site or each other, or other areas of vegetation being classified vegetation.*
- (e) *Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.*
- (f) *Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks.*

### NOTES:

- 1 *Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100 mm).*
- 2 *A windbreak is considered a single row of trees used as a screen or to reduce the effect of wind on the leeward side of the trees.*<sup>23</sup>

This assessment takes the following factors into account:

- The existing use, development and maintenance of the areas of low threat vegetation provides reasonable assurance that this land will continue to be maintained in a low bushfire threat condition that satisfies the above criteria (as applicable).
- AS.3959-2018 specifies that when assessing vegetation classes for forests, woodlands and rainforest that the classified vegetation is determined by the unmanaged understorey rather than either the canopy (drip line) or the trunk of any trees<sup>24</sup>. This approach effectively treats scattered trees with no understorey fuels as being low threat vegetation because with no understorey there is no point at which the distance to the vegetation can be measured.

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<sup>22</sup> Clause 53.02 excludes the operation of paragraph (a)

<sup>23</sup> Standards Australia, 18 December 2020

<sup>24</sup> Refer to Figure 2.2 of Clause 2.2.5 of AS.3959-2018

- Compliance with the requirements of the Bushfire Management Plan (BMP) will result in vegetation located in the proposed defendable space envelope meeting the criteria for exclusion in accordance with Clause 2.2.3.2(f) of AS.3959-2018.

Representative photos of areas of low threat vegetation located on the adjoining land to the north are provided in **Plates 15-25**. Photos of the vegetation within the defendable space that were provided in Version 1 of this report have been omitted due to most of the existing trees within the revised building footprint and extending from the east to the south-west of the site, through south, having been removed since the site was inspected by the author. It is also unnecessary for those images to be updated as the BMP prescribes and regulates the management of the vegetation within the defendable space and in the areas of the site described in this paragraph only one tree remains.

**Plate 15** Maintained gardens on the adjoining land to the north of the site



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**Plate 16** Tennis court on the adjoining land to the north of the site



**Plate 17** Maintained lawn on the adjoining land to the north of the site – east of the tennis court depicted in Plate 16



## 5.3 Distance of the site from classified vegetation (Clause 2.2.4, AS.3959-2018)

The distance of the site from areas of classifiable vegetation has been determined in accordance with Clause 2.2.4 of AS.3959-2018 and the outcome of this assessment is recorded in **Table A** below.

Notes:

- Distance to vegetation includes vegetation located in the defensible space and other areas of low threat vegetation.
- In accordance with Note 1 to Figure 2.1 of AS.3959-2018 the distance is taken from the nearest part of an external wall of the building or for parts of the building that do not have external walls it is taken from the supporting posts or columns.

## 5.4 Effective slope of land under the classified vegetation (Clause 2.2.5, AS.3959-2018)

The effective slope of areas of classifiable vegetation have been determined in accordance with Section 2.2.5 of AS.3959-2018 and the outcome of this assessment is recorded in **Table A** below.

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**Table A: Recording the outcome of the bushfire hazard site assessment**

Aspect	Vegetation classification (Clause 2.2.3)	Distance from vegetation (Clause 2.2.4)	Effective slope (degrees) (Clause 2.2.5)
North	Forest	≥ 26 m	Flat
North	Grassland	≥ 36 m	Downslope 0-5
North-east	Forest	≥ 65 m	Downslope 0-5
East	Forest	≥ 53 m	Downslope 5-10
South	Forest	≥ 53 m	Downslope 5-10
South-west	Grassland	≥ 100 m	Flat
West	Low threat	N/A	N/A
North-west	Grassland	≥ 100 m	Downslope 0-5
<p>1. Distance to vegetation includes vegetation located in the defendable space and other areas of low threat vegetation.</p> <p>2. Low threat vegetation means vegetation that satisfies one or more of the exclusions in Clause 2.2.3.2 of AS.3959-2018 – excluding paragraph a).</p>			

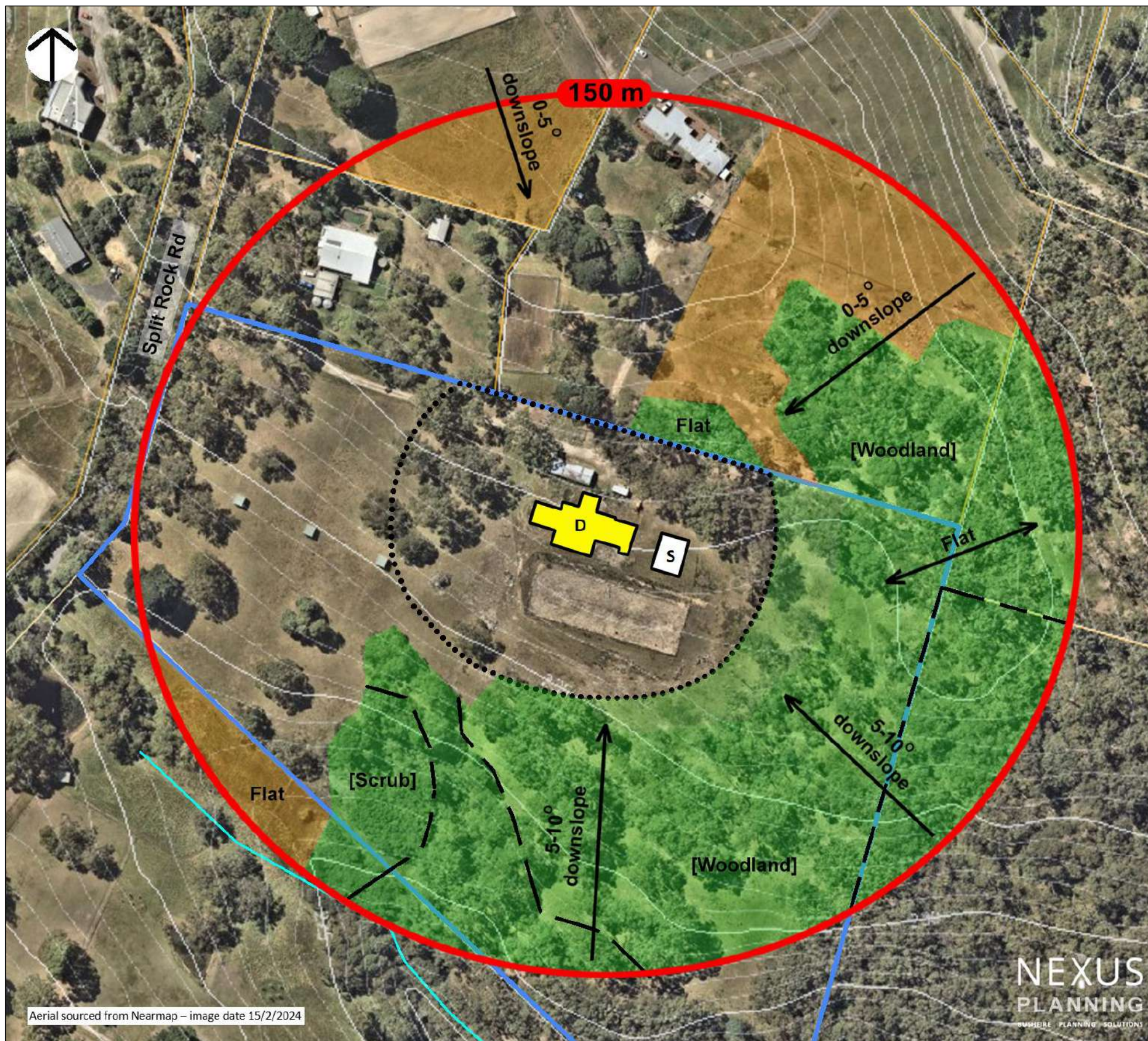
## 5.5 Road access and water supplies

Reticulated water is not available in the area and accordingly the land is not serviced by fire hydrants.

The land has frontage to Split Rock Road which is a two lane asphalt road with a trafficable width exceeding 5.5 metres.

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# Map 2: Bushfire Hazard Site Assessment Map



## NEXUS PLANNING

### Bushfire Hazard Site Assessment Map Proposed dwelling at 210 Split Rock Road, Beaconsfield Upper

Aspect	Vegetation type	Distance from vegetation	Effective slope (degrees)
North	Forest	≥ 26 m	Flat
North	Grassland	≥ 36 m	Downslope 0-5
North-east	Forest	≥ 65 m	Downslope 0-5
East	Forest	≥ 53 m	Downslope 5-10
South	Forest	≥ 53 m	Downslope 5-10
South-west	Grassland	≥ 100 m	Flat
West	Low threat	N/A	N/A
North-west	Grassland	≥ 100 m	Downslope 0-5

- Distance to vegetation includes vegetation located in the defensible space and other areas of low threat vegetation – being all unshaded areas within 150 m of the site.
- Low threat vegetation means vegetation that satisfies one or more of the exclusions in Clause 2.2.3.2 of AS.3959-2018 – excluding paragraph a).

**Legend**

- Subject land
- Forest - Group A vegetation
- Grassland - Group G vegetation
- 1 metre contours
- Defensible space envelope - extends 53 metres around the dwelling, truncated at the northern boundary where it is located closer to the dwelling
- Approx. siting of the dwelling (D) and shed (S)

**Scale**

0 50 100m



## 6 Assessment of bushfire planning provisions

### 6.1 Introduction

This section of the report is also to be read in conjunction with the Bushfire Management Plan (BMP) presented as **Map 3** at the end of this section.

**Table B** below outlines the Objectives, Approved measures and Alternative measures which are relevant to this application and which are addressed in this section of the report. In accordance with the *Operation* to Clause 53.02 compliance with the Approved measures is deemed to meet the objective. Where an Approved measure can't be met an Alternative measure – including other unspecified alternative measures – may be considered where the responsible authority is satisfied that the objective can be met.

**Table B: Clause 53.02 – Relevant objectives, approved measures and alternative measures**

Pathway / Clause / Objective / measures		Applies?	Rationale / Approved Measure met or Alternative Measure proposed?
<b>53.02-4.1</b>	<b>Landscape, siting and design objectives</b>		
AM 2.1	Landscape bushfire hazard	Yes	Complies
AM 2.2	Siting	Yes	Complies
AM 2.3	Building design	Yes	Complies
<b>53.02-4.2</b>	<b>Defendable space and construction objective</b>		
AM 3.1	For dwellings, dependant person's units, industry, office and retail	Yes	Complies
AM 3.2	Other development	No	AM 3.1 applies
AltM 3.3	Use of adjoining land for defendable space	No	Complies with AM 3.1
AltM 3.4	Use of Method 2 (AS.3959)	No	AM 3.1 applies
AltM 3.5	Criteria for flame zone	No	AM 3.1 applies
AltM 3.6	Integrated risk management	No	AM 3.1 applies
<b>53.02-4.3</b>	<b>Water supply and access objective</b>		
AM 4.1	For dwellings, dependant person's units, industry, office and retail	Yes	Complies
AM 4.2	Other development	No	AM 4.1 applies

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## 6.2 Clause 53.02-4.1 – Landscape, siting and design objectives

The objectives of Clause 53.02-4.1 – *Landscape, siting and design objectives* are:

- Development is appropriate having regard to the nature of the bushfire risk arising from the surrounding landscape.
- Development is sited to minimise the risk from bushfire.
- Development is sited to provide safe access for vehicles, including emergency vehicles.
- Building design minimises vulnerability to bushfire attack.

There are three approved measures (AM 2.1, AM 2.2 and AM 2.3) which apply to this objective and are relevant to this proposal. An assessment of the proposal against the requirements of each approved measure is outlined below.

### Approved measure 2.1 (Landscape bushfire risk)

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#### AM 2.1 Requirement

The bushfire risk to the development from the landscape beyond the site can be mitigated to an acceptable level.

#### Response to AM 2.1

With reference to the bushfire hazard landscape assessment and the bushfire hazard site assessment the following conclusions can be drawn about the influence of the landscape bushfire hazard on the bushfire risk to the proposed development:

- The type and extent of vegetation located more than 150 metres from the site has the potential to result in neighbourhood-scale destruction as it interacts with the bushfire hazard close to the site.
- A bushfire can impact the site from more than one aspect but the nature, extent and location of areas of bushfire hazard combined with the gently undulating topography in the wider landscape and the extent of low threat vegetation and grassland extending from the south-west to the north of the site (through west) is not conducive to the development of extreme bushfire behaviour at the site level.
- The subject land is located in an area that generally aligns with the description for 'Broader Landscape Type Three' in the BMO Technical Guide<sup>25</sup> but at the lower end of what is assumed for Type Three landscapes and the credible bushfire scenarios for the site are likely to be within the parameters of the BMO/AS.3959-2018 design fire.
- The semi-rural nature of the locality and distance of the site from the nearest township area or bushfire place of last resort means the ability for the occupants of the studio to access to a place that can provide shelter from the impact of bushfire, other than the proposed building, is to some extent uncertain.

