as part of a planning process under the Planning and Environment Act 1987.

<u>The docment must not be used for any pupose which may breach Copyright or Privacy Laws</u>



NOTICE OF AN APPLICATION FOR PLANNING PERMIT

The land affected by the application is located at:	356 Two Hills Road GLENBURN, (LOT: 2 LP: 96010)
The application is for a permit to:	Use and development of the land for a dwelling
The applicant for the permit is:	A Stubbs & L D Thwaites
The application reference number is:	2024/9
You may look at the application and any documents that support the application by visiting our website via the following web address:	www.murrindindi.vic.gov.au/Planning Comment

Any person who may be affected by the granting of the permit may object or make other submissions to the responsible authority.

An objection must be sent to the responsible authority in writing, with the full name and postal address of the objector and include the reasons for the objection, and state how the objector would be affected.

The responsible authority must make a copy of every objection available at its office for any person to inspect during office hours free of charge until the end of the period during which an application may be made for review of a decision on the application.

decide on the application before:	The responsible authority will not	07 March 2024
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If you object, the responsible authority will tell you its decision.

The planning unit can be contacted on (03) 5772 0333 or planning@murrrindindi.vic.gov.au.

art of a planning process docment must must be used	Office Use Only	se which may bre	each Copyri	ght or Privacy	Laws.	
	VicSmart?			YES	☐ NO	
	Specify class of Vi	cSmart application:				
, A	Application No.:			Date Lodged:	1 1	
<u>Murrindindi</u>						
Shire Council			- 1		• 4	
Planning Enquiries Phone: (03) 5772 0317	Applica	tion for a F	lann	ing Per	mit	
Email: planning@murrindindi.vic.gov.au Web: www.murrindindi.vic.gov.au	If you need help to	complete this form, read M	ORE INFORMATI	ON at the back of this forn	n.	
vveb. <u>www.marmamar.vic.gov.au</u>	available for pul the purpose of e	bmitted with this application blic viewing, including elect enabling consideration and ant Act 1987. If you have an	tronically, and cop review as part of	ies may be made for intere a planning process under	ested parties fo the <i>Planning</i>	
	A Questions mar	ked with an asterisk (*) m	nust be complete	ed.		
Class Farm	_	ovided on the form is ins	ufficient, attach	a separate sheet.		
Clear Form Click for further information.						
Application Type	No Yes					
Is this a VicSmart application?*	If yes, please specif VicSmart class or cl					
	If the application	n falls into one of the classe	es listed under Cl	ause 92 or the schedule to	Clause 94,	
	it is a VicSmart	application.				
Dro application Mostir						
Pre-application Meetir	<u></u>					
pre-application meeting	No Yes	s If 'Yes', with whom?).			
with a Council planning officer?				da / maambh /aa		
		Date:		day / month / year		
The Land I						
Address of the land. Complete the St	reet Address and or	ne of the Formal Land De	escriptions.			
Street Address *	Unit No.:	St. No.: 356	St. Name:	Two Hills rd		
	Suburb/Locality:	Glenburn		Postcode	3717	
Formal Land Description * Complete either A or B.	A Lot No.:2	OLodged Plan	Title Plan F	Plan of Subdivision No.:	096010	
	OR					
This information can be found on the certificate of title.		ant No :		Section No.:		
	B Crown Allotme	ent ivo				
the certificate of title. If this application relates to more than one	B Crown Allotme					

copied document is made ew	e available for the sole purpose of enabling its consideration an
	ss under the Planning and Environment Act 1987. d for any pupose which may breach Copyright or Privacy Laws.
A You must give full details of you	our proposal and attach the information required to assess the application. tion will delay your application.
For what use, development	
or other matter do you require a permit? *	To build a Dwelling to run farm effieciently
Estimated cost of any development for which the permit is required *	Provide additional information about the proposal, including: plans and elevations; any information required by the planning scheme, requested by Council or outlined in a Council planning permit checklist; and if required, a descript of the likely effect of the proposal. You may be required to verify this estimate. Insert '0' if no development is proposed. If the application is for land within metropolitan Melbourne (as defined in section 3 of the Planning and Environment Act 198 and the estimated cost of the development exceeds \$1 million (adjusted annually by CPI) the Metropolitan Planning Levy must be paid to the State Revenue Office and a current levy certificate must be submitted with the application. Visit www.sro.vic.gov.au for information.
Existing Conditions	
Describe how the land is	
used and developed now * For example, vacant, three dwellings, medical centre with two practitioners, licensed restaurant with 80 seats, grazing.	Land is used for grazing cattle at present, but once We have a dwelling onsite we will move into breeding. There is a farm shed onsite.
	Provide a plan of the existing conditions. Photos are also helpful.
	Frovide a plan of the existing conditions. Photos are also neighbor.
Title Informedian	
Title Information II	Does the proposal breach, in any way, an encumbrance on title such as a restrictrive covenant, section 173 agreement or other obligation such as an easement or building envelope?
Encumbrances on title *	Yes (If 'yes' contact Council for advice on how to proceed before continuing with this application.)
	● No
	Not applicable (no such encumbrance applies).
	Provide a full, current copy of the title for each individual parcel of land forming the subject site. The title includes: the covering 'register search statement', the title diagram and the associated title documents, known as 'instruments', for example, restrictive covenants.

This copied document is made available for the sole purpose of enabling its consideration and dAmehicanstand Conviged Fletails pose which may breach Copyright or Privacy Laws Provide details of the applicant and the owner of the land. Applicant * TitleMr & Mrs First Name:Daniel & Ange Surname: The person who wants the permit. **Thwaites** Organisation (if applicable): Postal Address: If it is a P.O. Box. enter the details here: Unit No.: Suburb/Locality: Please provide at least one contact Contact information for applicant OR contact person below phone number Business phone Mobile phone: Contact person's details* Where the preferred contact person Same as applicant for the application is different from the applicant, provide the details of First Name: Surname: Title: that person. Organisation (if applicable): Postal Address: If it is a P.O. Box, enter the details here: Unit No.: St. No.: St. Name: Suburb/Locality: State: Postcode: Owner * Same as applicant Name: The person or organisation Title: First Name: Surname: who owns the land Organisation (if applicable): Where the owner is different from the applicant, provide the details of that Postal Address: If it is a P.O. Box, enter the details here: person or organisation. Unit No.: St. No.: St. Name: State: Postcode: Suburb/Locality: Owner's Signature (Optional): Date: day / month / year Information Contact Council's planning department to discuss the specific requirements for this application and obtain a planning permit checklist. requirements Is the required information Yes O No provided? Declaration I This form must be signed by the applicant * Remember it is against the law I declare that I am the applicant; and that all the information in this application is true and to provide false or misleading correct; and the owner (if not myself) has been notified of the permit application. information, which could result in a heavy fine and cancellation Signature Date: 30/01/2024 of the permit. day / month / year

his copied document is ma eview	ade available for the sole purpose of enabling its consideration and
s pa rt of a planning pro c	cess under the Planning and Environment Act 1987.
he comenklists inot be us	for any pupose which may breach Copyright or Privacy Laws. Filled in the form completely?
Have you:	Paid or included the application fee? Most applications require a fee to be paid. Contact Council to determine the appropriate fee.
	Provided all necessary supporting information and documents?
	A full, current copy of title information for each individual parcel of land forming the subject site.
	A plan of existing conditions.
	Plans showing the layout and details of the proposal.
	Any information required by the planning scheme, requested by council or outlined in a council planning permit checklist.
	If required, a description of the likely effect of the proposal (for example, traffic, noise, environmental impacts).
	If applicable, a current Metropolitan Planning Levy certificate (a levy certificate expires 90 days after the day on which it is issued by the State Revenue Office and then cannot be used). Failure to comply means the application is void.
	Completed the relevant council planning permit checklist?
	Signed the declaration above?
Need help with the	Application? I

If you need help to complete this form, read More Information at the end of this form.

For help with a VicSmart application see Applicant's Guide to Lodging a VicSmart Application at www.planning.vic.gov.au

General information about the planning process is available at www.planning.vic.gov.au

Assistance can also be obtained from Council's planning department.

Lodgement II

ougement **u**

Lodge the completed and signed form, the fee and all documents with:

Murrindindi Shire Council PO Box 138 Alexandra VIC 3714 Shire Offices Perkins Street Alexandra VIC 3714

Contact information: Phone: (03) 5772 0317 Fax: (03) 5772 2291

Email: planning@murrindindi.vic.gov.au

Deliver application in person, by post or by electronic lodgement.

s part of a planning process under the Planning and Environment Act 1987.

The Land

Planning permits relate to the use and development of the land. It is important that accurate, clear and concise details of the land are provided with the application.

How is land identified?

Land is commonly identified by a street address, but sometimes this alone does not provide an accurate identification of the relevant parcel of land relating to an application. Make sure you also provide the formal land description - the lot and plan number or the crown, section and parish/township details (as applicable) for the subject site. This information is shown on the title.

See Example 1.

The Proposal

Why is it important to describe the proposal correctly?

The application requires a description of what you want to do with the land. You must describe how the land will be used or developed as a result of the proposal. It is important that you understand the reasons why you need a permit in order to suitably describe the proposal. By providing an accurate description of the proposal, you will avoid unnecessary delays associated with amending the description at a later date.

A Planning schemes use specific definitions for different types of use and development. Contact the Council planning office at an early stage in preparing your application to ensure that you use the appropriate terminology and provide the required details.

How do planning schemes affect proposals?

A planning scheme sets out policies and requirements for the use, development and protection of land. There is a planning scheme for every municipality in Victoria. Development of land includes the construction of a building, carrying out works, subdividing land or buildings and displaying signs.

Proposals must comply with the planning scheme provisions in accordance with Clause 61.05 of the planning scheme. Provisions may relate to the State Planning Policy Framework, the Local Planning Policy Framework, zones, overlays, particular and general provisions. You can access the planning scheme by either contacting Council's planning department or by visiting the Planning Schemes Online section of the department's website http://planning-schemes.delwp.vic.gov.au

▲ You can obtain a planning certificate to establish planning scheme details about your property. A planning certificate identifies the zones and overlays that apply to the land, but it does not identify all of the provisions of the planning scheme that may be relevant to your application. Planning certificates for land in metropolitan areas and most rural areas can be obtained by visiting www.landata.vic.gov.au. Contact your local Council to obtain a planning certificate in Central Goldfields, Corangamite, Macedon Ranges and Greater Geelong. You can also use the free Planning Property Report to obtain the same information.

See Example 2.

Estimated cost of development

In most instances an application fee will be required. This fee must be paid when you lodge the application. The fee is set down by government regulations.

To help Council calculate the application fee, you must provide an accurate cost estimate of the proposed development. This cost does not include the costs of development that you could undertake without a permit or that are separate from the permit process. Development costs should be calculated at a normal industry rate for the type of construction you propose.

Council may ask you to justify your cost estimates. Costs are required solely to allow Council to calculate the permit application fee. Fees are exempt from GST.

▲ Costs for different types of development can be obtained from specialist publications such as Cordell Housing: Building Cost Guide or Rawlinsons: Australian Construction Handbook.

▲ Contact the Council to determine the appropriate fee. Go to <u>www.planning.vic.gov.au</u> to view a summary of fees in the Planning and Environment (Fees) Regulations.

Metropolitan Planning Levy refer Division 5A of Part 4 of the *Planning and Environment Act 1987* (the Act). A planning permit application under section 47 or 96A of the Act for a development of land in metropolitan Melbourne as defined in section 3 of the Act may be a leviable application. If the cost of the development exceeds the threshold of \$1 million (adjusted annually by consumer price index) a levy certificate must be obtained from the State Revenue Office after payment of the levy. A valid levy certificate must be submitted to the responsible planning authority (usually council) with a leviable planning permit application. Refer to the State Revenue Office website at www.sro.vic.gov.au for more information. A leviable application submitted without a levy certificate is void.

Existing Conditions

How should land be described?

You need to describe, in general terms, the way the land is used now, including the activities, buildings, structures and works that exist (e.g. single dwelling, 24 dwellings in a three-storey building, medical centre with three practitioners and 8 car parking spaces, vacant building, vacant land, grazing land, bush block).

Please attach to your application a plan of the existing conditions of the land. Check with the local Council for the quantity, scale and level of detail required. It is also helpful to include photographs of the existing conditions.

See Example 3.

Title Information

What is an encumbrance?

An 'encumbrance' is a formal obligation on the land, with the most common type being a 'mortgage'. Other common examples of encumbrances include:

- Restrictive Covenants: A 'restrictive covenant' is a written agreement
 between owners of land restricting the use or development of the land
 for the benefit of others, (eg. a limit of one dwelling or limits on types
 of building materials to be used).
- Section 173 Agreements: A 'section 173 agreement' is a contract between an owner of the land and the Council which sets out limitations on the use or development of the land.
- Easements: An 'easement' gives rights to other parties to use the land or provide for services or access on, under or above the surface of the land.
- Building Envelopes: A 'building envelope' defines the development boundaries for the land.

Aside from mortgages, the above encumbrances can potentially limit or even prevent certain types of proposals.

What documents should I check to find encumbrances?

Encumbrances are identified on the title (register search statement) under the header 'encumbrances, caveats and notices'. The actual details of an encumbrance are usually provided in a separate document (instrument) associated with the title. Sometimes encumbrances are also marked on the title diagram or plan, such as easements or building envelopes.

What about caveats and notices?

A 'caveat' is a record of a claim from a party to an interest in the land. Caveats are not normally relevant to planning applications as they typically relate to a purchaser, mortgagee or chargee claim, but can sometimes include claims to a covenant or easement on the land. These types of caveats may affect your proposal.

Other less common types of obligations may also be specified on title in the form of 'notices'. These may have an effect on your proposal, such as a notice that the building on the land is listed on the Heritage Register.

as part of a planning process under the Planning and Environment Act 1987.

What happens if the proposal contravenes an encumbrance on the Declaration Commission Com

Encumbrances may affect or limit your proposal or prevent it from proceeding. Section 61(4) of the *Planning and Environment Act 1987* for example, prevents a Council from granting a permit if it would result in a breach of a registered restrictive covenant. If the proposal contravenes any encumbrance, contact the Council for advice on how to proceed.

You may be able to modify your proposal to respond to the issue. If not, separate procedures exist to change or remove the various types of encumbrances from the title. The procedures are generally quite involved and if the encumbrance relates to more than the subject property, the process will include notice to the affected party.

▲ You should seek advice from an appropriately qualified person, such as a solicitor, if you need to interpret the effect of an encumbrance or if you seek to amend or remove an encumbrance.

Why is title information required?

Title information confirms the location and dimensions of the land specified in the planning application and any obligations affecting what can be done on or with the land.

As well as describing the land, a full copy of the title will include a diagram or plan of the land and will identify any encumbrances, caveats and notices.

What is a 'full' copy of the title?

The title information accompanying your application must include a 'register search statement' and the title diagram, which together make up the title.

In addition, any relevant associated title documents, known as 'instruments', must also be provided to make up a full copy of the title.

Check the title to see if any of the types of encumbrances, such as a restrictive covenant, section 173 agreement, easement or building envelope, are listed. If so, you must submit a copy of the document (instrument) describing that encumbrance. Mortgages do not need to be provided with planning applications.

A Some titles have not yet been converted by Land Registry into an electronic register search statement format. In these earlier types of titles, the diagram and encumbrances are often detailed on the actual title, rather than in separate plans or instruments.

Why is 'current' title information required?

It is important that you attach a current copy of the title for each individual parcel of land forming the subject site. 'Current' title information accurately provides all relevant and up-to-date information.

Some Councils require that title information must have been searched within a specified time frame. Contact the Council for advice on their requirements.

⚠ Copies of title documents can be obtained from Land Registry: Level 10, 570 Bourke Street, Melbourne; 03 8636 2010; www.landata.vic.gov.au – go direct to "titles & property certificates".

Applicant and Owner Details

This section provides information about the permit applicant, the owner of the land and the person who should be contacted about any matters concerning the permit application.

The applicant is the person or organisation that wants the permit. The applicant can, but need not, be the contact person.

In order to avoid any confusion, the Council will communicate only with the person who is also responsible for providing further details. The contact may be a professional adviser (e.g. architect or planner) engaged to prepare or manage the application. To ensure prompt communications, contact details should be given.

Check with council how they prefer to communicate with you about the application. If an email address is provided this may be the preferred method of communication between Council and the applicant/contact.

The owner of the land is the person or organisation who owns the land at the time the application is made. Where a parcel of land has been sold and an application made prior to settlement, the owner's details should be identified as those of the vendor. The owner can, but need not, be the contact or the applicant.

See Example 4.

The declaration should be signed by the person who takes responsibility for the accuracy of all the information that is provided. This declaration is a signed statement that the information included with the application is true and correct at the time of lodgement.

The declaration can be signed by the applicant or owner. If the owner is not the applicant, the owner must either sign the application form or must be notified of the application which is acknowledged in the declaration.

▲ Obtaining or attempting to obtain a permit by wilfully making or causing any false representation or declaration, either orally or in writing, is an offence under the *Planning and Environment Act 1987* and could result in a fine and/or cancellation of the permit.

Checklist

What additional information should you provide to support the proposal?

You should provide sufficient supporting material with the application to describe the proposal in enough detail for the Council to make a decision. It is important that copies of all plans and information submitted with the application are legible.

There may be specific application requirements set out in the planning scheme for the use or development you propose. The application should demonstrate how these have been addressed or met.

The checklist is to help ensure that you have:

- · provided all the required information on the form
- · included payment of the application fee
- · attached all necessary supporting information and documents
- · completed the relevant Council planning permit checklist
- · signed the declaration on the last page of the application form

A The more complete the information you provide with your permit application, the sooner Council will be able to make a decision.

Need help with the Application?

If you have attended a pre-application meeting with a Council planner, fill in the name of the planner and the date, so that the person can be consulted about the application once it has been lodged.

Lodgement

The application must be lodged with the Council responsible for the planning scheme in which the land affected by the application is located. In some cases the Minister for Planning or another body is the responsible authority instead of Council. Ask the Council if in doubt.

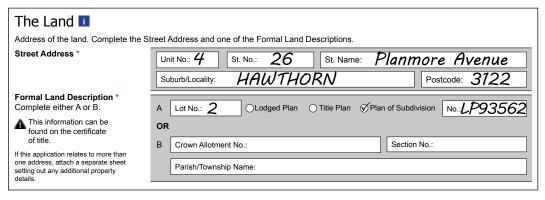
Check with Council how they prefer to have the application lodged. For example, they may have an online lodgement system, prefer email or want an electronic and hard copy. Check also how many copies of plans and the size of plans that may be required.

