



31 January 2025

Notification of Development Application No. 2024/097

Site Description: Lot: 13 DP: 1196733, 42 Bindea Place GUNNEDAH.

Notice is given that a Development Application has been submitted for Council's consideration that involves the construction of a new dwelling, detached garage and pool. The proposed garage varies the maximum building height, size and cumulative area.

The address of the proposed development is 42 Bindea Place GUNNEDAH.

The applicant is SAE Design and Gunnedah Shire Council is the consent authority.

The Development Application has been placed on public exhibition for a period of **21** days. The documents may be inspected at Council's office during office hours 9am-4pm or on Council's website <http://www.gunnedah.nsw.gov.au/>.

Any person may make a written submission about this application to the General Manager, Gunnedah Shire Council, PO Box 63, Gunnedah NSW 2380 or via email council@gunnedah.nsw.gov.au. The issues you raise will be included in the evaluation of the development application, along with the other matters Council must consider.

Submissions should be received no later than 5.00pm on **21 February 2025**. All submissions must include disclosure of any reportable political contribution or gift made in the previous two years.

If the submission includes an objection to the proposal, the grounds of objection must be given. You are advised that you may request that your name and address not be disclosed by stating prominently "OBJECTION IN CONFIDENCE" on your submission for reason that disclosure would result in detriment to you. However, Council may be obliged to release these details under the Freedom of Information Act 1989 even if these words are used in the submission. Further, submissions that do not contain the author's name and address may not be considered as Council will be unable to validate the submissions authenticity.

If you have any enquiries in relation to this Development Application, please contact Council's Duty Planner on 6740 2100

Yours faithfully

Bhavika Khot
SENIOR TOWN PLANNER

Contact: 6740 2100
Reference: 2024/097
ld

Development Consent Cover Sheet – Council’s Use

Made under the Environmental Planning & Assessment Act.1979

LAST UPDATED 23 JULY 2021

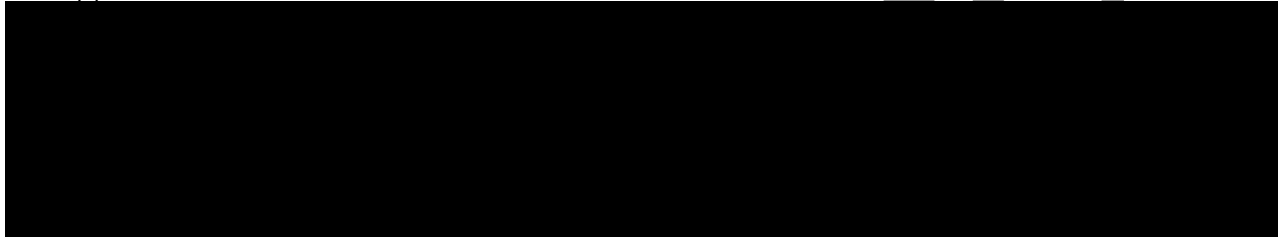
Date: 17/12/24

DEVELOPMENT APPLICATION NUMBER

Development Application Number: 10.2024.00000097.001

APPLICANT DETAILS

Name(s): S Edgar



LAND TO BE DEVELOPED

Address: 42 Bindea Place

Lot Number: 13 DP Number: 1196733 Site Area:

BRIEF DESCRIPTION AND USE OF PROPOSED DEVELOPMENT

Development Application

Dwelling, Detached Garage/Carport, & Pool

Variation to Outbuilding size

PROPOSED DEVELOPMENT DETAILS

- ☒ Local Development
- ☐ Integrated Development (requires approval under another Act)
- ☐ Designated Development (requires an EIS to be submitted)

Total Project Value: \$1,800,000.00

Applicant contact details

Title	Mr
First given name	Steve
Other given name/s	
Family name	Edgar
Contact number	
Email	
Address	
Application on behalf of a company, business or body corporate	No

Owner/s of the development site

Owner/s of the development site	There are one or more owners of the development site and the applicant is NOT one of them
Owner #	1
Title	Mr
First given name	James
Other given name/s	
Family name	Barlow
Contact number	
Email	
Address	

I declare that I have shown this document, including all attached drawings, to the owner(s) of the land, and that I have obtained their consent to submit this application. - Yes

Note: It is an offence under Section 10.6 of the Environmental Planning and Assessment Act 1979 to provide false or misleading information in relation to this application.

Site access details

Are there any security or site conditions which may impact the person undertaking the inspection? For example, locked gates, animals etc.	No
---	----

Developer details

ABN	
ACN	
Name	
Trading name	
Address	
Email Address	

Development details

Application type	Development Application
Site address #	1
Street address	42 BINDEA PLACE GUNNEDAH 2380
Local government area	GUNNEDAH
Lot / Section Number / Plan	13/-/DP1196733 <input checked="" type="checkbox"/>

Primary address?	Yes
Planning controls affecting property	Land Application LEP Gunnedah Local Environmental Plan 2012 Land Zoning R5: Large Lot Residential Height of Building NA Floor Space Ratio (n:1) NA Minimum Lot Size 3000 m ² Heritage NA Land Reservation Acquisition NA Foreshore Building Line NA

Proposed development

Selected common application types	Erection of a new structure
Selected development types	Dwelling House Garage, carport or carparking space Swimming pool
A pool or spa of 40,000 litres or greater proposed	Yes
Description of development	Proposed New dwelling, detached garage + pool
Does the development include affordable housing?	No
Dwelling count details	
Number of dwellings / units proposed	1
Number of storeys proposed	1
Number of pre-existing dwellings on site	0
Number of dwellings to be demolished	0
Number of proposed occupants	5
Existing gross floor area (m2)	0
Proposed gross floor area (m2)	595
Total site area (m2)	4,289
Total net lettable area (m2)	595
What is the estimated development cost, including GST?	\$1,800,000.00
Estimated development cost	\$1,636,350.00
Do you have one or more BASIX certificates?	Yes
BASIX Certificate Number	1775289S
Subdivision	
Number of existing lots	
Proposed operating details	
Number of staff/employees on the site	

Number of parking spaces

Number of loading bays	
Is a new road proposed?	No
Concept development	

Is the development to be staged?	No, this application is not for concept or staged development.
Crown development	
Is this a proposed Crown development?	No

Related planning information

Is the application for integrated development?	No
Is your proposal categorised as designated development?	No
Is your proposal likely to significantly impact on threatened species, populations, ecological communities or their habitats, or is it located on land identified as critical habitat?	No
Is this application for biodiversity compliant development?	No
Does the application propose a variation to a development standard in an environmental planning instrument (eg LEP or SEPP)?	No
Is the application accompanied by a Planning Agreement ?	No
Section 68 of the Local Government Act	
Is approval under s68 of the Local Government Act 1993 required?	Yes
Have you already applied for approval under s68 of the Local Government Act?	No
Would you like to apply for approval under s68 of the Local Government Act?	Yes
10.7 Certificate	
Have you already obtained a 10.7 certificate?	
Tree works	
Is tree removal and/or pruning work proposed?	No
Local heritage	
Does the development site include an item of environmental heritage or sit within a heritage conservation area.	No
Are works proposed to any heritage listed buildings?	No
Is heritage tree removal proposed?	No
Affiliations and Pecuniary interests	
Is the applicant or owner a staff member or councillor of the council assessing the application?	No
Does the applicant or owner have a relationship with any staff or councillor of the council assessing the application?	No
Political Donations	
Are you aware of any person who has financial interest in the application who has made a political donation or gift in the last two years?	No
Please provide details of each donation/gift which has been made within the last 2 years	

Sustainable Buildings

Is the development exempt from the State Environmental Policy (Sustainable Buildings) 2022 Chapter 3, relating to non-residential buildings?	Yes
Provide reason for exemption. Is the development any of the following:	Development that is wholly residential

Payer details

Provide the details of the person / entity that will make the fee payment for the assessment.

The *Environmental Planning and Assessment Regulation 2021* and Council's adopted fees and charges establish how to calculate the fee payable for your development application. For development that involves building or other works, the fee for your application is based on the estimated cost of the development.

If your application is for integrated development or requires concurrence from a state agency, additional fees will be required. Other charges may be payable based on the Council's adopted fees and charges. If your development needs to be advertised, the Council may charge additional advertising fees. Once this application form is completed, it and the supporting documents will be submitted to the Council for lodgement, at which time the fees will be calculated. The Council will contact you to obtain payment. Note: When submitting documents via the NSW Planning Portal, credit card information should not be displayed on documents attached to your development application. The relevant consent authority will contact you to seek payment.

The application may be cancelled if the fees are not paid:

First name	
Other given name(s)	
Family name	
Contact number	
Email address	
Billing address	

Application documents

The following documents support the application.

Document type	Document file name
Architectural Plans	1086-23 PLANS R6
BASIX certificate	1086-23 Basix Cert 20592 NatHERS Certificate
Bushfire Assessment Report	BR-860124-A.
Cost estimate report	1086-23 Cost Estimate
Other	1086-23 DA Cover Letter
Site Plans	1086-23 SITE PLAN R6
Statement of environmental effects	1086-23 S of EE

Applicant declarations

I declare that all the information in my application and accompanying documents is, to the best of my knowledge, true and correct.	Yes
I understand that the development application and the accompanying information will be provided to the appropriate consent authority for the purposes of the assessment and determination of this development application.	Yes
I understand that if incomplete, the consent authority may request more information, which will result in delays to the application.	Yes
I understand that the consent authority may use the information and materials provided for notification and advertising purposes, and materials provided may be made available to the public for inspection at its Offices and on its website and/or the NSW Planning Portal	Yes
I acknowledge that copies of this application and supporting documentation may be provided to interested persons in accordance with the Government Information (Public Access) 2009 (NSW) (GIPA Act) under which it may be required to release information which you provide to it.	Yes

I agree to appropriately delegated assessment officers attending the site for the purpose of inspection.	Yes
I have read and agree to the collection and use of my personal information as outlined in the Privacy Notice	Yes
I confirm that the change(s) entered is/are made with appropriate authority from the applicant(s).	

EXHIBITION COPY

Statement of Environmental Effects

SINGLE DWELLING HOUSES, RESIDENTIAL ANCILLARY & OUTBUILDING DEVELOPMENTS ONLY

LAST UPDATED 15 AUGUST 2023

INTRODUCTION

A Statement of Environmental Effects is to be submitted with all development applications other than "designated development" or proposals having negligible environmental impact, eg internal alterations. This form is to be used for single dwelling houses, residential ancillary & outbuilding developments only. All other developments require a detailed, site specific Statement of Environmental Effects.

This Statement of Environmental Effects is not exhaustive and should be augmented where appropriate. If insufficient space not has been provided, please attach additional sheets.

Please place a tick (✓) in the appropriate box.

SITE AND CONTEXT SUITABILITY

	YES	NO
Is the development compatible with the land zoning?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is the development compatible with adjoining development?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does your application include a site plan illustrating the topography of the development site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Describe the topography of the site (eg slope of the land, existing vegetation, groundwater issues, orientation of dwelling, streetscape and setbacks etc)		
The Land slopes from rear down to the front, there is no existing large mature trees.		
There is to small trees at the front of the block which will remain		
The house will be positioned toward the back of the block orientated to the north		

PRESENT AND PREVIOUS USES

What is the current use of the site?

The site is a residential block, currently vacant

Has there been any other land use other than that listed above?

What is the use of the adjoining land?

Adjoining land are residential lots of a similar size.

The adjoining land to the rear is a nature reserve

Is the present use a potentially contaminated activity?

YES NO

☐ ☒

Was the previous use a potentially contaminated activity?

☐ ☒

Has there been any testing or assessment of the site for land contamination?

☐ ☒

Have any of the following land uses or activities been undertaken on the site:

- Service station
- Sheep or cattle dip
- Intensive agriculture
- Mining or extractive industry
- Waste storage or waste treatment
- Manufacture of chemicals
- Asbestos or asbestos products
- Other - Refer to State Environmental Planning Policy (Resilience and Hazard) 2021

☒ ☒

☒ ☒

☐ ☒

☒ ☒

☒ ☒

☐ ☒

☐ ☒

☐ ☒

If a "Yes" answer is given above, please provide details:

.....

.....

Could the proposal result in soil contamination?

☐ ☒

ELECTRICITY

Where will electricity be accessed from?

Mains power to the site and new photovoltaic system

ACCESS AND TRAFFIC

YES NO

Is there adequate provision for vehicle access to a public road?

☒ ☐

Will the proposal generate traffic?

☐ ☒

If "yes" a traffic impact assessment report should be prepared and submitted.

What road will the site be accessed from? (road name, existing entrance location, etc)

Bindea Place

Will local traffic movements and volumes be affected?

☐ ☒

Is existing servicing inadequate?

☒ ☐

Will additional access requirements be needed?

☐ ☒

Is there an attached garage with a minimal 2 spaces or has parking arrangements been made for such spaces parking?

☒ ☐

What is the current formation of the existing access?

Access will be directly from Bindea Place

.....

WATER AND DRAINAGE

Where will water be sourced from?

- Town Supply
- Rainwater Tank
- Bore

YES NO

<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

How will stormwater be disposed from the site?

- Street
- Onsite retention

<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Are inter-allotment drainage easement across a downstream property required?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

Will the proposed design increase stormwater runoff or adversely affect flooding on other land?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-------------------------------------	-------------------------------------

Does the development site contain an existing rainwater tank that is currently being utilised?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

If disposal of stormwater is on site, describe disposal system.

.....

.....

Are measures in place to maximise infiltration and minimise water runoff?
(eg groundcover, banks, stormwater reuse, low water demand, native plants)

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

PRIVACY, VIEWS AND SUNLIGHT

Will the proposal affect the amenity of surrounding residences by:

- Overshadowing
- Loss of privacy

YES NO

<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

WASTE MANAGEMENT SYSTEM

How will effluent be disposed of?

- Onsite
- Sewer

YES NO

<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Will the proposal lead to direct discharges of stormwater or waste water into a natural water system?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

Will other wastes be generated by this development?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

Does the site plan include the location of any proposed onsite waste management system?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

HERITAGE

Is a heritage item located on the development site?

YES NO

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

Is the development site located in a heritage conservation area?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

Is the development site an archaeological or potential archaeological site?
(eg having Aboriginal Heritage significance)

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

ENVIRONMENTAL IMPACTS

SOIL

Will excavation and/or filling be required?

YES NO

☒ ☐

Slopes of greater than 15% require a geotechnical report. Is the slope is greater than 15%?

☐ ☒

Are suitable retaining walls or vegetated earth batters to be installed?

☒ ☐

HABITAT

Will the proposal involve the removal of vegetation?

☐ ☒

If vegetation is to be removed, how much area of vegetation will be removed?

(this area should be measured based on canopy size and includes areas that may be affected by access driveways, installation of services, operation of Onsite Sewerage Management Systems, APZ, etc)

Could the proposal affect native vegetation or animal habitats?

☐ ☒

(Zones other than RU1, RU4, RU6 and C3)

Does the development have low or nil impact on koalas or koala habitat?

☒ ☐

Refer to State Environmental Planning Policy (Biodiversity and Conservation) 2021, Clause 4.9

For lots within the RU1, RU4, RU6 and C3 zones a Koala Assessment Report is Required in accordance with Chapter 3 of State Environmental Planning Policy (Biodiversity and Conservation) 2021

HAZARDS

YES NO

Is the site subject to natural hazards such as:

- Subsidence
- Other

☐ ☒

☐ ☒

FLOOD PRONE LAND

YES NO

Is the site subject to flooding?

☐ ☒

If "yes", detailed levels are to be provided with the application as part of a Flood Survey Plan.

AQUACULTURE

YES NO

Is the development located closer than 40m from a natural water course or body of water?

☐ ☒

BUSHFIRE PRONE LAND

YES NO

Has the land been identified as Bushfire Prone Land on the Gunnedah LGA in accordance with the Bushfire Prone Land Map 2003?

☒ ☐

If "yes", the development will need to take into consideration the policy "Planning for Bushfire Protection" (NSW Rural Fire Service).

SIGNED

Author's Name: Steve Edgar (SAE Design)

Author's Signature:  Date: 20/11/2024

Ref: 1086-23

Date: 29/11/2024

The Manager
Gunnedah Shire Council
63 Elgin Street
Gunnedah NSW 2380

**RE: Development Application- Proposed New Dwelling at 42 Bindea Place Gunnedah
(Lot 13 DP1196733)**

Dear Manager,

Please find attached the following documents for a Development Application, for a proposed new dwelling, detached garage + new pool.

Submitted documents include:
Architectural Plans
Basix Certificate + Natthers Certificate
Statement of Environmental Effects

Project Overview:

The site (lot 13) is currently a vacant lot. The owner also owns the vacant lot immediately to the North, which at this stage will remain vacant, the new development will be constructed solely on Lot 13.

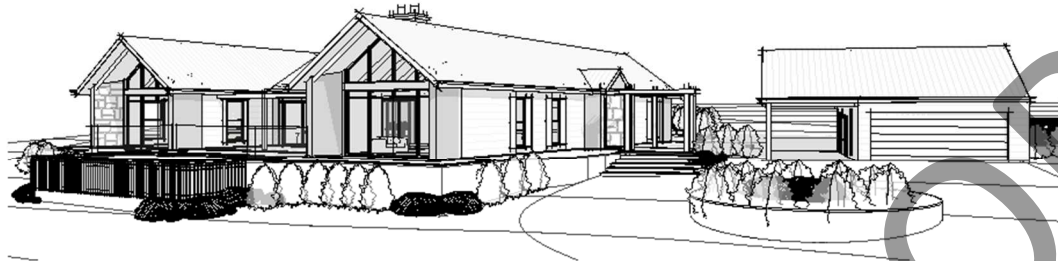


Figure 1- Aerial View (google.com)

The development will consist of 3 build elements, including a 4 bedroom dwelling (411sqm), a detached garage + carport (115 sqm) and a swimming pool.

Retaining walls will also be constructed (approx. 1.2m high), as part of the build, in benching the site.

The development is wholly residential.



NORTH VIEW

Figure 2- North View

Service:

The site has access to mains water, sewer + electricity.

New Rainwater storage tanks will be installed to for residential use. Water storage will also be used for bushfire purposes.

A 5kW Photovoltaic system is proposed for the development.