<sup>25</sup> As highlighted in **Section 4** It is the view of the author of this report that there are significant limitations with the approach adopted in the BMO Technical Guide for ranking bushfire landscape typologies which limits the utility of this guidance.

- The site is located in an area that has a good road network that can support bushfire response and recovery.

In deciding whether the requirement of AM 2.1 is met it is also relevant and necessary to consider the key elements of the assessment methodology and the proposed bushfire protection measures – which in this case includes the following<sup>26</sup>:

- Table 2 to Clause 53.02-5 (Table 2), which is derived from the Simplified Method (Method 1) of AS.3959, has been used to determine the defensible space and construction for the proposed building.
- The dwelling achieves siting and defensible space for BAL-29 to the north and BAL-19 in all other directions, with the defensible space provided from the north-east to north-west, through south, being applied on the highest risk aspect for vegetation type and slope (Forest, Downslope 5-10 degrees).
- Whilst the area of defensible space to the north is less than the other aspects the classification of the vegetation to the north of the site as Forest is very conservative (refer to **Section 5.2.1** of this report) and is only 3 metres short of achieving defensible space for BAL-19 based on Woodland (downslope 0-5 degrees) and even that classification would be conservative based on the fuel structure of the vegetation on the adjoining land where it is located within 53 metres of the proposed dwelling.
- The siting of the dwelling and the proposed defensible eliminates the potential for the building to be exposed to direct flame contact from the fire front and limit the fire actions to moderate to high levels of radiant heat ( $\leq 19$  kW/sqm in all directions other than to the north and  $\leq 29$  kW/sqm to the north), embers and burning debris<sup>27</sup>.
- The requirement for the building to be constructed to comply with the requirements for BAL-29 in accordance with Sections 3 and 7 of AS.3959-2018 ensures that the building is provided with the full range of ember protection measures of the Standard which is an appropriate response to the potential for the building to be exposed to significant ember attack.
- The proposal achieves compliance with all of the Approved measures of Clause 53.02-4.

Having regard to the above, and the nature of the proposal, it is concluded that the bushfire risk to the development from the landscape beyond the site can be mitigated to an acceptable level as required by AM 2.1.

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<sup>26</sup> With reference to the CFA guideline 'Applying the Bushfire Hazard Landscape Assessment in a Bushfire Management Overlay'<sup>26</sup> (CFA, December 2022)

<sup>27</sup> Based on the BMO/AS.3959-2018 design fire

## Approved measure 2.2 (Siting)

### AM 2.2 Requirement

A building is sited to ensure the site best achieves the following:

- The maximum separation distance between the building and the bushfire hazard.
- The building is in close proximity to a public road.
- Access can be provided to the building for emergency service vehicles.

### Response to AM 2.2

The siting of the proposed building is acceptable and meet the requirements of AM 2.2 having regard to the following:

- The nature of the bushfire hazard as documented in the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment and in particular the absence of bushfire hazards in the wider landscape that have the potential to create extreme fire behaviour at the site level.
- The dwelling achieves siting and defendable space for BAL-29 to the north and BAL-19 in all other directions, with the defendable space provided from the north-east to north-west, through south, being applied on the highest risk aspect for vegetation type and slope (Forest, Downslope 5-10 degrees).
- The siting of the dwelling and the proposed defendable eliminates the potential for the building to be exposed to direct flame contact from the fire front and limit the fire actions to moderate to high levels of radiant heat ( $\leq 19$  kW/sqm in all directions other than to the north and  $\leq 29$  kW/sqm to the north), embers and burning debris<sup>28</sup>.
- The existing driveway is to be used and the length of the access measured from the road carriageway to the 'Y' head turning area to be constructed adjacent to the garage under the main roofline of the proposed dwelling is approximately 140-150 metres.
- The BMP prescribes that the design and construction of the vehicle access to Split Rock Road must comply with the requirements of Table 5 to Clause 53.02-5 and the existing driveway complies or is capable of being upgraded to comply with those requirements, ensuring the dwelling and the static water supply is accessible by firefighting and other emergency service vehicles.

While not an explicit consideration under AM 2.2 or Clause 53.02-4.1, the siting of the dwelling reduces the bushfire risk to the adjoining dwellings to the north and north-west to a greater level than what would be achieved if the building was sited closer to the road.

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<sup>28</sup> Based on the BMO/AS.3959-2018 design fire

## Approved measure 2.3 (Building design)

### AM 2.3 Requirement

A building is designed to be responsive to the landscape risk and reduce the impact of bushfire on the building.

### Response to AM 2.3

The design of the proposed buildings provides an acceptable response to the requirement of AM 2.3 having regard to the following:

- The nature of the bushfire hazard as documented in the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment and in particular the absence of bushfire hazards in the wider landscape that have the potential to create extreme fire behaviour at the site level.
- The dwelling achieves siting and defensible space for BAL-29 to the north and BAL-19 in all other directions, with the defensible space provided from the north-east to north-west, through south, being applied on the highest risk aspect for vegetation type and slope (Forest, Downslope 5-10 degrees).
- The siting of the dwelling and the proposed defensible eliminates the potential for the building to be exposed to direct flame contact from the fire front and limit the fire actions to moderate to high levels of radiant heat ( $\leq 19$  kW/sqm in all directions other than to the north and  $\leq 29$  kW/sqm to the north), embers and burning debris<sup>29</sup>.
- The building is single storey and constructed slab on ground with brick veneer walls.
- While it has a complex form the roof of the building has a moderately pitched roof (22.5 degrees) and avoids the need for box gutters.
- The BMP prescribes that construction of the dwelling must comply with the requirements for BAL-29 in accordance with Sections 3 and 7 of AS.3959-2018. This ensures the building is constructed to a standard that is equal to or higher than the BAL that is achieved by the defensible space that is provided, is provided with the full range of ember protection measures of the Standard and complies with Performance Requirement H7P5 – *Buildings in bushfire prone areas* of the National Construction Code 2022<sup>30</sup>.
- The shed is setback a minimum of 10 metres from the eastern wall of the dwelling which ensures that it does not provide a significant fire source feature to the dwelling and avoids the need for the shed to comply with bushfire construction requirements of AS.3959-2018 or Table 7 to Clause 53.02-5.

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<sup>29</sup> Based on the BMO/AS.3959-2018 design fire

<sup>30</sup> ABCB 2022

## 6.3 Clause 53.02-4.2 – Defendable space and construction objective

The objective of Clause 53.02-4.2 – *Defendable space and construction objective* is:

Defendable space and building construction mitigate the effect of flame contact, radiant heat and embers on buildings.

There is one Approved measure (AM 3.1) which applies to this objective and that is relevant to this proposal. An assessment of the proposal against the requirements of these measures is outlined below.

### Approved measure 3.1 (Defendable space and construction)

#### AM 3.1 Requirement

A building used for a dwelling (including an extension or alteration to a dwelling), a dependant person's unit, industry, office or retail premises is provided with defendable space in accordance with:

- Table 2 Columns A, B or C and Table 6 to Clause 53.02-5 wholly within the title boundaries of the land; or
- If there are significant siting constraints, Table 2 Column D and Table 6 to Clause 53.02-5.

The building is constructed to the bushfire attack level that corresponds to the defendable space provided in accordance with Table 2 to Clause 53.02-5.

#### Response to AM 3.1

As documented in the Bushfire Hazard Site Assessment, Table 2 to Clause 53.02-5 (Table 2) has been used to determine the defendable space and construction for the proposed dwelling and in response to this the BMP (**Map 3**) prescribes the following bushfire protection measures:

- Defendable space has been applied for a distance of 53 metres around the dwelling, truncated at the northern title boundary where it is located closer to the dwelling but not less than 26 metres.
- Vegetation in the defendable space envelope will be managed in accordance with the requirements of Table 6 to Clause 53.02-5 – except the 5 metre tree canopy separation requirement has been modified to facilitate the retention of all of the existing canopy trees located in the defendable space.
- Construction of the dwelling must comply with the requirements for BAL-29 in accordance with Sections 3 and 7 of AS.3959-2018.

**Table C** below, together with the additional justification provided below the table, demonstrates that the above response complies with the requirements of AM 3.1.

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**Table C: Siting and defensible space [or separation] required for BAL-19 & BAL-29 construction**

Aspect	Vegetation type	Distance from vegetation	Effective slope (degrees)	Required defensible space or [separation]		Defensible space (on-site)	Total defensible space
				BAL	Distance		
North	Forest	≥ 26 m	Flat	BAL-29	25 m	≥ 26 m (PB)	≥ 26 m
North	Grassland	≥ 36 m	DS 0-5	BAL-19	15 m	≥ 26 m (PB)	≥ 26 m
N-east	Forest	≥ 65 m	DS 0-5	BAL-19	[43 m]	≥ 26 m (PB)	[≥ 65 m]
East	Forest	≥ 53 m	DS 5-10	BAL-19	53 m	53 m	53 m
South	Forest	≥ 53 m	DS 5-10	BAL-19	53 m	53 m	53 m
S-west	Grassland	≥ 100 m	Flat	BAL-19	15 m	53 m	53 m
West	Grassland*	≥ 53 m	Flat	BAL-19	13 m	53 m	53 m
N-west	Grassland	≥ 100 m	DS 0-5	BAL-19	15 m	≥ 26 m (PB)	≥ 100 m

1. Distance to vegetation excludes vegetation located in the defensible space and other areas of low threat vegetation.
2. Low threat vegetation means vegetation that satisfies one or more of the exclusions in Clause 2.2.3.2 of AS.3959-2018 – excluding paragraph a).
3. DS = Downslope, PB = property boundary, \* The more conservative classification of Grassland has been adopted as a proxy to this aspect in lieu of the low threat classification in the site assessment

Rationale and justification for reliance on separation/buffering methodology

**Table C** above identifies that the provision of defensible space to the north-east of the site is reliant on the application of a methodology that I describe as separation or buffering. It is my opinion that this methodology is a relevant consideration when all of the following circumstances applies – as is the case with this proposal:

- One or more areas of bushfire hazard are located between the site and another area of bushfire hazard – in this case an area of Forest with an effective slope of downslope 0-5 degrees is separated from the site by an area of Forest and Grassland with an effective slope of flat.
- The required defensible space for the bushfire hazard located closest to the site (Forest, flat slope) is met.

- The required defensible space for the bushfire hazard located further from the site (Forest, downslope 0-5 degrees) is not achieved on-site but the proposed building is setback at least the distance needed to achieve the proposed BAL construction from that area/s of hazard.

The reliance on the concept of separation is an acceptable response for this site and meets the objective of Clause 53.02-4.2 having regard to the following:

- The nature of the bushfire hazard as documented in the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment and in particular the absence of bushfire hazards in the wider landscape that have the potential to create extreme fire behaviour at the site level.
- The approach is consistent with the site assessment methodology in AS.3959-2018 where the BAL rating/construction standard of a building is determined by the setback of a building from different areas of bushfire hazard.
- The conservative approach that has been applied to the classification of this vegetation as Forest as described in **Section 5.2.1** of this report.
- The assessment does not rely on an assumption of defensible space being provided on adjoining land.
- This approach has been applied by the author of this report for numerous assessments and has been accepted by the CFA.

#### Justification to vary the vegetation management requirements of Table 6 to Clause 53.02-5

The BMP prescribes that the land in the defensible space envelope must be managed in accordance with the requirements of Table 6 to Clause 53.02-5 (Table 6) – except the requirement to provide a separation of 5 metres between the canopy of trees has been modified so that it does not apply to existing trees shown on the BMP to be retained. This has the effect of facilitating the retention of all of the existing canopy trees located in the defensible space. This approach is an acceptable response for the site and is consistent with the purpose of providing defensible space for the dwelling having regard to the following:

- The nature of the bushfire hazard as documented in the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment and in particular the absence of bushfire hazards in the wider landscape that have the potential to create extreme fire behaviour at the site level.
- Table 6 provides that the requirements of the table can be modified where it is agreed in writing to the satisfaction of the relevant fire authority.
- The conservative approach that has been adopted to the provision of the defensible space and the construction standard of the building – i.e. except for a reduced defensible space directly to the north the building is provided with defensible space for BAL-19 based on the highest risk aspect for vegetation type and slope in all directions and is to be constructed to a BAL-29 standard.