Contact details are listed in the lodgement section on the last page of the form

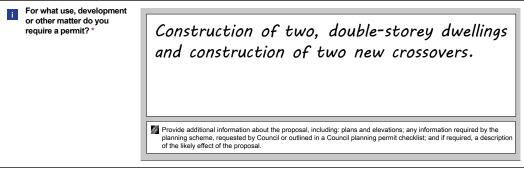
Approval from other authorities: In addition to obtaining a planning permit, approvals or exemptions may be required from other authorities or Council departments. Depending on the nature of your proposal, these may include food or health registrations, building permits or approvals from water and other service authorities.

as part of a proper process under the Planning and Environment Act 1987.
The docment must not be used for any pupose which may breach Copyright or Privacy Laws

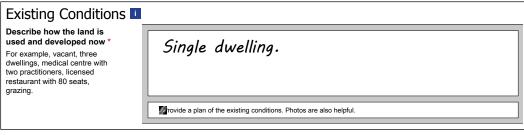
Example 1



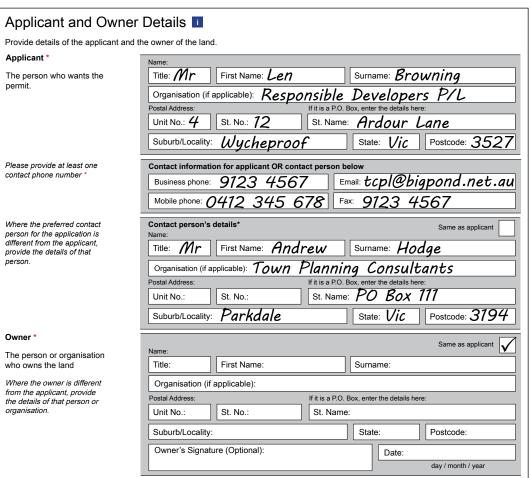
Example 2



Example 3



Example 4



PROPOSED DWELLING 356 TWO HILLS ROAD GLENBURN. VIC. 3717

GENERAL NOTES & SPECIFICATIONS:

ALL MATERIALS AND WORK PRACTICES MUST COMPLY WITH, BUT NOT LIMITED TO THE BUILDING REGULATIONS 2018, NCC2022 AND ALL RELEVANT CURRENT AUSTRALIAN STANDARDS (AS AMENDED) REFERRED TO THEREIN.

ALL MATERIALS AND CONSTRUCTION PRACTICE MUST MEET THE PERFORMANCE REQUIREMENTS OF THE NCC2022. WHERE AN ALTERNATIVE SOLUTION IS PROPOSED THEN. PRIOR TO IMPLEMENTATION OR INSTALLATION, IT FIRST MUST BE ASSESSED AND APPROVED BY THE RELEVANT BUILDING SURVEYOR AS MEETING THE PERFORMANCE REQUIREMENTS OF THE NCC2019 - VOLUME 2.

ALL WORKS MUST COMPLY TO THE FOLLOWING AUSTRALIAN STANDARDS;

AS 1288 - GLASS IN BUILDINGS: SELECTION AND INSTALLATION

AS 1562 - DESIGN AND INSTALLATION OF SHEET ROOF AND WALL CLADDING AS 1684 - NATIONAL TIMBER FRAMING CODE

AS 1860 - INSTALLATION OF PARTICLE BOARD FLOORING

AS 2049 - ROOF TILES

AS 2050 - FIXING OF ROOF TILES

AS 2870 - RESIDENTIAL SLABS AND FOOTINGS

AS 2904 - DAMP PROOF COURSES AND FLASHINGS

AS 3600 - CONCRETE STRUCTURES

AS 3660.1 - CODE OF PRACTICE FOR PHYSICAL BARRIERS USED IN THE PROTECTION OF **BUILDINGS AGAINST SUBTERRANEAN TERMITES**

AS 3700 - MASONRY IN BUILDINGS

AS 3786 - SMOKE ALARMS AS 4055 - WIND LOADINGS FOR HOUSING

AS 4100 - STEEL STRUCTURES

THE BUILDER AND SUBCONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, RELEVANT LEVELS AND DIMENSIONS ON-SITE PRIOR TO COMMENCING ANY BUILDING WORKS, ORDERING OF MATERIALS OR PREFABRICATION.

THIS DRAWING MUST BE READ IN CONJUNCTION WITH ANY STRUCTURAL ENGINEERING COMPUTATIONS & STRUCTURAL DRAWINGS.

THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONSULTANTS' DRAWINGS/ DETAILS AND WITH ANY OTHER WRITTEN INSTRUCTIONS ISSUED IN THE COURSE

ALL MEASUREMENTS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.

THE BUILDER MUST TAKE ALL STEPS NECESSARY TO ENSURE THE STABILITY AND GENERAL WATER TIGHTNESS OF ALL NEW AND/OR EXISTING STRUCTURES DURING ALL WORKS.

THE BUILDER AND SUBCONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS, SETBACKS, LEVELS AND SPECIFICATIONS AND ALL OTHER RELEVANT DOCUMENTATION PRIOR TO THE COMMENCEMENT OF ANY WORKS. REPORT ALL DISCREPANCIES TO THIS OFFICE FOR CLARIFICATION.

INSTALLATION OF ALL SERVICES SHALL COMPLY WITH THE RESPECTIVE SUPPLY AUTHORITY

THE BUILDER AND SUBCONTRACTOR SHALL ENSURE THAT ALL STORMWATER DRAINS, SEWER PIPES AND THE LIKE ARE LOCATED AT A SUFFICIENT DISTANCE FROM ANY BUILDINGS FOOTING AND/ OR SLAB EDGE BEAMS SO AS TO PREVENT GENERAL MOISTURE PENETRATION, DAMPNESS, WEAKENING AND UNDERMINING OF ANY BUILDING AND ITS FOOTING SYSTEM.

CONNECT STORMWATER AND SULLAGE DRAINS INTO LEGAL POINTS OF DISCHARGE , ALL DRAINS SHALL COMPLY WITH LOCAL AUTHORITIES REGULATIONS AND AS 3500.3-1998

ALL EXISTING UNDERGROUND SERVICES ARE TO BE LOCATED PRIOR TO EXCAVATION FOR NEW PIPES LINES AND NO EXISTING SERVICE SHALL BE DISCONNECTED OR DISTURBED WITHOUT APPROVAL FROM ENGINEER.

PROVIDE 90mm DIA. AGRICULTURAL DRAINS TO THE BASE OF ALL EXCAVATIONS BANKS AND RETAINING WALLS. CONNECT TO STORMWATER VIA SILT PIT.

STORMWATER DRAINS TO BE 100mm DIAMETER AT A GRADE OF 1:100 UNLESS NOTED

ALL PIPE JUNCTIONS SHALL BE WITH A 45 DEGREE JOINT.

ALL UPVC PIPES SHALL CONFORM TO AS1260 "UNPLASTICISED P.V.C(UPVC) PIPES AND FITTINGS FOR SEWAGE APPLICATIONS" PART 1 TO 5.

THE SITE SHOULD BE DRAINED SO THAT THE WATER CANNOT POND AGAINST OR NEAR THE BUILDING. THE GROUND IMMEDIATELY ADJACENT TO THE BUILDING SHOULD BE GRADED TO FALL 50mm OVER THE FIRST METER. WHERE THIS IS IMPRACTICABLE (I.E. SEVERAL SLOPING SITES) USE AG DRAINS ADJACENT TO THE FOOTINGS WHERE THE GROUND FALLS TOWARDS THE BUILDING.

THE GROUND BENEATH SUSPENDED FLOORS MUST BE GRADED SO THAT THE AREA BENEATH THE BUILDING IS ABOVE THE ADJACENT EXTERNAL FINISHED GROUND LEVEL AND SURFACE WATER IS PREVENTED FROM PONDING UNDER THE BUILDING. UNLESS OTHERWISE NOTE. ALL BATTERS TO EXCAVATIONS TO BE AT 45° MAX. PROVIDE 1000mm CLEAR FROM BASE OF CUT TO BUILDING AND/OR RETAINING WALLS AND GRADE AWAY FROM BUILDING AND/OR RETAINING WALLS WITHIN 1:20 MIN FALL.

90Ø uPVC DOWNPIPES (MIN) ARE REQUIRED TO BE PROVIDED AT 12m MAX SPACING (AND SERVE NO GREATER THEN 12m GUTTER LENGTH AND ARE TO BE CONNECTED TO THE APPROVED POINT OF DISCHARGE TO THE SATISFACTION OF THE RELEVANT BUILDING SURVEYOR.

SMOKE ALARMS TO COMPLY WITH AS 3786-2014 AND MUST BE INSTALLED IN ACCORDANCE WITH NCC2022 - PART 9.5 SMOKE ALARMS MUST BE CONNECTED DIRECTLY TO MAINS POWERS

REFER TO SOIL REPORT FOR SOIL CLASSIFICATIONS AND FOUNDING DEPTHS.

ALL EXPOSED STEEL TO BE HOT DIPPED GALVANIZED OR DURAGAL - REFER ENG.

FOR BUILDINGS IN CLOSE PROXIMITY TO THE SEA, ENSURE THAT ALL STEELWORKS BRICK CAVITY TIES AND STEEL LINTELS, ETC. THAT ARE EMBEDDED OR FIXED INTO MASONRY BE PROTECTED IN ACCORDANCE WITH AS 1650 OR AS 3700-2011, HOT DIPPED GALVANIZED STAINLESS STEEL OR CADMIUM COATED

PROVIDE MECHANICAL VENTILATION IN ACCORDANCE WITH NCC2022 - PART 10.6 AS

ALL EXHAUST FANS ARE TO DISCHARGE TO EXTERIOR OF THE BUILDING (OUTSIDE AIR)

NATURAL & ARTIFICIAL LIGHTING

PLEASE ENSURE COMPLIANCE WITH NCC2022 - PART 10.5.1 & 10.5.2

WATERPROOFING OF WET AREAS, BEING BATHROOMS, SHOWERS, SHOWER ROOMS LAUNDRIES, SANITARY COMPARTMENTS AND THE LIKE SHALL BE PROVIDED IN ACCORDANCE WITH AS 3740-2021: WATERPROOFING OF DOMESTIC WET AREAS.

PROVIDE IMPERVIOUS FLOOR & WALL FINISHES TO ALL WET AREAS IN ACCORDANCE WITH NCC2022 -PART 10.2

ALL WET AREAS TO COMPLY WITH THE NCC2022 - VOLUME 2 PART 10.2 & AS 3740 -2021 WALL FINISHES SHALL BE IMPERVIOUS TO A HEIGHT OF 1800mm VERTICAL OF FLOOR TO SHOWER ENCLOSURES AND 150mm ABOVE BATHS, BASINS, SINKS AND TROUGHS IF WITHIN 75mm FROM WALL. PROVIDE IMPERVIOUS FLOOR COVERINGS TO ALL WET AREAS TO THE SATISFACTION OF THE BUILDING SURVEYOR

WHERE THE BUILDING (EXCLUDES A DETACHED CLASS 10) IS LOCATED IN A TERMITE PRONE AREA THE BUILDING IS TO BE PROVIDED WITH A TERMITE MANAGEMENT

FOOTINGS

REINFORCED CONCRETE STRIP FOOTINGS & PAD FOOTINGS TO ENGINEERS DESIGN. FOOTING CONSTRUCTION TO COMPLY WITH NCC2022 & A.S. 2870-2011

TIMBER WALL FRAMING IS TO COMPLY WITH AS 1684-2010 " RESIDENTIAL TIMBER FRAMED CONSTRUCTION " AND WITH SUPPLEMENTARY TABLES.

PROVIDE DOUBLE STUD, STUMP & PAD UNDER ALL LOAD POINTS.

ALL STRUCTURAL STEEL IS TO COMPLY WITH AS 4100 " STEEL STRUCTURES CODE

WALL TIE DOWNS ARE TO BE INSTALLED AT 1800 ctrs (EVERY 4th STUD). THE TYPES OF WALL TIES DOWNS MAY BE INCLUSIVE OF METAL STRAPS, BOLTS, SCREWS, COACH SCREWS AND FRAMING ANCHORS, REFER TO ENGINEERING DRAWINGS FOR DETAILS

ALL MASONRY WORK IS TO COMPLY WITH AS 4773-2010 " MASONRY CODE " AND NCC2022 - PART 5.1

CONCRETE STRENGTH 25MPa (MIN) AT 28 DAYS (UNO ON STRUCTURAL DRAWINGS). ALL CONCRETE MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE AS3600 - 2001

CONCRETE STRUCTURES CODE. ALL CONCRETE SHALL BE CURED IN ACCORDANCE WITH AS3600-2001. ALL REINFORCEMENT TO BE LAID AND LAPPED TO MANUFACTURERS SPECIFICATIONS

ON APPROVED BAR CHAIRS. ALL WORKS TO BE IN ACCORDANCE WITH AS 2870-2011

OWNERS MUST RECOGNIZE THEIR RESPONSIBILITIES NOTED IN AS 2870-2011 AMENDMENT 4 AND MORE DETAIL IN C.S.I.R.O PUBLICATION "GUIDE TO HOMEOWNERS ON FOUNDATION MAINTENANCE AND PERFORMANCE."

AUSTRALIAN STANDARD: AS 3742 MINERAL WOOL THERMAL INSULATION-BATT &

PROVIDE INSULATION TO WALLS AND CEILINGS AS PER ENERGY REPORT. R-VALUES: REFER TO ENERGY REPORT PROVIDE SOUND-DAMPENING AND SARKING TO METAL ROOFS: 50mm THICK FIBERGLASS BLANKETS. SISILATION FLAMMABILITY INDEX NO GREATER THAN 5. SUPPLY AND INSTALL SISILATION

PROVIDE AN ELECTRONIC COPY OF THE ROOF TRUSS MANUFACTURER'S DESIGN AND LAYOUT OF THE BEAMS ARE TO BE SUBMITTED PRIOR TO THE FRAME INSPECTION BEING CARRIED OUT. NOTE: THE FRAME INSPECTION WILL NOT BE CARRIED OUT UNTIL SUCH TIME THAT COPY OF FULL TRUSS COMPUTATIONS AND LAYOUT

PROVIDE AN ELECTRONIC COPY OF ROOF TRUSS COMPUTATIONS (ROOF DESIGN INCLUSIVE) AND LAYOUT PLANS ARE TO BE SUBMITTED PRIOR TO THE ARRANGEMENT OF THE FRAME INSPECTION. THE WALL AND ROOF BRACING LAYOUT IN CONJUNCTION WITH THE ROOF TIE DOWN DETAILS ARE TO FORM PART OF THE DOCUMENTATION SUBMITTED FOR ASSESSMENT. IT IS ALSO EXPECTED THAT ALL LINTEL SIZES DESIGNED BY THE MANUFACTURER WILL FORM PART OF THE DOCUMENTATION SUBMITTED. THIS WILL BE MADE A CONDITION ON THE BUILDING PERMIT.

FALL, PITCH AND PROFILE OF THE ROOF TO BE INSTALLED IN ACCORDANCE WITH THE

CORRUGATED (MIN 5deg) TRAPEZOIDAL (MIN 3deg) CONCEALED FASTENED (MIN 10deg)

SELECTED COLORBOND ROOFING @ SPECIFIED PITCH

IMBER ROOF FRAMING IS TO COMPLY WITH A.S. 1684 - 2010 RESIDENTIAL TIMBER FRAMED CONSTRUCTION' AND WITH ANY SUPPLEMENTARY TABLES.

FIMBER ROOF TRUSSES AT 900ctrs TO MANUFACTURERS SPECIFICATIONS PROVIDE GALV. IRON CROSS BRACING OVER ROOF TRUSSES.

INTERNAL PLASTERBOARD CEILING, EXTERNAL LINING (MIN) 4.5mm F.C. SHEET EAVES

EXPOSED COLORBOND GUTTERS AND FASCIAS, INSTALLED PER NCC2022 - PART 7.4

REMOVABLE HINGES TO BE PROVIDED TO POWDER ROOMS, WC'S ENSUITES AND BATHROOMS WHERE DOOR SWINGS INWARD AND IS LESS THEN 1.2m FROM HINGE

ALL FLASHING TO BE INSTALLED IN ACCORDANCE WITH AS/NZS 2904-1995 & NCC2022 -PART 7.3.3

ALL EXTERNAL STEEL LINTELS ARE TO BE DURAGAL OR HOT DIPPED GALVANIZED AND THE WALL TIES PROVIDED ARE TO BE STAINLESS STEEL, REFER ENGINEERING CONSULTANT FOR DETAILS

ANY ONSITE WELDING MUST BE WIRE BRUSHED CLEANED & PAINTED FOR PROTECTION

GLAZING, INCLUDING SAFETY GLAZING, SHALL BE INSTALLED TO A SIZE, TYPE AND THICKNESS SO AS TO COMPLY WITH:

ALL SIZES SHOWN ARE NOMINAL AND SHOULD BE COMPARED TO MANUFACTURERS STANDARD SCHEDULE BEFORE CONSTRUCTION / ORDERING OF MATERIALS.

NON-STANDARD WINDOWS TO HAVE SIZES CHECKED ON SITE PRIOR TO MANUFACTURING REFER TO ELEVATIONS FOR SASH ARRANGEMENT.

ALL WINDOW SIZES & CLEARANCES TO BE CHECKED ON SITE PRIOR TO MANUFACTURING INSULATION:

GRADE A SAFETY GLASS IS REQUIRED TO ALL GLAZING IN BATHROOMS, ENSUITES, SPA ROOMS, SHOWER DOORS, SHOWER SCREENS, BATH ENCLOSURES, AND ASSOCIATED WINDOWS, WHERE THE LOWEST SIGHT LINE IS LESS THAN 2.0m ABOVE THE HIGHEST ABUTTING FINISHED LEVEL OF THE FLOOR, BOTTOM OF THE BATH, OR

PLEASE NOTE THAT WINDOWS CAPABLE OF BEING MISTAKEN FOR A DOORWAY OR OPENING AND GREATER THEN 500mm IN WIDTH, 1.0m IN HEIGHT AND WITHIN 700mm OF THE FINISHED FLOOR ARE TO BE PROVIDED WITH A MID-HEIGHT MOTIF WITHIN ITS PANEL IN ACCORDANCE WITH NCC2022 - VOLUME 2.

SAFETY GLASS TO BE USED IN THE FOLLOWING CASES;

- ALL ROOMS WITHIN 500mm VERTICAL OF THE FLOOR BATHROOMS - WITHIN 2000mm VERTICAL OF THE BATH BASE LAUNDRY - WITHIN 1200mm VERTICAL OF THE FLOOR AND/OR WITHIN 300mm
- DOORWAY WITHIN 300mm HORIZONTAL FROM ALL DOORS SHOWER SCREENS SHALL BE GRADE A SAFETY GLASS

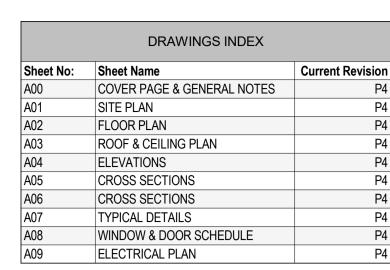
WINDOWS TO BE FLASHED ALL AROUND.