Access:

The site will be accessed directly from Bindea Place, via a gravel hardstand driveway.

General Amenity:

The existing site residential R5 (LSM – W) with neighbouring existing residential homes to the North + West. The boundary to the south is a nature reserve.

There is minimal existing vegetation on the site.

The site falls from the rear to the front. The dwelling + garage will sit on a level pad with the dwellings orientation toward the North.

We hope the above information adequately outlines the projects details. If you require further information, please do not hesitate to contact us.

Kind regards,

Steve Edgar
S.A.E Design

Date: 06/12/2024

Our Ref: BR-860124-A

BUSH FIRE ASSESSMENT

42 Bindea Place Gunnedah 2380

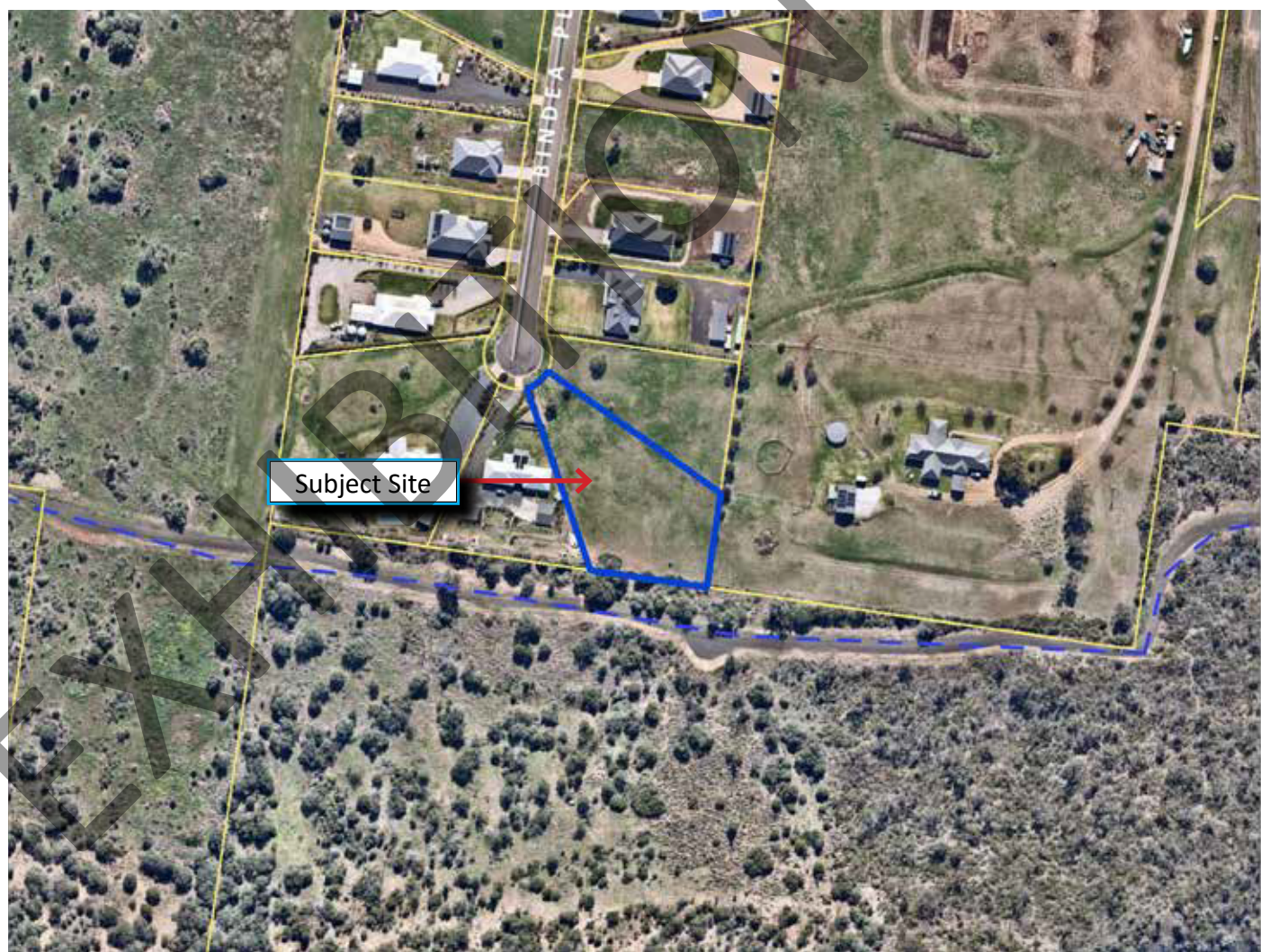
Prepared by: Christiane Turner

Approved by: Matthew Noone | BPAD Accreditation Number: BPAD-25584 (Level 3)

Site Address: 42 Bindea Place Gunnedah 2380

Lot / DP: 13/-/DP1196733

Project Description: Proposed Sole Occupancy Dwelling and Detached Garage



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REPORT NUMBER
BR-860124-A

BAL ASSESSMENT CERTIFICATION

Provided to support the Development Application

42 Bindea Place Gunnedah 2380

Certified by: Matthew Noone | BPAD Accreditation Number: BPAD-25584 (Level 3)

Site Address: 42 Bindea Place Gunnedah 2380



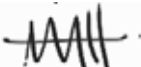
Lot / DP: 13/-/DP1196733

Project Description: Sole Occupancy Dwelling and Detached Garage

PBP Development Type: Infill Development

I hereby certify that:

1	I (Matthew Noone) am a person recognised by the NSW Rural Fire Service as a qualified consultant in bushfire risk assessment holding accreditation with the Fire Protection Association (BPAD-25584).				
2	Subject to the recommendations contained in the attached Bushfire Risk Assessment Report the proposed development conforms to the relevant specifications and requirements.* <table><tr><td>*</td><td>The relevant specifications and requirements being; specifications and requirements of the document entitled Planning for Bush Fire Protection prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and any other document as prescribed by Section 4.14 of the Environmental Planning and Assessment Act 1979.</td></tr><tr><td>*</td><td>The proposed development complies with the relevant specifications and requirements. RFS referral is not required.</td></tr></table>	*	The relevant specifications and requirements being; specifications and requirements of the document entitled Planning for Bush Fire Protection prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and any other document as prescribed by Section 4.14 of the Environmental Planning and Assessment Act 1979.	*	The proposed development complies with the relevant specifications and requirements. RFS referral is not required.
*	The relevant specifications and requirements being; specifications and requirements of the document entitled Planning for Bush Fire Protection prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and any other document as prescribed by Section 4.14 of the Environmental Planning and Assessment Act 1979.				
*	The proposed development complies with the relevant specifications and requirements. RFS referral is not required.				
3	I am aware that the Bushfire Assessment Report, prepared for the above mentioned site is to be submitted in support of a development application for this site and will be relied upon by Council as the basis for ensuring that the bushfire risk management aspects of the proposed development have been addressed in accordance with Planning for Bushfire Protection (2019).				

CERTIFICATE NUMBER BR-860124-A			FPAA Accreditation Number BPAD-25584 
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DOCUMENT TRACKING

Issue Date	Issued to	Description	Version
06/12/2024	SAE Designs	Issued for DA.	A

DISCLAIMER and TERMS OF USE

"It should be borne in mind that the measures contained in this Standard cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature of behaviour of fire, and extreme weather conditions." (AS3959 2018).

Bushfire Planning & Design cannot be held liable for the loss of life or property caused by a bushfire event. This report has considered the relevant planning instruments, bushfire constructions codes and practices applicable at the time of writing. Should additional information be provided after this report has been issued, we reserve the right to review and if necessary modify our report. Bushfire Planning and Design has no control over workmanship, buildings degrade over time and vegetation if not managed will regrow. In addition legislation and construction standards are subject to change. Due to significant variance of bushfire behaviour, we do not guarantee that the dwelling will withstand the passage of bushfire even if this development is constructed to the prescribed standards.

This report has been based on our interpretation of Planning for Bushfire Protection (2019), AS3959 (2018) and the methodology for site specific bushfire assessment. As a consultant, our view can be subjective. Our opinions may differ from the opinions provided by you the Client (or Client Representative), the Council, the RFS or another bushfire consultant. The Rural Fire Service (RFS) has a higher authority and can upon their review, increase a nominated BAL-rating or entirely reject a development proposal. Any such recommendations made by the RFS take precedence. Our role is intermediary between our Client (or Client Representative) and the consenting authority. We apply our knowledge of the relevant bushfire protection standards to provide the best possible outcome for our Client (or Client Representative), both from a bushfire safety and financial perspective. Should the RFS modify our recommendations or reject the proposal to which this report relates to we will not be held liable for any financial losses as a result. By using this document, you the Client (or Client Representative) agree to and acknowledge the above statements

Bushfire Planning and Design accepts no liability or responsibility for any use or reliance upon this report and its supporting material by any unauthorized third party. The validity of this report is nullified if used for any other purpose than for which it was commissioned. Unauthorized use of this report in any form is deemed an infringement of our intellectual property. By using this document to support your development you the Client (or Client representative) agree to these terms.

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GLOSSARY

The abbreviations that are commonly used are explained below. Not all are present in this report.

APZ	Asset Protection Zone
AS3959	Australian Standard for the Construction of a Building in a Bushfire Prone Area
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BFPL	Bush Fire Prone Land
BFPLM	Map Bush Fire Prone Land Map
BFDB	Bush Fire Design Brief
BPM	Bush Fire Protection Measure
DA	Development Application
DCP	Development Control Plan
DPIE	Department Of Planning, Industry And Environment
DTS	Deemed to Satisfy
EPA ACT	Environmental Planning And Assessment Act 1979
FDI	Fire Danger Index
FFDI	Forest Fire Danger Index
GFDI	Grassland Fire Danger Index
IPA	Inner Protection Area
LEP	Local Environmental Plan
NASH	National Association of Steel Framed Housing
NCC	National Construction Code
OPA	Outer Protection Area
PBP	Planning for Bush Fire Protection
RF ACT	Rural Fires Act
RF REG	Rural Fires Regulation
NSW RFS	New South Wales Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SFR	Short Fire Run
SSD	State Significant Development

ASSESSMENT DETAILS

Client	SAE Designs		
Location	42 Bindea Place Gunnedah 2380		
Title reference	13/-/DP1196733		
LGA	Gunnedah Shire		
Zoning	R5 - Large Lot Residential		
Development Type	Sole Occupancy Dwelling and Detached Garage		
PBP (2019) Assessment Type	Infill (Chapter 7)		
Bushfire Consultancy	Bushfire Planning and Design - Director Matthew Noone - Accreditation number BPAD-25584 (Level 3)		
Report no.	Date of Issue	BR-860124-A	06/12/2024

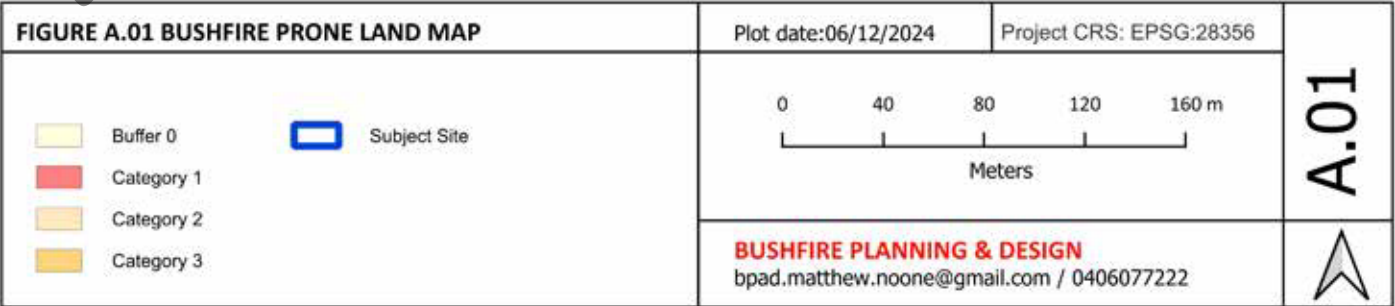
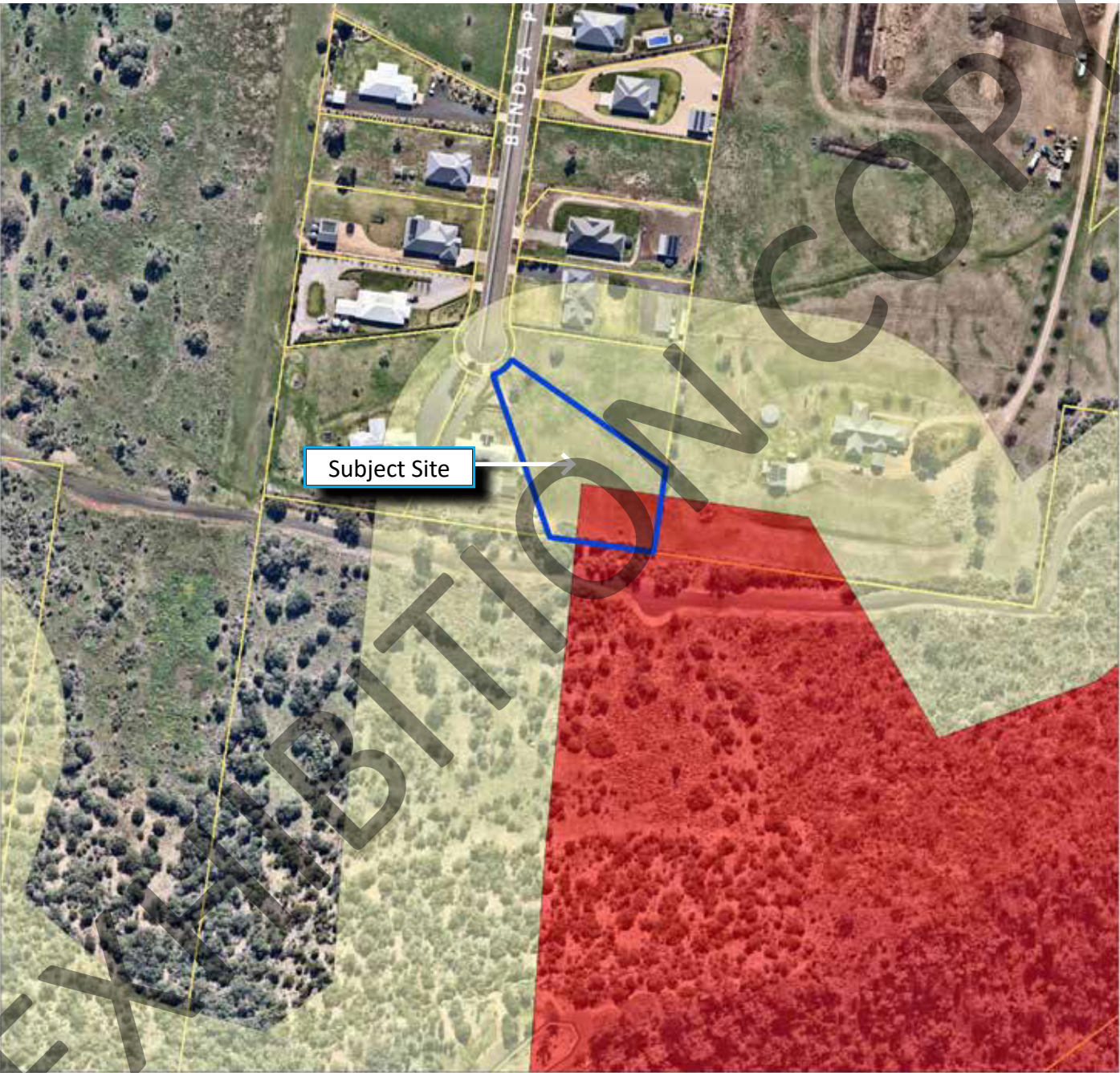
SCOPE

The first intended audience for our report is our Client and the design team. The recommendations in this report should be adopted integral to design development and prior to the DA being lodged. Additionally our recommendations are to be included in the DA consent and should be confirmed prior to the release of the Construction Certificate. Whereas our report will be used to support the development application to which this report relates, our report is not necessarily written for RFS or Council and the information within is to be considered in the same context as a set of specifications that if employed will achieve compliance with PBP.

Our report provides an assessment of the Bushfire Attack Level (BAL) and outlines the Bushfire Protection Measures (BPM's) that must be incorporated into the development design to ensure compliance with AS3959 (2018) Construction of Buildings in Bushfire Prone Areas and the New South Wales Rural Fire Service document Planning for Bushfire Protection (2019).