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- A comprehensive vegetation assessment prepared by Jane Burke titled ‘Vegetation assessment/ landscape plan 210 Split Rock Road Beaconsfield Upper’ dated 27 March 2024 (‘vegetation assessment’) has been prepared which ensures there is certainty about the nature and extent of the existing trees that are not subject to the 5 metre tree canopy separation requirement.
- The requirement to provide a separation of 5 metres between the canopy of trees will apply to all other trees in the defendable space, including any future landscaping or naturally generating vegetation.
- The BMP prescribes that any trees other than those shown on the plan to be retained must be removed and it is understood that the only trees remaining within the defendable space at the time of writing this report are those that are shown on that plan to be retained<sup>31</sup>.
- The existing modified bushland located in the defendable space is already substantially free of elevated fuels and the requirement to maintain understorey fuels within the defendable space – including having no shrubs under the canopy of trees, shrubs being clumped and spread out, grass being maintained in a short-cropped condition and uplifting of lower level branches – significantly reduces the risk of the crown of the trees becoming involved in fire.
- The exclusion of the trees from the tree canopy separation requirement is consistent with the methodology of AS.3959-2018 whereby the distance from classified vegetation for forests, woodlands and rainforest is determined by the unmanaged understorey rather than either the canopy (drip line) or the trunk of any trees<sup>32</sup>.
- The high level of construction for the proposed building (BAL-29) which ensures it is designed and constructed to mitigate the impact of high levels of radiant heat (<29 kW/m<sup>2</sup>), embers and burning debris<sup>33</sup> and are provided with the full range of ember protection measures from AS.3959-2018. The wall and roof cladding of the dwelling is also to be constructed of non-combustible materials.
- The CFA has previously supported substantial variations to the tree canopy separation requirement for this project – and while it is acknowledged that was based on a different design response including a different building siting that is balance to a large extent by the fact that substantially less trees are being retained under this revised scheme.

While not relevant to addressing the provisions of the BMO it is also noted that the tailored approach to managing the canopy fuels will assist in addressing the purpose of the Rural Conservation Zone and the objectives of the Environmental Significance Overlay that apply to the land.

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<sup>31</sup> The vegetation assessment identifies that two immature Silver Stringybark saplings identified as Tree #105 and #106 are to be removed but it would appear they have already been removed

<sup>32</sup> Refer to Figure 2.2 of Clause 2.2.5 of AS.3959-2018

<sup>33</sup> AS.3959-2018

## Justification for bushfire construction requirements not being applied to the shed

In accordance with the DELWP Fact Sheet for ‘Outbuildings in the Bushfire Management Overlay’<sup>34</sup> bushfire construction requirements are not required to be applied to the proposed shed as it is setback 10 metres from the dwelling. Bushfire construction requirements are also not required in accordance with Performance Requirement H7P5 – *Buildings in bushfire prone areas* of the National Construction Code 2022<sup>35</sup> as Clause 3.23(a) of AS.3959-2018 states the requirements of the Standard do not apply if the an adjacent structure is separated from the building required to confirm with the Standard by at least 6 metres.

This Fact Sheet prescribes that defendable space for the shed is to be provided for a distance of 10 metres or to the title boundary – whichever is the lesser distance from the building. In this case the defendable space that is prescribed for the dwelling results in the shed being provided with a greater area of defendable space and accordingly it is unnecessary for the BMP to explicitly apply defendable space requirements to the shed – other than to make clear that the vegetation management requirements apply equally to that building.

## **6.4 Clause 53.02-4.3 – Water supply and access objectives**

The objectives of Clause 53.02-4.3 – *Water supply and access objectives* are:

A static water supply is provided to assist in protecting property.

Vehicle access is designed and constructed to enhance safety in the event of a bushfire.

The following provides a response to the one approved measure (AM 4.1) that is relevant to this proposal.

### **Approved measure 4.1 (Water supply and access)**

#### **AM 4.1 Requirement**

A building used for a dwelling (including an extension or alteration to a dwelling), a dependent person’s unit, industry, office or retail premises is provided with:

- A static water supply for fire fighting and property protection purposes specified in Table 4 to Clause 53.02-5.
- Vehicle access that is designed and constructed as specified in Table 5 to Clause 53.02-5.

The water supply may be in the same tank as other water supplies provided that a separate outlet is reserved for fire fighting water supplies.

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<sup>34</sup> DELWP, October 2017

<sup>35</sup> ABCB 2022

## Response to AM 4.1

### Static Water Supply

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The subject land has an area of more than 1,000 square metres and is not serviced by reticulated water. Accordingly, it is a requirement of Table 4 to Clause 53.02-5 (Table 4) to provide 10,000 litres of static water supply reserved for firefighting and property protection purposes that complies with the following Fire Authority requirements:

*Unless with otherwise agreed in writing by the relevant fire authority, the water supply must:*

- *Be stored in an above ground water tank constructed of concrete or metal.*
- *Have all fixed above ground water pipes and fittings required for firefighting purposes made of corrosive resistant metal.*
- *Include a separate outlet for occupant use.*

*Where a 10,000 litre water supply is required, fire authority fittings and access must be provided as follows:*

- *Be readily identifiable from the building or appropriate identification signage to the satisfaction of the relevant fire authority.*
- *Be located within 60 metres of the outer edge of the approved building.*
- *The outlet/s of the water tank must be within 4 metres of the accessway and unobstructed.*
- *Incorporate a separate ball or gate valve (British Standard Pipe (BSP 65 millimetre) and coupling (64 millimetre CFA 3 thread per inch male fitting).*
- *Any pipework and fittings must be a minimum of 65 millimetres (excluding the CFA coupling).*

The BMP demonstrates and prescribes compliance with all of these requirements – with 10,000 litres of water to be reserved for firefighting and property protection in an above ground metal or concrete water tank located approximately 35 metres to the the north-west of the dwelling and within the defendable space envelope.

### Access

As noted above there is a requirement to provide fire authority access to the static water supply and the length of the driveway measured from the edge of the road carriageway to the proposed turning area is approximately 140-150 metres. Based on this the design and construction of the driveway providing access to the static water is required to comply with the following requirements of Table 5 to Clause 53.02-5:

- *All-weather construction.*
- *A load limit of at least 15 tonnes.*
- *Provide a minimum trafficable width of 3.5 metres.*
- *Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically.*
- *Curves must have a minimum inner radius of 10 metres.*
- *The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres.*
- *Dips must have no more than a 1 in 8 (12.5%) (7.1°) entry and exit angle.*

- *A turning area for fire fighting vehicles must be provided close to the building by one of the following:*
  - *A turning circle with a minimum radius of eight metres.*
  - *A driveway encircling the dwelling.*
  - *The provision of other vehicle turning heads – such as a T or Y head – which meet the specification of Austroad Design for an 8.8 metre Service Vehicle.*

Note – unlike the previous scheme the passing bays are not required as the driveway is less than 200 metres long.

The BMP prescribes that the design and construction of the vehicle access to Split Rock Road must comply with the requirements of Table 5 to Clause 53.02-5 and the existing driveway complies or is capable of being upgraded to comply with those requirements, ensuring the dwelling and the static water supply is accessible by firefighting and other emergency service vehicles.

Based on the above it is assessed that the proposal complies with the static water supply and access requirements of AM 4.1.

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# Map 3: Bushfire Management Plan (Sheet 1 of 2)

**Legend**

- Approx. siting/footprint of proposed dwelling
- Defendable space envelope – extends 53 metres around the dwelling, truncated at the northern title boundary where it is located closer to the building
- Existing tree to be retained – refer to schedule on Sheet 2
- Static water supply with ≥ 10,000 litres reserved for firefighting purposes
- TA** 'Y' head turning area for firefighting vehicles

**Bushfire protection measures**

All bushfire protection measures shown on this plan must be implemented before the occupation of the dwelling and shed commences and must then be maintained on a continuing basis to the satisfaction of the Responsible Authority.

**Construction – Bushfire Attack Level (BAL)**

The construction of the dwelling must comply with the requirements for a Bushfire Attack Level (BAL) of **BAL-29** in accordance with Sections 3 and 7 of AS.3959-2018 – *Construction of buildings in bushfire-prone areas.*

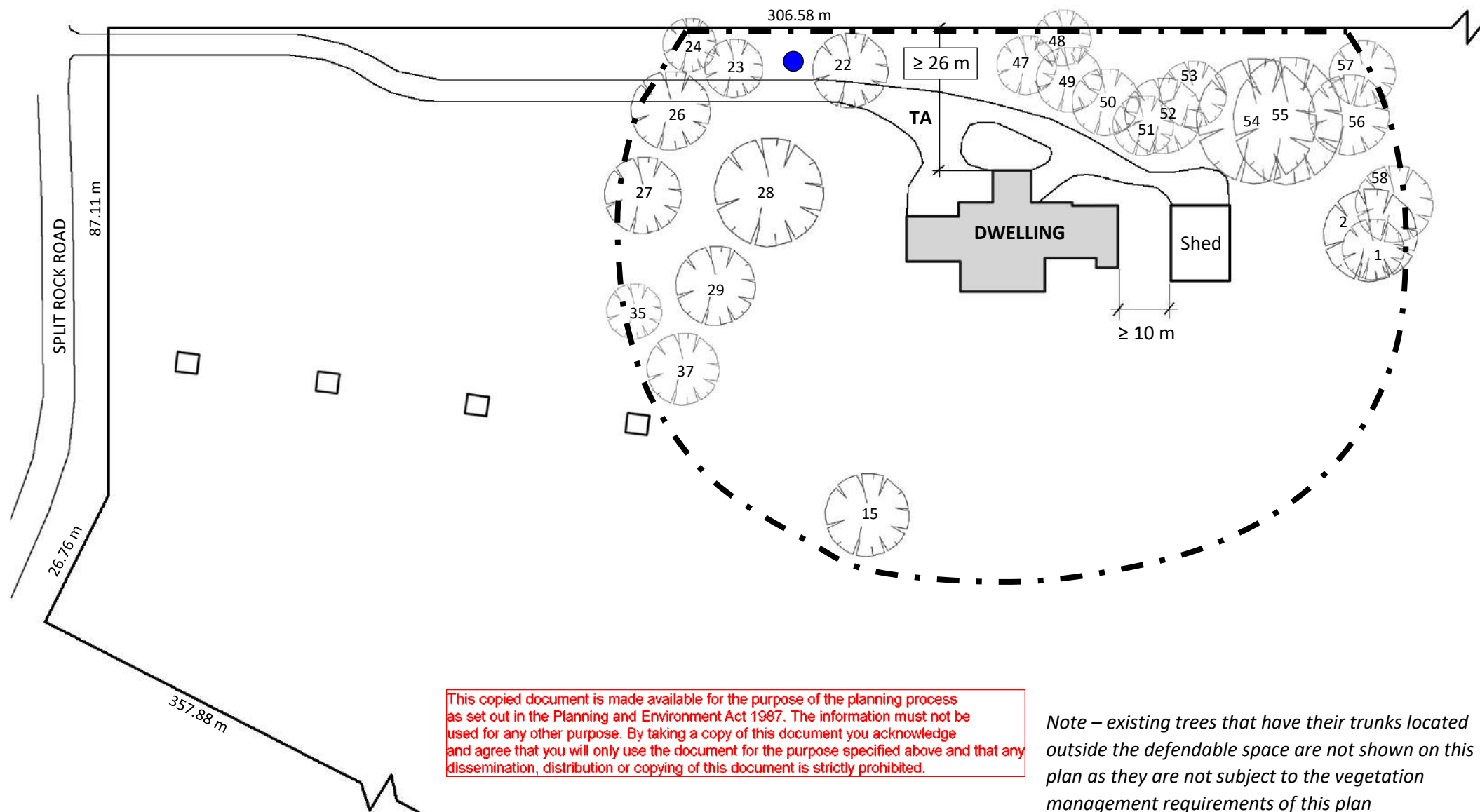
**Removal of existing trees**

All trees at the date of this plan that have their trunks located in the defendable space must be removed unless shown on this plan to be retained.

**Defendable space/vegetation management**

Vegetation located in the defendable space envelope, including vegetation that is landscaped or naturally regenerated, must be modified and managed to comply with the following requirements:

1. Grass must be short cropped and maintained during the declared fire danger period.
2. All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
3. Within 10 metres the dwelling and shed, flammable objects must not be located close to the vulnerable parts of the building.
4. Plants greater than 10 centimetres in height must not be placed within 3 metres of a window or glass feature of the dwelling and shed.
5. Shrubs must not be located under the canopy of trees.
6. Individual and clumps of shrubs must not exceed 5 square metres in area and must be separated by at least 5 metres.
7. Trees must not overhang or touch any elements of the dwelling or shed.
8. The canopy of trees must be separated by at least 5 metres – except between existing trees shown on this plan to be retained and listed on Sheet 2 of this plan.
9. There must be a clearance of at least 2 metres between the lowest tree branches and ground level.