HORIZONTAL FROM DOORS

THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH ANY HOUSE ENERGY RATING (HERS) REPORT AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STAMPED PLANS ENDORSED BY THE ACCREDITED THERMAL PERFORMANCE ASSESSOR WITHOUT ALTERATION.

ANY CHANGES NEED TO BE BROUGHT TO THE ATTENTION OF THE ACCREDITED

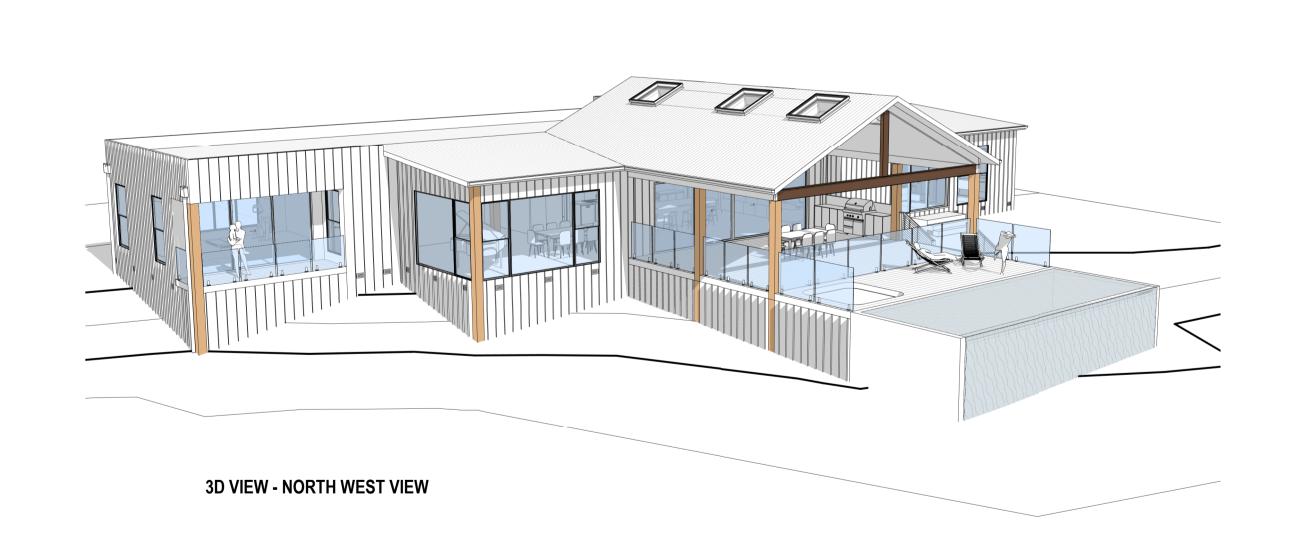
THE MIN 2000L RAINWATER TANK IS TO BE SERVED BY A ROOF AREA OF NO LESS THEN 50m2 CATCHMENTS AREA CONNECTED TO SANITARY FLUSHING SYSTEMS. (WHERE APPLICABLE - NEW DWELLINGS ONLY)





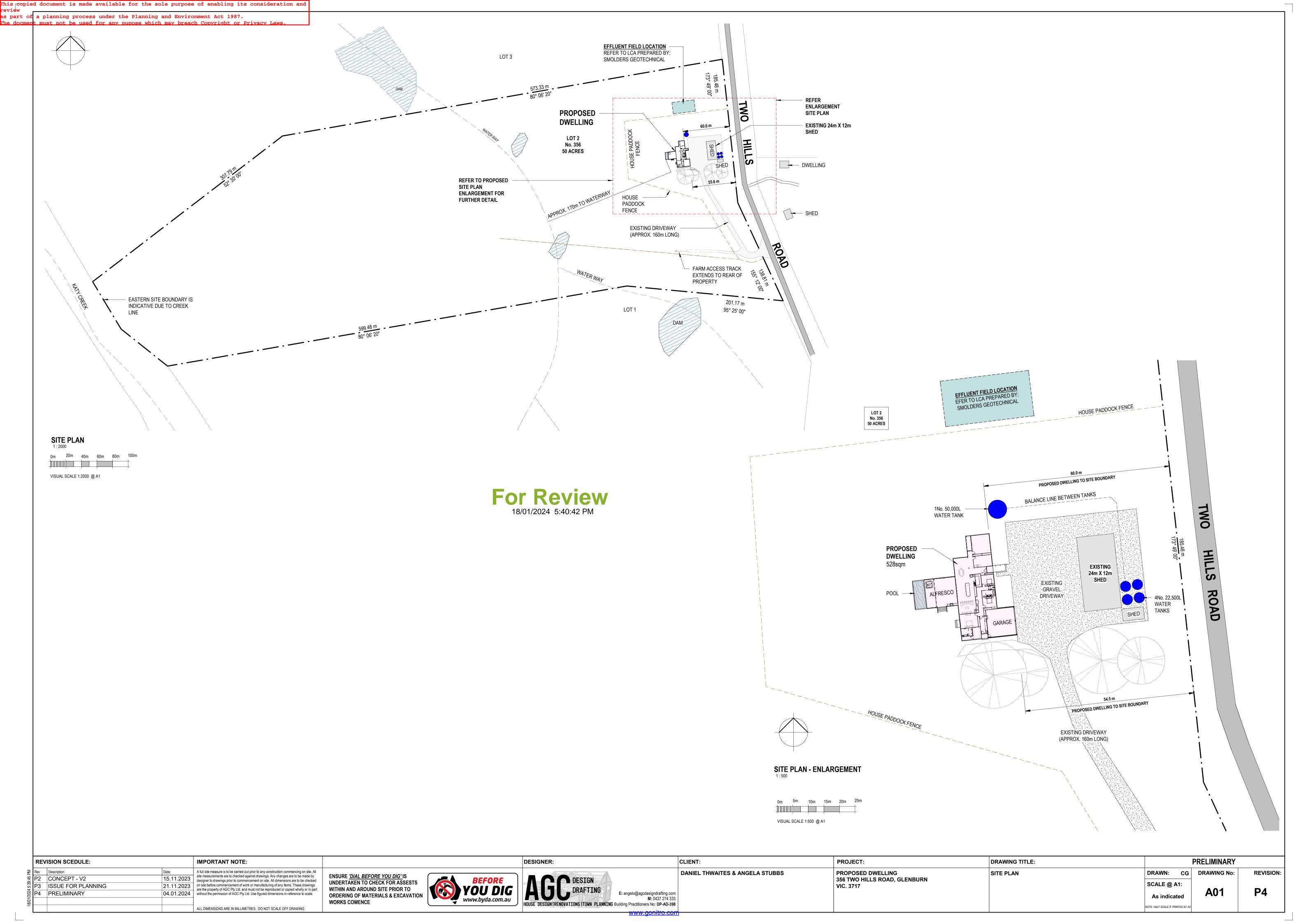
LOCATION PLAN

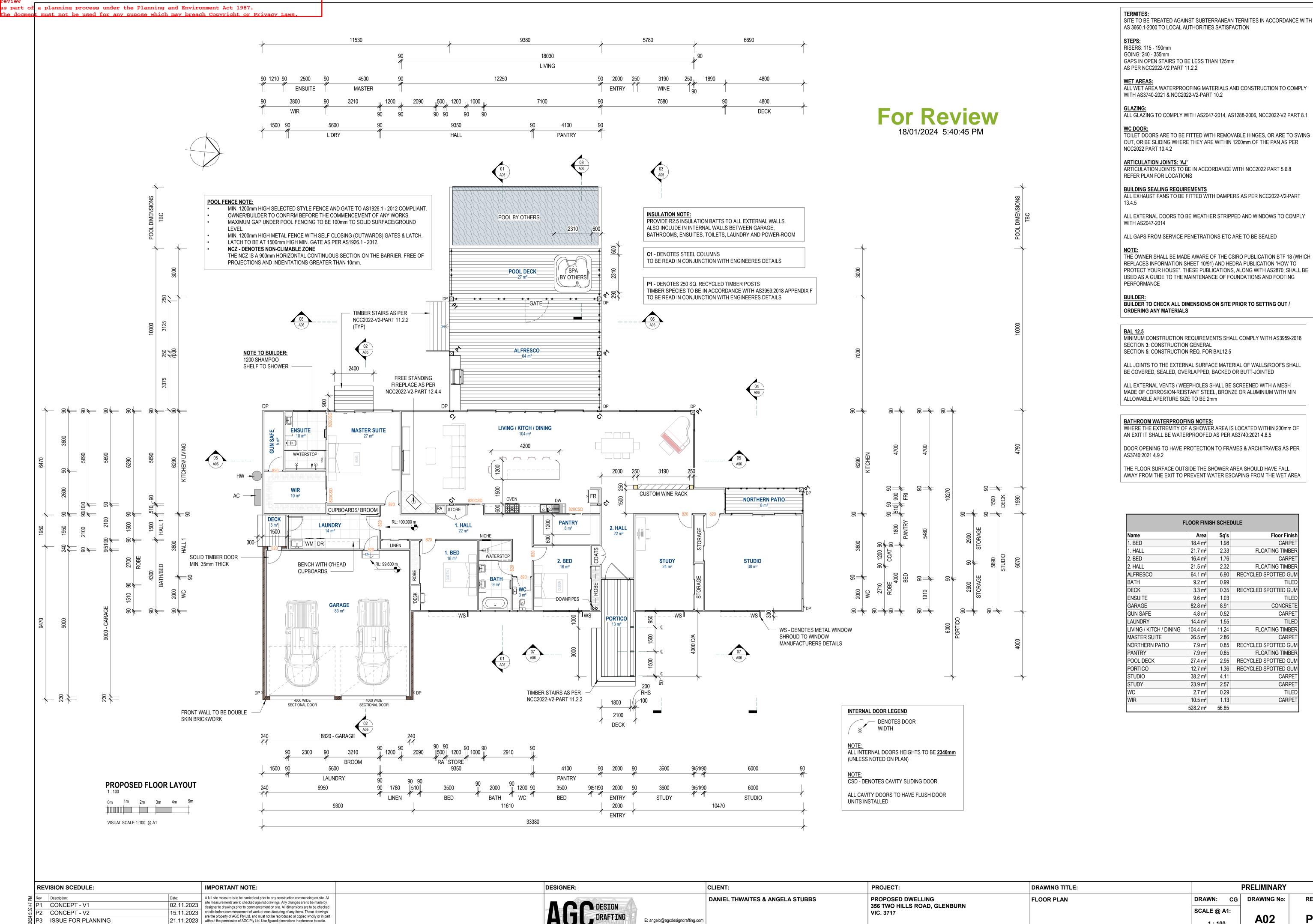




For Review

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Rev Description:	Date: A full site measure is to be carried out prior to any construction commencing on site. All site measurements are to checked against drawings. Any changes are to be made by		DANIEL THWAITES & ANGELA STUBBS	PROPOSED DWELLING	COVER PAGE & GENERAL NOTES	DRAWN: CG	DRAWING No:	REVISION:
P2 CONCEPT - V2	designer to drawings prior to commencement on site. All dimensions are to be checked	DESIGN		356 TWO HILLS ROAD, GLENBURN				
P3 ISSUE FOR PLANNING	21.11.2023 on site before commencement of work or manufacturing of any items. These drawings are the property of AGC Pty Ltd. and must not be reproduced or copied wholly or in part	DRAFTING Franch Conduction and		VIC. 3717		SCALE @ A1:		
P4 PRELIMINARY	04.01.2024 without the permission of AGC Pty Ltd. Use figured dimensions in reference to scale.	E: angelo@agcdesigndraming.com					A00	P4
		M: 0437 274 333						
	ALL DIMENSIONS ARE IN MILLIMETRES. DO NOT SCALE OFF DRAWING	HOUSE DESIGN RENOVATIONS TOWN PLANNING Building Practitioners No: DP-AD-398				NOTE: HALF SCALE IF PRINTED AT A3		





HOUSE DESIGN | RENOVATIONS | TOWN PLANNING Building Practitioners No: DP-AD-398

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SITE TO BE TREATED AGAINST SUBTERRANEAN TERMITES IN ACCORDANCE WITH AS 3660.1-2000 TO LOCAL AUTHORITIES SATISFACTION

RISERS: 115 - 190mm

GOING: 240 - 355mm GAPS IN OPEN STAIRS TO BE LESS THAN 125mm AS PER NCC2022-V2 PART 11.2.2

ALL WET AREA WATERPROOFING MATERIALS AND CONSTRUCTION TO COMPLY WITH AS3740-2021 & NCC2022-V2-PART 10.2

ALL GLAZING TO COMPLY WITH AS2047-2014, AS1288-2006, NCC2022-V2 PART 8.1

OUT, OR BE SLIDING WHERE THEY ARE WITHIN 1200mm OF THE PAN AS PER NCC2022 PART 10.4.2

ARTICULATION JOINTS: 'AJ'

ARTICULATION JOINTS TO BE IN ACCORDANCE WITH NCC2022 PART 5.6.8 REFER PLAN FOR LOCATIONS

BUILDING SEALING REQUIREMENTS

ALL EXHAUST FANS TO BE FITTED WITH DAMPERS AS PER NCC2022-V2-PART

ALL EXTERNAL DOORS TO BE WEATHER STRIPPED AND WINDOWS TO COMPLY WITH AS2047-2014

ALL GAPS FROM SERVICE PENETRATIONS ETC ARE TO BE SEALED

THE OWNER SHALL BE MADE AWARE OF THE CSIRO PUBLICATION BTF 18 (WHICH REPLACES INFORMATION SHEET 10/91) AND HEDRA PUBLICATION "HOW TO PROTECT YOUR HOUSE". THESE PUBLICATIONS, ALONG WITH AS2870, SHALL BE USED AS A GUIDE TO THE MAINTENANCE OF FOUNDATIONS AND FOOTING PERFORMANCE

BUILDER TO CHECK ALL DIMENSIONS ON SITE PRIOR TO SETTING OUT / ORDERING ANY MATERIALS

MINIMUM CONSTRUCTION REQUIREMENTS SHALL COMPLY WITH AS3959-2018 SECTION 3: CONSTRUCTION GENERAL

SECTION 5: CONSTRUCTION REQ. FOR BAL12.5

ALL JOINTS TO THE EXTERNAL SURFACE MATERIAL OF WALLS/ROOFS SHALL BE COVERED, SEALED, OVERLAPPED, BACKED OR BUTT-JOINTED

ALL EXTERNAL VENTS / WEEPHOLES SHALL BE SCREENED WITH A MESH MADE OF CORROSION-REISTANT STEEL, BRONZE OR ALUMINIUM WITH MIN ALLOWABLE APERTURE SIZE TO BE 2mm

BATHROOM WATERPROOFING NOTES:

WHERE THE EXTREMITY OF A SHOWER AREA IS LOCATED WITHIN 200mm OF AN EXIT IT SHALL BE WATERPROOFED AS PER AS3740:2021 4.8.5

DOOR OPENING TO HAVE PROTECTION TO FRAMES & ARCHITRAVES AS PER AS3740:2021 4.9.2

THE FLOOR SURFACE OUTSIDE THE SHOWER AREA SHOULD HAVE FALL AWAY FROM THE EXIT TO PREVENT WATER ESCAPING FROM THE WET AREA

FLOOR FINISH SCHEDULE Area Sq's Floor Finish I. BED 18.4 m² 1.98 CARPE FLOATING TIMBER 21.7 m² 2.33 16.4 m² 2. HALL 21.5 m² 2.32 FLOATING TIMBER ALFRESCO 64.1 m² 6.90 RECYCLED SPOTTED GUM 9.2 m² 0.99 3.3 m² 0.35 RECYCLED SPOTTED GUM 9.6 m² **ENSUITE** GARAGE 82.8 m² CONCRETE **GUN SAFE** 4.8 m² CARPE LAUNDRY 14.4 m² LIVING / KITCH / DINING 104.4 m² 11.24 FLOATING TIMBER MASTER SUITE 26.5 m² 2.86 CARPE 0.85 RECYCLED SPOTTED GUM NORTHERN PATIO 7.9 m² 0.85 7.9 m² FLOATING TIMBER POOL DECK 27.4 m² 2.95 RECYCLED SPOTTED GUM PORTICO 12.7 m² 1.36 RECYCLED SPOTTED GUM STUDIO 38.2 m² 4.11 CARPE 23.9 m² 2.57 CARPET 2.7 m² 0.29 10.5 m² 1.13 CARPET 528.2 m² 56.85

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A02

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BAL 12.5
MINIMUM CONSTRUCTION REQUIREMENTS SHALL COMPLY WITH AS3959-2018 SECTION 3: CONSTRUCTION GENERAL SECTION 5: CONSTRUCTION REQ. FOR BAL12.5

ALL JOINTS TO THE EXTERNAL SURFACE MATERIAL OF WALLS/ROOFS SHALL BE COVERED, SEALED, OVERLAPPED, BACKED OR BUTT-JOINTED

ALL EXTERNAL VENTS / WEEPHOLES SHALL BE SCREENED WITH A MESH MADE OF CORROSION-REISTANT STEEL, BRONZE OR ALUMINIUM WITH MIN ALLOWABLE APERTURE SIZE TO BE 2mm

ROOF BLANKET:
BRADFORD ANTICON R1.8 ROOF BLANKET (OR SIMILAR FOIL FACED EARTHWOOL / GLASSWOOL BAL COMPLIANT ROOF BLANKET) INSTALLED TO THE ENTIRE ROOF AREA OVER THE TOP OF BATTENS.

EXTEND FOIL 50mm INTO GUTTER / VALLEY GUTTER.