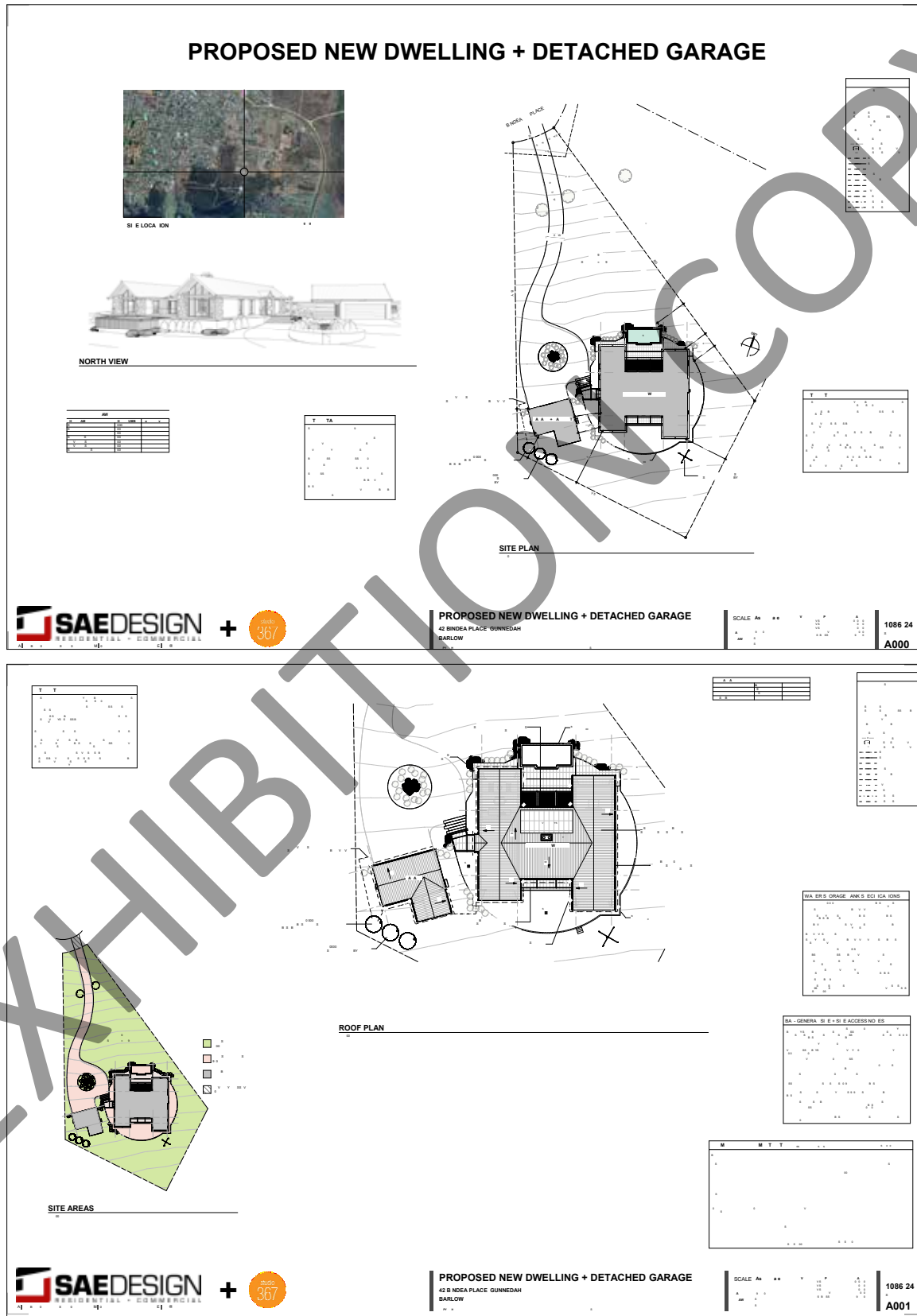
A.01 BUSHFIRE PRONE LAND

The subject site whether in whole or part is recorded as bushfire affected on a relevant map certified under Section 10.3 (2) of the Environmental Planning and Assessment Act 1979 (Refer figure A.01). All developments on certified bushfire prone land are required to address bushfire as per Section 4.14 of the Environmental Planning and Assessment Act 1979.



A.02 DEVELOPMENT PROPOSAL

The development relates to the construction of a sole occupancy dwelling and detached garage on a vacant allotment.



Concept Drawings.

A.03 REGULATORY FRAME WORK

The relevant legislative instruments applicable to the subject development are outlined below.

PRE-DEVELOPMENT CONSENT

- Section 10.3 (2) of the Environmental Planning and Assessment Act 1979.
- Section 4.14 of Environmental Planning and Assessment Act 1979
- Planning for Bush Fire Protection (2019).

POST-DEVELOPMENT CONSENT

- National Construction Code (2022).
- AS3959 (2018) Construction of Buildings in Bush Fire Prone Areas.

A.04 SITE LOCATION, DESCRIPTION AND POTENTIAL BUSHFIRE THREATS

The subject site is located in Gunnedah which is within the Gunnedah Shire Local Government Area (LGA). The site is located in a recent subdivision and will be surrounded by managed residential curtilage in the near future. Woodland vegetation occurs to the south of the site within Porcupine Reserve. A fire trail is located within Porcupine Reserve adjacent the boundary of the site. According to NSW RFS Fire Trail Standards (2023), the fire trail clearing is at least 6m wide. A narrow area of vegetation occurs between the southern boundary of the site and the fire trail (assessed as remnant in accordance with Appendix A1.11.1 of PBP (2019)). Access to the site is via Bindea Place to the north-west.

A.05 LAND USE, ZONING AND PERMISSIBILITY

The subject site is zoned R5 - Large Lot Residential



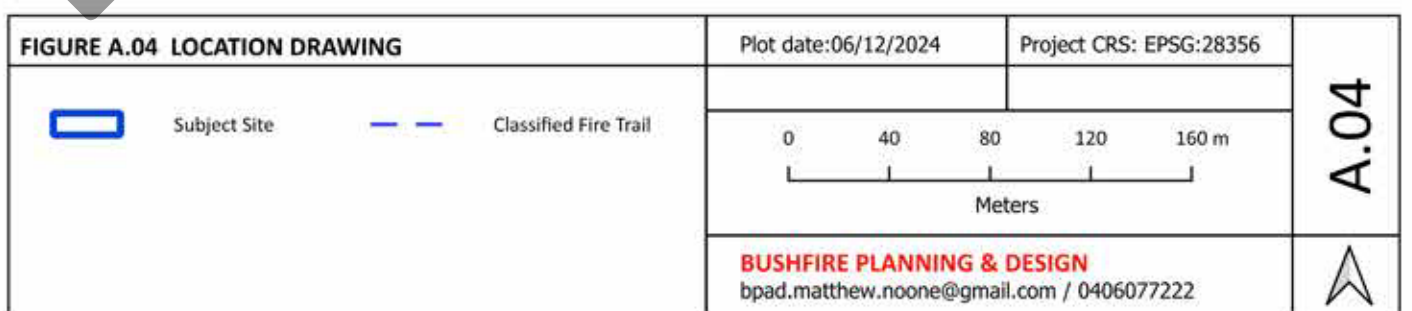
LAND ZONING LEGEND



R5 - Large Lot Residential



RE1 - Public Recreation



A.06 SIGNIFICANT ENVIRONMENTAL FEATURES

Our BAL-assessment in Part-B of this report has considered the environmental features that are relevant to our assessment. There are no additional significant environmental features within the 140m study area that would influence our opinion of the assessed Bushfire Attack Level.

A.07 DETAILS OF ABORIGINAL HERITAGE

To our knowledge the site is not associated with any items of Aboriginal heritage.

A.08 THREATENED SPECIES, COMMUNITIES AND CRITICAL HABITATS

The subject site is not mapped by the Department of Planning, Industry and Environment (DPIE) under Part 7 of the Biodiversity Conservation Act 2016 (BC Act) as having Biodiversity Values (BV).

A.09 REPORT LIMITATIONS

This bushfire assessment is developed based on the current accepted standards. The severity of bushfire attack is reliant on many variables. Due to these variables the bushfire attack on any given day could be higher due to the limitations outline below. The bushfire protection measures contained in this document does not guarantee that loss of life, injury or property damage will not occur during a bush fire event.

Fire Danger Index

It may be possible that days of higher Fire Danger Index (FDI) may be experienced than the FDI levels used for assessment. This may result in fire situations where conditions challenge survivability of buildings and their occupants.

Fuel Load

The fuel loads and vegetation classes used in our assessment are based on the State Vegetation Mapping and Comprehensive Fuel Loads based on The University of Wollongong's (UoW) Fuels Modelling Project. Fuel loads in some areas may be higher than those used in this document. This can influence bush fire behaviour and the potential impact on property. The DTS APZs in PBP (2019) are based on the UoW fuel loads and are therefore suitable for design purposes.

Climate change

Climate change has led to longer, more intense fire seasons and an increase in the average number of elevated fire weather days, as measured by the Forest Fire Danger Index (FFDI). Last year saw the highest annual accumulated FFDI on record. Australia was the first country in the world to report the impact of climate change on bushfires through CSIRO's work to model the increase in high fire danger days.

Legislative Standards

Recommendations relating to development of bushfire prone land are a directive through the legislative standards applicable at the time of writing. Legislative standards change over time. All recommendations made are based on the current standards. We cannot guarantee that the current standards will be suitable in comparison to future standards.

Maintenance

After the issuance of an Occupancy Certificate (OC) it is imperative that the bushfire protection recommendations are carried out for the life of the development. Failure to maintain a property in accordance with the RFS standards for Asset Protection Zones could lead to the failure of the building, property and life. We have no control over the extent of how well a property will be maintained post OC.

B.01 INTRODUCTION

For the purpose of this bushfire assessment, the vegetation is required to be described to a distance of 140m from the boundary and the slope to 100m from boundary. Vegetation type and slope under vegetation are the factors that will significantly affect bushfire behaviour.

‘Research has shown that 85% of houses are lost in the first 100m from bushland and that ember attack is a significant form of attack on properties’ (RFS 2006).

B.02 SLOPE DETERMINATION

The effective slope has been assessed for a distance of at least 100m from the proposed development. The slope data has been calculated from a 1m LiDAR Digital Elevation Model (DEM). The source data sets have been captured to standards that are generally consistent with the Australian ICSM LiDAR Acquisition Specifications which require a fundamental vertical accuracy of at least 0.30m (95% confidence) and horizontal accuracy of at least 0.80m (95% confidence). The slope arrows indicated in figure A represent the slope calculated across the length of the arrow direct from the digital elevation model.

B.03 HOW THE VEGETATION COVER IS MEASURED

The distance to vegetation is measured from the extent of vegetation cover interpolated from high resolution aerial imagery. For the areas beyond the line of sight we have defaulted to interpreting the extent of vegetation cover high resolution aerial image.

B.04 PREDOMINANT VEGETATION FORMATIONS

This assessment considers the vegetation within the site and if relevant, vegetation external to the site boundaries. Where mixes of vegetation formations are located together, the vegetation formation providing the greater hazard (highest radiant heat load) shall be used to determine the BAL and APZ. The combination of vegetation and slope that yields the worst case scenario shall be used (A1.2 PBP 2019). The vegetation mapping provides an overview of the types of vegetation proximal to the site. The predominant vegetation class to the forest to the west. The vegetation mapping shown in Figure B.04 is not intended to be conclusive.



FIGURE B.04 VEGETATION FORMATIONS

- | | | |
|---|---|---|
|  Subject Site |  Dry Sclerophyll Forests (Shrubby sub-formation) |  Grassy Woodlands |
|  Dry Sclerophyll Forests (Shrub/grass sub-formation) |  Grasslands |  Rainforests |

CRS: EPSG:28356

Plot date: 06/12/2024

0 Meters 100 m

BUSHFIRE PLANNING & DESIGN
projects@bpad-nsw.com / 0406077222

B.05 BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT.

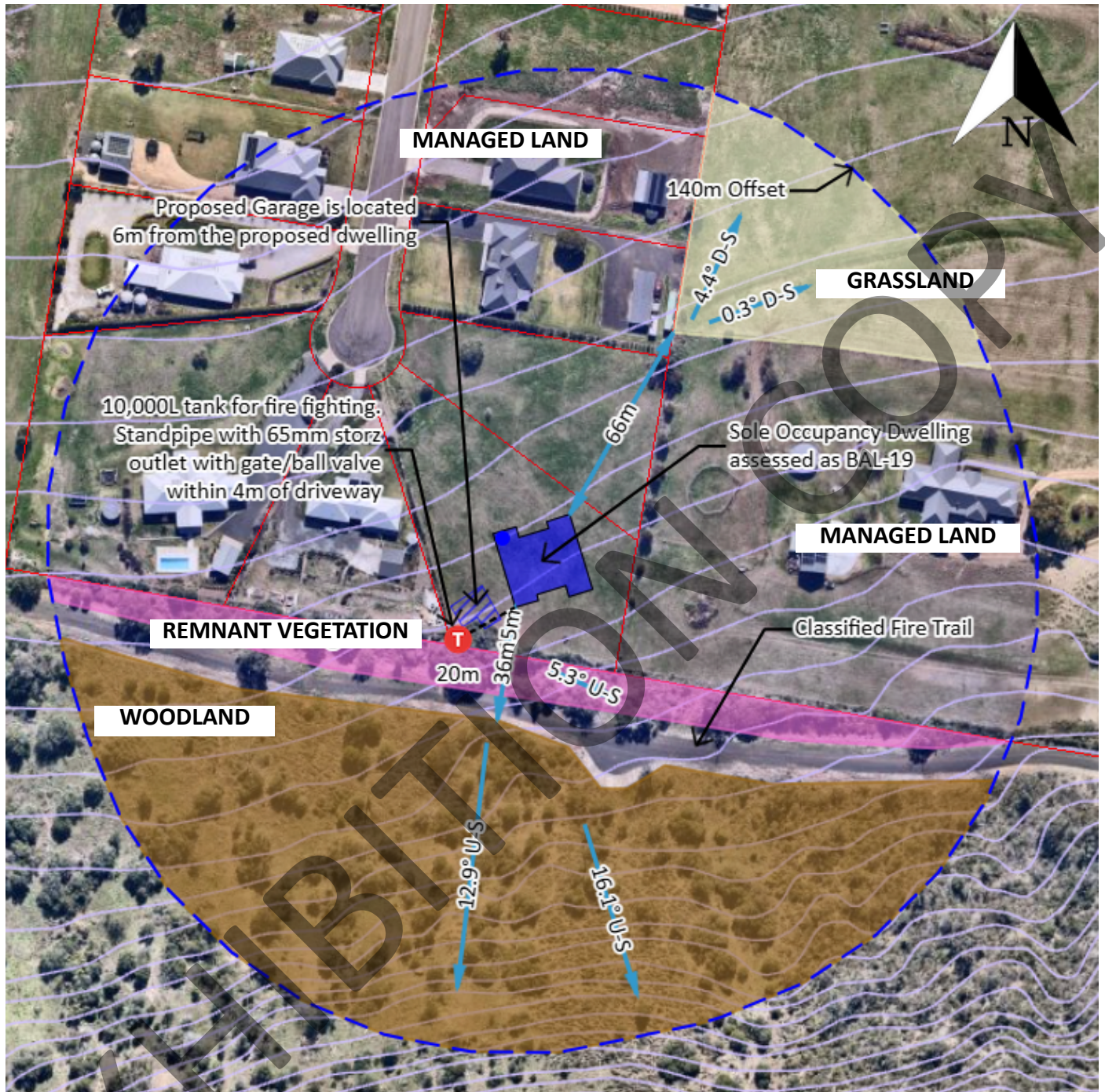
Remnant and woodland vegetation is located 15m and 36m to the south of the site, respectively.

Based on PBP (2019) Table A1.12.5 and the parameters indicated in Table 1 and shown in Figure A, the proposed dwelling is assessed as BAL-19.

TABLE 1 Dwelling					
LGA = Gunnedah Shire Council				Forest Fire Danger Index = FDI 80	
ASPECT ¹	Vegetation Class ²	Max Effective Slope ³	Site slope ³	DTV from dwelling ⁵	Predicated Radiant Heat
S1	Remnant ⁷	U-S	N/A	15m	19 kW/m ²
S2	Woodland	U-S	N/A	36m	12.5 kW/m ²
Abbreviations					
AOD All other directions		EML Extent of managed land		NVC Narrow vegetation corridor	

¹	Cardinal direction from each proposed building facade based on grid north.
²	Vegetation Classifications are as described in PBP (2019) A1.2.
³	Site slope is calculated from 1m LiDAR contours.
⁴	Minimum APZ required stated as Acceptable Solutions within Table 1.12.2 and A1.12.5. PBP (2019).
⁵	Distance to Vegetation (DTV) Actual dimensional setback from the face of the building to the assessed vegetation. Achieved Asset Protection Zone (APZ) or extent of managed land (EML).
⁶	Where the direct line of sight between the proposed building and assessed vegetation is obstructed (by a wall or building) the assessed rating can be lowered by one BAL-rating (PBP 2019, s. A1.8).
⁷	Remnant bushland and narrow vegetation corridors (NVC) as stated in PBP (2019) s.A1.11 can be assessed as rainforest as a simplified approach or be assessed as Short Fire Run using method 2 (AS3959).
⁸	Deeming provisions for grassland s.7.9 PBP (2019).

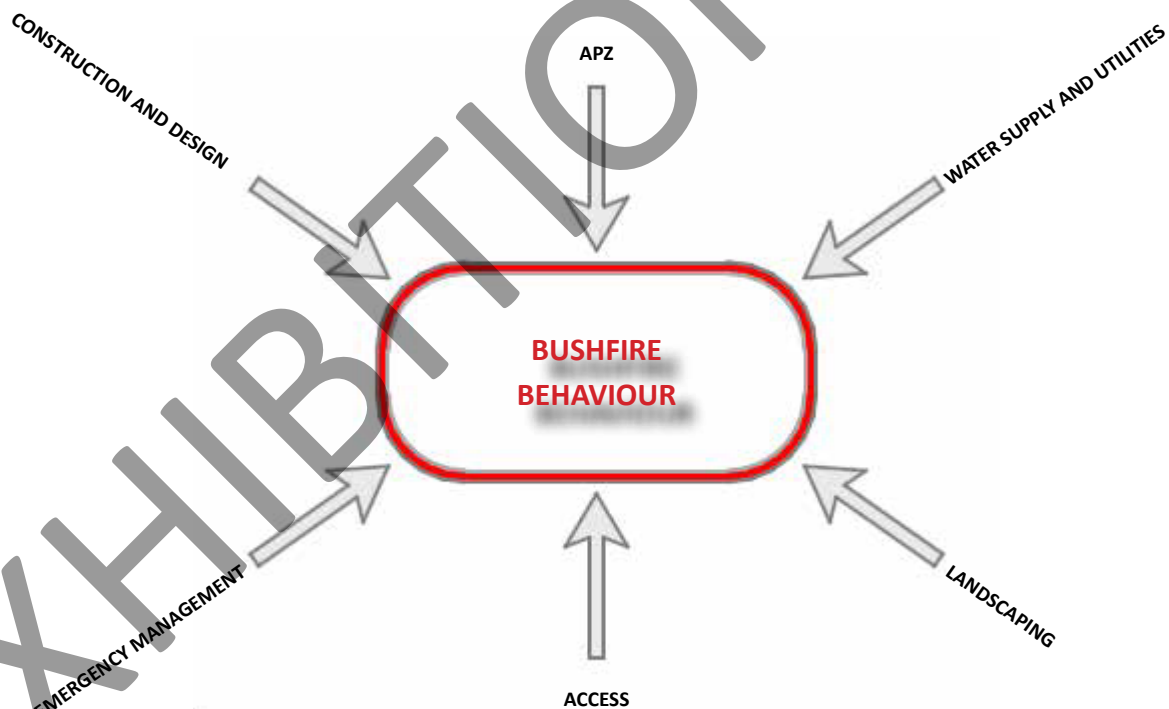
FIGURE A



This site diagram has been produced for the express intent of supporting the development application described in this report. Use of this drawing for any other purpose, or by any persons other than those for whom this document was prepared is prohibited. This drawing is representative only and should not be used to scale. Unless otherwise specified, all height data is derived from the NSW Government Spatial Services Digital Elevation Model.