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*Note – existing trees that have their trunks located outside the defendable space are not shown on this plan as they are not subject to the vegetation management requirements of this plan*

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		Sheet Size A3	Version 4		

# Map 3: Bushfire Management Plan (Sheet 2 of 2)

## Existing trees to be retained in the defensible space

The following existing trees are to be retained in the defensible space envelope and are not subject to the 5 metre tree canopy separation requirement – except that any future trees located in the defensible space must have its canopy separated from these trees by at least 5 metres:

Tree #	Genus/species	Common name
1-2	<i>Eucalyptus ovata</i>	Swamp Gum
15	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark
22-24	<i>Eucalyptus radiata</i>	Narrow L. Peppermint
26 & 27	<i>Eucalyptus radiata</i>	Narrow L. Peppermint
28	<i>Eucalyptus obliqua</i>	Messmate Stringybark
29	<i>Eucalyptus radiata</i>	Narrow L. Peppermint
35	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark
37	<i>Eucalyptus radiata</i>	Narrow L. Peppermint
47-53	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark
54 & 55	<i>Eucalyptus obliqua</i>	Messmate Stringybark
56-58	<i>Eucalyptus cephalocarpa</i>	Silver Stringybark

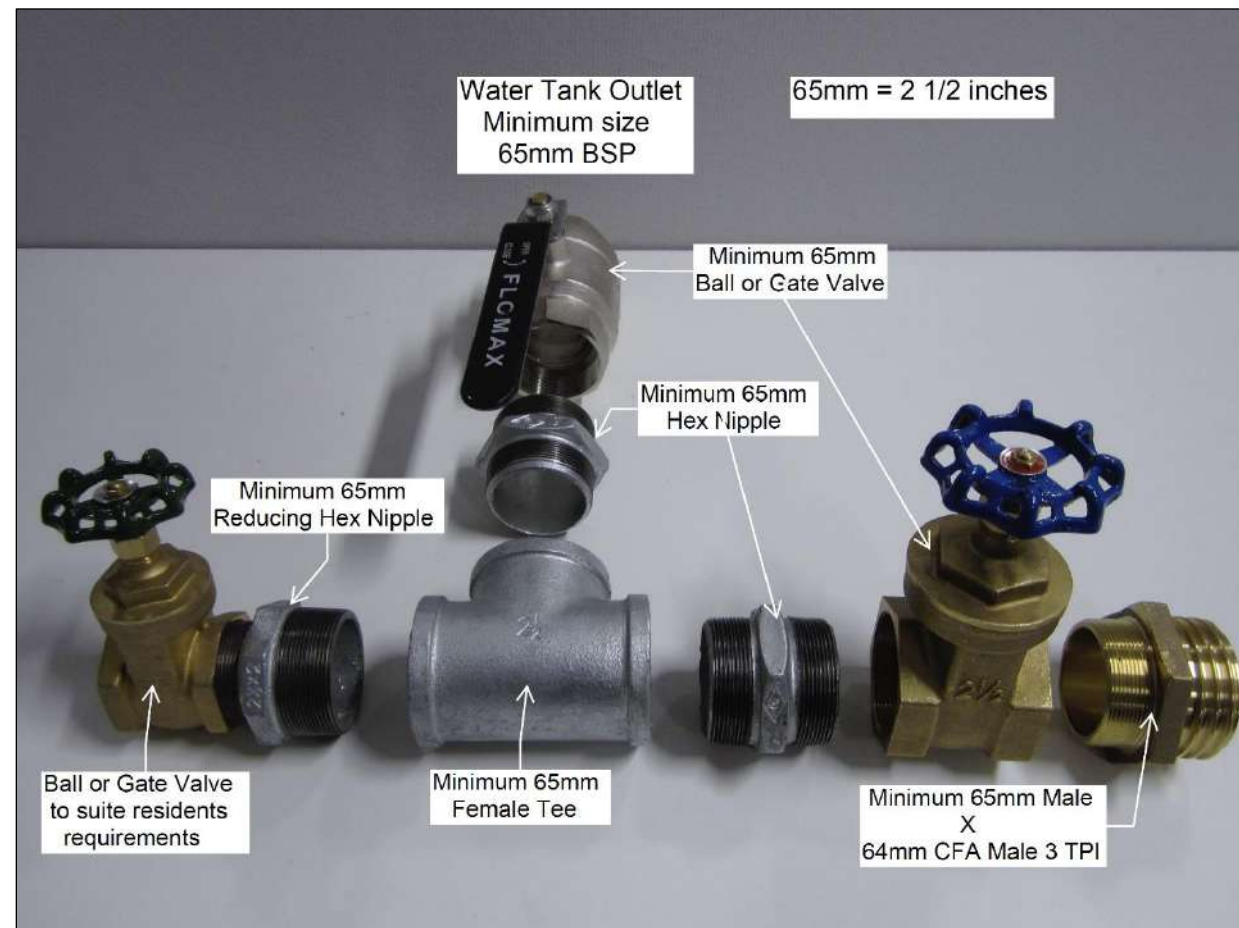
Note – The above tree data is sourced from a plan titled 'Vegetation assessment/landscape plan 210 Split Rock Road Beaconsfield Upper' prepared by Jane Burke dated 27 March 2024.

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## Static water supply reserved for firefighting and property protection purposes

A static water supply must be provided that complies with the following requirements:

1. A minimum of 10,000 litres of water must be reserved for firefighting and property protection purposes in an above-ground metal or concrete water tank.
2. The tank and outlet must be located within 60 metres of the dwelling, within 4 metres of the driveway and generally in the location shown on Sheet 2 of this plan.
3. If the water is in the same tank as other water supplies a separate outlet must be reserved for firefighting water supplies.
4. A ball or gate valve (British Standard Pipe (BSP) 65 mm) and coupling (64 mm CFA 3 thread per inch male fitting) must be provided and must face towards the driveway.
5. All water pipes and fittings must be a minimum of 65 mm nominal bore (excluding the CFA coupling).
6. An additional ball or gate valve that suits the requirements of the occupants of the building must be provided.
7. All fixed above-ground water pipes and fittings required for firefighting purposes must be made of corrosive resistant metal.
8. The CFA outlet must face the driveway and access to both outlets must not be obstructed.



This diagram is sourced from CFA's publication 'FSG LUP 006 Land Use Planning – Tank Connections Explained, Bushfire Management Overlay (BMO)', CFA 5 August 2014

## Vehicle access

The design and construction of the vehicle access to the dwelling and the static water supply reserved for firefighting and property protection purposes must comply with the following requirements:

1. All-weather construction.
2. A load limit of at least 15 tonnes.
3. Provide a minimum trafficable width of 3.5 metres.
4. Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically.
5. Curves must have a minimum inner radius of 10 metres.
6. The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres.
7. Dips must have no more than a 1 in 8 (12.5 per cent) (7.1 degrees) entry and exit angle.
8. A turning area for firefighting vehicles must be provided close to the dwelling and generally in the position shown on Sheet 1 of this plan, comprising a Y head turning area that meets the specifications of Austroad Design for an 8.8 metre Service Vehicle.

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## 7 Conclusion

It is assessed that the proposal provides an acceptable outcome in terms of addressing the objectives and requirements of Clause 44.06 and 53.02, including the decision guidelines of Clause 53.02-4.5 having regard to the following:

- The nature of the bushfire hazard as documented in the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment and in particular the absence of bushfire hazards in the wider landscape that have the potential to create extreme fire behaviour at the site level.
- The nature of the bushfire protection measures that will be provided for the proposed dwelling which includes:
  - Siting and a defensible space envelope for the that achieves defensible space for BAL-19 in accordance with Table 2 of Clause 53.02-5.
  - Achieves the minimum separation and defensible space for **BAL-29** to the north and **BAL-19** in all other directions in accordance with Table 2 to Clause 53.02-5
  - Vegetation management in the defensible space envelope that complies with the requirements of Table 6 to Clause 53.02-5 – except the 5 metre tree canopy separation requirement has been modified to facilitate the retention of all the existing canopy trees located in the defensible space.
  - Construction of the dwelling to comply with the requirements for BAL-29 in accordance with Table 2 to Clause 53.02-5 and Sections 3 and 7 of AS.3959-2018.
  - 10,000 litres of static water reserved for firefighting and property protection purposes in an above ground metal or concrete water tank that incorporates fire authority fittings (with a remote CFA outlet) in accordance with Table 4 to Clause 53.02-5.
  - Access to the dwelling and the static water supply by firefighting and other emergency vehicles in accordance with Table 4 and 5 to Clause 53.02-5.
- It has been demonstrated that the proposal complies with the Approved measures of Clause 53.02-4.
- The bushfire protection measures prescribed in the Bushfire Management Plan (BMP) are capable of being practically implemented and maintained.

## 8 Recommended planning permit conditions

In addition to the Mandatory condition for buildings and works at Clause 44.06-5 of the Planning Scheme it is recommended that the following condition is included on any planning permit that is issued:

The Bushfire Management Plan prepared by Nexus Planning, Version 4, Sheets 1-2, dated 25 April 2024 must be endorsed to form part of the planning permit.

Note – there were two previous amendments to the BMP (Version 2 and Version 3) which did not involve changes to the BMS which is why the BMS is identified as Version 2 and the BMP is identified as Version 4.

## 9 Obligations for the owner/occupier

1. The owner/occupier of the land is obligated to ensure that all of the bushfire protection measures prescribed in the Bushfire Management Plan (BMP) incorporated in this report (the BMP) are implemented within the timeframe/s prescribed in the BMP and to ensure that those measures are maintained on a continuing basis.
2. The client is obligated to provide a copy of the BMP to the owner of the land, if they are not the owner. The owner of the land is obligated to provide a copy of the BMP to the occupier of the land (if they are not the occupier) and to any future purchaser of the land so they are aware of their obligations specified in the BMP.

## 10 Report limitations and important advice and recommendations

1. This report has been specifically prepared to respond to the requirements of Clauses 44.06 and 53.02 of the Planning Scheme<sup>36</sup>.
2. Compliance with the BAL construction requirements of *Australian Standard AS 3959:2018 Construction of buildings in bushfire-prone areas* (AS.3959-2018) and the other bushfire protection measures prescribed in the BMP does not guarantee the survival of buildings or their occupants. This is “... *substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions.*”<sup>37</sup>
3. The BAL construction requirements of AS.3959-2018 are **minimum** standards and are “*primarily concerned with improving the ability of buildings in designated bushfire-prone areas to better withstand attack from bushfire thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself.*”<sup>38</sup>
4. The bushfire risk associated with a Bushfire Attack Level of BAL-19 is MODERATE with a risk of ember attack and burning debris ignited by wind borne embers and a likelihood of exposure to radiant heat. The construction elements of the building are expected to be exposed to a heat flux of not greater than 19 kW/m<sup>2</sup>.<sup>39</sup>
5. The bushfire risk associated with a Bushfire Attack Level of BAL-29 is HIGH with an increased risk of ember attack and burning debris ignited by wind borne embers and a likelihood of exposure to radiant heat. The construction elements of the building are expected to be exposed to a heat flux of not greater than 29 kW/m<sup>2</sup>.<sup>40</sup>
6. No assessment has been made of the extent to which the plans of the proposed development demonstrate compliance (or not) with the relevant construction requirements of AS.3959-2018 – with such work being outside the scope of this report. It is the responsibility of the Relevant Building Surveyor to ensure that the final construction plans for the proposed development demonstrate compliance with those requirements.

<sup>36</sup> DELWP, 14 December 2023a and DELWP, 14 December 2023b

<sup>37</sup> Taken from the Foreword to AS.3959-2018 (Standards Australia, 18 December 2020)

<sup>38</sup> Taken from the Foreword to AS.3959-2018 (Standards Australia, 18 December 2020)

<sup>39</sup> Taken from Appendix G to AS.3959-2018 (Standards Australia, 18 December 2020)

<sup>40</sup> Taken from Appendix G to AS.3959-2018 (Standards Australia, 18 December 2020)



7. The requirements for the management and maintenance of vegetation as prescribed in the BMP apply equally to existing vegetation, future landscaping and naturally occurring regrowth on the land. A failure to implement and maintain this critical bushfire protection measure will likely expose the building to a higher level of bushfire attack than what it has been designed for and significantly increase its vulnerability to bushfire attack.
8. It is recommended that gutter and valley leaf guards are installed and if installed they must be constructed of non-combustible materials to comply with Clause 7.6.7 of AS.3959-2018.
9. The prescription of static water supply requirements in the BMP is not intended as an indication that active defence of the property in a bushfire event is an appropriate action for this site or a viable option for the current or future owner/occupier of the land. However, if active defence of the property forms part of the potential actions set out in a Bushfire Survival Plan it is recommended that consideration be given to the installation of a diesel pump and use of firefighting hoses to support the delivery of the water.
10. It is recommended that the owner/occupier develop and implement a Bushfire Survival Plan. Details about how to prepare a Bushfire Survival Plan and other important information about understanding your bushfire risk and knowing what to do before and during a fire is available from the Country Fire Authority – including: <http://www.cfa.vic.gov.au/plan-prepare/before-and-during-a-fire/> and <http://www.cfa.vic.gov.au/plan-prepare/your-local-area/>.