ALL JOINS SHALL BE COVERED, SEALED, OVERLAPPED (MIN. 150mm), BACKED OR BUTT-JOINTED & TAPED

ROOF PENETRATION NOTES:

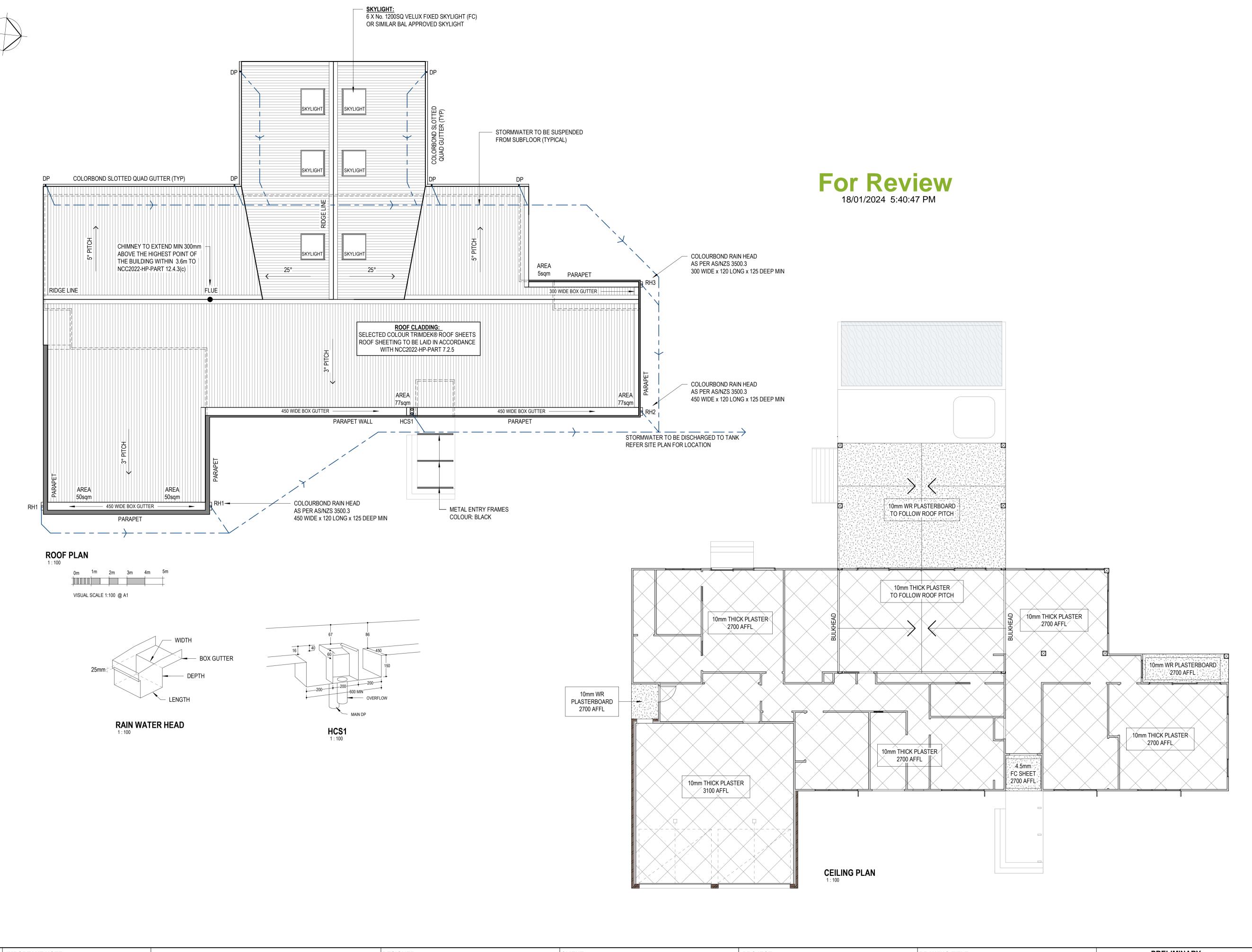
ALL ROOF PENETRATIONS TO BE SEALED USING NON-COMBUSTIBLE MATERIALS MADE FROM CORROSION-RESISTANT STEEL, BRONZE OR ALUMINIUM

ROOF PENETRATIONS AS PER AS3959:2018

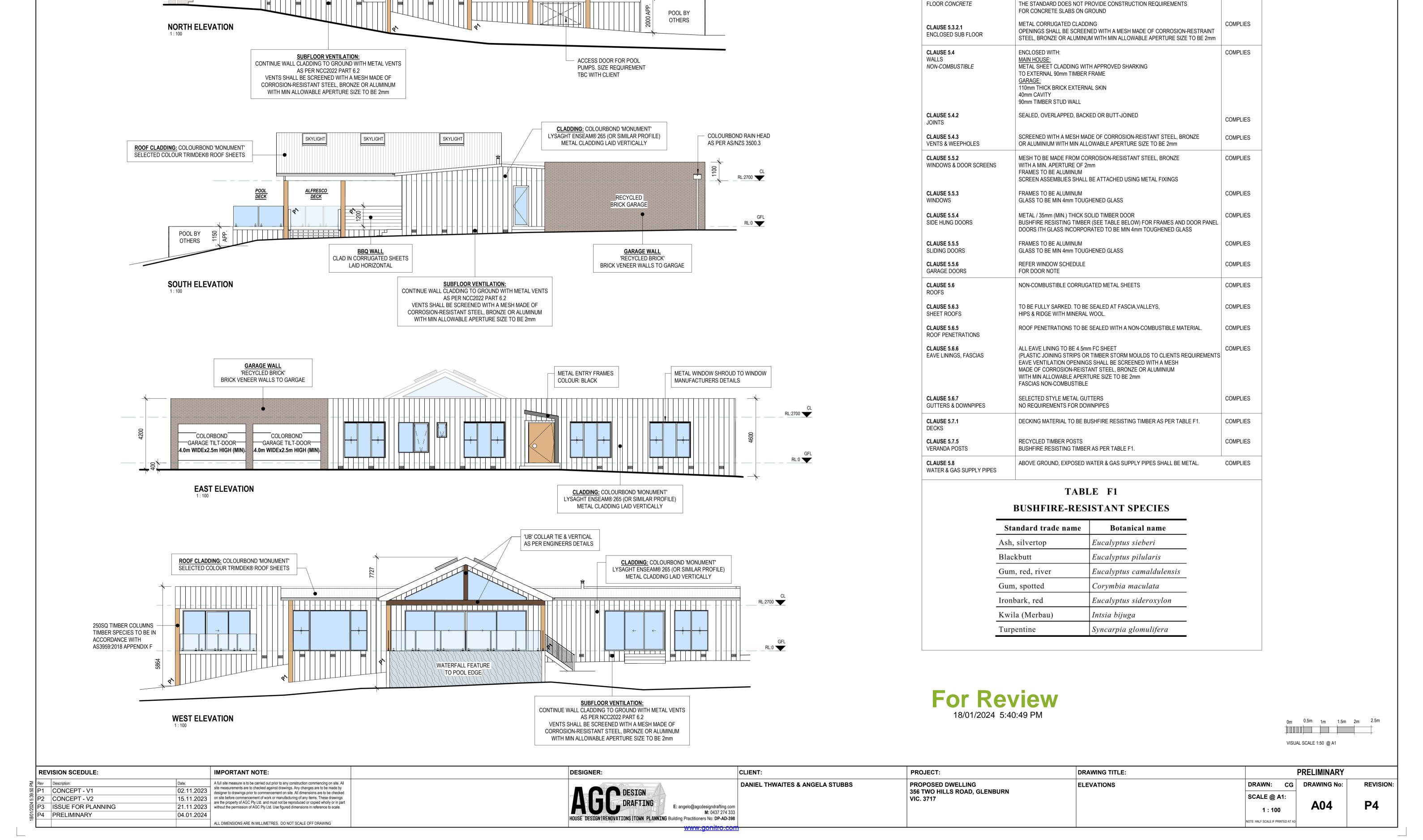
BUILDER TO CHECK ALL DIMENSIONS PRIOR TO SETTING OUT / ORDERING ANY MATERIALS

ALL DRAWINGS SHALL BE READ IN CONJUNCTION

STRUCTURAL ENGINEER'S DRAWINGS ENERGY RATER'S DOCUMENTATION



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		<u>vv vv v</u>	r.goriitro.com			



GARAGE WALL
'RECYCLED BRICK'
BRICK VENEER WALLS TO GARGAE

CLADDING: COLOURBOND 'MONUMENT'
LYSAGHT ENSEAM® 265 (OR SIMILAR PROFILE)
METAL CLADDING LAID VERTICALLY

SKYLIGHT

SKYLIGHT

ROOF CLADDING: COLOURBOND 'MONUMENT' SELECTED COLOUR TRIMDEK® ROOF SHEETS

1200 HIGH SELECTED STYLE GLASS BALUSTRADE FIXED

TO DECKING AS PER PRODUCT MANUFACTURERS

SPECIFICATIONS & NCC2022 PART 11.3

RL:2700

RL:0

BAL12.5 NOTES:

REGULATION

CLAUSE 5.3.1

SECTION 3: CONSTRUCTION GENERAL

SECTION 5: CONSTRUCTION FOR BUSHFIRE ATTACK 12.5

MINIMUM CONSTRUCTION REQUIREMENTS SHALL COMPLY WITH AS3959-2018

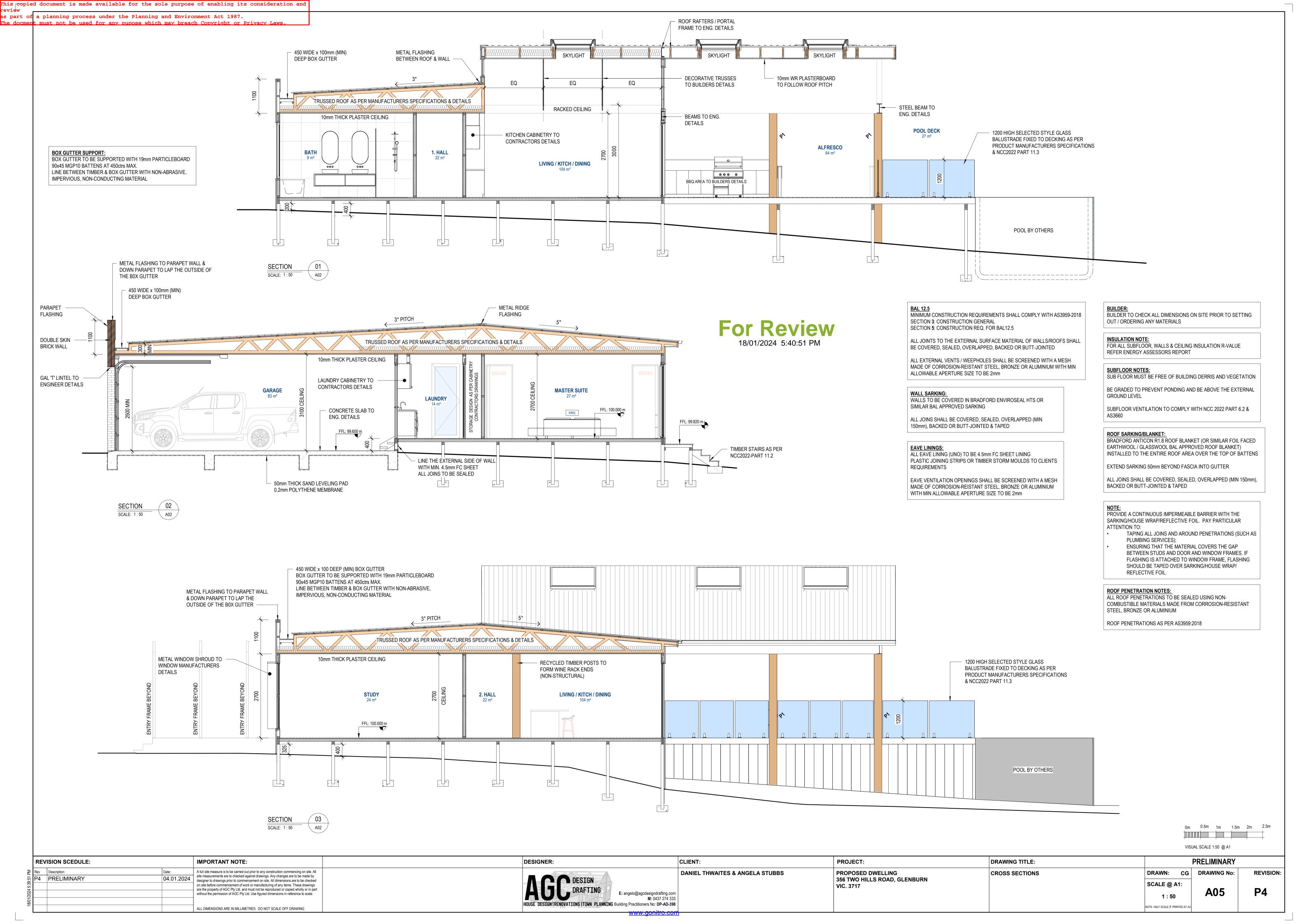
<u>RESPONSE</u>

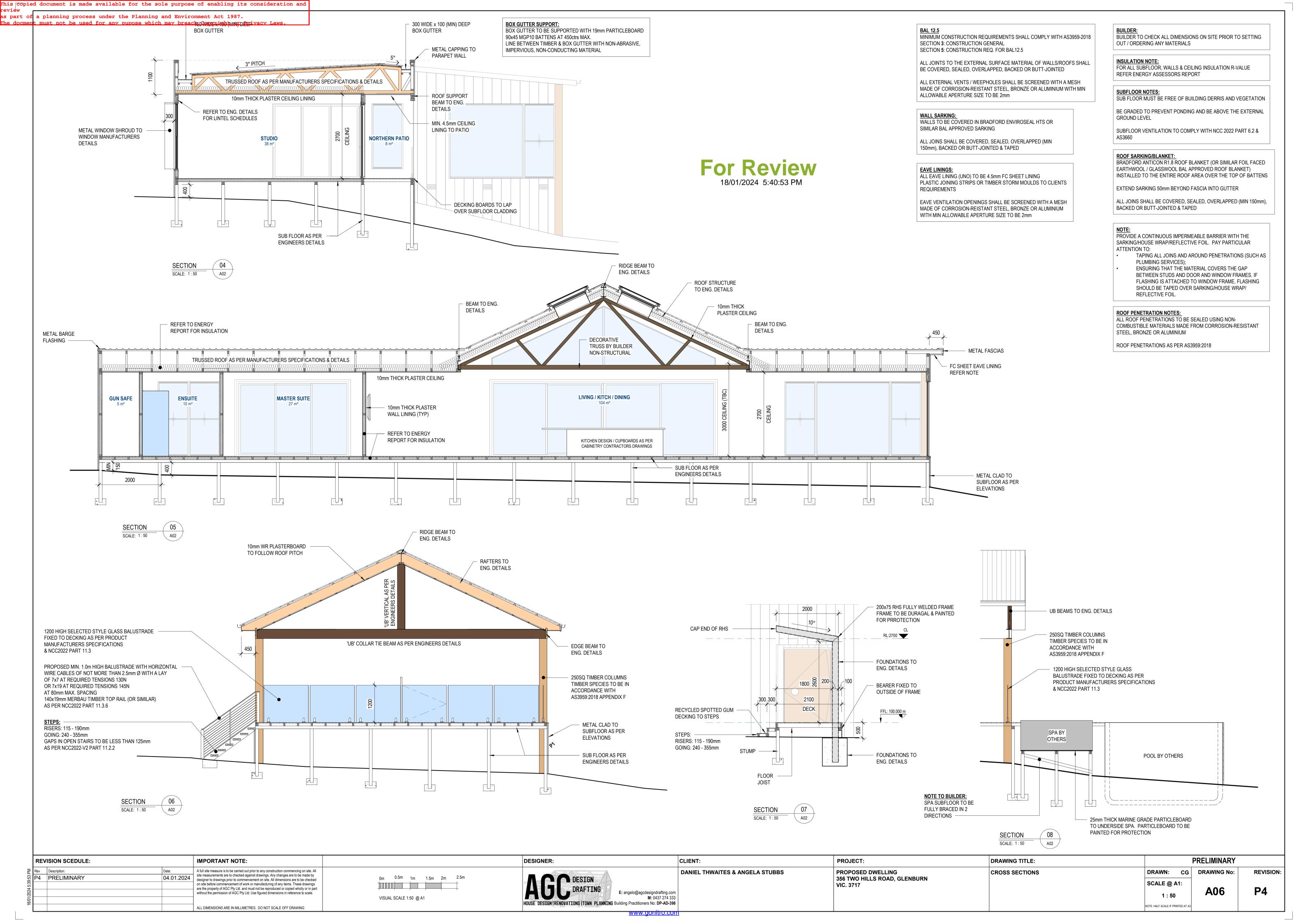
CONCRETE SLAB

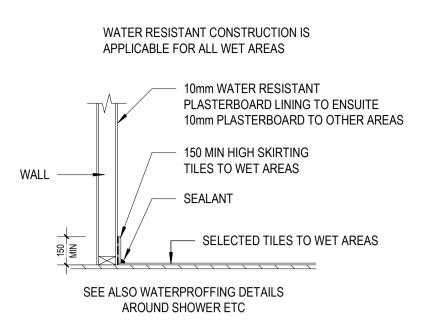
COMPLIES

SKYLIGHT

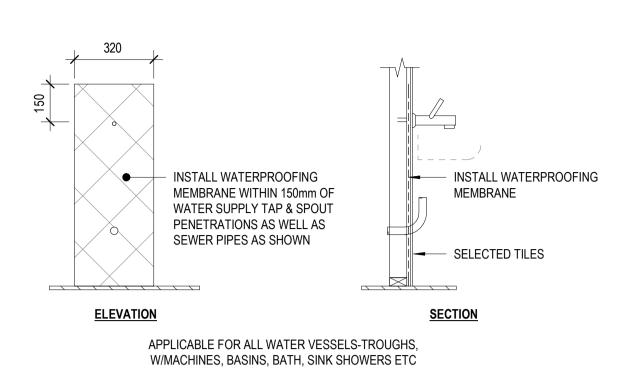
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WATER RESISTANT CONSTRUCTION



WATERPROOFING DETAIL AROUND PIPES

TO 1800mm MIN HIGH WITHIN 1500 OF SHOWER ROSE. USE WATERPROOFING WHICH COMPLIES WITH AS 3740 AND NCC FALL TO DRAIN @ 1:60 MAX / 1:80 MIN - LATEX FLEXIBLE MEMBRANE OVER SCREED.EXTEND WATERPROOFING 20 MM INTO PUDDLE FLANGE SCREED 10mm ----CUT TILES

@ 45° FLOOR WITHIN 1500 OF SHOWER ROSE - SELECTED TILES CONNECTION TO BE WATERPROOFED & / SEALANT GRADED TO FLOOR WASTE SET DOWN 20mm & SCREED OVER
REPRATE TO CREATE FALL REBATE TO CREATE FALL JOISTS NOTE TO BE NOTCHED SELECTED FLOOR WASTE SYSTEM **INDICATIVE SHOWER TILE PLAN** PUDDLE FLANGE

INSTALL WATERPROOFING MEMBRANE TO BASE AND UP WALLS

TILED SHOWER BASE DETAIL

LATCH RELEASE **HINGE NOTE** 1500 MIN. ABOVE GROUND & 1400 MIN. ABOVE WHERE HINGES PROTRUDE MORE THAN 10mm OR THE GAP HIGHEST LOWEST CLAIMABLE MEMBER BETWEEN THE POST & GATE IS GREATER THAN 10mm A 900 MIN. & A 1000 MIN. VERTICAL SEPARATION IS REQUIRED TO PREVENT HINGES CLAIMABLE HINGE _ LATCH * P+++++++ <u>GATE</u> SELF CLOSING / LOCKING OPENING AWAY FROM POOL

MAX. TO A PERMANENT STABLE SURFACE

NON-CLIMBABLE ZONES (NCZ)

THE MIN. HEIGHT OF AN INTERNAL SWIMMING POOL BARRIER IS 1200mm MEASURED ON THE APPROACH SIDE (OUTSIDE) OF THE BARRIER. REFER DETAILS. 900 NCZ BETWEEN THE HORIZONTAL RAILS ON EACH PANEL & 1000 MIN. TO THE TOP MUST BE MAINTAINED