PART C BUSHFIRE PROTECTION MEASURES / RECOMMENDATIONS

BPMs can mitigate the impact of bush fire attack on people and assets. The types of protection measures include APZs, access, landscaping, water supply, building design and construction and emergency management arrangements. These measures assist building survival during a bush fire. They also contribute to the safety of firefighters and members of the community occupying buildings during the passage of a bush fire front. There are a range of different BPMs which should be applied in combination based upon the development type and the level of bush fire risk. All requirements for BPMs that relate to the development must be provided, as required by this document.



C.01 ASSET PROTECTION ZONES (APZs)

The site is to be managed as an Inner APZ in perpetuity in accordance with Appendix 4 of PBP (2019). To do this the following guidelines are to be applied.

TREE CANOPY TREATMENT

- Inner APZ tree canopy cover should be less than 15% at maturity;
- Inner APZ trees at maturity should not touch or overhang the building;
- Inner APZ lower limbs should be removed up to a height of 2m above the ground;
- tree canopies should be separated by 2 to 5m; and
- preference should be given to smooth barked and evergreen trees.

SHRUBS

- create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided;
- shrubs should not be located under trees;
- shrubs in the Inner APZ should not form more than 10% groundcover; and
- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

GRASS

- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
- leaves and vegetation debris should be removed.

VEGETATION IMPACT STATEMENT

The site is cleared of vegetation. No vegetation is required to be removed to comply with Appendix 4 of PBP (2019).

C.02 CONSTRUCTION

Our assessment of the Bushfire Attack Level indicates the proposed dwelling could experience radiant heat loads up to 19 kW/m² if exposed to bushfire.

The proposed dwelling is to be constructed to comply with BAL-19 as specified in AS3959 (2018). This includes the general requirements of Section 3 of AS3959 (2018) and the additional construction requirements stipulated in Section 7.5 of PBP (2019). The north-western elevation can be reduced to the next lower BAL in accordance with the shielding provisions in PBP (2019) and AS3959 (2018), i.e. the north-western elevation can be constructed to comply with BAL-12.5. Please note the reduction in BAL does not include sub-floors and roofs.

There are no bushfire construction requirements for the proposed garage as it is located 6m from the proposed dwelling.

Any proposed fencing should be constructed from hardwood or non-combustible materials. New fencing within 6m of any habitable building should be made of non-combustible material only.

C.03 ACCESS

In bushfire-prone areas, the road system serves several purposes. It provides firefighters with access to structures, allowing for more efficient use of resources. It also offers evacuation routes for both firefighters and the public. Additionally, it enables access to areas of bushfire hazard for firefighting and hazard mitigation purposes. Roads must have sufficient width and other dimensions to ensure safe, unobstructed access and to allow firefighting crews to operate equipment around their vehicles.

ACCESS - PUBLIC ROADS

The site is accessed via Bindea Place. Bindea Place is a sealed public road. The public road system is deemed to be adequate for emergency services appliances.

ACCESS - PROPERTY ACCESS

The driveway is to comply with the following RFS requirements.

property access roads are two-wheel drive, all weather roads.

the capacity of road surfaces and any bridges/ causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes), bridges and causeways are to clearly indicate load rating.

Provide "suitable access for a Category 1 fire appliance to within 4m of the static water supply"

minimum 4m carriageway width;

a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches;

property access must provide a suitable turning area in accordance with Appendix 3 of PBP (2019);

curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress;

the minimum distance between inner and outer curves is 6m;

the crossfall is not more than 10 degrees;

maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads;

C.04 WATER

The development will rely on tank water for fire fighting. To comply with PBP (2019), a minimum of 10,000L is to be dedicated for fire fighting. The fire fighting water supply outlet must be located within 4m of the driveway to allow RFS with efficient access. The following are to be specified where applicable.

- A connection for fire-fighting purposes is to be located within the IPA or non-hazard side and away from the structure; 65mm Storz outlet with a ball valve is fitted to the outlet.
- Ball valves and pipes are to be adequate for water flow and are metal.
- Supply pipes from tank to ball valve are to have the same bore size to ensure flow volume.
- Underground tanks are to have an access hole of 200mm to allow tankers to refill direct from the tank.
- A hardened ground surface for truck access is to be provided within 4m.
- Above-ground tanks are to be manufactured from concrete or metal.
- Raised tanks are to have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F of AS 3959).
- Unobstructed access is to be provided at all times.
- Underground tanks are to be clearly marked.
- Tanks on the hazard side are to be provided with adequate shielding for the protection of firefighters.
- All exposed water pipes external to the building are to be metal, including any fittings.
- Where pumps are provided, they are to be a minimum 5hp or 3kW petrol or diesel-powered pump, and are to be shielded against bush fire attack. Any hose and reel for fire-fighting connected to the pump shall be 19mm internal diameter.
- Fire hose reels are to be constructed in accordance with AS/NZS 1221:1997 and installed in accordance with the relevant clauses of AS 2441:2005.

GAS PROVISIONS

Should the applicant wish to install a gas supply to the dwelling, the following criteria are to be complied with.

- Reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is to be used.
- All fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side.
- Connections to and from gas cylinders are to be metal.
- Polymer-sheathed flexible gas supply lines are not to be used.
- Above-ground gas service pipes are to be metal, including and up to any outlets.

ELECTRICAL PROVISIONS

Should there be a need to install new electrical connections the following should be considered;

- Where practicable place electrical transmission lines are underground or,
- If overhead electrical transmission lines are proposed:- lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and no part of a tree is closer to a power line than the distance set out in accordance with the specifications in 'Vegetation Safety Clearances' issued by Energy Australia (NS179, April 2002).
- No part of a tree is to be closer to a power line than the distance set out in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines.

PART D SUMMARY

The development relates to the construction of a sole occupancy dwelling and detached garage on a vacant allotment.

The development is captured under Section 4.14 of the Environmental Planning and Assessment Act 1979; Consultation and development consent – certain bush fire prone land. For the purpose of bushfire assessment the development is considered infill development as described in PBP (2019).

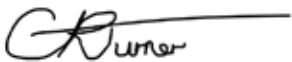


The subject site is located in Gunnedah which is within the Gunnedah Shire Local Government Area (LGA). The site is located in a recent subdivision and will be surrounded by managed residential curtilage in the near future. Woodland vegetation occurs to the south of the site within Porcupine Reserve. A fire trail is located within Porcupine Reserve adjacent the boundary of the site. According to NSW RFS Fire Trail Standards (2023), the fire trail clearing is at least 6m wide. A narrow area of vegetation occurs between the southern boundary of the site and the fire trail (assessed as remnant in accordance with Appendix A1.11.1 of PBP (2019)). Access to the site is via Bindea Place to the north-west.

The is to be managed as an Inner APZ in accordance with Appendix 4 of PBP (2019).

The proposed dwelling is to be constructed to comply with BAL-19 as specified in AS3959 (2018). This includes the general requirements of Section 3 of AS3959 (2018) and the additional construction requirements stipulated in Section 7.5 of PBP (2019). The north-western elevation can be reduced to the next lower BAL in accordance with the shielding provisions in PBP (2019) and AS3959 (2018), i.e. the north-western elevation can be constructed to comply with BAL-12.5.

A minimum of 10,000L is to be dedicated for fire fighting. The fire fighting water supply outlet must be located within 4m of the driveway, which is to be designed to accommodate an RFS appliance.

Should you have any questions in relation to this report please get in contact.

Report prepared by:	Bushfire Planning and Design Author: Christiane Turner	Reviewed: Matthew Noone
	 Bushfire Consultant BSc (Wildlife Conservation Biology) Hons	 

D.01 REFERENCES

AS3959 (2018)	Australian Standard, Construction of buildings in bushfire-prone areas, AS 3959, Third edition 2018 Standards Australia International Ltd, Sydney.
BCA (2019)	Building Code of Australia 2019, Building Code of Australia, Australian Building Codes Board, Canberra 2019.
EPA Act (1979)	Environmental Planning and Assessment Act 1979, NSW Government, NSW, legislation found at www.legislation.nsw.gov.au
Keith (2004)	Keith, D.A. (2004), Ocean shores to desert dunes: The Native Vegetation of New South Wales and the ACT. NSW Department of Environment and Conservation (2004).
PBP (2019)	Planning for Bushfire Protection, a Guide for Councils, Planners, Fire Authorities, Developers and Home Owners. Rural Fire Service 2019, Australian Government Publishing Service, Canberra.
RFS (2015)	Rural Fire Service, Guide For Bush Fire Prone Land Mapping, Version 5b.

D.02 APPENDICES

Appendix A - Client Supplied Drawings.

APPENDIX A -

CLIENT SUPPLIED DRAWINGS

EXHIBITION COPY

PROPOSED NEW DWELLING + DETACHED GARAGE



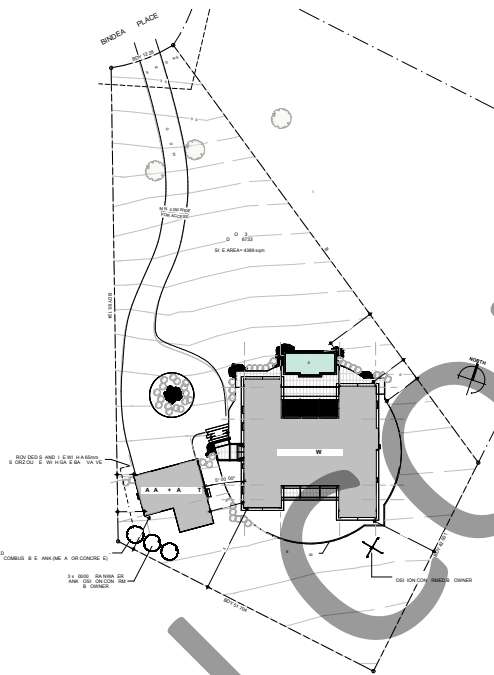
SI E LOCA ION



NORTH VIEW

ITEM	QTY	UNIT	PRICE	TOTAL
1.00	1.00	sqm	1.00	1.00
2.00	1.00	sqm	1.00	1.00
3.00	1.00	sqm	1.00	1.00
4.00	1.00	sqm	1.00	1.00
5.00	1.00	sqm	1.00	1.00
6.00	1.00	sqm	1.00	1.00
7.00	1.00	sqm	1.00	1.00
8.00	1.00	sqm	1.00	1.00
9.00	1.00	sqm	1.00	1.00
10.00	1.00	sqm	1.00	1.00

SI E DE AILS	QTY	UNIT	PRICE	TOTAL
1.00	1.00	sqm	1.00	1.00
2.00	1.00	sqm	1.00	1.00
3.00	1.00	sqm	1.00	1.00
4.00	1.00	sqm	1.00	1.00
5.00	1.00	sqm	1.00	1.00
6.00	1.00	sqm	1.00	1.00
7.00	1.00	sqm	1.00	1.00
8.00	1.00	sqm	1.00	1.00
9.00	1.00	sqm	1.00	1.00
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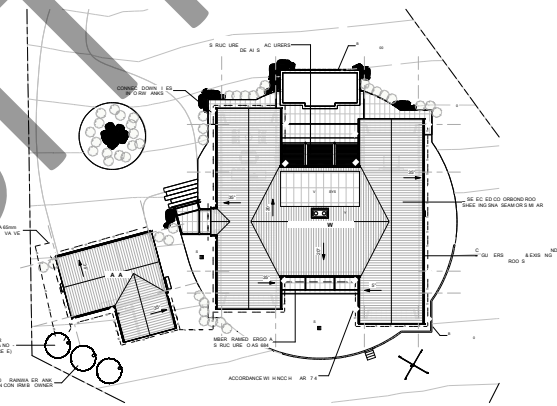
SITE PLAN



PROPOSED NEW DWELLING + DETACHED GARAGE
42 B INDEA PLACE GUNNEDAH
BARLOW

SCALE	As Indicated
1:100	1:100
1:200	1:200
1:500	1:500
1:1000	1:1000

SI E NO ES	
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94	94.00
95	95.00
96	96.00
97	97.00
98	98.00
99	99.00
100	100.00

WATER STORAGE TANK SPECIFICATIONS:	
ANALYSIS	1.00 1.00

ROOF PLAN

BAL-GENERAL SITE SITE ACCESS NOTES	
1.00	1.00
2.00	2.00
3.00	3.00
4.00	4.00
5.00	5.00
6.00	6.00
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9.00	9.00
10.00	10.00

PLUMBING REQUIREMENT NO ES	
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SITE AREAS



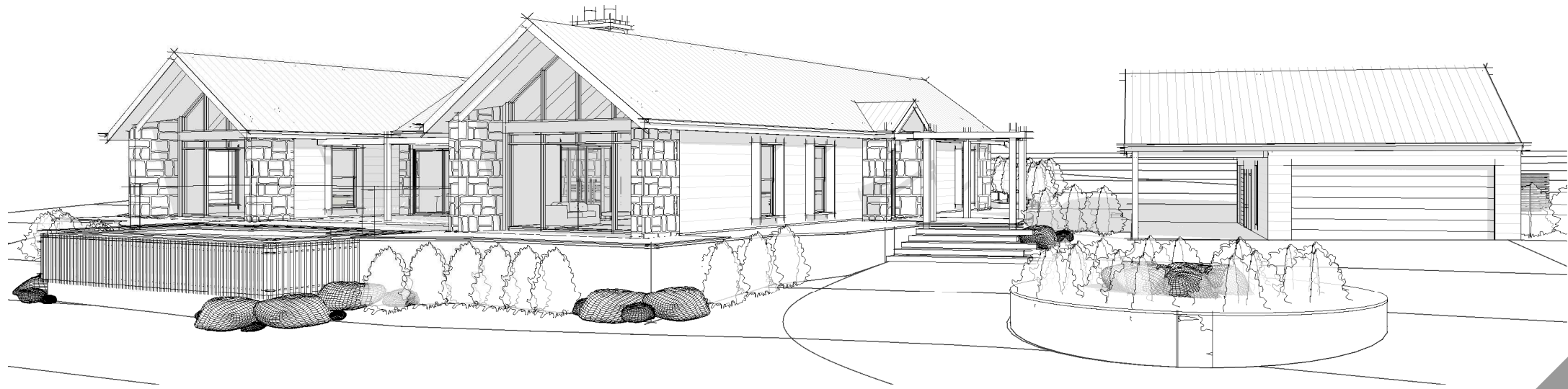
PROPOSED NEW DWELLING + DETACHED GARAGE
42 B INDEA PLACE GUNNEDAH
BARLOW

SCALE	As Indicated
1:100	1:100
1:200	1:200
1:500	1:500
1:1000	1:1000

PROPOSED NEW DWELLING, DETACHED GARAGE + POOL



SITE LOCATION



NORTH VIEW

SCHEDULE OF DRAWINGS

SHEET NAME	SHEET NUMBER	Current Revision
SITE INFORMATION	A000	6
SITE PLAN	A001	6
FLOOR PLAN	A002	6
SCHEDULES	A003	6
ELEVATIONS	A004	6
ELEVATIONS	A005	6
SEDIMENT EROSION CONTROL	A006	6

SITE DETAILS

SITE AREA:	4389 sqm
LEP ZONING:	RS LARGE LOT RESIDENTIAL
LOCAL GOVERNMENT AREA:	GUNNEDAH SHIRE COUNCIL
DEVELOPMENT TYPE:	PROPOSED NEW DWELLING, DETACHED GARAGE + POOL
BUILDING CLASSIFICATION:	CLASS 1A + 10A
WIND CLASSIFICATION:	N3 SITE CLASSIFICATION TO AS 4055-2021
SOIL CLASSIFICATION:	REFER TO ENG. DETAILS
CLIMATE ZONE:	4 (WWW.ABCB.GOV.AU MAP)
BUSHFIRE PRONE LAND:	AREAS OF BUSHFIRE PRONE VEGETATION: BAL 19.0
OTHER CONTROLS:	N/A

PROVIDED STANDPIPE WITH A 65mm STORZ OUTLET WITH GATE/BALL VALVE

A MINIMUM OF 10,000 L1 RAINWATER DEDICATED TO BUSHFIRE & STORED IN A NON-COMBUSTIBLE TANK (METAL OR CONCRETE)

3 x 10000LT RAINWATER TANK POSITION CONFIRM BY OWNER

SITE PLAN

1 : 300

LEGEND

T	TELSTRA PIT
E	ELECTRICAL PIT
WM	WATER METER
PP	POWER POLE
DP	DOWNPIPE
SWP	STORMWATER PIT
SMH	SEWER ACCESS CHAMBER
KIP	KERB INLET PIT
H	HYDRANT
LB	LETTER BOX
LP	LIGHT POLE
GAS	GAS PIT
-20-	APPROX. SURFACE CONTOUR
[200]	DESIGN SURFACE LEVEL
200	EXISTING SURFACE LEVEL
-SW-	STORMWATER DRAINAGE
-S-	SEWER
-W-	WATER
-T-	TELSTRA
-OPT-	OPTIC FIBRE
-E-	ELECTRICAL
-OHP-	OVERHEAD POWER
-GS-	GAS LINE
-EX-SW-	EXISTING STORMWATER
-EX-S-	EXISTING SEWER

SITE NOTES

ALL SURFACE WATER TO FALL AWAY FROM BUILDING IN ALL DIRECTIONS IN ACCORDANCE WITH REQUIREMENTS OF AS2870 + NCC HP PART 3.3.3

DOWNPIPES TO BE CONNECTED INTO STORMWATER AS SOON AS THE ROOF IS INSTALLED.

DOWNPIPES SHOULD BE AT A MAXIMUM OF 12 METER CENTRES + AS CLOSE TO VALLEYS AS POSSIBLE AND IN ACCORDANCE WITH NCC HP PART 7.4 + NCC VOL. 3

EXCAVATED MATERIAL STORED ON SITE SHALL BE PLACED UP-SLOPE OF SEDIMENT FENCE. INSTALL A SEDIMENT FENCE ON THE DOWNSLOPE SIDE OF MATERIAL.