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## 10 References

Author	Date	Publication / document	Source / viewed at
ABCB	2022	<i>National Construction Code Volume Two – Building Code of Australia 2022</i>	<a href="https://ncc.abc.gov.au/editions/ncc-2022">https://ncc.abc.gov.au/editions/ncc-2022</a>
CFA	Version 4.0, December 2022	<i>Land Use Planning Guideline – Applying the Bushfire Hazard Landscape Assessment in a Bushfire Management Overlay</i>	<a href="https://www.cfa.vic.gov.au/plan-prepare/building-planning-regulations/planning-controls/planning-and-bushfire-management-overlay">https://www.cfa.vic.gov.au/plan-prepare/building-planning-regulations/planning-controls/planning-and-bushfire-management-overlay</a>
CFA	5 August 2014	<i>FSG LUP 006 Land Use Planning – Tank Connections Explained, Bushfire Management Overlay (BMO)</i>	<a href="https://www.cfa.vic.gov.au/plan-prepare/building-planning-regulations/planning-controls/planning-and-bushfire-management-overlay">https://www.cfa.vic.gov.au/plan-prepare/building-planning-regulations/planning-controls/planning-and-bushfire-management-overlay</a>
DELWP	24 April 2024	<i>Planning Property Report – 210 Split Rock Road Beaconsfield Upper</i>	<a href="http://mapshare.maps.vic.gov.au/vicplan/">http://mapshare.maps.vic.gov.au/vicplan/</a>
DELWP	14 December 2023a (VC253)	<i>Clause 44.06 – Bushfire Management Overlay</i>	<a href="https://planning-schemes.app.planning.vic.gov.au/Victoria%20Planning%20Provisions/ordinance/44.06">https://planning-schemes.app.planning.vic.gov.au/Victoria%20Planning%20Provisions/ordinance/44.06</a>
DELWP	14 December 2023b (VC253)	<i>Clause 53.02 – Bushfire planning</i>	<a href="https://planning-schemes.app.planning.vic.gov.au/Victoria%20Planning%20Provisions/ordinance/53.02">https://planning-schemes.app.planning.vic.gov.au/Victoria%20Planning%20Provisions/ordinance/53.02</a>
DELWP	October 2017	<i>Fact Sheet – Outbuildings in the Bushfire Management Overlay</i>	<a href="https://www.planning.vic.gov.au/data/assets/pdf_file/0020/107660/Outbuildings-in-the-Bushfire-Management-Overlay.pdf">https://www.planning.vic.gov.au/data/assets/pdf_file/0020/107660/Outbuildings-in-the-Bushfire-Management-Overlay.pdf</a>
DELWP	September 2017	<i>Technical Guide Planning Permit Applications Bushfire Management Overlay</i>	<a href="https://www.planning.vic.gov.au/guides-and-resources/guides/all-guides/building-in-the-bushfire-management-overlay">https://www.planning.vic.gov.au/guides-and-resources/guides/all-guides/building-in-the-bushfire-management-overlay</a>
Standards Australia	18 December 2020*	<i>Australian Standard AS 3959:2018 Construction of buildings in bushfire-prone areas (AS.3959-2018)</i>	<a href="http://www.saiglobal.com">www.saiglobal.com</a> (May be subject to a fee to access and download)
<p>* Incorporating Amendment Nos 1 and 2</p> <p>ABCB – Australian Building Codes Board            CFA – Country Fire Authority            DELWP – Department of Environment, Land, Water and Planning</p>			

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# **LAND CAPABILITY ASSESSMENT REPORT**

**FOR THE PROPERTY  
AT  
210 (LOT 1) SPLIT ROCK ROAD  
BEACONSFIELD UPPER**

**REPORT NUMBER: 1241582-1**

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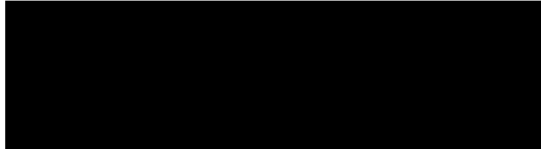
## TABLE OF CONTENTS

1.	<b>INTRODUCTION:</b> .....	<b>3</b>
2.	<b>SITE KEY FEATURES:</b> .....	<b>4</b>
2.1	Locality Plan.....	5
2.2	Table - Site Features.....	7
3.	<b>SOIL ASSESSMENT AND CONSTRAINTS:</b> .....	<b>7</b>
3.1	Published Soils Information.....	7
3.2	Site Exposure.....	7
3.3	Soil Profile and Condition.....	7
3.4	Soil Assessment.....	8
4.	<b>FIELD ASSESSED PERMEABILITY:</b> .....	<b>9</b>
5.	<b>LAND CAPABILITY ASSESSMENT MATRIX:</b> .....	<b>10</b>
6.	<b>THE MANAGEMENT PROGRAM:</b> .....	<b>13</b>
6.1	Treatment System.....	13
6.1.1	<i>Subsurface Drip Irrigation:</i> .....	13
6.2	Land Applications Areas .....	13
6.2.1	<i>Suitable Land Application Systems</i> .....	13
6.3	Siting and Configuration.....	13
6.4	Monitoring, Operation and Maintenance .....	15
6.5	Storm Water Management .....	15
7.	<b>CONCLUSIONS:</b> .....	<b>16</b>
8.	<b>REFERENCES:</b> .....	<b>16</b>
9.	<b>QUALIFICATIONS AND EXPERIENCE:</b> .....	<b>17</b>
	<b>APPENDIX A: ENGINEERING LOG</b>	
	<b>APPENDIX B: WATER BALANCE</b>	
	<b>APPENDIX C: SETBACK DISTANCES</b>	

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**CLIENT**

:



**PROJECT ADDRESS**

:

210 (Lot 1) Split Rock Road  
BEACONSFIELD UPPER

**REPORT NUMBER**

:

1241582-1

**TESTING DATE**

:

04 October 2024

## 1. INTRODUCTION:

Civiltest Pty Ltd (Civiltest) have been engaged to undertake a Land Capability Assessment (LCA) for an approximately 6.01HA site at 210 (Lot 1) Split Rock Road BEACONSFIELD UPPER. It has been proposed to construct a five (5) bedroom dwelling on the allotment.

This report will address:

- The capability of the site to sustainably manage wastewater within the allotment boundaries;
- A management program that should be put into place to minimise health and environmental impacts of on-site wastewater management, including the impact on surface water and groundwater; and
- Information about the site and soil conditions.

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## 2. SITE KEY FEATURES:

<b>Site Address</b>	210 (Lot 1) Split Rock Road BEACONSFIELD UPPER
<b>Owner/Applicant</b>	[REDACTED]
<b>Local Council</b>	Cardinia Shire Council
<b>Total Land Area</b>	Approximately 6.01HA
<b>Domestic Water Supply</b>	Reticulated/Tank
<b>Anticipated wastewater loads (Litres/day)</b>	<p><u>Assumed equivalent to five (5) bedroom residence, up to 6 people.</u></p> <p>1. Households with standard water fixtures: EPA <math>\{(No. \text{ of bedrooms}) + 1\} \times 180 = 1080\text{L/day}</math></p> <p>2. Households with WELS scheme fixtures and fittings: EPA: 150L/person = 900L/day</p>
<b>Organic Material Loading Design Rates</b>	BOD / 60g per person, total is number of bedrooms plus one, therefore $6 \times 60\text{g} = 360\text{g}$
<b>Availability of sewer</b>	Sewer is not available to this site and is not expected to become available in the near future.
<b>Groundwater Quality</b>	Groundwater is classified as Class A1 (Potable) TDS <500mg/L. <a href="http://www.vvg.org.au">http://www.vvg.org.au</a>

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<b>SITE FEATURES</b>	
<b>Climate</b>	Average annual rainfall 1009.0mm
<b>Flood Potential</b>	The site is not prone to flooding and is located outside of the Floodway overlay and the Land Subject to Inundation overlay.
<b>Vegetation</b>	Natural and pasture grasses. Surrounding areas contained native trees.
<b>Water Table</b>	No free groundwater table was encountered in the investigation. Groundwater maps of the area suggest the groundwater table is 20 to 50 metres depth.
<b>Exposure</b>	Open/Sparse
<b>Slope</b>	Gentle slope down to the south west
<b>Landform</b>	Low hills 30 – 90m
<b>Approximation to water course</b>	An ephemeral waterway is located greater than 100m to the south west of the proposed development.  The site is not located within any declared Special Water Supply Catchment Overlay.
<b>Erosion Potential</b>	Minor
<b>Surface Drainage</b>	The site was found to be well drained
<b>Land Area</b>	Approximately 6.01HA
<b>Rocks and Rock Outcrop</b>	Nil
<b>Geology</b>	Devonian Granodiorite belonging to the Lysterfield Granodiorite Intrusion.

## 2.2 Table - Site Features

No critical issues were identified above.

## 3. SOIL ASSESSMENT AND CONSTRAINTS:

### 3.1 Published Soils Information

The soils are best described as Dermosols using the Australian Soil Classification (<http://www.asris.csiro.au>).

### 3.2 Site Exposure

A general assessment of the site exposure is as follows:

The site is exposed to the prevailing winds. The proposed effluent disposal area is generally exposed to sun and wind all year round.

### 3.3 Soil Profile and Condition

The natural soil profile in the borehole consisted of sandy SILT overlying sandy CLAY followed by extremely weathered ROCK.

The log of the borehole is attached showing the soil descriptions and depths, along with any cohesive strengths measured and observed densities on non-cohesive soils.

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## 3.4 Soil Assessment

<b>BOREHOLE</b>	<b>SAMPLE DEPTH:</b> 300mm	
<b>SOIL ASSESSMENT (AS1547-2012)</b>	<b>SOIL HORIZON:</b> A	
Soil Colour	Light Brown	
Soil Texture	Sandy clay loam SCL	
Coarse Fragments (%)	<2%	
Soil Structure	Massive	
Soil Dispersion	Slake 2	
Soil Permeability	0.06-0.12m/day	
Soil Category	CAT 4	
Design Irrigation Rate	3.5mm/day	
pH 1:5 Ratio Electronic Method	5.3	
Electrical Conductivity	0.19 $\mu$ S/cm	/1000 = 0.019dS/m
Salinity Hazard	NON saline – Class 1	

<b>BORE HOLE</b>	<b>SAMPLE DEPTH:</b> 600mm	
<b>SOIL ASSESSMENT (AS1547-2012)</b>	<b>SOIL HORIZON:</b> B	
Soil Colour	Light Orange	
Soil Texture	SC, Sandy Clay	
Coarse Fragments (%)	<2%	
Soil Structure	Massive	
Soil Dispersion	Slake 2	
Soil Permeability	0.06-0.12m/day	
Soil Category	CAT 4	
Design Loading Rate	4mm/day	
pH 1:5 Ratio Electronic Method	6.0	
Electrical Conductivity	0.24 $\mu$ S/cm	/1000 = 0.024dS/m
Salinity Hazard	NON saline – Class 1	

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#### 4. FIELD ASSESSED PERMEABILITY:

An investigation on the soil profile was assessed in-situ and permeability testing conducted as outlined in AS 1547-2012 using the constant-head test method. The constant-head test was conducted in four locations across the site (see plan, Figure 2). The field assessed permeability was calculated using the Talsma-Hallam constantly maintained head of water equation identified in AS 1547-2012.

$$K_{\text{sat}} = \frac{4.4 Q [0.5 \sinh^{-1}(H/2r) - \sqrt{\{(r/H)^2 + 0.25\}} + r/H]}{2\pi H^2}$$

Where:

$K_{\text{sat}}$  = saturated hydraulic conductivity of the soil in cm/min

4.4 = correction factor for a systematic under-estimate of soil permeability in the mathematical derivation of the equation

Q = rate of loss of water from the reservoir in cm<sup>3</sup>/min

H = depth of water in the test hole in cm

r = radius of the test hole in cm.