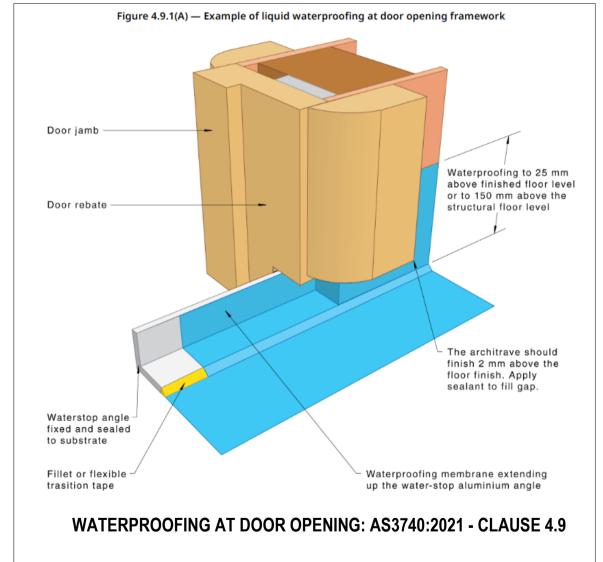
GATES INSTALLED IN THE INTERNAL BARRIER MUST BE SELF CLOSING & SELF LATCHING WITH A LATCH RELEASE 1500mm HIGH & MUST OPEN AWAY (OUTWARDS) FROM THE POOL / SPA

MATERIALS

MATERIALS SHOULD BE SUFFICIENTLY STRONG TO PREVENT FORCED ENTRY BY A CHILD TO A POOL ENCLOSURE AND SHOULD COMPLY WITH AS1926.1-2012

DETAIL TO BE READ IN CONJUNCTION WITH AS19226.1-2012

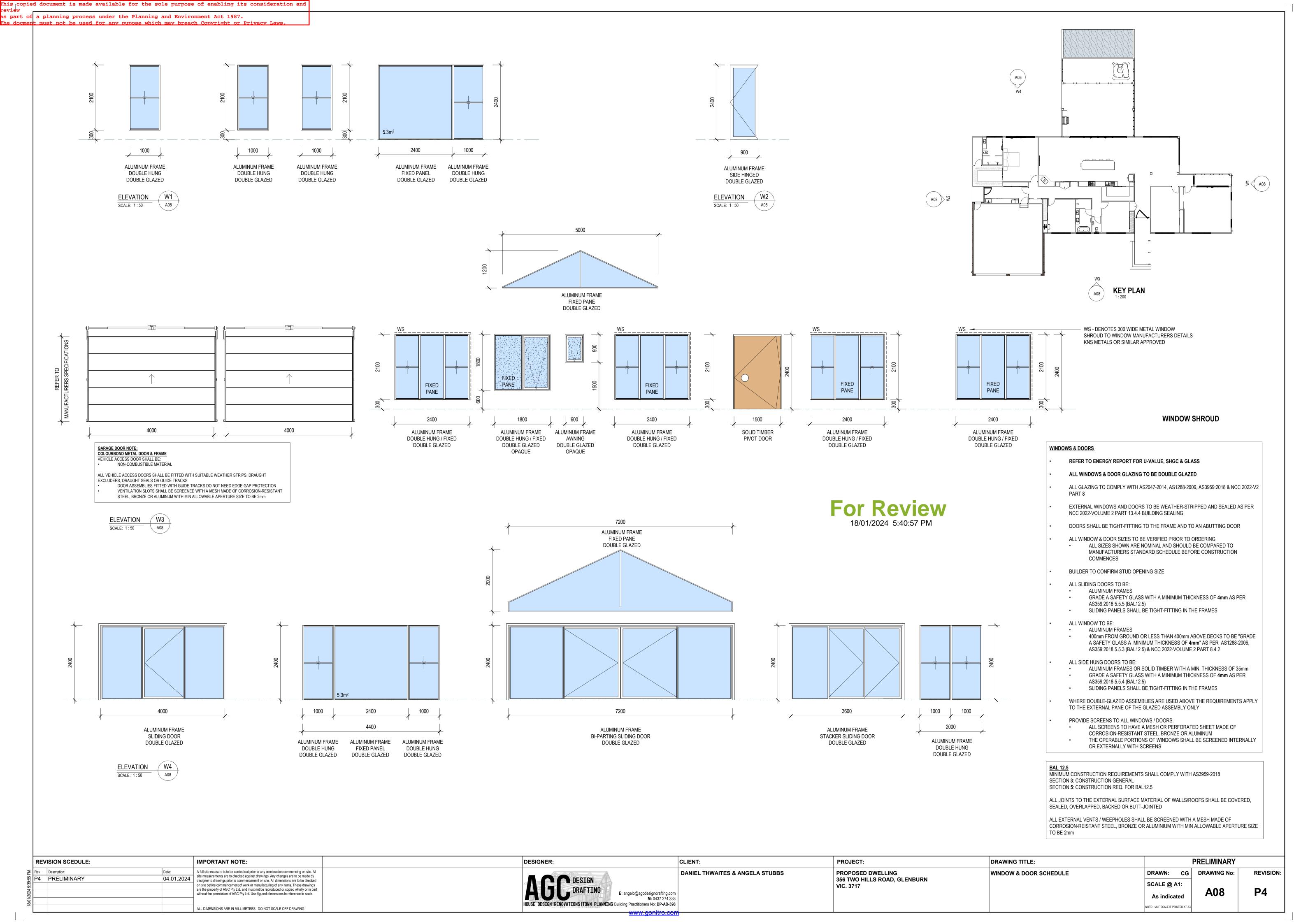
— Shower area -- Bathroom ----Optional for membrane to -Optional shower screen extend up and over water stop bedded on sealant ← Fall Tile bed Tile bed Waterproofing membrane: Optional capping angle to support angle ... protect exposed membrane 50 mm 4 4 4 Membrane shown in blue -Compatable bond WATERSTOP DETAIL AS PER: AS 3740:2021 - CLAUSE 4.8



For Review

NON-CLIMBABLE ZONES (NCZ) THE NCZ IS A 900mm HIGH VERTICAL CONTINUOUS SECTION ON THE BARRIER, FREE OF PROJECTIONS AND INDENTATIONS GREATER THAN 10mm. WHERE THE NCZ IS MEASURED FROM DEPENDS ON IF THE BARRIER IS A 1200mm POOL FENCE, OR AN 1800mm BOUNDARY BARRIER.	Door rebate	Waterproofing to 25 mm above finished floor level or to 150 mm above the structural floor level
TYPICAL POOL FENCE / GATE DETAIL 1:20	Waterstop angle fixed and sealed to substrate Fillet or flexible trasition tape WATERPROOFING AT DOOR OP	The architrave should finish 2 mm above the floor finish. Apply sealant to fill gap. Waterproofing membrane extending up the water-stop aluminium angle PENING: AS3740:2021 - CLAUSE 4.9

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ELECTRICAL REQUIREMENTS FOR SPA AND POOL TO BE CONFIRMED WITH CLIENT PRIOR TO ORDERING MATERIALS AND ROUGHING-IN POOL DECK OUTDOOR NOTE TO ELECTRICIAN: KITCHEN/ BBQ CLIENT TO CONFIRM KITCHEN LAYOUT OUT & POWER TO DISHWASHER, OVEN, RANGE HOOD, ETC PRIOR TO ROUGHING-IN FIRE PLACE: **ENSUITE** CONSIDER AESTHETICS OF POWERPOINTS/ ELECTRICAL SUPPLY TO FIREPLACE. TBC WITH CLIENT WINE RACK: LIGHTING REQUIREMENTS FOR WINERACK TO BE CONFIRMED WITH CLIENT PRIOR TO ORDERING MATERIALS AND ROUGHING-IN EXTERNAL POWER TO HOT WATER UNITS, AIR-CONDITIONER CONDENSERS & PREASSURE PUMP AT TANK TO BE CONFIRMED PRIOR TO ROUGHING-IN. WINE RACK NORTHERN PATIO RA STORE NOTE TO ELECTRICIAN: POWER REQUIREMENTS FOR GARAGE DOOR STUDY TO BE CONFIRMED BY MANUFACTURE PRIOR TO ROUGHING-IN LINEN **GYM STUDIO:** CLIENT TO CONFIRM ELECTRICAL REQUIREMENTS FOR GYM EQUIPMENT PRIOR TO ROUGHING-IN M CLIENT TO CONFIRM ELECTRICAL REQUIREMENTS/ LOCATION OF DESK ETC. IN OFFICE PRIOR TO ROUGHING-IN **ENTRY FRAMES:** PROVIDE SELECTED SENSOR LIGHTING TO ENTRY FRAMES

Lighting Schedule - 3W/m2 Area (m2) Permited (w) 82.81 331.25

Lighting Schedule - 4W/m2 Area (m2) Permited (w) 64.11 256.43 3.27 13.07 NORTHERN PATIO 7.92 31.69 12.67 50.69 PORTICO

Lighting Sche	dule - 5W/m2	
Name	Area (m2)	Permited (w)
1. BED	18.39	91.97
1. HALL	21.65	108.27
2. BED	16.36	81.82
2. HALL	21.55	107.74
BATH	9.18	45.88
ENSUITE	9.56	47.79
GUN SAFE	4.80	23.99
LAUNDRY	14.44	72.21
LIVING / KITCH / DINING	104.37	521.87
MASTER SUITE	26.53	132.65
PANTRY	7.92	39.60
STUDIO	38.21	191.06
STUDY	23.86	119.30
WC	2.70	13.48
WIR	10.46	52.32

ELECTRICAL LEGEND:

B LED BATTEN HOLDER LIGHTS 12w

P PENDANT LIGHT LIGHTS 12w

EXTERNAL LIGHTS

WALL LIGHTS 12w MECHANICAL VENTS:

ANY CONTAMINATED AIR FROM A SANITARY COMPARTMENT OR BATHROOM MUST EXHAUST DIRECTLY TO OUTSIDE AS PER NCC2022-HP-PART FLOW RATES AS PER NCC2022-HP-PART 10.8.2

SMOKE DETECTORS

SMOKE DETECTORS TO BE INSTALLED AND COMPLY WITH **AS3786-2014** AND **NCC2022-HP-PART 9.5.1** ALL SMOKE ALARMS TO BE HARDWIRED INTO MAINS POWER NCC2022-HP-PART 9.5.1(c) & TO BE INTERCONNECTED AS PER NCC2022-HP-PART 9.5.1(d)

CEILING FAN MULTI SPEED CEILING FAN

CEILING FAN WITH LED LIGHT MULTI SPEED CEILING FAN LED LIGHT 12w

DOWNLIGHTS WATTAGE 10W

NOTE: DOWNLIGHTS MUST BE IC RATED OR PROVIDED WITH APPROVED FIRE PROOF NON-VENTILATED DOWNLIGHT COVERS REFER INSULATION OVER LED FITTING NOTE

GARAGE LIGHTS 2 x 36W FLUORESCENT LIGHT WITH DIFFUSER

SELECTED DOUBLE GPO
AB - DENOTES ABOVE BENCH WHERE APPLICABLE

SELECTED EXTERNAL DOUBLE GPO HEIGHT FROM FFL SHOWN WHERE APPLICABLE

ANTENNA POINT PLACE AERIAL TO ROOF AT OPTIMUM LOCATION FOR RECEPTION IN THIS AREA

NOTES TO ELECTRICIAN:

TO COMPLY WITH NCC2022-HP-PART 13.7.6 ARTIFICIAL LIGHTING

ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL ALL WIRING AND FITTINGS UNLESS OTHERWISE SPECIFIED. ALL WIRING, FITTINGS AND INSTALLATION TO COMPLY WITH AUSTRALIAN STANDARDS AS3000-2000

ELECTRICAL CONTRACTOR TO INCLUDE FOR PROVIDING WEATHERPROOF

EXTERNAL POWER OUTLETS IF REQUIRED ELECTRICAL CONTRACTOR TO NOTE THAT THE POSITION OF ALL FIXTURES

& OUTLETS SHOWN IS DIAGRAMMATIC ONLY, EXACT LOCATIONS MUST BE

CONFIRMED ON SITE WITH OWNER PRIOR TO PLASTERING OF WALLS

ALL LIGHT FITTINGS TO BE SELECTED BY OWNER / BUILDER

HEATING AND COOLING SYSTEMS TO BE SELECTED BY OWNER / BUILDER. ALLOW FOR ALL NECESSARY WIRING

INTERNAL POWER OUTLETS TO BE LOCATED 300mmABOVE THE FLOOR (OR BENCH TOP) UNLESS IT SERVES A SPECIFIC APPLIANCE SUCH AS A REFRIGERATOR OR DISHWASHER WHERE THE POSITION SHALL BE APPROPRIATE FOR THE EQUIPMENT.

EXTERNAL POWER OUTLETS TO BE LOCATED 1000mm ABOVE FLOOR.

POWER POINTS AND LIGHT CONTROL SWITCHES SHALL BE WHITE IN COLOUR UNLESS NOTED OTHERWISE.

LIGHT CONTROL POINTS SHALL BE LOCATED 1000mm FROM THE FLOOR.

PROVIDE POWER TO ALL APPLIANCES THAT REQUIRE POWER SUCH AS HEATERS, COOLERS AND STOVES.

METER BOX TO BE METAL.

ELECTRICIAN TO LIAISE WITH CLIENT TO CHECK IF NBN & ASSOCIATED DATA POINT CONNECTION IS REQUIRED TO FUTURE PROOF HOUSE.

BATHROOM/ENSUITE OR SANITARY COMPARTMENTS MUST HAVE AN EXHAUST CAPACITY OF 25L/sec MIN DUCTED TO OUTSIDE THROUGH ROOF VENT (AVOID VENTS TO FRONT ELEVATION) OR SIDEWAYS TO WALL VENT

KITCHEN OR LAUNDRY COMPARTMENTS MUST HAVE AN EXHAUST CAPACITY OF 40L/sec MIN DUCTED TO OUTSIDE THROUGH ROOF VENT (AVOID VENTS TO FRONT ELEVATION) OR SIDEWAYS TO WALL VENT

FLOW RATES & DISCHARGE OF EXHAUST SYSTEMS TO BE IN ACCORDANCE WITH NCC 2019 VOLUME TWO, CLAUSE 3.8.7.3

LIGHTING ALLOWANCE: 5W/m2 FOR HOUSE

4W/m2 FOR VERANDAH / ALFRESCO 3W/m2 FOR GARAGE / CARPORT

INSULATION OVER LED FITTINGS NOTE:

BUILDING INSULATION ABUTTING OR IS WITHIN 100mm HORIZONTALLY OF THE LUMINAIRE MUST MEET THE FOLLOWING REQUIREMENTS: BE OF A TYPE THAT CAN MAINTAIN ITS DIMENSIONS AND STRUCTURAL INTEGRITY WHEN EXPOSED TO A MAXIMUM SURFACE TEMPERATURE OF THE CLASS OF THE LUMINAIRE, BEING 90°C;

BE OF A TYPE THAT CAN WITHSTAND A 30sec NEEDLE FLAME TEST CARRIED OUT IN ACCORDANCE WITH AS/NZS 60695.11.5 WITH A FLAME APPLIED TO ALL SURFACES OF THE SAMPLE.

INSULATION TYPES WHICH SHOULD BE USED WITH THIS FITTING ARE GLASS WOOL (PINK BATTS) & POLYESTER. **IMPORTANT NOTE**:

BUILDER MUST NOT INSTALL LOOSE FILL INSULATION, SUCH AS WOOL OR MACERATED PAPER. FIXTURE DRIVER OR CONTROL GEAR MUST BE MOUNTED ABOVE ANY

INSULATION COVERING THE FIXTURE.

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REVISION SCEDULE:		IMPORTANT NOTE:	DESIGNER:	CLIENT:	PROJECT:	DRAWING TITLE:	PREI	LIMINARY	
Rev Description: P4 PRELIMINARY	Date: 04.01.2024	A full site measure is to be carried out prior to any construction commencing on site. All site measurements are to checked against drawings. Any changes are to be made by designer to drawings prior to commencement on site. All dimensions are to be checked on site before commencement of work or manufacturing of any items. These drawings are the property of AGC Pty Ltd. and must not be reproduced or copied wholly or in part without the permission of AGC Pty Ltd. Use figured dimensions in reference to scale.	DESIGN DRAFTING E: angelo@a	gcdesigndrafting.com M: 0437 274 333 oners No: DP-AD-398	PROPOSED DWELLING 356 TWO HILLS ROAD, GLENBURN VIC. 3717	ELECTRICAL PLAN	SCALE @ A1:	A09	REVISION:
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LAND MANAGEMENT PLAN

For 356 Two Hills Road, Glenburn

Prepared on behalf of Daniel Thwaites & Angela Stubbs



PO Box 534, Healesville Vic 3777 Ph: 03 59621446 Mobile: 0419288551 Email: consultancy@mapbuild.com.au Web: www.mapbuild.com.au

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Mapping the property and assessing its assets and risks will provide a better opportunity to plan and prioritise improvements.

Whilst the Property/Land Management Plan has been submitted it will take more time to develop once residing on the property.

This plan provides an overall plan which is intended to be flexible and take into account changes in the family, in finances and the natural environment.

It is intended to implement this Land Management Plan over a period of 5 years as an ongoing project and which will be reviewed regularly.

It includes the installation/construction of the required infrastructure being the dwelling, proposed farm building, fencing, pasture improvement/management/maintenance, weed and pest management and planting/revegetating areas to be protected (watercourses, dams, etc.)

Protection and Enhancement of the Native Vegetation areas

Native vegetation not only provides habitat & refuse for fauna including transitional and migrating species, but links bush together increasing the range of different species and contributes to the health of the remnant patches.

This increases regeneration through seeding of bushland and maintaining and retaining various species of flora.

Controlling of weed species, pest species and limiting stock within these areas will assist and contribute to the health and regeneration of native bushland.

- * Identify areas for protection, restoration and/or revegetation.
- * Protecting higher quality vegetation within this zone
- * Identify the type of vegetation community to be protected or restored.
- * Plant only indigenous native plants grown from local provenance seed.
- * Assess the risks to mature trees on the property.
- * Restrict stock within these areas.
- * Fencing of these native vegetation areas
- * Control Pest Plant & Animals within these zone.
- * Limit vehicle access into these area other than maintenance required.

Protection and enhancement of Grazing areas

The grazing areas of the property are extremely important to ensure that the property itself allows the ongoing use for agriculture.

It is important to manage and maintain these areas to ensure that the property can support and accommodate the stock capacities and production of hay on a continuous basis.

Actions to be taken on an ongoing basis are to:

- * Regular monitoring and maintenance to control and eradicate weeds
- * Carry out Soil Analysis (every 3 to 5 years) to establish requirements of fertilizes to be applied.
- * Rotation of stock from paddock to paddock to limit overgrazing.
- * Limit stock to paddocks to allow growth of pasture for hay cutting.
- * Provide shelter belts for stock.
- * Vary stock carrying capacity at various times of year depending on weather and pasture availability
- * Introduce Tactical Grazing to meet animals and pasture objectives.