CONSTRUCTION VEHICLES TO BE PARKED ON THE STREET, TO PREVENT TRANSFERRING DEBRIS ONTO STREET. UNLESS ALTERNATIVE SEDIMENT TRANSFER REDUCTION METHODS ARE IN PLACE.

ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED AND EXPOSED PRIOR TO EARTHWORKS COMMENCING & IT IS THE RESPONSIBILITY OF THOSE PERSONS USING THIS PLAN TO CONFIRM BOTH POSITION & LEVEL OF THESE UTILITIES IN CONJUNCTION WITH THE APPROPRIATE AUTHORITY.

PROPOSED NEW DWELLING, DETACHED GARAGE + POOL

42 BINDEA PLACE, GUNNEDAH
BARLOW

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SCALE As indicated

DATE 29/11/2024
DRAWN SAE
DESIGNED SAE

REVISION	DESCRIPTION
2	REVISED FLOOR PLAN
3	REVISED FLOOR PLAN
4	REVISED GARAGE
5	FOR APPROVAL
6	DA SUBMISSION

DATE 02/04/2024
31/07/2024
27/09/2024
15/10/2024
29/11/2024

PROJECT No.
1086-24
SHEET
A000

ALL SURFACE WATER TO FLOW AWAY FROM BUILDING IN ALL DIRECTIONS IN ACCORDANCE WITH REQUIREMENTS OF AS2670 + NCC HP PART 3.3.3

DOWNPIPES TO BE CONNECTED INTO STORMWATER AS SOON AS THE

DOWNPIPES SHOULD BE AT A MAXIMUM OF 12 METRE CENTERS + AS CLOSE TO VALLEYS AS POSSIBLE AND IN ACCORDANCE WITH NCC HP PART 7.4 + NCC VOL 3

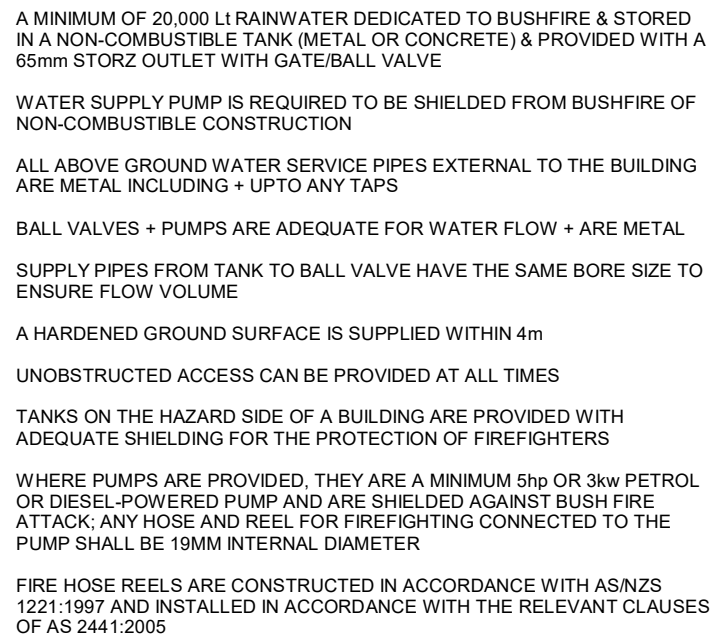
EXCAVATED MATERIAL STORED ON SITE SHALL BE PLACED UP-SLOPE OF SEGMENT FENCE. INSTALL A SEDIMENT FENCE ON THE DOWN-SLOPE OF MATERIAL.

CONSTRUCTION VEHICLES TO BE PARKED ON THE STREET. TO PREVENT TRANSFERRING DEBRIS ONTO STREET. UNLESS ALTERNATIVE METHOD OF TRANSPORT RECOMMENDED BY THE COUNCIL

ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED AND EXPOSED PRIOR TO EARTHWORKS COMMENCING & IT IS THE RESPONSIBILITY OF THOSE PERSONS USING THIS PLAN TO CONFIRM BOTH THE DEPTH AND LOCATION OF THE UTILITIES IN CONJUNCTION WITH THE APPROPRIATE AUTHORITY.

ROOF AREAS		
Name	Area	Comments
DWELLING ROOF	497.7 m ²	
GARAGE ROOF	120.3 m ²	
AJUSTABLE PERGOLA	28.5 m ²	
TOTAL	646.5 m ²	

T	TELSTRA PIT
E	ELECTRICAL PIT
WM	WATER METER
PP	POWER POLE
⌀	DOWNPIPE
SWP	STORMWATER PIT
SMH	SEWER ACCESS CHAMBER
KIP	KERB INLET PIT
H	HYDRANT
LB	LIGHT BOX
LP	LITTER POLE
GAS	GAS PIT
20	APPROX. SURFACE CONTOUR
200	DESIGN SURFACE LEVEL
200	EXISTING SURFACE LEVEL
—SW—SW—	STORMWATER DRAINAGE
—S—S—	SEWER
—W—W—	WATER
—T—T—	TELSTRA
—OPT—OPT—	OPTIC FIBRE
—E—E—	ELECTRICAL
—OP—OP—	OVERHEAD POWER
—G—G—	GAS LINE
—EX SW—EX SW—	EXISTING STORMWATER
—EX S—EX S—	EXISTING SEWER



1 : 200



THE AREA AROUND THE DWELLING FOR A DISTANCE OF 50m OR TO THE PROPERTY BOUNDARY SHOULD BE MANAGED AS AN INNER ASSET PROTECTION ZONE AS OUTLINED IN THE NSW RFS DOCUMENT 'STANDARDS FOR ASSET PROTECTION ZONES' - NSW RFS 2010 'PLANNING FOR BUSHFIRE PROTECTION' (PFBP) (APPENDIX 4);

MINIMUM CARRIAGEWAY WIDTH OF 4.0m

VEHICLE PASSING BAYS ARE REQUIRED AT EVERY 200m ALONG ENTRANCE WAY. MIN. 20.0m LONG + 2.0m WIDE

NO TREE TO OVERHANG WITHIN 4.0m OF ACCESS

INCORPORATE A VEHICLE LOOP ROAD AROUND THE HOUSE OR A 12m OPEN SPACE TURNING CIRCLE IN ACCORDANCE WITH PFBP APPENDIX 3

NO ROADS ALLOWED WITHOUT A 6.0m INNER RADIUS TURNING CIRCLE

PROPERTY ACCESS ROADS SHALL COMPLY WITH NSW RFS DOCUMENT 'STANDARDS FOR ASSET PROTECTION ZONES' - NSW RFS 2010 'PLANNING FOR BUSHFIRE PROTECTION' (APPENDIX 4);

NEW CONSTRUCTION SHALL COMPLY WITH AS3599 CONSTRUCTION OF BUILDING IN BUSHFIRE PRONE LAND

ALL LANDSCAPING IS TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF AN INNER PROTECTION AREA (IPA) DOCUMENT TITLED 'PLANNING FOR BUSHFIRE PROTECTION' (APPENDIX 4 - ASSET PROTECTION ZONE Requirements, pp. 106-107)

ALL FENCING IS TO BE HARDWOOD OR NON-COMBUSTIBLE IN ACCORDANCE WITH THE DOCUMENT TITLED 'PLANNING FOR BUSHFIRE PROTECTION' (SECTION 7.6 - FENCES AND GATE, P.70)

AS2870-2011 (Clause 5.6)

ADDITIONAL REQUIREMENTS FOR CLASSES M, HI, H2 AND E SITES:
On dry or extremely reactive sites the use of system of plumbing detailed in accordance with the following:

- 5.6.3 Drainage requirements
 - a) Surface drainage shall be considered in the design of the footing system and necessary modification shall be included in the design documentation. Surface drainage of the site shall be controlled from the start of site preparation and construction. The drainage system shall be completed by the finish of construction of the building.
 - b) The base of trenches shall be sloped away from the building. Trenches shall be backfilled with clay in the top 300 mm within 1.5 m of the building. The clay used for backfilling shall be compacted. Where pipes pass under the footing system, the trench shall be backfilled full depth with clay or concrete to restrict the ingress of water beneath the footing system.
 - c) Where pipes pass under the footing system, the trench shall be backfilled full depth with clay to act as a barrier to the ingress of water beneath the footing system. Alternatively, a plastic membrane across the cross-section of the trench, taped to the pipe and keyed into the sides and base of the trench may be used.
 - d) Subsurface drains to remove groundwater shall not be used within 1.5 m of the building unless designed in accordance with engineering principles.
- 5.6.4 Plumbing requirements
 - a) The floor beams of a raft and perimeter strip footings shall be pounded where practicable, but where necessary shall be detailed to allow for movement. Closed-cell polyethylene lagging shall be used around all stormwater and sanitary plumbing drain pipe penetrations through footings. The lagging shall be a minimum of 20 mm thick on Class H2 sites and 40 mm thick on Class H2 and Class E sites. Vertical penetrations do not require lagging.
 - NOTE: Sleeves allowing equivalent movements may be used as an alternative to the lagging.
 - b) Drains attached to or emerging from underneath the building incorporate flexible joints immediately outside the footing and commencing within 1 m of the perimeter to accommodate a small range of differential movement in any direction equal to the estimated characteristic surface movement of the site (s_y). In the absence of specific design guidance, the fittings or other devices that are provided to allow for the movement shall be set at the mid-position of their range of possible movement at the time of installation. The movement shall be allowed for movement equal to 0.5 s_y in any direction from the initial setting. This requirement applies to all stormwater and sanitary plumbing drains and discharge pipes.
 - c) Cold water pipes and heated or hot water pipes shall not be installed under a slab, unless the pipes are installed within a conduit so that if the pipe leaks water it will be noticed above the slab or outside the slab and will not leak unnoticed under the slab.
 - NOTE: Water service pipes and hot water concrete slabs should comply with the relevant requirements of AS/NZS 3500.1. Heated water service pipes installed under concrete slabs should comply with the relevant requirements of AS/NZS 3500.4.

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SCALE		As indicated		REVISION	DESCRIPTION	DATE	PROJECT No.
		2		REVISD FLOOR PLAN	02/04/2024	1086-24	A001
		3		REVISD FLOOR PLAN	31/07/2024		
		4		REVISD GARAGE	27/08/2024		
DATE	29/11/2024	5		FOR APPROVAL	15/10/2024		
DRAWN	SAE	6		DA SUBMISSION	29/11/2024		
DESIGNED	SAE					SHEET	

DOOR SCHEDULE						
Mark	Height	Width	Glazing Areas	Orientation	Material	Comments
1	2340	1640	3.84	W	GLAZED HINGE DBL DOORS	
2	2400	2400	5.76	E	AL. FRAMED SLIDING	
3	2400	9000	21.60	N	AL. FRAMED STACKER DOORS	
4	2400	2400	5.76	S	AL. FRAMED SLIDING	
5	2340	920	2.15	S	GLAZED HINGE DOOR	
6	2400	2600	6.24	S	AL. FRAMED SLIDING	
7	2340	920	2.15	S	GLAZED HINGE DOOR	
8	2400	3300	7.92	S	AL. FRAMED SLIDING	
9	2040	820			SELECTED HINGE DOOR	
10	2040	820			SELECTED HINGE DOOR	
11	2040	1960			920 CAVITY SLIDER	
12	2040	820			DBL 820 CAVITY SLIDER	
13	2040	820			SELECTED HINGE DOOR	
14	2040	820			SELECTED HINGE DOOR	
15	2040	820			SELECTED HINGE DOOR	
16	2040	820			SELECTED HINGE DOOR	
17	2040	820			SELECTED HINGE DOOR	
18	2040	820			SELECTED HINGE DOOR	
19	2040	820			SELECTED HINGE DOOR	
20	2040	920			DBL 920 CAVITY SLIDER	
21	2040	1440			SELECTED FRENCH DOORS	
22	2400	2700			SELECTED ROLLERDOOR	GARAGE
23	2400	6000			SELECTED SECTIONAL PANEL DOOR	GARAGE
24	2040	920			GLAZED HINGE DOOR	GARAGE
25	2040	820			SELECTED HINGE DOOR	GARAGE
25	55.42					

WINDOW SCHEDULE						
Mark	Head Height	Height	Width	Glazing Area	Orientation	Material
1	2400	2100	1200	2.52	W	AL. FRAMED DBL HUNG
2	2400	2100	1200	2.52	W	AL. FRAMED DBL HUNG
3	2400	2100	1200	2.52	W	AL. FRAMED DBL HUNG
4	2400	2100	1200	2.52	E	AL. FRAMED DBL HUNG
5	2400	2100	900	1.89	E	AL. FRAMED DBL HUNG
6	2400	900	600	0.54	E	AL. FRAMED DBL HUNG
7	2400	2100	600	1.26	E	AL. FRAMED FIXED
8	2400	1800	2400	4.32	E	AL. FRAMED DBL HUNG
9	2400	2100	700	1.47	E	AL. FRAMED DBL HUNG
10	2400	1200	2400	2.88	E	AL. FRAMED DBL HUNG
11	2400	2100	900	1.89	W	AL. FRAMED FIXED
12	2400	2100	1200	2.52	E	AL. FRAMED DBL HUNG
13	2400	2100	1200	2.52	W	AL. FRAMED DBL HUNG
14	2400	2100	700	1.47	W	AL. FRAMED DBL HUNG
15	2700	2100	900	1.89	W	AL. FRAMED FIXED
16	2400	2100	900	1.89	E	AL. FRAMED FIXED
17	2400	900	600	0.54	W	AL. FRAMED SLIDING
17	35.16					

CURTAIN WINDOW/DOOR SCHEDULE				
Type	Length	Area	Function	Orientation/Comments
Curtain Wall fixed Glazing 1	5139	7.5 m²	Exterior	NORTH BEDROOM
Curtain Wall fixed Glazing 2	5058	7.5 m²	Exterior	NORTH LIVING
Curtain Wall w/ Sliding Doors 1	5139	13.9 m²	Exterior	NORTH BEDROOM
Curtain Wall w/ Sliding Doors 2	5139	13.9 m²	Exterior	NORTH LIVING
Curtain Wall w/ Sliding Doors 3	5058	13.7 m²	Exterior	SOUTH RETREAT
Total		56.4 m²		

BASIX NOTES:

FIXTURES
Shower heads with a minimum 3 star rating (>7.5 but <= 9 L/min)
Toilet flushing system with a minimum 3 star rating to be installed in each toilet
Tap fittings with a minimum 3 star rating to be installed in the kitchen
Basin tap fittings with a minimum 3 star rating to be installed in each bathroom

ADDITIONAL INSULATION

Refer to Thermal Spec

RAINWATER STORAGE

The 10,000L rainwater tank to be connected to:

An outdoor tap

All Toilets

The Laundry

ARTIFICIAL LIGHTING

The primary type of lighting is fluorescent lighting in each of the following rooms
5 Bedrooms
3 Living Areas
Kitchen
Laundry
Hallways

AIR CONDITIONING (for heating + cooling)

In Living areas- Air Conditioner min. 3 star

In Bedrooms- Air Conditioner min. 3 star

HOT WATER SYSTEM

Solar Hotwater system shall be installed

VENTILATION

Bathroom: Individual fan (ducted)- manual on/off switch

Kitchen: Individual fan (ducted)- manual on/off switch

Laundry: natural ventilation

OTHER

Gas cooktop and Electric oven shall be installed in kitchen

Install an outdoor clothesline

5kW Photovoltaic System to be installed

Refer to Basix Certificate for full range & scope of energy efficiency measures to be incorporated into the construction of this building

BASIX- POOL REQUIREMENTS:

THE POOL MUST NOT HAVE A VOLUME GRATER THAN- 54 KiloLitres

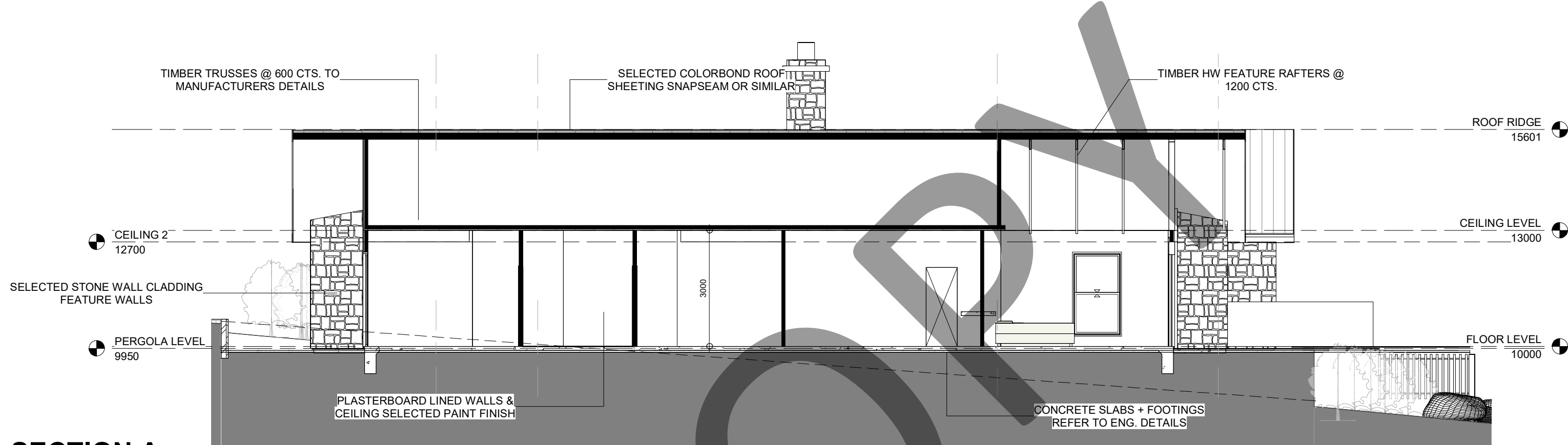
A TAP IS TO BE LOCATED WITHIN 10m OF THE SWIMMING POOL