<b>CONSTANT HEAD PERMEABILITY</b>	
Rate of loss of water from reservoir (Q)	1.17 cm <sup>3</sup> /min
Saturated hydraulic conductivity ( $K_{\text{sat}}$ )	0.0007 cm/min
Indicative permeability ( $K_{\text{sat}}$ )	0.01 m/day

**Note:** The results in the table above are based on average readings taken from the test holes.

Based on the soil assessment and field assessed permeability, category 5c (Weakly structured or massive light clays) in accordance to EPA Victoria Guideline for Onsite Wastewater Management – May 2024 Table 4-8 has been adopted at this site. Therefore, a maximum Design Irrigation Rate of 3.0mm/day has been adopted.

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## 5. LAND CAPABILITY ASSESSMENT MATRIX:

The table below is a Land Capability Assessment (LCA) matrix. The LCA has been developed for the whole site, however soils information relates to soils within the vicinity of the building envelope.

<b>Table 3: Risk Assessment of Site Characteristics</b>				
<b>Characteristic</b>	<b>Level of Constraint</b>			<b>Assessed Level of Constraint for Site</b>
	<b>Nil or Minor</b>	<b>Moderate</b>	<b>Major</b>	
<b>Aspect (affects solar radiation received)</b>	North / North-East / North-West	East / West / South-East / South-West	South	Minor
<b>Climate (difference between annual rainfall and pan evaporation)</b>	Excess of evaporation over rainfall in the wettest months	Rainfall approximates to evaporation	Excess of rainfall over evaporation in the wettest months	Major
<b>Erosion (or potential for erosion)</b>	Nil or minor	Moderate	Severe	Minor
<b>Exposure to sun and wind</b>	Full sun and/or high wind or minimal shading	Dappled light	Limited patches of light and little wind to heavily shaded all day	Minor
<b>Fill (imported)</b>	No fill or minimal fill, or fill is good quality topsoil	Moderate coverage and fill is good quality	Extensive poor quality fill and variable quality fill	Nil
<b>Flood frequency (ARI)</b>	Less than 1 in 100 years	Between 100 and 20 years	More than 1 in 20 years	Nil
<b>Groundwater bores</b>	No bores onsite or on neighbouring properties	Setback distance from bore complies with requirements in EPA Victoria Guideline for Onsite Wastewater Management (as amended)	Setback distance from bore does not comply with requirements in EPA Victoria Guideline for Onsite Wastewater Management (as amended)	Nil
<b>Land area available for LAA</b>	Exceeds LAA and duplicate LAA and buffer distance requirements	Meets LAA and duplicate LAA and buffer distance requirements	Insufficient area for LAA	Nil
<b>Landslip (or landslip potential)</b>	Nil	Minor to moderate	High or Severe	Nil
<b>Rock outcrops (% of surface)</b>	<10%	10-20%	>20%	Nil
<b>Slope Form (affects water shedding ability)</b>	Convex or divergent side-slopes	Straight side-slopes	Concave or convergent side-slopes	Nil
<b>Slope gradient (%)</b>				
(a) for absorption trenches and beds	<6%	6-15%	>15%	Moderate
(b) for surface irrigation	<6%	6-10%	>10%	Moderate
(c) for subsurface irrigation	<10%	10-30%	>30%	Minor

Table 3: Risk Assessment of Site Characteristics						
Characteristic	Level of Constraint					Assessed Level of Constraint for Site
	Nil or Minor		Moderate	Major		
<b>Soil Drainage (qualitative)</b>	No visible signs or likelihood of dampness, even in wet season		Some signs or likelihood of dampness	Wet soil, moisture-loving plants, standing water in pit; water ponding on surface, soil pit fills with water		Nil
<b>Stormwater run-on</b>	Low likelihood of stormwater run-on			High likelihood of inundation by stormwater run-on		Nil
<b>Surface waters - setback distance (m)</b>	Setback distance complies with requirements in EPA Victoria Guideline for Onsite Wastewater Management (as amended)			Setback distance does not comply with requirements in EPA Victoria Guideline for Onsite Wastewater Management (as amended)		Nil
<b>Vegetation coverage over the site</b>	Plentiful vegetation with healthy growth and good potential for nutrient uptake		Limited variety of vegetation	Sparse vegetation or no vegetation		Minor
Characteristic	Level of Constraint					Assessed Level of Constraint for Site
	Nil or Minor		Moderate	Major		
<b>Soil Drainage (Field Handbook definitions)</b>	Rapidly drained. Water removed from soil rapidly in relation to supply, excess water flows downward rapidly. No horizon remains wet for more than a few hours after addition	Well drained. Water removed from the soil readily, excess flows downward. Some horizons may remain wet for several days after addition	Moderately well drained. Water removed somewhat slowly in relation to supply, some horizons may remain wet for a week or more after addition	Imperfectly drained. Water removed very slowly in relation to supply, seasonal ponding, all horizons wet for periods of several months, some mottling	Poorly/Very poorly drained. Water remains at or near the surface for most of the year, strong greying. All horizons wet for several months	Minor

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**Legend:**

- Nil or Minor: If all constraints are minor, conventional/standard designs are generally satisfactory.
- Moderate: For each moderate constraint an appropriate design modification over and above that of a standard design, should be outlined.
- Major: Any major constraint might prove an impediment to successful on-site wastewater management, or alternatively will require in-depth investigation and incorporation of sophisticated mitigation measures in the design to permit compliant onsite wastewater management.

**The above risk assessment indicates conventional/standard designs are satisfactory at this site**

The table below is a Land Capability Assessment of general and soil characteristics of the site.

Land Features	Land Capability Class Rating					Site Rating	Comments
	Very Good (1)	Good (2)	Fair (3)	Poor (4)	Very Poor (5)		
<b>Groundwater table (m) seasonal watertable depth</b>	>5.0	2.5 – 5.0	2.0 – 2.5	1.5 – 2.0	<1.5	1†	No free groundwater table was encountered in the investigation. Groundwater maps of the area suggest the groundwater table is 20 to 50 metres depth.
<b>Exposure</b>	High sun and wind exposure		Moderate	Low sun and wind exposure		1	Open/Sparse
<b>Vegetation Type (land application area)</b>	Turf or pasture				Dense Forest	1	Natural and pasture grasses. Surrounding areas contained native trees.
<b>Rainfall (mm/yr)<sup>2</sup></b>	<450	450 - 650	650 – 750	750 - 1000	>1000	5	1009.0 mm/year
<b>Pan evaporation (mm/yr)<sup>3</sup></b>	>1500	1250 - 1500	1000 – 1250	-	<1000	3	1197 mm/year
<b>Profile depth</b>	>2.0m	1.5–2.0m	-	1.0–1.5m	<1.0m	2	Soil profile to 1.8m depth, overlying weathered ROCK
<b>Shrinkage* (%)</b>	Low <4%	Moderate 4-12%	High 12-20%	Very High >20%		2	Moderately reactive clay profile
<b>Permeability* (m/d)</b>	0.15–0.30	0.08–0.15 0.30-0.60	0.06-0.08 0.60-1.50	- 1.50-2.00	<0.06 >2.00	5	<0.06m/day
<b>Soil Permeability Category<sup>1</sup></b>	2 and 3	4		5	1 and 6	4	Category 5c
<b>Emerson Test* (dispersion / slaking)</b>	4,6,8	5	7	2,3	1	4	Class 3, Slake 2
<b>Electrical Conductivity (Ece) (dS/m)</b>	<0.3	0.3-0.8	0.8-2.0	2.0-4.0	>4.0	1	Non-saline
<b>pH</b>	6-8		4.5-6		<4.5, >8	1 & 3	Neutral to slightly acidic

<sup>1</sup> Source: AS1547-2012

<sup>2</sup> Source BOM station – Beaconsfield Upper

<sup>3</sup> Source BOM station – Scoresby Research Institute

\* Relevant to soil layer(s) associated with wastewater application

† No water table was encountered while drilling the Bore Hole (see engineering log).

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## 6. THE MANAGEMENT PROGRAM:

The following sections provide an overview of our preferred system and the sizing and design considerations that are involved with the system.

### 6.1 Treatment System

Based on the land capability assessment, the following system is recommended at this site. That is:

#### 6.1.1 *Subsurface Drip Irrigation:*

Primary treatment by septic or vermiculture treatment plus secondary treatment of all wastewaters by either aerated wastewater treatment system, sand filter, reed bed, or similar. Dispose to land via subsurface drip irrigation.

### 6.2 Land Applications Areas

#### 6.2.1 *Suitable Land Application Systems*

The local climate conditions are based on the weather station at Beaconsfield Upper which observes monthly rainfall data, and Scoresby Research Institute which observes pan evaporation data. A daily wastewater output of 1080L/day was assumed.

The following wastewater envelopes are required with regard to the recommended option:

#### ***Subsurface Irrigation Based on Design Irrigation Rate (DIR) of 3.0mm/day***

Primary treatment by septic or vermiculture treatment plus secondary treatment of all wastewater by either aerated wastewater treatment system, sand filter, reed bed, or similar. Dispose to land via subsurface drip irrigation based on the maximum of the DIR and the nutrient balance calculation methods (Appendix B):

- Subsurface irrigation field area based on DIR only: 360.00m<sup>2</sup>
- Subsurface irrigation field area based on nutrient balance: 434.0m<sup>2</sup>

Therefore, maximum results of two methods adopted:

- 434.0m<sup>2</sup> of subsurface irrigation

Pipes and emitters installed generally at a depth of 100mm to 150mm below ground level.

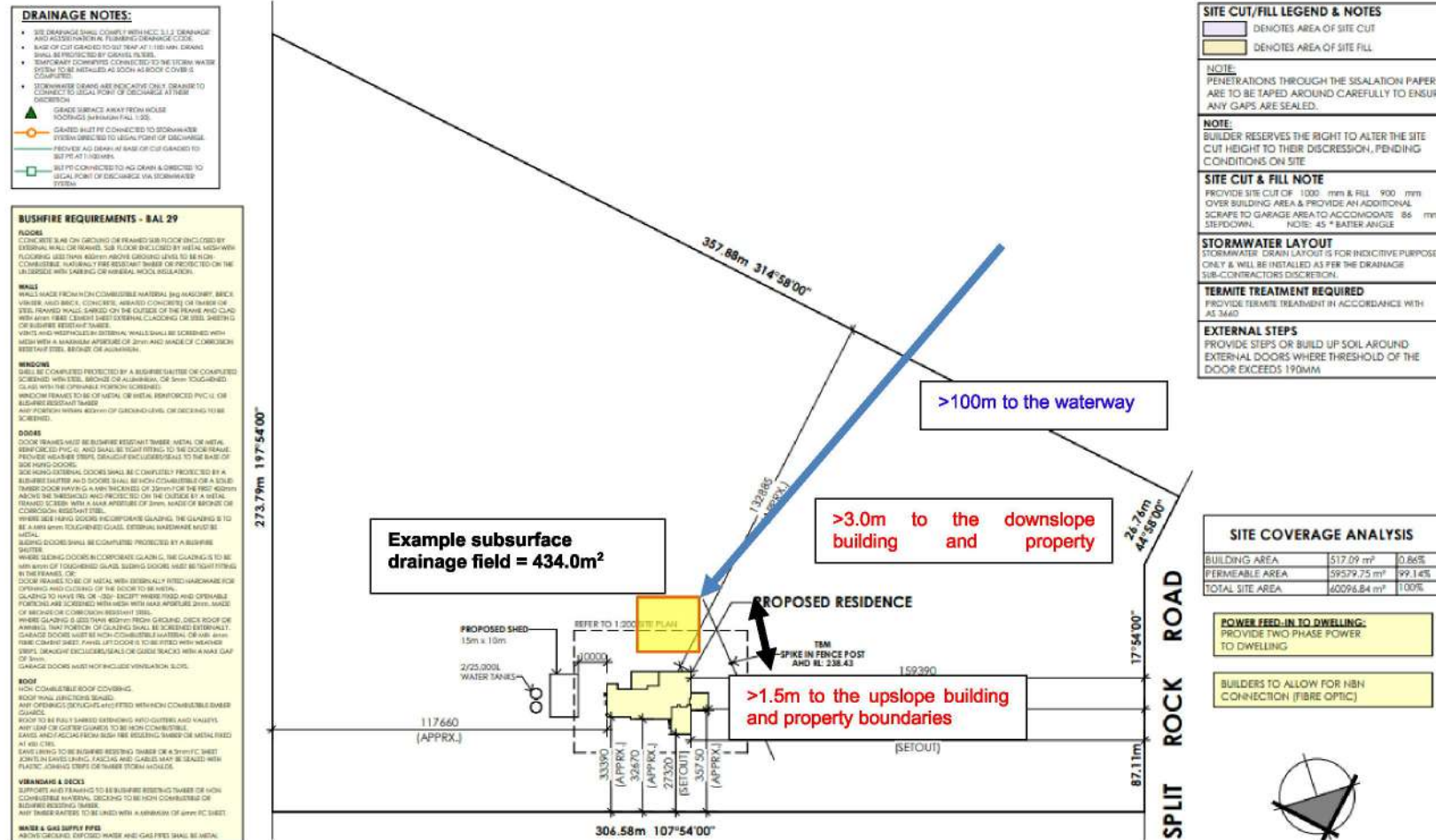
### 6.3 Siting and Configuration

Civiltest Pty Ltd considers the wastewater envelope area marked on **Figure 2 - Site Plan** and **Figure 3 – Example Effluent Field Layout** to be suitable for wastewater disposal. Set back requirements (**see Appendix C: Setback Distances**) must be taken into consideration.