Erosions Control

A good soil structure provides an open porous structure with high levels of nutrients. Soil with an open structure is well aerated and allows water to percolate down into spaces that can hold moisture. High levels of organic matter assist in maintaining soil structure and fertility,

as part which phonding the ability to replant he as of disturbed solvior reduce exposed soil which erode the document must not be used for any pupose which may breach copyright or Privacy Laws (fillough fain, wind and water nows.

- *Erosions control measures as above to be put in place after completing all earthworks required providing a sound base for regeneration and revegetation.
- *Prepare and replant any exposed areas of the site. Preference given to replanting local indigenous species (all batters to be planted with ground covers)
- *Fence along natural contours of the land.
- *Protect any steeps areas, streams, and waterways
- *Protect any wet/drainage areas on site from stock
- *Minimise overgrazing of areas by rotation of stock.
- *Fence of any waterways, creeks, dams from use by stock.

Control of Noxious and Environmental Weeds

Noxious weeds. Noxious weeds are classed as either State Prohibited, Regionally Prohibited or Regionally Controlled. Landholders are responsible for eradicating these weeds on their properties and controlling their growth and spread to other areas.

Environmental weeds. Environmental weeds threaten native vegetation.

They invade bushland and out-compete indigenous species which reduces the habitat available for native animals. Environmental weeds can be either introduced or native to Australia. Sweet Pittosporum (*Pittosporum undulatum*) and Cootamundra Wattle are native plants that are serious environmental weeds in many areas. Landholders should make every effort to control these weeds on their land and to prevent their spread to other areas.

Annual weeds grow to maturity, set seed and die within one year. The roots of annuals are usually shallow. Annuals rely heavily on annual seed production for their survival. Cape Weed and Large Quaking Grass (*Briza maxima*) are annual weeds.

Biennial weeds live for two years. They germinate and grow to a small plant in the first year then flower and set seed in the second year. Many species of thistles are biennials.

Perennial weeds live for many years. They usually flower and set seed in the first few years and continue to do so until they die. Some perennial plants reproduce by sending up shoots from underground roots or stems. Blackberry, Sweet Vernal Grass and Cat's Ear (*Hypochoeris radicata*) are perennial weeds. Perennial shrubs and trees are often referred to as woody weeds.

Weed control methods

Prevention and plant competition

Weeds are always more of a problem in areas that have been disturbed by grazing or earthworks or are subject to soil erosion. Simply keeping the soil in good condition will mean plants can strongly compete with weeds and help to control them.

Grazing

Well-planned rotational grazing regimes can assist in the control of pasture weeds. Following up with mowing and slashing will ensure that weeds not eaten by stock do not gain an advantage and crowd out the preferred plants.

Hand pulling

Hand pulling is the preferred weed control method in small areas and where the weeds are scattered. It is suited to areas of native bushland as it causes little disturbance. Hand pulling provides a good opportunity to get close to plants and to increase your knowledge of identification and biology.

Hand pulling can be assisted by tools such as knives, trowels and forks but should always aim to cause the least possible disturbance to the soil. Hand pulling should be done before plants drop their fruits or seeds. Care should be taken to ensure all of the plant is removed and that it is disposed of without causing a potential weed threat elsewhere.

as part of a native ving tarcorases under the Ponnie should be viscoment of a regular basis for weed the document must not have used for any purpose which may breach to each the protected of an expedience of the protected of an ongoing basis

Mowing and slashing

Regular use of a brushcutter, whippersnipper or mower (a push mower with grass catcher attached in the domestic area) can help keep weeds under control. Timing is important. Annual weeds should be cut before they drop seed. Cutting the weeds close to the ground does more damage to the weeds than cutting them high. Perennial weeds may need to be mowed or slashed several times over the growing season to limit growth and prevent fruits or seeds from developing.

Mulching

Mulching involves smothering the weeds with a layer of impenetrable material. The weed seeds are denied access to the light which prevents them from germinating. Mulching preserves the moisture in the soil which can assist the more desirable plants to establish. It is also useful when revegetating areas that have been badly disturbed. Many different materials can be used as mulch. These include commercial mulch, wood chips, newspaper and plastic. Care must be taken when purchasing commercial mulch or using organic mulches as they often contain weed seeds. Mulching should never be used where there are indigenous groundstorey plants as it smothers them and prevents germination.

Chemical control

Chemicals designed to control weeds are called herbicides. The use of herbicides in the environment is a cause of great community concern. Spray drift, the persistence of herbicides in the soil, damage to non-target species and the health risks involved in handling and storing herbicides are some of the potential problems associated with herbicide use. But when used selectively by an experienced operator, herbicides can be highly effective. Herbicides can be either specific – meaning they target a particular type of plant but not others – and non-specific – meaning they have the potential to kill any type of plant. Herbicide manufacturers are required by law to provide application rates and methods and safety information on product labels. It is important to choose both the right herbicide and the right method of application. The most common methods of application are spraying using a pump pack or spray can, wiping and dabbing using specialised applicators and painting with a brush or sponge. The smallest possible amount of herbicide at the lowest possible toxicity must always be used.

Some chemical weed control can only be undertaken by contractors as the herbicide required can only be legally handled by the holder of an Agricultural Chemical Users Permit.

- * Plan ahead. It may take years to completely eradicate certain species. Set realistic, achievable goals.
- *Correctly identify the weed and the indigenous species growing around it.
- Choose a safe and appropriate control method.
- *Consider environmental impacts. Are there waterways nearby? What are the risks to indigenous species?
- * Minimise disturbance at the site so the weeds don't spread further. This includes limiting vehicle access and checking tools, clothing and footwear.
- Time treatments to get maximum results.
- Remove weeds carefully to avoid re-infestation.
- Encourage the spread of local species or revegetate with indigenous species.
- Record and evaluate all treatments. Modify if necessary.
- Work co-operatively with your neighbours.
- *Join the Local Landcare Group

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Rabbit control methods

Monitoring is important. Walking around the property with a touch at either dusk or early morning counting how many rabbits there are. Observing where they are feeding, run to when disturbed. Record all findings.

Destroying harbour

Rabbits do not need burrows or extensive warrens to survive. They can live amongst thickets of weeds and native plants, under buildings, in sheds, woodpiles and even abandoned car bodies. Trimming around hedges and controlling weeds will help to destroy rabbit habitat. Fences can be built around woodpiles and wire netting installed around the base of buildings.

Fumigation and warren destruction

Fumigation involves placing a poisonous fumigant in warrens and burrows and blocking all exits. Running dogs over the area or creating loud noise will scare rabbits into their burrows before fumigation. Every hole or burrow must be treated and then securely blocked. Fumigation of warrens must be undertaken by contractors as the fumigant can only be legally handled by the holder of an Agricultural Chemical Users Permit.

Destroying warrens after fumigation will prevent re-infestation. Warrens can be destroyed by digging them out with a shovel, mattock or pick. Backhoes are very useful but care must be taken to avoid excessive soil disturbance which can cause erosion. Check the area regularly so any newly constructed burrows can be quickly closed up.

Baiting

Carrot or oat baits laced with Pindone, an anti-coagulant poison, are effective in controlling large rabbit infestations but there are some risks to native animals and pets. The safety and handling directions on the product label must be strictly adhered to. An antidote is available from veterinarians if pets accidentally consume baits. A baiting program must be carefully planned and will include the notification of neighbours and the erection of warning signs. Baiting has the most impact during the late summer and early autumn period when rabbit feed is at a premium and they are foraging for food. Providing a 'free feed' of untreated carrots before baiting helps the rabbits to acquire a taste for the carrots and increases the effectiveness of baiting. It also allows for monitoring and re-adjustment of the amount of bait that is required. Several poison feeds are then given, generally a few days apart. Carcasses must be collected daily. Fresh carcasses may still be found up to 12 days after the last baits were laid. Carcasses must be properly disposed of so there is no risk to non-target species.

Ferreting

This technique is useful for clearing a few remaining rabbits once numbers have been reduced by other methods. Ferreting is effective inside fenced off areas or under buildings where access is difficult. Care must be taken to ensure that any native animals using rabbit burrows are not threatened or injured by ferrets

Fox control methods

Control rabbits and weeds

Foxes prey heavily on rabbits and reducing rabbit numbers will impact directly on foxes, however, it will also force foxes to meet the rabbit shortfall with native species. For this reason, it is critical that fox and rabbit control programs are co-ordinated. Foxes use Blackberry thickets and other woody weeds as cover. Controlling weeds and removing rubbish heaps, building materials and unused outbuildings reduces fox harbour.

Reduce access to food

Foxes are scavengers and will eat a wide variety of foods. Pet food should not be left out at night and food scraps should be cleaned up. Fallen fruit under fruit trees should be removed quickly and compost heaps covered or enclosed in a sealed bin. Chickens, ducks, guinea pigs and pet rabbits must be enclosed in a secure pen each night.

Fumigation

Den fumigation can only be carried out by a registered pest controller as an Agricultural Chemical Users Permit is required. Den fumigation can be a good option if a breeding den is

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Deer Control Methods

Deer can eat farmers' pasture, reducing the amount of feed for stock and they are also a road hazard for drivers.

Whilst deer were protected wildlife in the past when someone wanted to control problem deer on their property, they had to obtain authority from Control Wildlife, however now the regulations for control of deer on private properties has now changed and Landowners can now give strict permission to someone who is going to come out and control deer.

The permission is in the form of a downloadable form (a letter) and that person carrying that letter can control (not hunt) deer on the property.

There is a difference between shooting animals for recreation and shooting deer to control a problem population.

Shooters trespassing on properties (without permission) is a longstanding ongoing issue for farmers, however now permission can be granted to those authorised (carrying the letter) to enter the property for the control of deer.

Overall Pest Control/Management

Integrated pest management using all available control measures where possible are to be implemented within the site to best control all pest animals.

- *Identify and monitor pest numbers.
- * Work with neighbours to eradicate pest animals
- * Combine several proven control methods including the destruction of harbour.
- * Strictly adhere to the safety and handling directions on poisons.
- * Engage appropriate registered Contractors when required.
- * Record and evaluate all methods and modify if necessary.
- * Continue to monitor pest activity after control.
- Be vigilant and persistent.
- Keep cats inside at night and control other potential pests.
- Control your dogs. Dogs should not be allowed to roam your property during the day when you are not home.

Anticipated Times Frames

Year 1

Put in place a weed & pest eradication program from pasture and native vegetation areas. Carry out soil analysis to commence management & maintenance of pasture (i.e. fertilizers etc.). Installation of infrastructure – Driveway, stock yards, farm building (for farm equipment)

Year 2 & 3

Continue installation of infrastructure including dwelling, repair fencing, install new fencing, Installation of troughs where required to provide water for cattle

Continue management and maintenance of farm including weed and pest management.

Cut hay for use on site for cattle when introduced.

Commence Planting vegetation where required (ref to Land Management Site Plan) Introduce initially 12/15 head of cattle to farm.

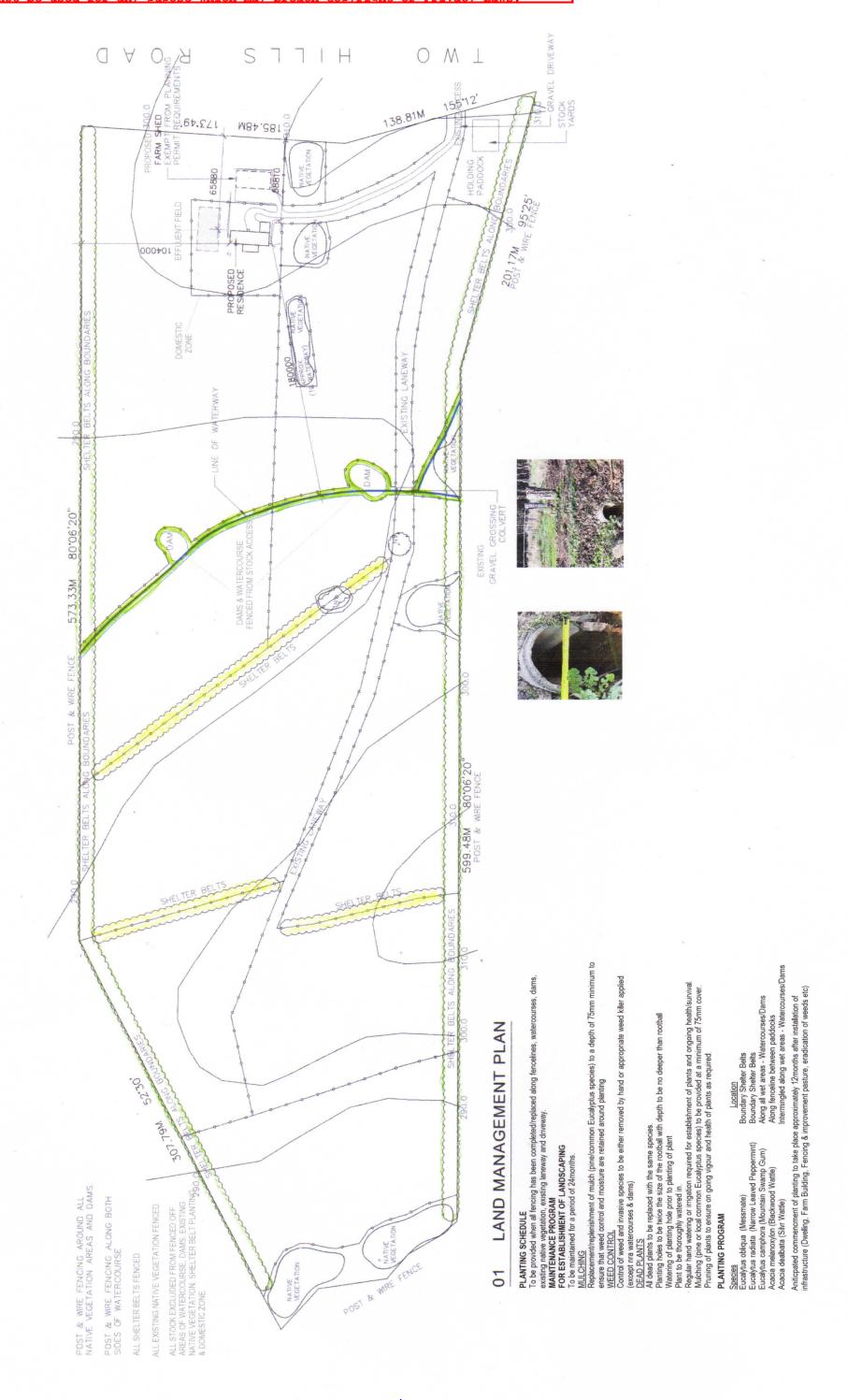
Year 4 & 5

Continue management and maintenance of farm. i.e. weeds & pest management, pasture improvement, stock management etc.

Introduce more stock if pasture objectives achieved.

Refer to attached Appendix - Land Management Site Plan which forms part of this document.

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SM LDERS® GEOTECHNICAL

Land Capability Assessment Report

SITE ADDRESS: 356 Two Hills Road, GLENBURN, VIC 3717

CLIENT: Daniel Thwaites

356 Two Hills Road, GLENBURN, VIC 3717

C/- Thwaites Construction Ptv Ltd

DATE: 28th November 2023

REFERENCE NUMBER: 23H6839

UPDATED:

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1. Introduction

THE CONSULTANTS

Smolders Geotechnical Pty Ltd has been engaged to undertake a Land Capability Assessment (LCA) for a site at 356 Two Hills Road, GLENBURN, VIC 3717.

The field investigation and report have been undertaken and prepared by suitably experienced staff.

I Richard Smart B.Sc (soils) PhD. undertook the site investigation and prepared this report.

Smolders Geotechnical Pty Ltd has appropriate professional indemnity insurance for this type of work.

REPORT SUMMARY

I understand that this report will accompany an application for a Septic Tank Permit to Install submitted to Strathbogie Shire Council for an onsite wastewater management system for a proposed 4-bedroom residence (three bedrooms plus study) at the above site.

This document provides information about the site and soil conditions. It also provides a detailed Land Capability Assessment for the site and includes a conceptual design for a suitable onsite wastewater management system, including recommendations for monitoring and management requirements. A number of options are provided for both the treatment system and Land Application Area (LAA).

However, the wastewater should treated to <u>secondary level</u> by a suitable EPA-approved treatment system and the effluent applied to land via pressure compensating sub-surface drip irrigation.

Council and/or Referral Authorities may require secondary treatment prior to disposal as policy regardless of the results of the Land Capability Assessment.

SITE OVERVIEW

The site is an undeveloped, slightly sloping paddock and is consistent with a farming zone.

The proposed LAA is situated on slightly sloping land. The area has a very good exposure and aspect.

There is a dam and drainage line/ephemeral creek approximately 210m west of the proposed Land Application Area (LAA), and another dam and drainage line/ephemeral creek approximately 240m east of the proposed LAA. There is further dam and drainage line approximately 200m south of the proposed LAA (see site photographs).

There is sufficient land available for sustainable onsite effluent management that maintains the required buffers to protect any nearby surface waters and floodways.

I did not observe any sensitive environmental receptors within a 200m setback from the recommended Land Application Area envelope.

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2. Description of the Development

Site Address: 356 Two Hills Road, GLENBURN, VIC 3717. A Land Channel Property Report provides a locality plan and indicates the location of the site of the proposed development (Appendix 9.8).

Client/Agent: Daniel Thwaites

Postal Address: 356 Two Hills Road, GLENBURN, VIC 3717

Contact:

Council Area: Murrindindi Shire Council.

Zoning: Farming Zone (FZ), Bushfire Management Overlay (BMO).

Allotment Size: 19.71 Hectares.

Domestic Water Supply: Assume not available at site.

Anticipated Wastewater Load: Assume a residence with full water-reduction fixtures at maximum occupancy. Wastewater generation = 150 L/person/day (source Table 4 of the EPA Code of Practice 891.4).

Availability of Sewer: The area is unsewered and highly unlikely to be sewered within the next 10-20 years, due to low development density in the area and the considerable distance from existing wastewater services.

3. Site and Soil Assessment

I undertook a site investigation on the 7th September 2023.

3.1 SITE KEY FEATURES

Table 1 summarises the key features of the site in relation to effluent management proposed for the site.

NOTE:

- There is no evidence of a shallow watertable to 1.8m depth;
- There is sufficient land available for effluent disposal;
- Very good exposure and aspect;
- The site is slightly sloping down to the west;
- The risk of effluent transport offsite is low.

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Both aerial and site photographs are appended to provide current site context (Appendix ii).