THE POOL MUST BE OUTDOORS

THE POOL MUST HAVE A POOL PUMP TIMER

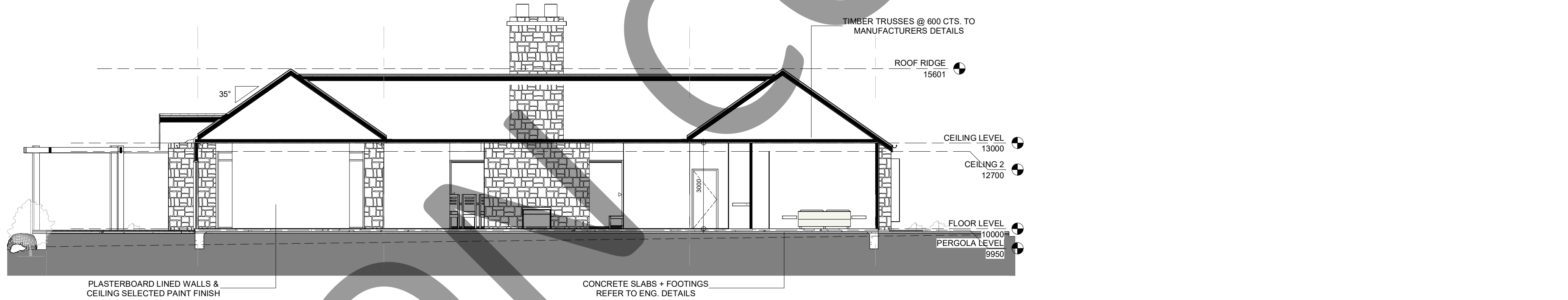
THE POOL MUST NOT INCORPORATE A POOL WATER HEATING SYSTEM

October 2024		BSA Reference: 20592	
Building Sustainability Assessments		Ph: (02) 4962 3439	
enquiries@buildingsustainability.net.au		www.buildingsustainability.net.au	
Important Note			
The following specification was used to achieve the thermal performance values indicated on the Assessor Certificate. If the proposed construction varies to those detailed below than the Assessor and NatHERS certificates will no longer be valid. Assessments assume that the BCA provisions for building sealing & ventilation are complied with at construction.			
Be aware that BASIX does not over-ride the BCA and the NSW variations must be complied with.			
Thermal Performance Specifications (does not apply to garage)			
External Wall Construction		Added Insulation	
Lightweight		R2.5	
Internal Wall Construction		Added Insulation	
Plasterboard on studs		R2.5 to walls adjacent to roofspace	
Ceiling Construction		Added Insulation	
Plasterboard		R7.0 to ceilings adjacent to roof space	
Roof Construction		Colour (Solar Absorptance)	
Metal		Monument (SA 0.73)	
		Foil + R1.0 blanket	
Floor Construction		Covering	
Concrete		As drawn (if not noted default values used)	
		None	
Windows		Glass and frame type	
Performance glazing Type A		U value	SHGC Range
		2.91	0.42 - 0.46
Performance glazing Type B		2.90	0.48 - 0.54
		Area sq m	
		As drawn	
Type A windows are awning windows, bifolds, casements, tilt 'n turn windows, entry doors, french doors			
Type B windows are double hung windows, sliding windows & doors, fixed windows, stacker doors, louvers			
Skylights		Glass and frame type	
		U	SHGC
		Area sq m	
		Detail	
N/A			
U and SHGC values are according to AFRC. Alternate products may be used if the U value is lower & the SHGC is within the range specified			
Shade elements		(eaves, verandahs, awnings etc)	
All shade elements modelled as drawn			
Ceiling Penetrations		(downlights, exhaust fans, flues etc)	
Downlights are modelled as IC rated with insulation fitted over the fixtures			
All exhaust fans are modelled as sealed			
Ceiling Fans used in the Modelling and to be installed in the following areas:			
1200mm to bedrooms 2, 3 & 4; 2x 1200mm to living areas (media & retreat).			



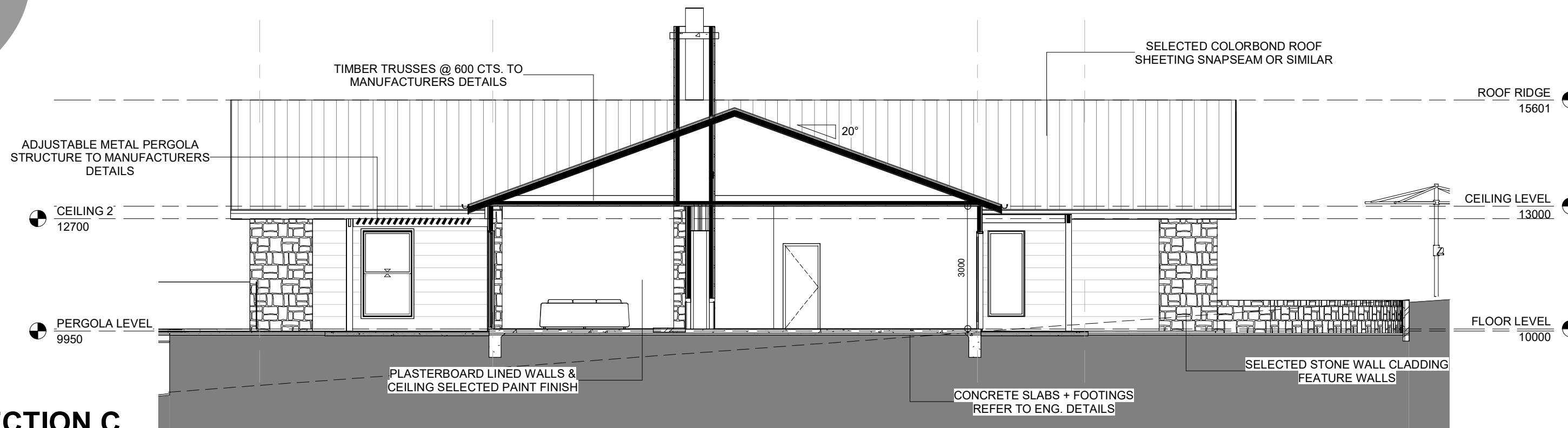
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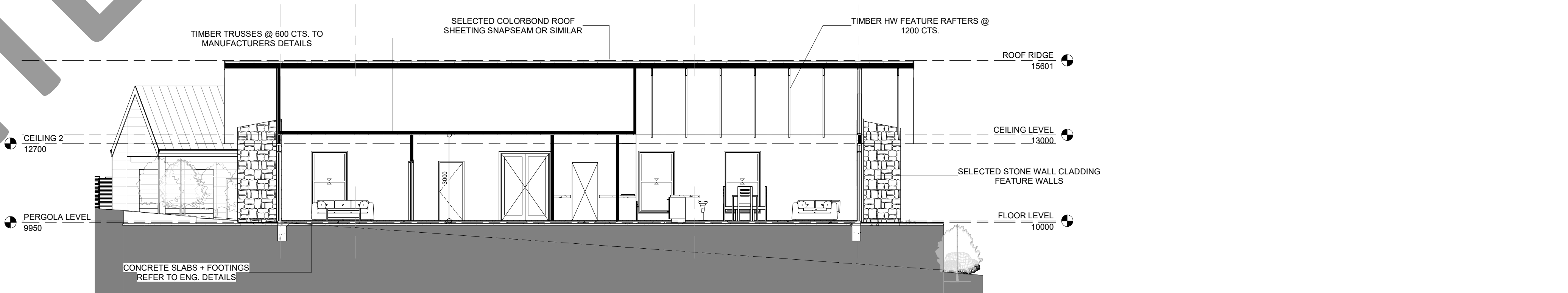
SECTION B

1 : 100



SECTION C

1 : 100



SECTION D

1 : 100

PROPOSED NEW DWELLING, DETACHED GARAGE + POOL

42 BINDEA PLACE, GUNNEDAH
BARLOW

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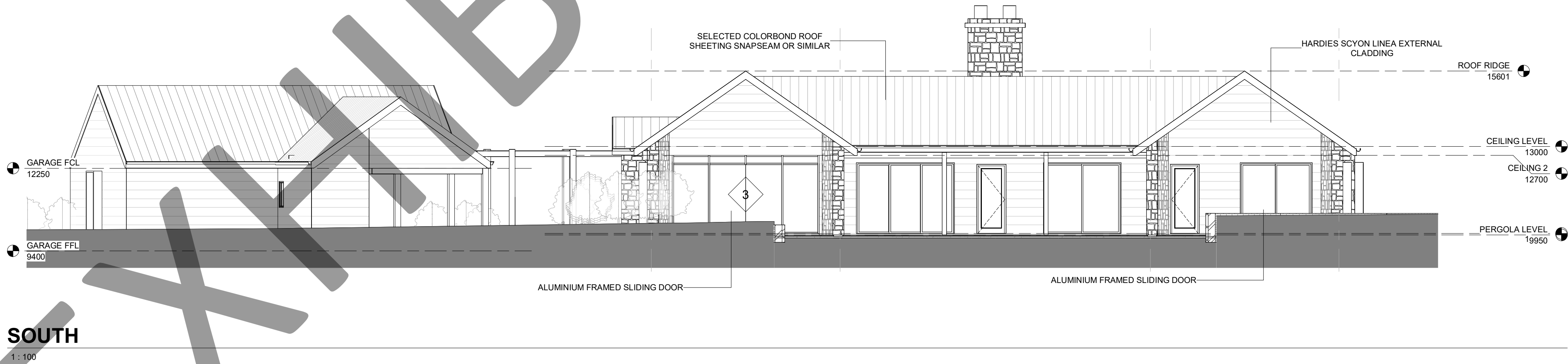
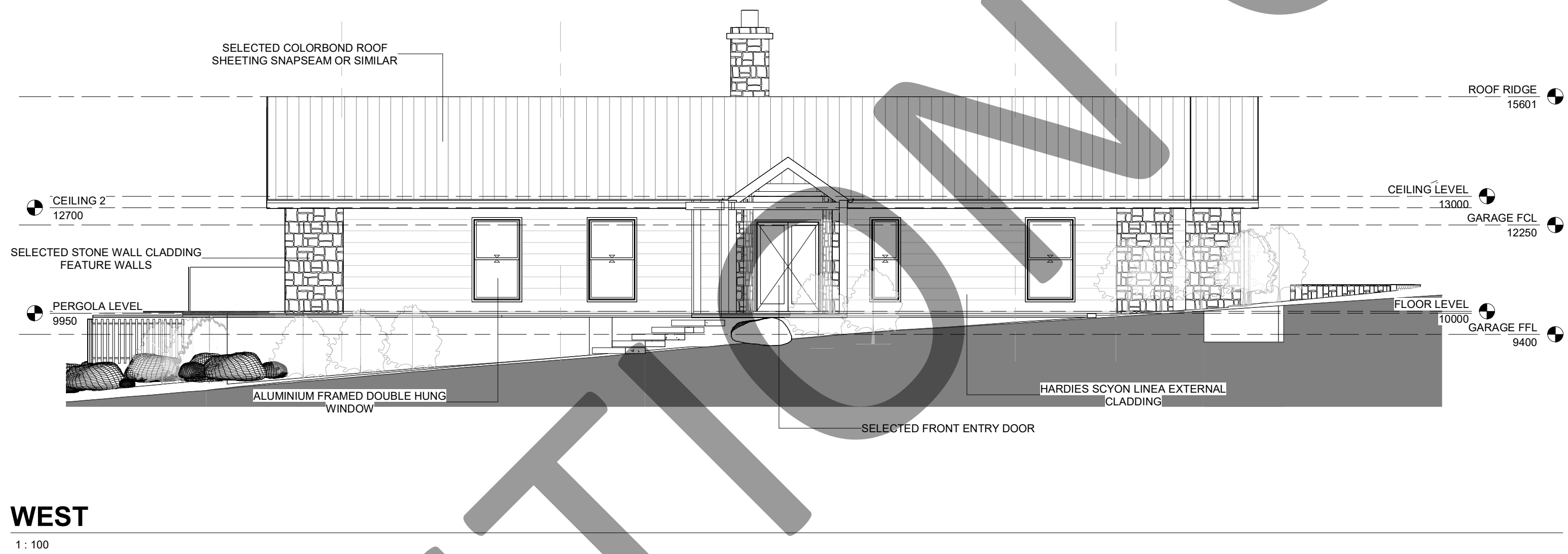
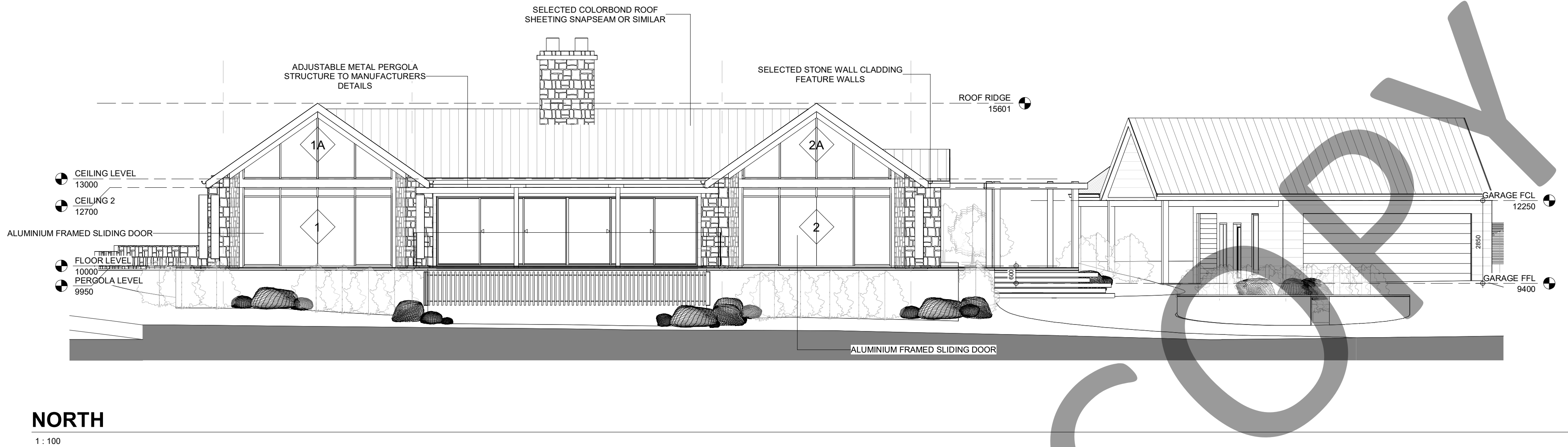
SCALE 1 : 100