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**Figure 3 – Example Effluent Field Layout**  
 Potential subsurface irrigation field layout.  
 System type, treatment plant, and final locations to be determined in the detailed design.

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**DRAINAGE NOTES:**

- SEE DRAINAGE SYMBOLS WITH NEC S.L.F. DRAINAGE AND APPROVED NATURAL FLOWING DRAINAGE CODE.
- BASE OF CUT GRADING TO BE AT 1100 MM. DRAIN SHALL BE PROTECTED BY GRASS/VEGETATION.
- TEMPORARY CONDUITS CONNECTED TO THE STORM WATER SYSTEM SHALL BE INSTALLED AS SOON AS WORK COMMENCES.
- STORMWATER DRAINS ARE INDICATIVE ONLY. DRAINER TO CONNECT TO LEGAL POINT OF DISCHARGE AT THEIR DISCRETION.
- GRADE SURFACE AWAY FROM HOUSE (SLOPES) WITH MIN. FALL 1:50.
- DRAINS MUST BE CONNECTED TO STORMWATER SYSTEM DIRECTED TO LEGAL POINT OF DISCHARGE.
- PROVIDE A DRAIN AT BASE OF CUT GRADING TO BE SET PER 1:50 SLOPE.
- SET PTS CONNECTED TO A DRAIN DIRECTED TO LEGAL POINT OF DISCHARGE VIA STORMWATER SYSTEM.

**BUSHFIRE REQUIREMENTS - BAL 29**

**FLOOR**  
 CONCRETE OR AN ON-GROUND OR FRAMED SUB-FLOOR ENCLOSED BY EXTERNAL WALL OR FRAME. SUB-FLOOR ENCLOSED BY METAL MESH WITH FLOORING SYSTEM ABOVE. MINIMUM GRADING LEVEL TO BE HIGHLY COMBUSTIBLE. NATURALLY FIRE RESISTANT SHALL BE PROTECTED ON THE UNDERSIDE WITH SABBING OR MINERAL WOOL INSULATION.

**WALLS**  
 SHALL BE MADE FROM NON-COMBUSTIBLE MATERIAL (e.g. MASONRY, BRICK, VENEER AND BRICK, CONCRETE, REINFORCED CONCRETE OR 130MM OF STEEL FRAMED WALLS) EXPOSED ON THE OUTSIDE OF THE FRAME AND CLAD WITH AN INHERENT CEMENT BASE EXTERNAL CLADDING OR STEEL SHEATHING OR BUSHFIRE RESISTANT TIMBER.  
 WALLS AND WINDOWS IN EXTERNAL WALLS SHALL BE SCREENED WITH MESH WITH A MINIMUM APERTURE OF 30MM AND MADE OF COMBUSTIBLE RESISTANT STEEL, BRASS, OR ALUMINIUM.

**WINDOWS**  
 SHALL BE COMPLETED PROTECTED BY A BUSHFIRE SHUTTER OR COMPLETED SCREENED WITH STEEL, BRASS OR ALUMINIUM, OR 30MM TOUGHENED GLASS WITH THE OPERABLE PORTION SCREENED.  
 WINDOW FRAMES TO BE OF METAL OR METAL REINFORCED PVC-U OR BUSHFIRE RESISTANT TIMBER.  
 ANY PORTION WITHIN 300MM OF GLAZING LEVEL OR EXPOSED TO BE SCREENED.

**DOORS**  
 DOOR FRAMES MUST BE BUSHFIRE RESISTANT TIMBER, METAL OR METAL REINFORCED PVC-U, AND SHALL BE TIGHT FITTING TO THE DOOR FRAME. PROVIDE WEATHER STRIPS, DRAUGHT EXCLUDERS/SEALS TO THE BASE OF DOOR FRAME DOORS.  
 SIDE HINGE EXTERNAL DOORS SHALL BE COMPLETED PROTECTED BY A BUSHFIRE SHUTTER AND DOORS SHALL BE NON-COMBUSTIBLE OR A STEEL FRAMED DOOR HAVING A MIN THICKNESS OF 30MM FOR THE FIRST 600MM ABOVE THE THRESHOLD AND PROTECTED ON THE OUTSIDE BY A METAL FRAMED SCREEN WITH A MAX APERTURE OF 30MM, MADE OF BRASS OR COMBUSTIBLE RESISTANT STEEL.  
 WHERE SIDE HINGE DOORS INCORPORATE GLAZING, THE GLAZING IS TO BE A MIN 30MM TOUGHENED GLASS. EXTERNAL HARDWARE MUST BE METAL.  
 SLIDING DOORS SHALL BE COMPLETED PROTECTED BY A BUSHFIRE SHUTTER.  
 WHERE SLIDING DOORS INCORPORATE GLAZING, THE GLAZING IS TO BE MIN 30MM TOUGHENED GLASS. SLIDING DOORS MUST BE TIGHT FITTING IN THE FRAMES OR DOOR FRAMES TO BE OF METAL WITH INTERNALLY FITTED WEATHER FOR OPENING AND CLOSING OF THE DOOR TO BE METAL.  
 GLAZING TO HAVE 30% OR LESS UNGLAZED PORTION AND OPERABLE PORTION SHALL BE SCREENED WITH METAL MESH APERTURE 30MM, MADE OF METAL OR COMBUSTIBLE RESISTANT TIMBER.  
 WHERE GLAZING IS SET TRANSVERSE FROM GROUND, CHECK ROOF OR AWNING THAT PORTION OF GLAZING SHALL BE SCREENED EXTERNALLY.  
 GARAGE DOORS MUST BE NON-COMBUSTIBLE MATERIAL OR 45MM THICK CEMENT SHEET. PANEL LIFT DOOR IS TO BE FITTED WITH WEATHER STRIP. 30MM HEIGHT EXCLUDER/SEALS OR GASKET TRACK WITH A MAX GAP OF 30MM.  
 GARAGE DOORS MUST NOT HAVE SIDE VENTILATION SLOTS.

**ROOF**  
 HIGH COMBUSTIBLE ROOF COVERING.  
 ROOF SHALL PROTECT FROM RAIN.  
 ANY OPERABLE PORTION MUST BE FITTED WITH HIGH COMBUSTIBLE DRAIN GUARDS.  
 ROOF TO BE FULLY SABBED EXTERNALLY INTO GUTTERS AND VENTS. ANY LEAK OR GUTTER GUARDS TO BE HIGH COMBUSTIBLE.  
 GUTTERS AND VENTS FROM ROOF MUST BE BUSHFIRE RESISTANT OR METAL (AT 450 CMB).  
 EAVES DROPPING TO BE BUSHFIRE RESISTANT OR 30MM PVC SHEET.  
 CONTAIN DRAINING, FASCIA AND GABLES MAY BE SABBED WITH PLASTIC JOINTING DRAFT OR TIMBER STORM HOULDS.

**VERANDAHS & DECKS**  
 SUPPORTS AND FRAMING TO BE BUSHFIRE RESISTANT TIMBER OR HIGH COMBUSTIBLE MATERIAL. DECKING TO BE HIGH COMBUSTIBLE OR BUSHFIRE RESISTANT TIMBER.  
 ANY TIMBER PARTS TO BE LINED WITH A MINIMUM OF 13MM PVC SHEET.

**WATER & GAS SUPPLY PIPES**  
 PIPING (CARRIED, EXPOSED) WATER AND GAS PIPES SHALL BE METAL.

**SITE CUT/FILL LEGEND & NOTES**

□ DENOTES AREA OF SITE CUT  
 □ DENOTES AREA OF SITE FILL

**NOTE:**  
 PENETRATIONS THROUGH THE SISALATION PAPER ARE TO BE TAPED AROUND CAREFULLY TO ENSURE ANY GAPS ARE SEALED.

**NOTE:**  
 BUILDER RESERVES THE RIGHT TO ALTER THE SITE CUT HEIGHT TO THEIR DISCRETION, PENDING CONDITIONS ON SITE.

**SITE CUT & FILL NOTE**  
 PROVIDE SITE CUT OF 1000 mm and FILL 900 mm. COVER BUILDING AREA & PROVIDE AN ADDITIONAL SCAPE TO GARAGE AREA TO ACCOMMODATE 86 mm STEPDOWN. NOTE: 45° BATTER ANGLE.

**STORMWATER LAYOUT**  
 STORMWATER DRAIN LAYOUT IS FOR INDICATIVE PURPOSES ONLY & WILL BE INSTALLED AS PER THE DRAINAGE SUB-CONTRACTORS DISCRETION.

**TERMITE TREATMENT REQUIRED**  
 PROVIDE TERMITE TREATMENT IN ACCORDANCE WITH AS 3640.

**EXTERNAL STEPS**  
 PROVIDE STEPS OR BUILD UP SOIL AROUND EXTERNAL DOORS WHERE THRESHOLD OF THE DOOR EXCEEDS 190MM.

**SITE COVERAGE ANALYSIS**

BUILDING AREA	517.09 m <sup>2</sup>	0.86%
PERMEABLE AREA	59529.75 m <sup>2</sup>	99.14%
TOTAL SITE AREA	60096.84 m <sup>2</sup>	100%

**POWER FEED-IN TO DWELLING:**  
 PROVIDE TWO PHASE POWER TO DWELLING.

BUILDERS TO ALLOW FOR NBN CONNECTION (FIBRE OPTIC).

**SJD homes**

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 info@sjdhomes.com.au

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PROPOSED:  
**HOUSE & GARAGE**

HOUSE TYPE:  
**CUSTOM**

THIS WORK IS THE PROPERTY OF SJD HOMES AND ANY COPYING OR ALTERING OF THE DRAWING SHALL NOT BE UNDERTAKEN WITHOUT WRITTEN PERMISSION FROM SJD HOMES.

SIGNED BUILDER:  
 \_\_\_\_\_

SIGNED OWNER:  
 \_\_\_\_\_

DATE:  
 \_\_\_\_\_

SITE ADDRESS:  
**NO. 210, SPLIT ROCK ROAD  
 BEACONSFIELD UPPER, 3808**

DRAWING TITLE:  
**LOCALITY PLAN**

ISSUE: A

ISSUE DATE: 29.08.24

SCALE: 1 : 1250

DRAWN: RD

CHECKED: TLG

SHEET NO: 02 OF: 14



#### 6.4 Monitoring, Operation and Maintenance

The requirements of the permit should be adopted and followed. In addition to any other requirements it is required that:

- The septic tank is de-sludged every 3 years

To ensure the AWTS system functions adequately residents must:

- Have a suitably qualified maintenance contractor service the AWTS every three months, as required by Council under the approval to operate.

The requirements of Standards Australia 2008, AS/NZS 1546.3: *On-site domestic wastewater treatment units - Part 3: Aerated wastewater treatment systems*.

This requires:

- The wastewater quality meets BOD 20mg/L
- Suspended Solids 30mg/L
- Faecal Coliforms organisms /100ml <10
- Free residual chlorine <2mg/L
- The irrigation area must be a permanent dedicated area within the premises
- The dedicated irrigation area must be cultivated to a depth 100mm, either planted with grasses or salt tolerant plants or mulched.

The irrigation lines may be laid around existing vegetation however, lines must be covered a minimum of 150mm with quality topsoil.

To ensure the treatment systems function adequately, residents must:

- Use household cleaning products sparingly and check that they are suitable for septic tanks.
- Keep as much fat and oil out of the system as possible; and
- Conserve water.

#### 6.5 Storm Water Management

All stormwater must be disposed of to the legal point of discharge.

**Note:** An agricultural (AG) drain must be installed on the high side of the wastewater envelope. The drain is to be installed a minimum of 100mm into the naturally occurring clay soils and allow sufficient fall to intercept and drain all overland and subsurface run-off to a legal point of discharge. If a legal point of discharge cannot be obtained, the drainage line may discharge directly to the surface soils, a minimum distance of 10 metres beyond the wastewater disposal area.

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## 7. CONCLUSIONS:

From this investigation it is concluded that the use of an on-site wastewater treatment and disposal system is environmentally sustainable if the recommendations made in this report are followed.