3.2 Table 1: Risk Assessment of Site Characteristics

Feature	Description	Level of Constraint	Mitigation Measures
Buffer Distances	All relevant buffer distances in Table 5 of the EPA Code of Practice (2016) are achievable from the proposed effluent management area.	Minor	Locate Land Application Area appropriately.
Climate	Average annual rainfall 743.6mm SILO Data Average annual evaporation 1170.2mm SILO Data (Appendix iii). Rainfall exceeds evaporation on average for 3 months of the year.	Moderate	Secondary Treatment
Drainage	Some signs or likelihood of dampness.	Moderate	plant LAA with high evapotranspiration vegetation, sub- surface drip irrigation
Erosion & Landslip	No evidence of sheet or rill erosion; the erosion hazard is low. No evidence of landslip and landslip potential is low.	Nil	NN
Exposure & Aspect	Proposed Land Application Area clear with good all round aspect, and good sun and wind exposure.	Nil	NN
Soil Drainage	Loam overlying Light Clay, imperfectly drained. Water removed somewhat slowly in relation to supply, some horizons may remain wet for more than a week after addition. Permeability measured as 0.12 m/d using constant head permeameter.	Moderate	plant LAA with high evapotranspiration vegetation, sub- surface drip irrigation
	LAA area calculated with full water balance.		

NN: Not needed

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3.2 Table 1: Risk Assessment of Site Characteristics Continued:

Feature Description Level of **Mitigation Measures Constraint** Flooding The proposed LAA envelope is located Nil NN above the 1:100 year flood level (source WSC). No signs of shallow groundwater Nil NN Groundwater tables to 1.8m depth. **Imported Fill** No fill observed on site. Nil NN **Land Available** Considering all the constraints and Nil NN for LAA buffers, the site has ample suitable land for land application of treated effluent. Landform Slightly sloping land in proposed LAA Minor NN **Rock Outcrops** No rock outcrops observed on site Nil NN Run-on & Possile run-on or run-off. Moderate Construct diversion Runoff berms above LAA Slightly sloping land (maximum of 6%). Nil NNSlope **Surface Waters** Minor NNNearest surface water is > 200 metres horizontal distance to the west/south and east. **Ground Water** No water bores within one kilometre. Nil NN **Bore** Nil Vegetation Mixture of grasses on proposed Land NN Application Area.

NN: Not needed

3.3 SITE ASSESSMENT RESULTS

Based on the most constraining site features (climate, drainage and run-on) the overall land capability of the site to sustainably manage all effluent onsite is satisfactory. The proposed effluent management area is located above the 1:100 flood level and by using secondary treatment and subsurface drip irrigation there will be ample protection of surface waters and groundwater.

3.4 SOIL KEY FEATURES

The site's soils have been assessed for their suitability for onsite wastewater management by a combination of soil survey and desktop review of published soil survey information as outlined below.

The soils on site have been derived from the broadford Formation (MapCode Sxb) which is the regional geological setting. Appended is a Geovic Map indicating the site location (Appendix 9.7).

3.5 SOIL SURVEY AND ANALYSIS

A soil survey was carried out at the site to determine suitability for application of treated effluent. Soil investigations were conducted at 3 locations in the vicinity of the proposed LAA, as shown in the Test Site Location Plan (Figure 1/Appendix v), using a 100mm hydraulic auger (2 x boreholes) to a maximum depth of 1.8m depth and a hand dug pit to a maximum depth of 700mm. This was sufficient to adequately characterise the soils as only minor variation would be expected throughout the area of interest.

Two soil types were encountered in these investigations. Full profile descriptions are provided in the appended borelogs (Appendix vi). Samples of all discrete soil layers for each soil type were collected for subsequent laboratory analysis of pH, electrical conductivity and Emerson Aggregate Class. Table 2 describes the soil constraints in detail for each of the soils encountered.

Soils in the vicinity of the building envelope are characterised as strongly structured loam topsoils overlying a strongly structured light clay lower horizon.

Considering the physical and chemical characteristics of the subsoil in this area of the site, in my opinion secondary treated effluent application via sub-surface drip irrigation is a suitable and viable disposal system for this site

Full Laboratory data results are appended (Appendix vii).

Table 2 below provides an assessment of the physical and chemical characteristics of the soil type present.

3.6 TABLE 2: RISK ASSESSMENT OF SOIL CHARACTERISTICS

Feature	Assessment	Level of Constraint	Mitigation Measures
Cation Exchange Capacity (CEC)	1.9 – 2.0 (subsoil) to 1.8 (topsoil) MEQ%. No evidence of restricted plant growth. Calcium dominant ion on exchange sites	Minor	NN
Electrical Conductivity (ECe)	0.009 to 0.013dS/m. No evidence of restricted plant growth on site.	Minor	NN
Emerson Aggregate Class	Topsoil: Slaking/ Some dispersion Class 2	Minor	Soil amelioration recommended. Apply gypsum to base of any excavation. (Min 1Kg/m²), or add one litre of liquid gypsum to the pump well biannually
	Subsoil: Slaking/ Some dispersion Class 2	Major	Soil amelioration recommended. Apply gypsum to base of any excavation. (Min 1Kg/m²), or add one litre of liquid gypsum to the pump well biannually
рH	4.9 to 5.1 No evidence of restricted plant growth on site.	Minor	NN
Rock Fragments	No rock fragments	Minor	NN
Sodicity (ESP)	Topsoil: 6.2% Sodic. Sub-soil 6.0-6.3%. Sodic. No evidence of restricted plant growth on site.	Moderate	Soil amelioration recommended. Apply gypsum to base of any excavation. (Min 1Kg/m²), or add one litre of liquid gypsum to the pump well biannually
Sodium Absorption Ratio (SAR)	Topsoil: 0.09 Sub-soil: 0.09. No evidence of restricted plant growth on site.	Moderate	Soil amelioration recommended. Apply gypsum to base of any excavation. (Min 1Kg/m²), or add one litre of liquid gypsum to the pump well biannually
Soil Depth	Topsoil: Majority of proposed LAA has 200mm depth.	Minor	Import good quality sandy loam/loam topsoil to provide minimum 400mm depth if client requires to minimise LAA.
	Subsoil: Soil depths 200 - 1800mm (minimum thickness). No hardpans occur, no mottling. No refusal in any boreholes.	Moderate	Secondary treatment, sub-surface drip irrigation.
Soil Permeability	Topsoil: Loam; 4.0mm/day Design irrigation Rate (DIR) for drip irrigation (Code, 2016).	Minor	NN
& Design Loading Rates	Sub-soil: Light Clay; 3.0mm/day DIR (Code, 2016) measured Ksat = 0.12 m/day	Moderate	Secondary treatment, sub-surface drip irrigation.
Soil Texture &	Topsoils: Loam (Category 3a)	Minor	NN
Structure	Subsoil (>300mm): Light clay (Category 5a) in accordance with AS/NZS/NZS 1547:2012	Moderate	Secondary Treatment/ sub-surface drip irrigation
Water table Depth	Groundwater not encountered. Deepest borehole terminated at 1.8m.	Minor	NN

NN: Not needed

3.7 OVERALL LAND CAPABILITY RATING

For the soil in the proposed additional land application area (strongly structured loam topsoils overlying a strongly structured light clay), no features present a moderate or major constraint that cannot be mitigated.

Based on the results of the site and soil assessment tabled above and provided in the Appendices, the overall land capability of the proposed effluent management area is not constrained <u>as long as disposal of secondary treated effluent by sub-surface drip irrigation is used.</u>

4 Waste Water Management System

The following sections provide an overview of a suitable onsite wastewater management system, with sizing and design considerations and justification for its selection. Detailed design for the system should be undertaken at the time of the building application and submitted to Council.

4.1 TREATMENT SYSTEM

Refer to the EPA website for the list of approved options that are available. Any of the secondary treatment system options can achieve the desired level of performance. The property owner has the responsibility for the final selection of the secondary treatment system and must include the details of it in the Septic Tank Permit to Install application form for Council approval.

4.2 EFFLUENT MANAGEMENT SYSTEM

A range of possible land application systems have been considered, such as absorption trenches, evapotranspiration/absorption (ETA) beds, wick trenches, subsurface/surface irrigation, and mounds.

The nominated and preferred systems is secondary treatment with a pressure compensating subsurface drip irrigation system. A sub-surface drip irrigation system relies on more processes than just absorption by the soil, thus overcoming the slightly limited drainage on the site. It will provide even dispersal of the treated effluent within the root-zone of plants. This system will provide beneficial reuse of effluent. It will also ensure that the risk of effluent being transported off-site will be low.

The client should note that council may require secondary treatment of effluent as standard.

4.3 DESCRIPTION OF THE IRRIGATION SYSTEM

A detailed irrigation system design is beyond the scope of this report; however, a general description of subsurface irrigation is provided here for the information of the client and Council.

PRESSURE COMPENSATING SUB-SURFACE DRIP IRRIGATION

A detailed irrigation system design is beyond the scope of this report; however, a general description of the system is provided here for the information of the client and Council.

Subsurface irrigation comprises a network of drip-irrigation lines that are specially designed for use with wastewater. The pipe contains pressure compensating emitters (drippers) that employ a biocide to prevent build-up of slimes and inhibit root penetration. The lateral pipes are usually up to 1.0m apart for loams, installed parallel along the contour. Installation depth is 100mm to 200mm in accordance with AS/NZS 1547:2012. It is critical that the irrigation pump be sized properly to ensure adequate pressure and delivery rate to the irrigation network.

A filter is installed in the main line to remove fine particulates that could block the emitters. This must be cleaned regularly (typically monthly) following manufacturer's instructions. Vacuum breakers should be installed at the high point/s in the system to prevent air and soil being sucked back into the drippers when the pump shuts off. Flushing valves are an important component and allow periodic flushing of the lines, which should be done at six monthly intervals. Flush water can be either returned to the treatment system, or should be released to a small dedicated gravel-based trench.

Separation of the treatment field into two or more areas via the use of a sequencing valve is recommended to ensure an even spread of the effluent over the Land application Area.

4.4 SIZING THE IRRIGATION SYSTEM

4-bedroom dwellings –five occupants.

Pressure Compensating Sub-surface Drip Irrigation System

We have used a DLR/DIR of 3.0 mm/d for secondary treated effluent via pressure compensating subsurface drip irrigation to take into account the strongly structured light clay sub-soils within the proposed LAA. The minimum area required is <u>449 sq m say 450 sq m</u>. The spreadsheet calculations are shown below on p.13.

Precipitation and evaporation data for Glenburn has been obtained from SILO data, and has been used in the modelling. (See Appendix iii for complete data).

As well as water balance modelling a preliminary nutrient balance has been considered to check that the Land Application Area is of sufficient size to ensure nutrients are assimilated by the soils and vegetation. It is acknowledged that a proportion of nitrogen will be retained in the soil through processes such as mineralisation and volatilisation.

Reference: Victoria Land Capability Assessment Framework Jan 2014 (app 2).

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NOTE: Soil has a high PRI (phosphorus retention index) in clayey soils. Phosphorus is readily removed under these circumstances from wastewater fixation in clayey soil by the action of adsorption. Phosphate in dispersed effluent is lost within a few centimetres of the soil.

This leaves nitrogen (N) as the limiting factor in this proposed development.

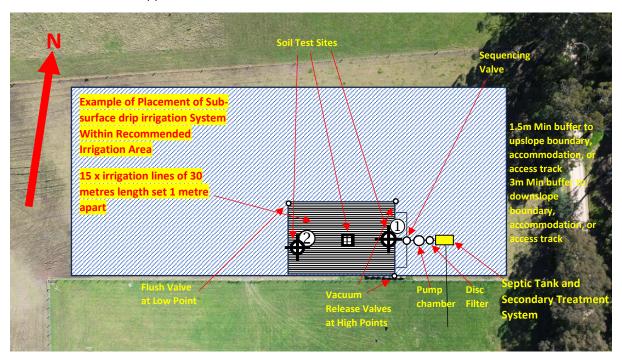
Calculation shown on page 14.

Minimum area required for N uptake = 249 sq m.

Therefore, adopt 450 sq m as the minimum size for a Sub-surface drip irrigation field for effluent distribution on this site.

If the client wishes to reduce the area of land required for effluent distribution, then the topsoil depth could be made up to 400mm by importing good quality sandy loam/loam topsoil, high in organic matter. This would reduce the LAA area to 281 sq m.

I am of the opinion that the area required for nitrogen assimilation and phosphorus can be met by the above sized Land Application Area.





Recommended Irrigation Area

Figure 1. Test Site Location Plan, showing an example of the location of a sub-surface drip irrigation system with secondary treated effluent.

Summary and Discussion

It is worth noting that modeling includes several significant factors of conservatism:

 Hydraulic load. This assumes a maximum occupancy of the residence at a rate of 150 Litres/person/day.

It is likely that the actual occupancy and water usage will be less than this;

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• From the nutrient balances, in the absence of site-specific data very conservative estimates of crop nutrient uptake rates and total nitrogen lost to soil processes are considered.

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Please read the attached notes befo	ore using t	this spreadshe	et													
Irrigation area siz	ing u	ısing N	omin	ated	Area W	/ater	Bala	ance	for Z	ero (Stora	ge				
Site Address:			, GLEN													
Date:					Assess	or:										
INPUT DATA	DRIP IRR	RIGATION														
Design Wastewater Flow	Q	750	L/day	Based on I	maximum pote	ntial occup	oancy and	derived fr	om Table 4	in the Ef	A Code of	Practice	(2013)			
Design Irrigation Rate	DIR	3.0	mm/day		soil texture cla											
Nominated Land Application Area	L	449	m ²	1												
Crop Factor	C	0.6-0.8	unitless	Estimates	evapotranspira	tion as a f	fraction of	nan evano	ration: var	ies with s	eason and	crop type	2			
Rainfall Runoff Factor	RF	0.8	untiless		of rainfall that							orop type				
Mean Monthly Rainfall Data		SILO Data	2		n and number		und				Ī.					
Mean Monthly Pan Evaporation Data		SILO Data		-	n and number											
Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month	D	. c.maia	days	31	28	31	30	31	30	31	31	30	31	30	31	365
Rainfall	R		mm/month	53.32	49.28	48.98	55.8	69.75	75.9	80.6	79.67	62.7	55.49	67.8	44.33	743.62
Evaporation	E		mm/month	190.03	148.96	123.38	70.2	43.09	28.5	32.86	48.05	71.7	107.57	132.9	172.98	1170.22
Crop Factor OUTPUTS	С		unitless	0.80	0.80	0.70	0.70	0.60	0.60	0.60	0.60	0.70	0.80	0.80	0.80	
	ET	ExC	mm/month	450	440	0.0	49	26	17	20	29	50	86	400	400	879.148
Evapotranspiration Percolation	В	DIRXD	mm/month mm/month	152 93.0	119 84	86 93.0	90.0	93.0	90.0	93.0	93.0	90.0	93.0	106 90.0	138 93.0	1095.0
Outputs		ET+B	mm/month	245.0	203.168	179.4	139.1	118.9	107.1	112.7	121.8	140.2	179.1	196.3	231.4	1974.1
INPUTS																
Retained Rainfall	RR	RxRF	mm/month	39.99	36.96	36.735	41.85	52.3125	56.925	60.45	59.7525	47.025	41.6175	50.85	33.2475	557.715
Applied Effluent	W	(QxD)/L	mm/month	51.8	46.8	51.8	50.1	51.8	50.1	51.8	51.8	50.1	51.8	50.1	51.8	609.7
Inputs		RR+W	mm/month	91.8	83.7	88.5	92.0	104.1	107.0	112.2	111.5	97.1	93.4	101.0	85.0	1167.4
STORAGE CALCULATION																
Storage remaining from previous month		(00.140 (57.5)	mm/month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Storage for the month Cumulative Storage	S M	(RR+W)-(ET+B)	mm/month mm	-153.3 0.0	-119.4 0.0	-90.8 0.0	-47.2 0.0	-14.8 0.0	-0.1 0.0	-0.5 0.0	-10.3 0.0	-43.1 0.0	-85.7 0.0	-95.4 0.0	-146.4 0.0	
Maximum Storage for Nominated Area	N		mm	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
•	V	NxL	L	0												
LAND AREA REQUIRED FOR	ZERO ST	TORAGE	m²	113	126	163	231	349	448	445	375	242	169	155	117	
MINIMUM ADEA DEGUIDED E	OD 7554	0.000405	-	440.0	2											
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¹ This value should be the largest of the	e following:	land application	n area regi	uired based	on the most li	mitina nutr	ient halan	ce or minir	num area	required f	or zero sto	rage				
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Nitrogen Balance Site Address: 356 Two Hills Road, GLENBURN SUMMARY - LAND APPLICATION AREA REQUIRED BASED NITROGEN BALANCE INPUT DATA Wastewater Loading Nutrient Crop Uptake	Please read the attached no	tes before us	ing this sp	readsheet							
Site Address: 356 Two Hills Road, GLENBURN SUMMARY - LAND APPLICATION AREA REQUIRED BASED NITROGEN BALANCE 249 m² INPUT DATA¹ Wastewater Loading Nutrient Crop Uptake Hydraulic Load 25 mg/L 25 mg/L 20 kg/ha/yr which equals 60.27 mg/m²/ % N Lost to Soil Processes (Geary & Gardner 1996) 0.2 Decimal 70tal N Loss to Soil 70			ge ep								
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Hydraulic Load T50	INPUT DATA ¹		-						· ·		
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¹ Model sensitivity to input parameters will affect the accuracy of the result obtained. Where possible site specific data should be used. Otherwise data should be obtained from a reliable source such as:

- EPA Guidelines for Effluent Irrigation
- Appropriate Peer Reviewed Papers
- Environment and Health Protection Guidelines: Onsite Sewage Management for Single Households
- USEPA Onsite Systems Manual

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Table summarizing LAA requirements for the recommended system.

SYSTEM TYPE	AREA REQUIRED M ² ASSUMING 15 DRIP LINES OF THIRTY METRES LENGTH	MAXIMUM LENGTH OF INDIVIDUAL DRIP LINES (METRES)	SPACING BETWEEN INDIVIDUAL DRIP LINES (METRES)
SUB-SURFACE DRIP IRRIGATION	450	30	1

4.5 SITING AND CONFIGURATION OF THE LAND APPLICATION AREA

Considering the allotment's size there is sufficient space for the location of A Sub-surface drip irrigation system on the allotment.

Whilst there is ample area for application of effluent, it is important that buffer distances be adhered to. It is important to note that buffers are measured as the overland flow path for run-off water from the effluent disposal area.

As a result of our visit, I can confirm that the sub-surface drip irrigation system can be placed in the nominated LAA envelope delineated on the provided site plan (Appendix 9.3/figure 1).

4.6 DISPOSAL SYSTEM DESCRIPTION

Disposal design should be adopted from Irrigation System designs within AS/NZS 1547:2012.

The Test Site Location Plan (figure 1 and Appendix 9.3) shows an area of land that has been investigated and is considered suitable for effluent management and maintains the relevant buffers.

Final placement and configuration of the irrigation system will be determined by the client and/or system installer, provided it remains within the allotment boundaries and satisfies the minimum area required according to the water and nutrient balances.