DATE 29/11/2024
DRAWN SAE
DESIGNED SAE

REVISION DESCRIPTION
2 REVISED FLOOR PLAN
3 REVISED GARAGE
4 FOR APPROVAL
5 DA SUBMISSION
6

DATE
02/04/2024
31/07/2024
27/08/2024
15/10/2024
29/11/2024

PROJECT No.
1086-24
SHEET
A003





EAST

1 : 100



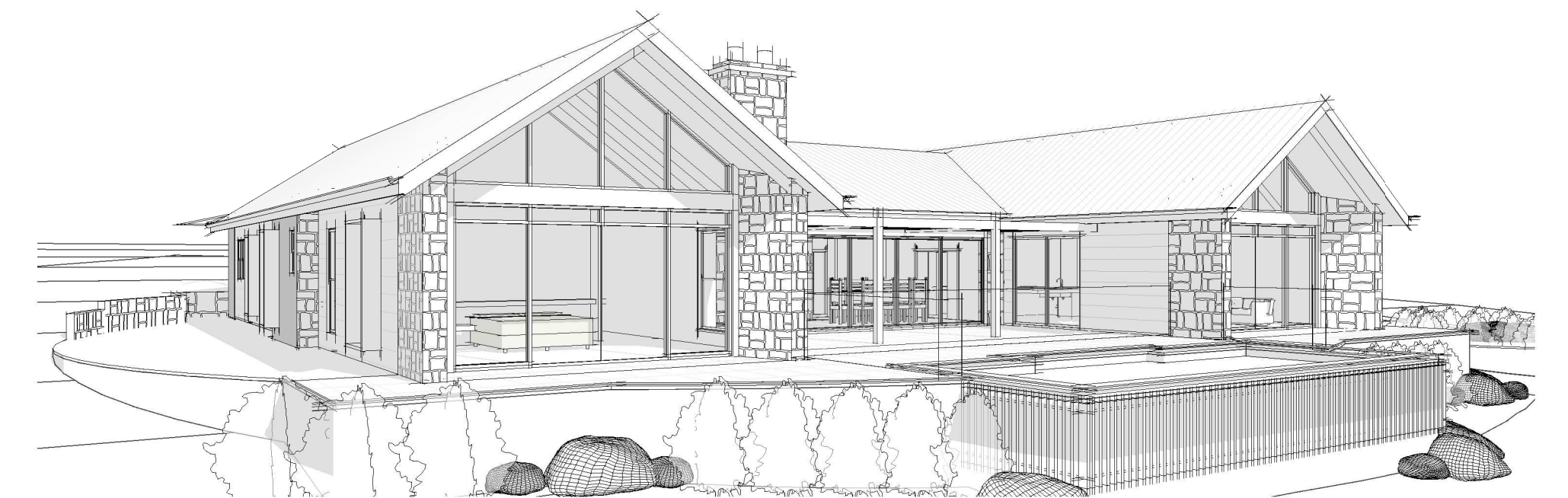
GARAGE EAST

1 : 100



GARAGE WEST

1 : 100



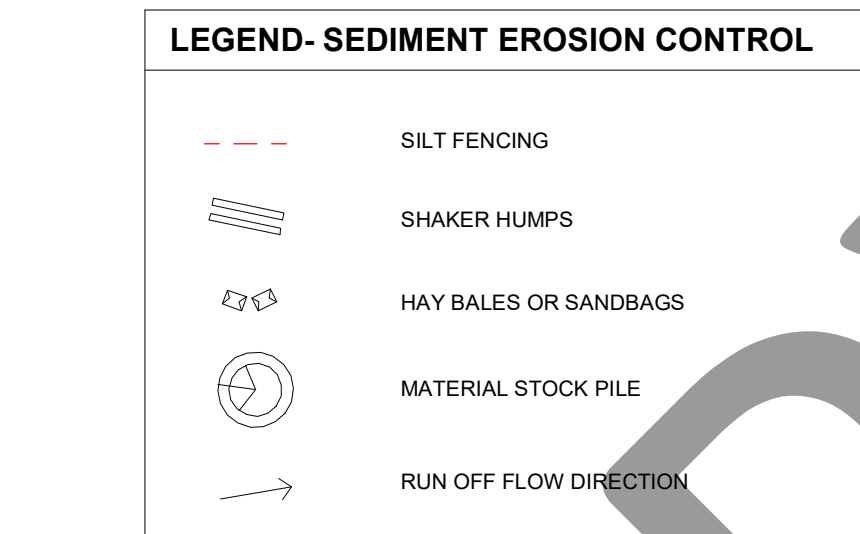
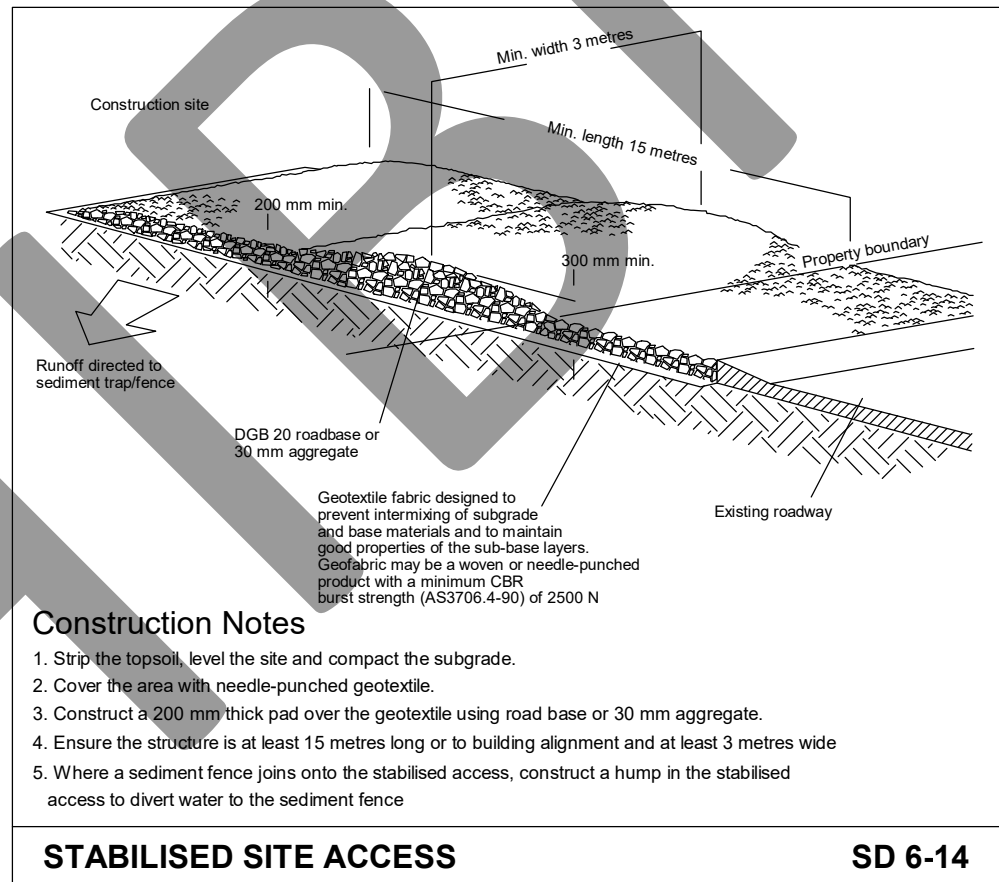
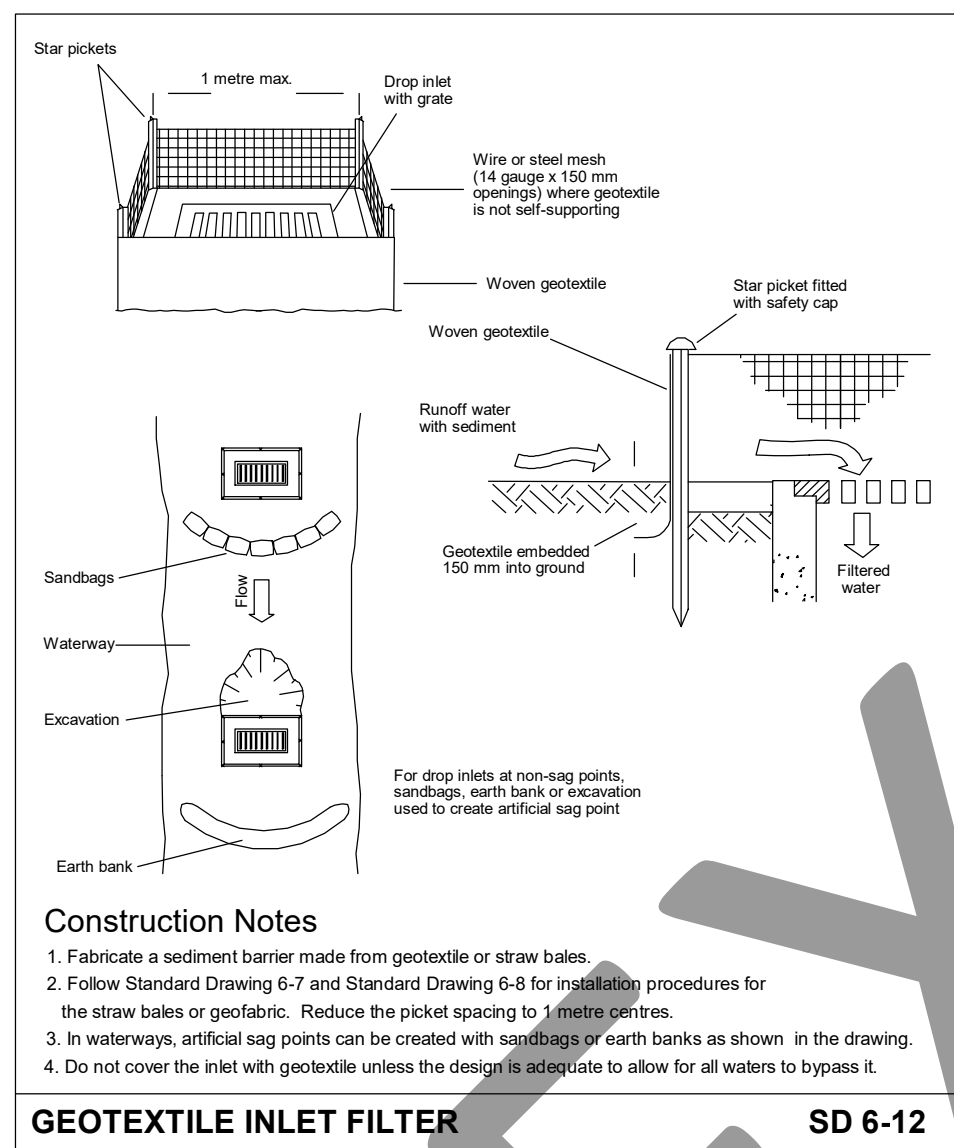
NE VIEW



SW VIEW

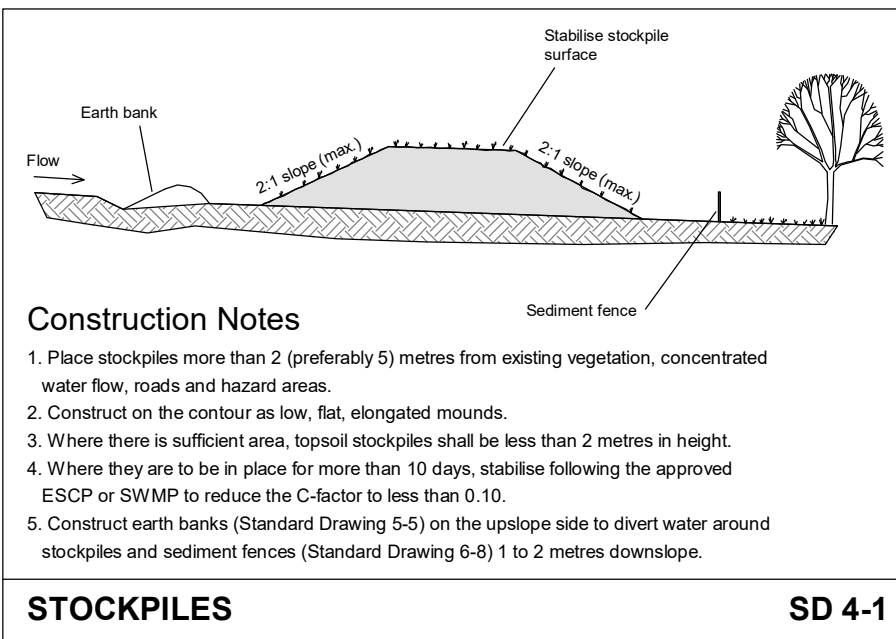
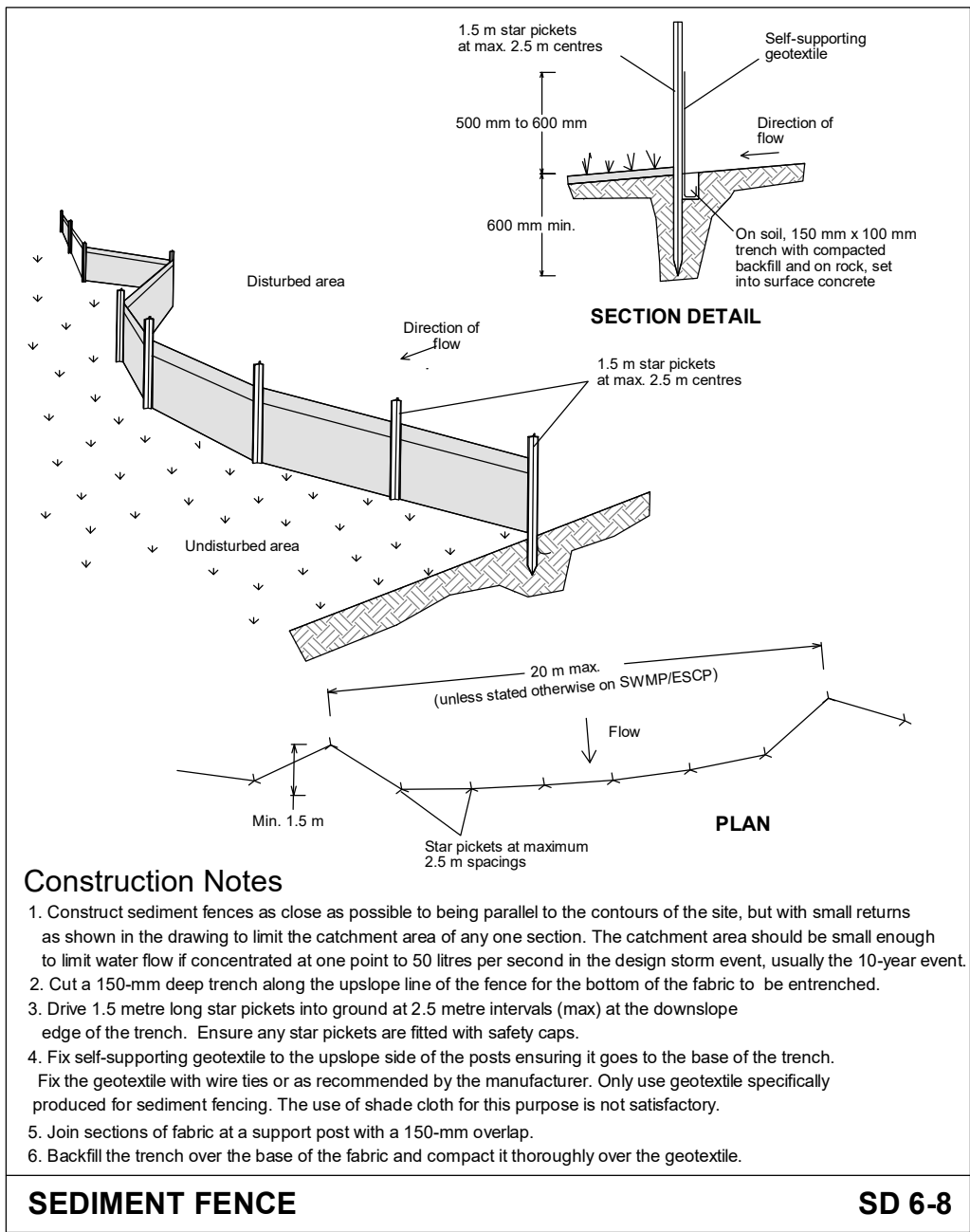
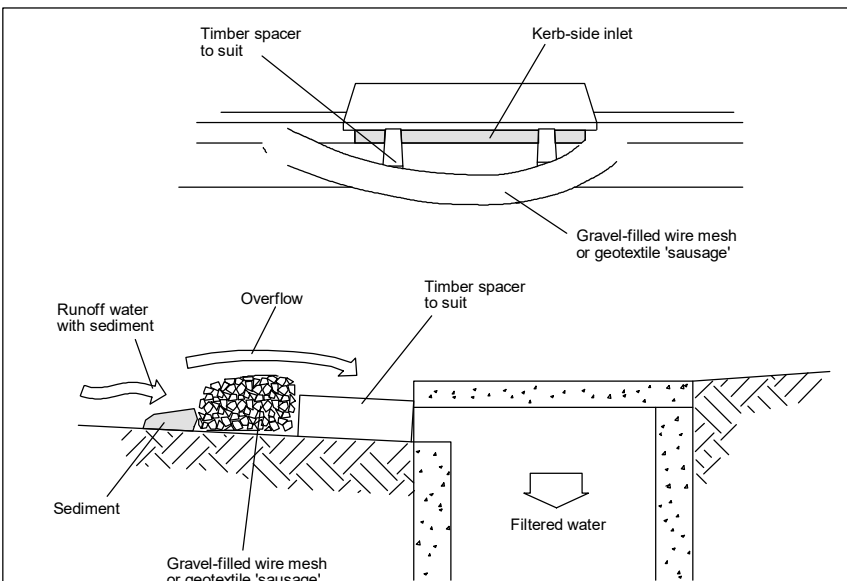
SEDIMENT EROSION CONTROL PLAN

1 : 200



SEDIMENT + EROSION CONTROL NOTES

- DO NOT COMMENCE CONSTRUCTION WORK UNTIL OR SEDIMENT CONTROL MEASURES ARE IN PLACE.
- NO MANEUVERING OF VEHICLES OR STOCKPILING OF MATERIALS OUTSIDE THE CONSTRUCTION SITE.
- THE ENTRY/EXIT OF VEHICLES FROM THE SITE WILL BE CONFINED TO ONE STABILISED POINT. SEDIMENT OR BARRIER FENCING WILL BE USED TO RESTRICT ALL VEHICULAR MOVEMENTS TO THAT POINT. STABILISATION WILL BE ACHIEVED BY EITHER:
 - CONSTRUCTING A SEALED (E.G. CONCRETE OR ASPHALT) DRIVEWAY TO THE STREET. CONSTRUCTING A STABILISED SITE ACCESS FOLLOWING STANDARD DRAWING SD 6-14 OR OTHER SUITABLE TECHNIQUE APPROVED BY THE COUNCIL.
- ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED & MAINTAINED BY SITE MANAGER DAILY.
- ALL SEDIMENT RETAINING STRUCTURES TO BE CLEANED ON REACHING 50% STORAGE CAPACITY.
- ALL EXISTING VEGETATION WILL BE RETAINED OUTSIDE THE CONSTRUCTION SITE.
- GUTTERING WILL BE CONNECTED TO THE STORMWATER SYSTEM OR A RAINWATER TANK AS SOON AS PRACTICABLE.
- CONSTRUCTION SITE STABILISATION TO COMMENCE IMMEDIATELY ON COMPLETION OF WORKS.
- ALL STOCKPILES TO BE PLACED IN THE LOCATION SHOWN & AT LEAST 2 METRES CLEAR OF ALL AREAS OF POSSIBLE CONCENTRATED WATER FLOW, INCLUDING DRIVEWAYS.
- APPROVED BINS FOR BUILDING WASTE, CONCRETE & MORTAR, SLURRIES, PAINTS, ACID WASHINGS & LITTER WILL BE PROVIDED. ARRANGEMENTS MADE FOR REGULAR COLLECTION & DISPOSAL.
- ALL STOCKPILES WILL BE PLACED IN THE LOCATION SHOWN ON THE ESCP & AT LEAST TWO METRES CLEAR OF ALL AREAS OF POSSIBLE AREAS OF CONCENTRATED WATER FLOW, INCLUDING DRIVEWAYS.
- THE FOOTPATH, OTHER THAN STABILISED SITE ACCESS IS NOT TO BE DISTURBED, INCLUDING STOCKPILING OF MATERIALS. WHERE ESSENTIAL WORKS (eg DRAINAGE) ARE REQUIRED, THE FOOTPATH IS TO BE REHABILITATED (TURFED) AS SOON AS POSSIBLE.
- TOPSOIL WILL BE RE-SPREAD & ALL DISTURBED AREAS WILL BE STABILISED WITHIN 20 WORKING DAYS OF THE COMPLETION OF WORKS.
- SEDIMENT FENCES AND BARRIER FENCES WILL BE INSTALLED AS SHOWN ON THE ATTACHED DRAWING (SEE SD 6-8 IN MUS: SOILS & CONSTRUCTION VOL. 1).
- TOPSOIL FROM THE WORKS AREA WILL BE STRIPPED AND STOCKPILED FOR LATER USE IN LANDSCAPING THE SITE (SEE SD 4-1 IN MUS: SOILS & CONSTRUCTION VOL. 1).
- WASTE BINS ARE TO BE PROVIDED FOR BUILDING WASTE OR WASTE ENCLOSURE MINIMUM 1800*1800*1200mm HIGH CONSTRUCTED USING STAR PICKETS AND 1200mm HIGH WEED CONTROL MAT. ARRANGEMENTS ARE TO BE MADE FOR REGULAR COLLECTION & DISPOSAL OR RECYCLING OF CONSTRUCTION WASTE.