The following should also be noted:

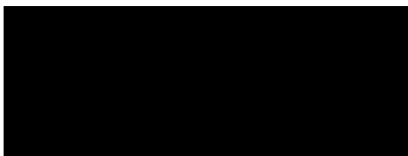
- Installation of 3 star rated water fixtures to reduce water use and wastewater loadings.
- Use of low phosphorus and low sodium (liquid) detergents to improve effluent quality and maintain beneficial uses of groundwater.
- Operation and maintenance of treatment and disposal systems in accordance with the manufacturer's recommendations and the recommendations made in this report.

## 8. REFERENCES:

- Environmental Protection Authority – Guideline for onsite wastewater management– May 2024
- Environmental Protection Authority – Guideline for Onsite Wastewater Effluent Dispersal and Recycling Systems, May 2024
- Municipal Association Victoria (MAV) 2006, Model Land Capability Assessment Report
- The Victorian Land Capability Assessment Framework (2<sup>nd</sup> Edition 2014)
- Australian/New Zealand Standard AS/NZS 1547-2012 – On-site domestic wastewater management.
- Civiltest Pty Ltd - Field and Laboratory data (where applicable) collected and recorded.
- Environmental Protection Authority - "Code of Practice - Septic Tanks", March 1996" ~ Publication 451.
- Environmental Protection Authority, Information Bulletin- "Land Capability Assessment for onsite Domestic Wastewater Management", March 2003 ~ Publication 746.1.
- Standards Australia 2008, AS/NZS 1546.1: *On-site domestic wastewater treatment units – Part 1: Septic Tanks.*
- Standards Australia 2008, AS/NZS 1546.3: *On-site domestic wastewater treatment units – Part 3: Aerated wastewater treatment systems.*

Any levels referred to in Civiltest reports should be regarded as general and are not to be interpreted as surveyed confirmed levels. All levels should be checked and confirmed by a licensed surveying organisation or qualified personnel.

This report consists of seventeen pages. Appendices A, B and C are attached.



**SENIOR GEOTECHNICAL ENGINEER  
CIVILTEST PTY LTD**

Ref: nk/LC/abf/th

22 October 2024

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## 9. QUALIFICATIONS AND EXPERIENCE:

<b>QUALIFICATIONS AND EXPERIENCE</b>	
<b>Land Capability Assessor</b>	[REDACTED]
<b>Qualifications</b>	<ul style="list-style-type: none"> <li>• Monash University – BEng (Civil &amp; Env) Hons</li> <li>• Centre for Environmental Training – Land Capability Assessment for On-site Wastewater Management</li> <li>• MIEAust CPEng NER RPEV</li> </ul>
<b>Experience</b>	<ul style="list-style-type: none"> <li>• Providing Land Capability Assessments within Victoria and NSW for over 8 years.</li> <li>• Completed approved Land Capability Assessments for the follow Councils: <ul style="list-style-type: none"> <li>○ Albury City Council</li> <li>○ Alpine Shire</li> <li>○ Ararat Rural City Council</li> <li>○ Bass Coast Shire Council</li> <li>○ Baw Baw Shire</li> <li>○ Benalla Rural City Council</li> <li>○ Broken Hill City Council</li> <li>○ Buloke Shire</li> <li>○ Campaspe Shire Council</li> <li>○ Cardinia Shire</li> <li>○ Chiltern District Council</li> <li>○ City of Casey</li> <li>○ City of Greater Dandenong</li> <li>○ Colac Otway Shire Council</li> <li>○ Corangamite Shire</li> <li>○ Federation Council</li> <li>○ Golden Plains Shire</li> <li>○ Greater Hume Council</li> <li>○ Indigo Shire Council</li> <li>○ Mansfield Council</li> <li>○ Mildura Rural City Council</li> <li>○ Mornington Peninsula Shire</li> <li>○ Rural City of Wangaratta</li> <li>○ South Gippsland Shire Council</li> <li>○ Strathbogie Shire</li> <li>○ Surf Coast Shire</li> <li>○ Swan Hill Rural City Council</li> <li>○ Wentworth Shire Council</li> <li>○ Yarra Ranges Council</li> </ul> </li> </ul>
<b>Professional Membership</b>	<ul style="list-style-type: none"> <li>• Member Engineers Australia (MIEAust)</li> <li>• Chartered Practising Engineer (CPEng)</li> <li>• National Engineering Register (NER)</li> <li>• Registered Practising Engineer – Victoria (RPEV)</li> <li>• Australian Geomechanics Society (AGS)</li> <li>• Footings and Foundations Society Victoria (FFSV)</li> </ul>
<b>Professional Indemnity Insurance</b>	<ul style="list-style-type: none"> <li>• Provider: Procover</li> <li>• Cover: Not less than \$5.0 million</li> </ul>

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## APPENDIX A: ENGINEERING LOG

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## APPENDIX B: WATER BALANCE

### Irrigation Sizing

Owner/Applicant:



Date: 22 October 2024

Site Address:

210 (Lot 1) Split Rock Road BEACONSFIELD UPPER

Notes:

FORMULA FOR SUBSURFACE IRRIGATION SIZING			NOTES
$B = Q/DIR$			From AS/NZS 1547:2012
Where:	Units		
B = Irrigation area	m <sup>2</sup>		
Q = Design Wastewater Flow	L/day		
DIR = Design Irrigation Rate	mm/day		

INPUT DATA	NOTES		
Design Wastewater Flow	Q	1080	L/day
Reduction in DIR		0	%
Design Irrigation Rate	DIR	3	mm/day

OUTPUT	NOTES		
Irrigation area required	B	360	m <sup>2</sup>

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## WATER/NITROGEN BALANCE (20/30 irrigation): With no wet month storage

Rainfall Station:	Scoresby Research Institute
Evaporation Station:	Scoresby Research Institute
Site Location:	210 Split Rock Road BEACONSFIELD UPPER
Date:	22-Oct-24
Owner/Applicant:	

ITEM	UNIT	#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YEAR
Days in month	mm	A	31	28	31	30	31	30	31	31	30	31	30	31	365
Evaporation (Daily Mean)	mm	A1	5.6	5.5	4	2.7	1.7	1.3	1.4	1.9	2.6	3.4	4.4	5	3.291667
Evaporation (monthly Mean)	mm	A2	173.6	154	124	81	52.7	39	43.4	58.9	78	105.4	132	155	1197
Rainfall (Mean)	mm	B	54.3	51.2	52.9	70.9	85.7	69.4	72.6	79.4	80.8	85.2	81.7	74.2	858.3
Rainfall (90th %ile)	mm	B1	100.3	106.9	84.4	116.2	137.7	104.4	107.5	115	126.1	148.6	144.9	142.1	1434.1
Effective rainfall	mm	B2	75.225	80.175	63.3	87.15	103.275	78.3	80.625	86.25	94.575	111.45	108.675	106.575	1075.575
Peak seepage Loss	mm	B3	148.8	134.4	148.8	144	148.8	144	148.8	148.8	144	148.8	144	148.8	1752
Evapotranspiration (J x A2)	mm	C1	138.88	123.20	86.80	56.70	31.62	23.40	26.04	35.34	54.60	84.32	105.60	124.00	890.50
Waste Loading (C1+B3-B2)	mm	C2	212.46	177.43	172.30	113.55	77.15	89.10	94.22	97.89	104.03	121.67	140.93	166.23	1566.93
Net evaporation from lagoons (10(0.8A-B1xlagoon area(ha)))	L	D	0	0	0	0	0	0	0	0	0	0	0	0	0
Volume of Wastewater	L	E	33480	30240	33480	32400	33480	32400	33480	33480	32400	33480	32400	33480	394200
Total Irrigation Water (E-D)/G	mm	F	77.15	69.68	77.15	74.66	77.15	74.66	77.15	77.15	74.66	77.15	74.66	77.15	908.32
Total Irrigation Area (E/C2) annual	m <sup>2</sup>	G	157.6	170.4	194.3	285.3	434.0	363.6	355.4	342.0	311.5	275.2	229.9	201.4	434.0
Surcharge	mm	H	-135.31	-107.75	-95.16	-38.89	0.00	-14.44	-17.07	-20.75	-29.37	-44.53	-66.27	-89.08	-658.605
Actual Seepage Loss	mm	I	13.49	26.65	53.65	105.11	148.80	129.56	131.73	128.06	114.63	104.28	77.73	59.72	1093.395
Direct Crop Coefficient		J	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.8	

Rainfall Retained	75	%	K
Lagoon Area	0	ha	L
Wastewater (Irrigation)	1080	L	M
Seepage Loss (Peak)	4.8	mm	N
Irrigation Area (No storage)	434.0	m <sup>2</sup>	O
Actual Application Rate	2.4885484	mm	P
Nitrogen in Effluent	25	mg/L	Q
Denitrification Rate	20	%	R
Plant Uptake	280	kg/ha/yr	S
Mean daily seepage loss	2.9956032	mm	T
Annual N load	7.88	kg/yr	U
Area for N uptake	281.6	m <sup>2</sup>	V
Actual Application Rate	3.8	mm	W

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## APPENDIX C: SETBACK DISTANCES

Extract from EPA Guideline for Onsite Wastewater Management, Table 4-10:

Landscape feature or structure	Setback distances (m)		
	OWMS with primary treated effluent	OWMS with secondary treated effluent or Level 3 greywater effluent	OWMS with Level 1 and 2 greywater effluent
<b>Building/allotment boundary</b>			
Up-slope of building (see Note 1)	6	3	3
Down-slope of building	3	1.5	1.5
Up-slope of adjacent lot	6	3	1
Down-slope of adjacent lot	3	1.5	0.5
<b>Services</b>			
Water supply pipe	3	1.5	1.5
Up-slope of potable supply channel (stock and domestic)	300	150	150
Down-slope of potable water supply	20	10	10
<b>Channel (stock and domestic)</b>			
In-ground water tank (see Note 2)	15	7.5	3
Closed stormwater drain	6	3	2
Open stormwater drain	50	30	10
Gas supply pipe	3	1.5	1.5
<b>Recreational areas</b>			
Children's grassed playground (see Note 3)	6	3	2
In-ground swimming pool	6	3	2
<b>Surface waters</b>			
Dam, lake or reservoir (use as source water for drinking or within a special water supply catchment) (see Notes 5, 6)	300	300	150
Waterways (use as source water for drinking or within a special water supply catchment) (see Notes 4, 5)	100	100	50
Waterways not used as source of water for drinking or within a special water supply catchment (for example, wetlands (continuous or ephemeral); estuaries (See Note 4)	60	30	30
Ocean beach at high-tide mark; dams, reservoirs or lakes not used as source of water for drinking or within a special water supply catchment (See Note 6)	60	30	30
Dam, lake or reservoir (used as source water for drinking or within a special water supply catchment) (See Notes 5, 6)	300	300	150
Drainage lines (See Note 7)	40	20	20
Up-slope of cutting/escarpment (See Note 8)	15	15	15
<b>Groundwater bores</b>			
Groundwater bores - Category 1 and 2a soils	NA	50	20
Groundwater bores - Category 2b to 6 soils	20	20	20
<b>Soil depth (See Note 9)</b>			
Depth to highest seasonal water table (See Note 10)	1.5	1.5	1.5
Depth to hydraulically limiting layer (for example, bedrock)	1.5	0.6	0.6



<sup>20</sup> Setback distances are measured horizontally from the external wall of the treatment plant and the boundary of the land application area, except for soil depth as per Note 10.

<sup>21</sup> The setback distances for flat land are equivalent to down-slope setback distances.

1. Establishing an OWMS up-slope of a building may have implications for the structural integrity of the building. This should be examined by a building surveyor on a site-by-site basis.

2. It is recommended that OWMS are installed down-slope of an in-ground water tank.

3. Means a school, council, community or other children's grassed playground managed by an organisation which may contain play equipment but does not mean a sports field.

4. Means a waterway as defined in the Water Act 1989.

5. Applies to land adjacent to a dam, lake, reservoir or waterway that provides source water used for the supply of public drinking water or, which is subject to an environmental significance overlay (ESO) that designates maintenance of water quality as the environmental objective to be achieved, or within a special water supply catchment area listed in Schedule 5 of the Catchment and Land Protection Act 1994.

6. Does not apply to dams, lakes or reservoirs located above ground level that cannot receive runoff.

7. An intermittent stream that is found to be a drainage line (drainage depression) with no defined banks and the bed is not incised. The topography of the drainage line should be demonstrated in writing and photographs in the LCA report.

8. A cutting/escarpment from which water is likely to emanate.

9. Depth is measured vertically through the soil profile from the base of absorption/ETA trenches/beds or from the irrigation pipes.

10. The highest seasonal water table occurs when groundwater is closest to the ground surface. This usually occurs in the wettest months of the year.

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