PROPOSED NEW DWELLING, DETACHED GARAGE + POOL

42 BINDEA PLACE, GUNNEDAH
BARLOW

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SCALE As indicated

DATE 29/11/2024
DRAWN SAE
DESIGNED SAE

REVISION	DESCRIPTION	DATE
2	REVISED FLOOR PLAN	02/04/2024
3	REVISED FLOOR PLAN	31/07/2024
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5	FOR APPROVAL	15/10/2024
6	DA SUBMISSION	29/11/2024

PROJECT No.
1086-24
SHEET

A006

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 1775289S

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Friday, 29 November 2024

To be valid, this certificate must be submitted with a development application or lodged with a complying development certificate application within 3 months of the date of issue.



Project summary

Project name	1086-23 Barlow
Street address	42 BINDEA Place GUNNEDAH 2380
Local Government Area	Gunnedah Shire Council
Plan type and plan number	Deposited Plan DP1196733
Lot no.	13
Section no.	-
Project type	dwelling house (detached)
No. of bedrooms	5

Project score

Water	✓ 30	Target 30
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 85	Target 65
Materials	✓ -97	Target n/a





Certificate Prepared by

Name / Company Name: Mr Steve Edgar

ABN (if applicable):

Description of project

Project address	
Project name	1086-23 Barlow
Street address	42 BINDEA Place GUNNEDAH 2380
Local Government Area	Gunnedah Shire Council
Plan type and plan number	Deposited Plan DP1196733
Lot no.	13
Section no.	-
Project type	
Project type	dwelling house (detached)
No. of bedrooms	5
Site details	
Site area (m²)	4389
Roof area (m²)	498
Conditioned floor area (m²)	363.7
Unconditioned floor area (m²)	19.5
Total area of garden and lawn (m²)	0
Roof area of the existing dwelling (m²)	0

Assessor details and thermal loads		
Assessor number	DMN/24/2214	
Certificate number	HR-9Q2HDO-01	
Climate zone	48	
Area adjusted cooling load (MJ/ m².year)	24	
Area adjusted heating load (MJ/ m².year)	55	
Project score		
Water	 30	Target 30
Thermal Performance	 Pass	Target Pass
Energy	 85	Target 65
Materials	 -97	Target n/a

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 3 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 3 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 10000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 646.5 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) 		✓ ✓	✓ ✓
Swimming Pool			
The swimming pool must not have a volume greater than 54 kilolitres.	✓	✓	

Water Commitments

Show on
DA plans

Show on CC/CDC
plans & specs

Certifier
check

The swimming pool must be outdoors.



Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
Assessor details and thermal loads			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate and the "Construction" and "Glazing" tables below.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.	✓	✓	✓
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.	✓	✓	✓

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Construction			
The applicant must construct the floors, walls, roofs, ceilings and glazing of the dwelling in accordance with the specifications listed in the tables below.	✓	✓	✓
The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the tables below.			✓

Construction	Area - m ²	Insulation
floor - concrete slab on ground, conventional slab.	383.2	polystyrene
external wall: framed (fibre cement sheet or boards); frame: timber - H2 treated softwood.	all external walls	fibreglass batts or roll+ foil/sarking
internal wall: plasterboard; frame: timber - H2 treated softwood.	378	none
ceiling and roof - flat ceiling / pitched roof, framed - metal roof, timber - H2 treated softwood.	320	ceiling: fibreglass batts or roll; roof: foil backed blanket.
ceiling and roof - raked ceiling / pitched or skillion roof, framed - metal roof, timber - H2 treated softwood.	178	ceiling: fibreglass batts or roll; roof: foil backed blanket.

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Glazing			
The applicant must install windows, glazed doors and skylights as described in the table below, in accordance with the specifications listed in the table.	✓	✓	✓

Frames	Maximum area - m2
aluminium	147
timber	0
uPVC	0
steel	0
composite	0

Glazing	Maximum area - m2
single	0
double	147
triple	0

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: electric boosted solar.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning - ducted; Energy rating: 3 star (cold zone)		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning - ducted; Energy rating: 3 star (cold zone)		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning - non ducted; Energy rating: 3 star (cold zone)		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning - ducted; Energy rating: 3 star (cold zone)		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development: At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
The applicant must ensure that a minimum of 80% of light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting.	✓	✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The applicant must install a window and/or skylight in 3 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Swimming pool			
The applicant must install the following heating system for the swimming pool in the development (or alternatively must not install any heating system for the swimming pool): no heating		✓	
The applicant must install a pump for the swimming pool in the development.		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
Alternative energy			
The applicant must install a photovoltaic system as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
The photovoltaic system must consist of: <ul style="list-style-type: none"> photovoltaic collectors with the capacity to generate at least 5 peak kilowatts of electricity, installed at an angle between 10 degrees and 25 degrees to the horizontal facing north 	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a ✓ in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a ✓ in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a ✓ in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. #HR-9Q2HDO-01

Generated on 21 Nov 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	42 Bindea Place , Gunnedah, NSW, 2380
Lot/DP	13/1196733
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No.1086-24 15/10/2024 5.
Prepared by	SAE Design + Studio 367 (BSA20592)

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 363.7	Open
Unconditioned* 19.5	NatHERS climate zone
Total 383.2	48 - Dubbo Airport
Garage 0.0	



Accredited assessor

Name	Krzysztof Kwiatkowski
Business name	Building Sustainability Assessments
Email	enquiries@buildingsustainability.net.au
Phone	+61 413626023
Accreditation No.	DMN/24/2214
Assessor Accrediting Organisation	DMN
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

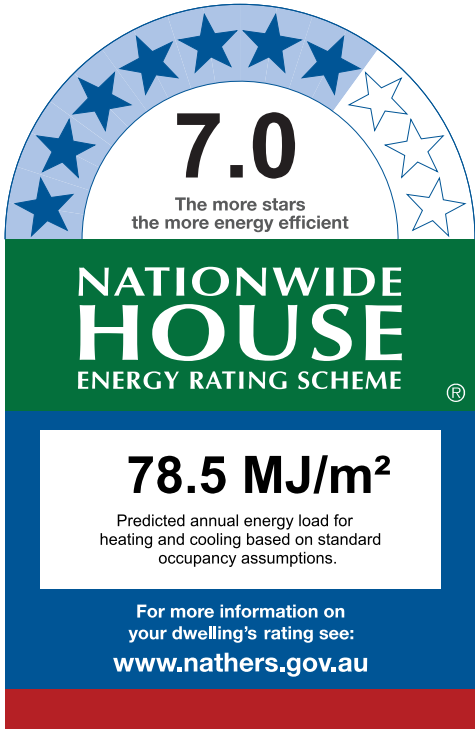
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	54.6	24.0
Load limits	73	32

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit

<http://www.hero-software.com.au/pdf/HR-9Q2HDO-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

- CSOG - Concrete Slab on Ground
- SF - Suspended Floor (or a mixture of CSOG and SF)
- NA - Not Applicable

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/surveyor checked	Builder checked	Consent authority/surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?

☐ ☐ ☐ ☐

Insulation installation method

Has the insulation been installed according to the NCC requirements?

☐ ☐ ☐

Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?

☐ ☐ ☐ ☐

Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?

☐ ☐ ☐ ☐ ☐

Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?

☐ ☐ ☐ ☐ ☐

Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?

☐ ☐ ☐ ☐ ☐

Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?

☐ ☐ ☐ ☐ ☐

Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?

☐ ☐ ☐ ☐ ☐

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?

☐ ☐ ☐ ☐

Does the hot water system meet the additional requirements specified in the NCC?

☐ ☐ ☐ ☐

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?

☐ ☐ ☐ ☐

Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional Notes

- The information below is provided by Building Sustainability Assessments.
- Assessments are conducted in accordance with the BASIX Thermal Comfort Protocol and the NatHERS Technical Note.
- If this assessment is based on Development Application (DA) documentation then it is recommended that the assessment be reviewed when Construction Certificate (CC) documents are available. Assessments based on the minimum plan requirements suitable only for a DA should not be relied upon for a CC application. A re-assessment at CC stage may be necessary to include details not available at DA stage.
- Where information is not shown on the plans for details of ceiling penetrations, floor coverings, wall and roof colours, waffle pod thickness, window operability & neighbouring buildings the values required by the NatHERS Technical note have been applied. Be aware that these provisional values are often worse case and may adversely affect the assessment.

Room schedule

Room	Zone Type	Area (m ²)
BEDROOM 4	Bedroom	21.94
MEDIA ROOM	Day Time	21.10
BEDROOM 3	Bedroom	16.84
BEDROOM 2	Bedroom	16.22
MAIN BEDROOM	Bedroom	49.09
L'DRY	Unconditioned	6.25
BATH	Unconditioned	6.78
ENS	Night Time	14.89
RETREAT	Living	29.47
POWDER	Unconditioned	6.45
ENTRY	Day Time	69.62
KITCHEN/LIVING	Kitchen/Living	68.71
LIVING AREA	Living	55.82

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ATB-005-03 B	Al Thermally Broken A DG Argon Fill High Solar Gain low-E - Clear	2.91	0.44	0.42	0.46
ATB-006-03 B	Al Thermally Broken B DG Argon Fill High Solar Gain low-E - Clear	2.90	0.51	0.48	0.54

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Shading device*
BATH	ATB-006-03 B	W09	2100	700	Double Hung	45	ENE	None
BEDROOM 2	ATB-006-03 B	W08	1800	2400	Double Hung	33	ENE	None
BEDROOM 3	ATB-006-03 B	W10	1200	2400	Double Hung	33	ENE	None
BEDROOM 3	ATB-006-03 B	D04	2400	2400	Sliding Door	45	SSE	None
BEDROOM 4	ATB-006-03 B	D06	2400	2600	Sliding Door	45	SSE	None
ENS	ATB-006-03 B	W05	2100	900	Double Hung	45	ENE	None
ENS	ATB-006-03 B	W06	900	600	Double Hung	45	ENE	None
ENS	ATB-006-03 B	W07	2100	600	Fixed	0	ENE	None
ENTRY	ATB-006-03 B	W11	2100	900	Double Hung	45	WSW	None
ENTRY	ATB-005-03 B	D07	2340	920	Hinged Door	90	SSE	None
ENTRY	ATB-005-03 B	D01	2340	1640	Hinged Door	45	WSW	None
KITCHEN/LIVING	ATB-006-03 B	D02	2400	2400	Sliding Door	45	ENE	None
KITCHEN/LIVING	ATB-006-03 B	D2	2700	5100	Sliding Door	45	NNW	None
KITCHEN/LIVING	ATB-006-03 B	W2A	1200	5100	Fixed	0	NNW	None
KITCHEN/LIVING	ATB-006-03 B	W01	2100	1200	Double Hung	45	WSW	None
KITCHEN/LIVING	ATB-006-03 B	W02	2100	1200	Double Hung	45	WSW	None
L'DRY	ATB-005-03 B	D05	2340	920	Hinged Door	90	SSE	None
LIVING AREA	ATB-006-03 B	D03	2400	9000	Sliding Door	66	NNW	None
MAIN BEDROOM	ATB-006-03 B	W04	2100	1200	Double Hung	45	ENE	None
MAIN BEDROOM	ATB-006-03 B	W03	2100	1200	Double Hung	45	WSW	None
MAIN BEDROOM	ATB-006-03 B	D1	2700	5100	Sliding Door	45	NNW	None

* Refer to glossary.



Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
MAIN BEDROOM	ATB-006-03 B	W1A	1200	5100	Fixed	0	NNW	None
MEDIA ROOM	ATB-006-03 B	D08	2400	3300	Sliding Door	66	SSE	None
POWDER	ATB-006-03 B	W14	2100	700	Double Hung	45	WSW	None
RETREAT	ATB-006-03 B	W13	2100	1200	Double Hung	45	WSW	None
RETREAT	ATB-006-03 B	W12	2100	1200	Double Hung	45	ENE	None
RETREAT	ATB-006-03 B	D3	2700	5100	Sliding Door	45	SSE	None

Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
----------	-------------	------------	-----------	-------------

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
None				

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
FC-NOCAV	Fibre-Cement Clad Direct-Fix (No Cavity) Stud Wall	0.50	Medium	2.50	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATH	FC-NOCAV	3000	2844	ENE	600	Yes
BEDROOM 2	FC-NOCAV	3000	3755	ENE	600	Yes
BEDROOM 3	FC-NOCAV	3000	3898	ENE	600	Yes
BEDROOM 3	FC-NOCAV	3000	533	SSE		No
BEDROOM 3	FC-NOCAV	3000	3786	SSE	2000	Yes
BEDROOM 4	FC-NOCAV	3000	4495	SSE	600	Yes
ENS	FC-NOCAV	3000	2034	ENE	600	Yes
ENS	FC-NOCAV	3000	403	NNW	8834	Yes
ENS	FC-NOCAV	3000	3018	ENE	197	Yes
ENS	FC-NOCAV	3000	403	SSE	12661	Yes
ENTRY	FC-NOCAV	3000	1306	WSW	600	Yes
ENTRY	FC-NOCAV	3000	1488	SSE	600	Yes
ENTRY	FC-NOCAV	3000	1855	WSW	1000	Yes
KITCHEN/LIVING	FC-NOCAV	3000	470	NNW		No
KITCHEN/LIVING	FC-NOCAV	3000	5657	ENE	9900	Yes
KITCHEN/LIVING	FC-NOCAV	3000	454	WSW		No
KITCHEN/LIVING	FC-NOCAV	4600	5538	NNW	2004	Yes
KITCHEN/LIVING	FC-NOCAV	3000	487	NNW		No
KITCHEN/LIVING	FC-NOCAV	3000	10125	WSW	600	Yes

* Refer to glossary.

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
L'DRY	FC-NOCAV	3000	1574	SSE	2000	Yes
L'DRY	FC-NOCAV	3000	2996	WSW	600	Yes
L'DRY	FC-NOCAV	3000	511	SSE		No
LIVING AREA	FC-NOCAV	3000	10506	NNW	3400	Yes
MAIN BEDROOM	FC-NOCAV	3000	462	NNW		No
MAIN BEDROOM	FC-NOCAV	3000	4785	ENE	600	Yes
MAIN BEDROOM	FC-NOCAV	3000	4434	WSW	9900	Yes
MAIN BEDROOM	FC-NOCAV	4600	5540	NNW	2000	Yes
MAIN BEDROOM	FC-NOCAV	3000	497	NNW		No
MEDIA ROOM	FC-NOCAV	3000	4323	SSE	600	Yes
POWDER	FC-NOCAV	3000	2485	WSW	600	Yes
POWDER	FC-NOCAV	3000	385	WSW		No
RETREAT	FC-NOCAV	3000	552	SSE		No
RETREAT	FC-NOCAV	3000	4538	WSW	600	Yes
RETREAT	FC-NOCAV	3000	2613	ENE	600	Yes
RETREAT	FC-NOCAV	3000	498	SSE		No
RETREAT	FC-NOCAV	3000	5445	SSE	2000	Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	272.5	0.00
INT-PB	Internal Plasterboard Stud Wall	20.0	2.50

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	CSOG-100: Concrete Slab on Ground (100mm)	6.8	N/A	0.00	Tile (8mm)

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BEDROOM 2	CSOG-100: Concrete Slab on Ground (100mm)	16.2	N/A	0.00	Carpet
BEDROOM 3	CSOG-100: Concrete Slab on Ground (100mm)	16.8	N/A	0.00	Carpet
BEDROOM 4	CSOG-100: Concrete Slab on Ground (100mm)	21.9	N/A	0.00	Carpet
ENS	CSOG-100: Concrete Slab on Ground (100mm)	14.9	N/A	0.00	Tile (8mm)
ENTRY	CSOG-100: Concrete Slab on Ground (100mm)	69.6	N/A	0.00	Tile (8mm)
KITCHEN/LIVING	CSOG-100: Concrete Slab on Ground (100mm)	68.7	N/A	0.00	Tile (8mm)
L'DRY	CSOG-100: Concrete Slab on Ground (100mm)	6.2	N/A	0.00	Tile (8mm)
LIVING AREA	CSOG-100: Concrete Slab on Ground (100mm)	55.8	N/A	0.00	Timber (12mm)
MAIN BEDROOM	CSOG-100: Concrete Slab on Ground (100mm)	49.1	N/A	0.00	Carpet
MEDIA ROOM	CSOG-100: Concrete Slab on Ground (100mm)	21.1	N/A	0.00	Carpet
POWDER	CSOG-100: Concrete Slab on Ground (100mm)	6.5	N/A	0.00	Tile (8mm)
RETREAT	CSOG-100: Concrete Slab on Ground (100mm)	29.5	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BEDROOM 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BEDROOM 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BEDROOM 4	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
ENS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
ENTRY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
KITCHEN/LIVING	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	7.00	Yes
KITCHEN/LIVING	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
L'DRY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
LIVING AREA	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes

* Refer to glossary.

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
MAIN BEDROOM	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	7.00	Yes
MAIN BEDROOM	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
MEDIA ROOM	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
POWDER	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
RETREAT	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	3	Downlight	200	Sealed
BATH	1	Exhaust Fan	350	Sealed
BEDROOM 2	6	Downlight	200	Sealed
BEDROOM 3	7	Downlight	200	Sealed
BEDROOM 4	9	Downlight	200	Sealed
ENS	6	Downlight	200	Sealed
ENS	1	Exhaust Fan	350	Sealed
ENTRY	28	Downlight	200	Sealed
ENTRY	1	Exhaust Fan	350	Sealed
KITCHEN/LIVING	27	Downlight	200	Sealed
KITCHEN/LIVING	1	Exhaust Fan	350	Sealed
L'DRY	2	Downlight	200	Sealed
LIVING AREA	22	Downlight	200	Sealed
MAIN BEDROOM	20	Downlight	200	Sealed
MEDIA ROOM	8	Downlight	200	Sealed
POWDER	3	Downlight	200	Sealed
POWDER	1	Exhaust Fan	350	Sealed
RETREAT	12	Downlight	200	Sealed

* Refer to glossary.

Ceiling fans

Location	Quantity	Diameter (mm)
BEDROOM 2	1	1200
BEDROOM 3	1	1200
BEDROOM 4	1	1200
MEDIA ROOM	1	1200
RETREAT	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	0.73	Dark (Monument)
FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	1.30	0.73	Dark (Monument)

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
None				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------



Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------

No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
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No Whole of Home Data

EXHIBITION COPY

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads.

The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the home's energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licensed assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans, pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your home's rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the operability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.