It is recommended that the owner consult an irrigation expert familiar with effluent irrigation equipment to design the system, and an appropriately registered plumbing/drainage practitioner to install the system. The irrigation plan must ensure even application of effluent throughout the entire irrigation area.

4.7 BUFFER DISTANCES

Setback buffer distances from effluent land application areas and treatment systems are required to help prevent human contact, maintain public amenity, and protect sensitive environments.

The relevant buffer distances for this site, taken from Table 5 of the Code (2016) are:

- 20 metres from groundwater bores.
- 30 metres (secondary treatment) from non-potable watercourses/dams/ponds.
- 100m from potable watercourses.
- 3 metres if area up-gradient 1.5 metres if area down-gradient of property boundaries, swimming pools and buildings.

These are conservative values for secondary effluent.

All buffer distances are achievable.

4.8 INSTALLATION OF THE IRRIGATION SYSTEM

Installation of the irrigation system must be carried out by a suitably qualified, licensed plumber or drainer experienced with effluent irrigation systems.

To ensure even distribution of effluent, it is essential that the pump capacity (if required) is adequate for the size and configuration of the irrigation system, taking into account head and friction losses due to changes in elevation, pipes, valves, fittings etc. An additional, and recommended, optional measure to achieve even coverage is to divide the irrigation area into two or more separate sub-zones of equal size; dosed alternately using an automatic indexing or sequencing valve.

The irrigation area and surrounding area must be vegetated or revegetated immediately following installation of the system, preferably with turf. The area should be fenced or otherwise isolated (such as by landscaping), to prevent vehicle and stock access; and signs should be erected to inform householders and visitors of the extent of the effluent irrigation area and to limit their access and impact on the area. The irrigation lines should be installed parrallel to the contours and be approximately horizontal.

5 Monitoring, Operation and Maintenance

Maintenance is to be carried out in accordance with the EPA Certificate of Approval of the selected secondary treatment system and Council's permit conditions. The treatment system will only function adequately if appropriately and regularly maintained.

To ensure the treatment system functions adequately, residents must:

- Have a suitably qualified maintenance contractor service the system at the frequency required by Council under the permit to use;
- Use low phosporous household cleaning products that are suitable for septic tanks;
- Sink strainer to be used to catch food particles;
- scrape all dishes to remove grease and fats before washing;
- do not install a garbage grinder waste disposal system;
- do not allow sanitary napkins or hygiene products to enter the system;
- do not dispose of aggressive toxic cleaning agents in the system;
- do not dispose of any solvents or paints in the system;
- do not allow bleach, whiteners, nappy soakers, spot removers or disinfectants to enter the system;
- Keep as much fat and oil out of the system as possible; and
- Conserve water (AAA rated fixtures and appliances are recommended).

To ensure the land application system functions adequately, residents must:

- Regularly harvest (mow) vegetation within the LAA and remove this to maximise uptake of water and nutrients;
- Monitor and maintain the chosen system following the manufacturer's recommendations;
- Dose the LAA more than once a day
- Regularly clean in-line filters (following manufacturers instructions);
- Not erect any structures and paths over the LAA;
- Avoid vehicle and livestock access to the LAA, to prevent compaction and damage; and
- Ensure that the LAA is kept level by filling any depressions with good quality topsoil (not clay).

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6 Stormwater Management

As mentioned above, stormwater may be a concern in this case. Therefore, the construction and maintenance of diversion berms is necessary to prevent the flow of surface water on to the Land Application Area. Roof stormwater must not be disposed of in the Land Application Area.

7 Conclusions

As a result of my investigations I conclude that sustainable onsite wastewater management is feasible with appropriate mitigation measures as outlined for a future residential development on this allotment.

Specifically, I recommend the following:

- Treatment of wastewater by an EPA-accredited secondary treatment system;
- Location of Land Application Area within the envelope nominated.
- Land application of treated effluent to a suitably sized pressure compensating subsurface drip irrigation system (which may be subdivided into two or more evenly sized zones using an indexing or sequencing valve);
- Application of Gypsum to the base of all drip irrigation trenches prior to installation of the system, or add one litre of liquid gypsum to the pump well biannually;
- Installation of water saving fixtures and appliances in the new shed to reduce the effluent load;
- Use of low phosphorus and low sodium (liquid) detergents to improve effluent quality and maintain soil properties for growing plants; and
- Operation and management of the treatment and disposal system in accordance with manufacturer's recommendations, the EPA Certificate of Approval, the EPA Code of Practice (2016) and the recommendations made in this report.

For and on behalf of SMOLDERS GEOTECHNCIAL PTY. LTD.



Dr. Richard Smart B.Sc. (Soils) PhD.

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9 Appendices

- 9.1 Aerial and Site Photographs
- 9.2 Floor Plan
- 9.3 Test Site Location Plan
- 9.4 Borelog Descriptions
- 9.5 Bureau of Meteorology Climate Report
- 9.6 Analytical Laboratory Results
- 9.7 Geological Map
- 9.8 Land Channel Property Report

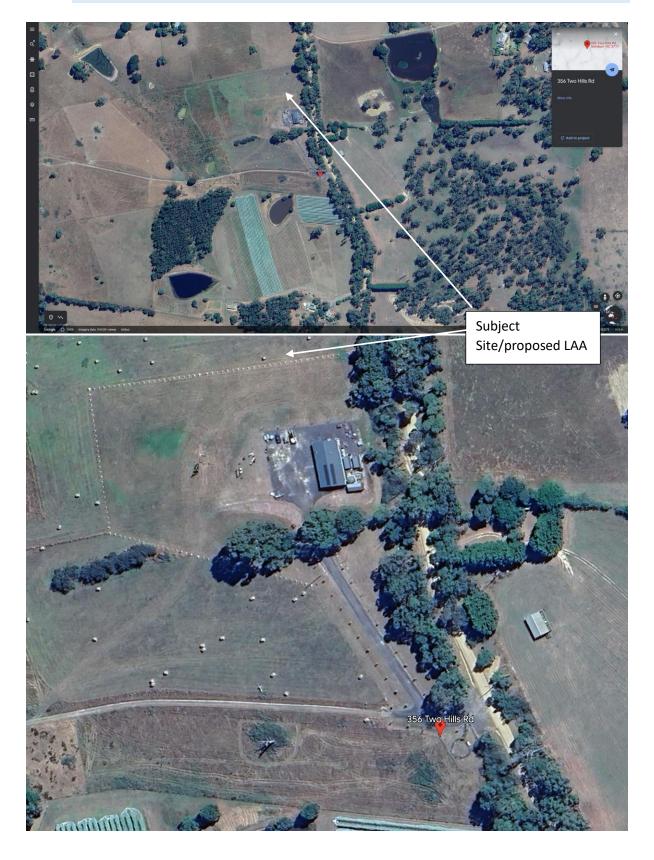
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Aerial and Site Photographs 9.1



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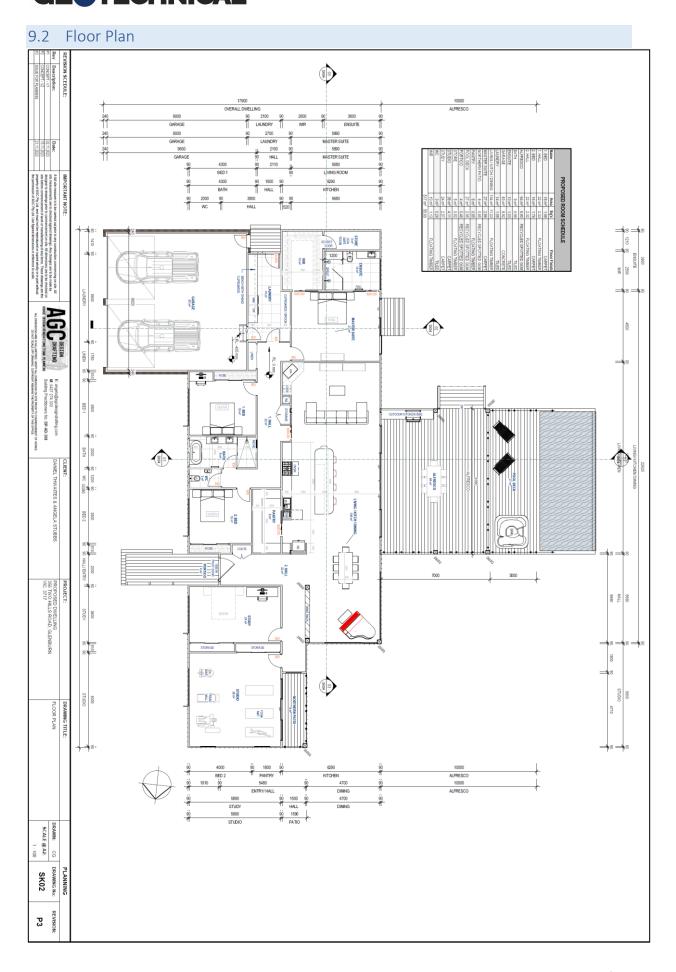
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9.3 Test Site and LAA Location Plan



■ TEST PIT



SOIL TEST SITES



RECOMMENDED IRRIGATION AREA

SMOLDERS GEOTECHNICAL PTY. LTD.

9.4 Borelog Description

PROJECT ADDRESS: 356 Two Hills Road, GLENBURN, VIC FIELD WORK DATE: 07/09/2023

REFERENCE NUMBER: 23H6839 SUPERVISING GEOLOGIST: Richard Smart + Peter McKay

REFERE	NCE NUMBER: 23H6839			SUPERVISING GEOLOGIST:					Richard Smart + Peter McKay				
	BORELOG				BORELOG 1				BORELOG 2				
Depth	SOIL PROFILE	Fill	Cat	Depth	SOIL PROFILE	Fill	Cat	Depth	SOIL PROFILE	Fill	Cat.		
mm	Hand Dug Pit			mm	Mechanical Auger			mm	Mechanical Auger				
100	Loam: brown/grey, moist, firm			100	Loam: brown/grey, moist, firm			100	Loam: brown/grey, moist, firm				
200	Strong structure, Ribbon Length 20-30mm		3a	200	Strong structure, Ribbon Length 20-30mm		3a	200	Strong structure, Ribbon Length 20-30mm		3 a		
300	Light Clay: yellow/orange/grey, moist				Light Clay: yellow/orange/grey, moist			300	Light Clay: yellow/orange/grey, moist				
	stiff				stiff			400					
500	Strong structure			500	Strong structure		5a		Strong structure		5a		
600	Ribbon length 60-75mm		5a	600	Ribbon length 60-75mm				Ribbon length 60-75mm				
700				700				700	Light Clay: yellow/orange/grey, moist				
800	End of Borehole: No Refusal			800				800					
900				900				900					
1000				1000				1000					
1100				1100				1100					
1200				1200				1200					
1300				1300				1300					
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Page **28** of **42** REF NUMBER: 23H6839 356 Two Hills Road, GLENBURN VIC This copied document is made available for the sole purpose of enabling its consideration and review as part of a Saming reper Sader the Planning and Environment Act 1987.

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9.5 Bureau of Meteorology Climate Report

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	31	28	31	30	31	30	31	31	30	31	30	31	
SILO MEDIAN DAILY PPT	1.72	1.76	1.58	1.86	2.25	2.53	2.6	2.57	2.09	1.79	2.26	1.43	24.44
SILO MEDIAN MONTHLY PPT	53.32	49.28	48.98	55.8	69.75	75.9	80.6	79.67	62.7	55.49	67.8	44.33	743.62
SILO DAILY EVAPORATION	6.13	5.32	3.98	2.34	1.39	0.95	1.06	1.55	2.39	3.47	4.43	5.58	38.59
SILO MONTHLY EVAPORATION	190.03	148.96	123.38	70.2	43.09	28.5	32.86	48.05	71.7	107.57	132.9	172.98	1170.22

SMOLDERS GEOTECHNICAL PTY. LTD.

9.6 Laboratory Results

Groundswell Batch #: GS23671

Client Name:

Groundswell laboratories

" A New Force in Analytical Testing"

CERTIFICATE OF ANALYSIS

Smolders Geotechnical Pty Ltd Groundswell Batch #: GS23671

 Client Address :
 PO Box 7299, Upper Ferntree Gully, VIC 3156
 Project Name :
 356 Two Hills Road, Glenburn VIC

 Client Mobile # :
 0488 773 060
 Project # :
 23H6839

Project Manager: Xavier Smolders Sample Matrix: Soil
E-mail: enquires@smoldersgeotechnical.com.au Sample #Submitted: 2

 E-mail :
 enquires@smoldersgeotechnical.com.au
 Sample # Submitted :
 2

 Project Sample Manager :
 Xavier Smolders
 Groundswell Quote # :
 Not Applicable

 E-mail :
 enquires@smoldersgeotechnical.com.au
 Date CofA Issued :
 14/09/2023

Paul Woodward
Managing Director
paul@groundswelllabs.com.au

Reference AF56.Rev4 Date Issued: 19/5/2014

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Groundswell Batch #: GS23671

Soil Analysis Results

Client Sample ID			Sample 1	Sample 2	Sample 2	
Laboratory Sample Number			GS23671-1	GS23671-2	GS23671-2	
Date Sampled			7/09/2023	7/09/2023	7/09/2023	
Analytes	Units	LOR			Duplicate	
pH	pH Units	0.1	5.1	4.9	4.9	
Electrical Conductivity @ 25°C	dS/m	0.005	0.013	0.009	0.009	
Exchangeable Calcium	mg/Kg	1	245	288	295	
Exchangeable Magnesium	mg/Kg	1	56	44	47	
Exchangeable Potassium	mg/Kg	1	12	11	10	
Exchangeable Sodium	mg/Kg	1	26	27	29	
CEC	MEQ%	0.1	1.8	1.9	2.0	
ESP	%	0.1	6.2	6.0	6.3	
Sodicity Rating			Sodic	Sodic	Sodic	
SAR		0.01	0.09	0.09	0.09	

Reference AF56.Rev4 Date Issued: 19/5/2014

Comments:

- 1- pH & electrical conductivity determined & reported on a 1:5 soil:water extraction
- 2- CEC determined by soil chemical method 15B1 'Exchangeable bases and cation exchange capacity 1M amonium chloride at pH 7.0, no pre-treatment for soluble salts'
- 3- ESP, sodicity rating & SAR determined by calculation using the exchangeable cation results

Groundswell Laboratories Pty Ltd ABN 24 133 248 923

116 Moray Street, South Melbourne, Victoria, 3205 Ph (03) 8669 1450 Fax (03) 8669 1451 E-mail: paul@groundswelllabs.com.au
Page 2 of 4

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Groundswell Batch #: GS23671

Soil Analysis Results

Client Sample ID			Sample 1	Sample 1	Sample 2	Sample 2
Laboratory Sample Number			GS23671-1	GS23671-1	GS23671-2	GS23671-2
Date Sampled			7/09/2023	7/09/2023	7/09/2023	7/09/2023
Analytes	Units	LOR				
Sample Type			Air Dried Aggregates	Re-moulded Ped	Air Dried Aggregates	Re-moulded Ped
Emerson Aggregate Class - 2 Hours			Slaking / Some Dispersion	Slaking / Some Dispersion	Slaking / No Dispersion	Slaking / Some Dispersion
Emerson Class Number			Class 2	Class 2	Class 7	Class 2
Emerson Aggregate Class - 20 Hours			Slaking / Some Dispersion	Slaking / Some Dispersion	Slaking / Some Dispersion	Slaking / Some Dispersion
Emerson Class Number			Class 2	Class 2	Class 2	Class 2
Addition of 1M HCI						
1:5 Soil:Water 10 minute extraction						
Emerson Class Number						
			Reference AF56.	Rev4 Date Issued : 19/5/2014		

Comments

Groundswell Laboratories Pty Ltd ABN 24 133 248 923

116 Moray Street, South Melbourne, Victoria, 3205 Ph (03) 8669 1450 Fax (03) 8669 1451 E-mail: paul@groundswelllabs.com.au
Page 3 of 4

¹⁻ Classification conducted in accordance with Emmerson 'A clasification of soil aggregates based on their coherence in water', 1967 & AS1289.C8.1-1980

Groundswell Batch #: GS23671

Inorganics Quality Control Report

Client Sample ID									
Laboratory Sample Number	1								
QC Parameter			Metho	d Blank	Laboratory Control Standard (LCS)				
			Method Blank	Within GSL	LCS (%R)	LCS (%R)	Within GSL		
						Acceptance	Acceptance		
				Criteria (<lor)< td=""><td></td><td>Criteria</td><td>Criteria</td></lor)<>		Criteria	Criteria		
				(Pass/Fail)			(Pass/Fail)		
Analyte	Units	LOR							
pH	pH units	0.1	NA	NA	4.00	4.00 ± 0.1 pH Unit	Pass		
Conductivity	dS/m	0.005	<0.005	Pass	98%	80-120%	Pass		
Exchangeable Calcium	mg/Kg	1	<1	Pass	95%	70-130%	Pass		
Exchangeable Magnesium	mg/Kg	1	<1	Pass	100%	70-130%	Pass		
Exchangeable Potassium	mg/Kg	1	<1	Pass	96%	70-130%	Pass		
Exchangeable Sodium	mg/Kg	1	<1	Pass	98%	70-130%	Pass		
CEC	MEQ%	0.1	NA	NA	NA	NA	NA		
ESP	%	0.1	NA	NA	NA	NA	NA		
SAR		0.01	NA	NA	NA	NA	NA		

Reference AF56.Rev4 Date Issued : 3/11/2010

Comments:

- 1- Exchangeable cations LCS values based on independent water standards
- 2- NA = Not Applicable

Groundswell Laboratories Pty Ltd ABN 24 133 248 923

116 Moray Street, South Melbourne, Victoria, 3205 Ph (03) 8669 1450 Fax (03) 8669 1451 E-mail: admin@groundswelllabs.com.au
Page 4 of 4

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p: 0488 773 060 e: enquiries@smoidersgeotechnical.com.au p: PO Box 7299, Upper Ferntree Guily, VIC 3156



DATE: 08 September 2023

Groundswell Laboratories To:

116 Moray Street

South Melbourne, VIC 3205

SITE: 356 Two Hills Road

Glenburn, VIC

REF No .: 23H6839

Please perform the following soil tests:

Emerson Aggregate Class

Cation Exchange Capacity

iii Electrical Conductivity (EC)

İν

Sodicity - Exchangeable Sodium Percentage (ESP) ٧

Sodium Absorption Ratio (SAR)

For the following Two (2) sample from One (1) location:

DATE	SAMPLE	TEST SITE	DEPTH (mm)	MATERIAL	LAB ID
07/09/2023	1	PIT1	100-200 mm	SOIL	
07/09/2023	2	PIT1	300-400 mm	SOIL	

We request that the sample be put through on the accelerated turnaround stream.

Yours sincerely

For and on behalf of SMOLDERS GEOTECHNCIAL PTY. LTD.



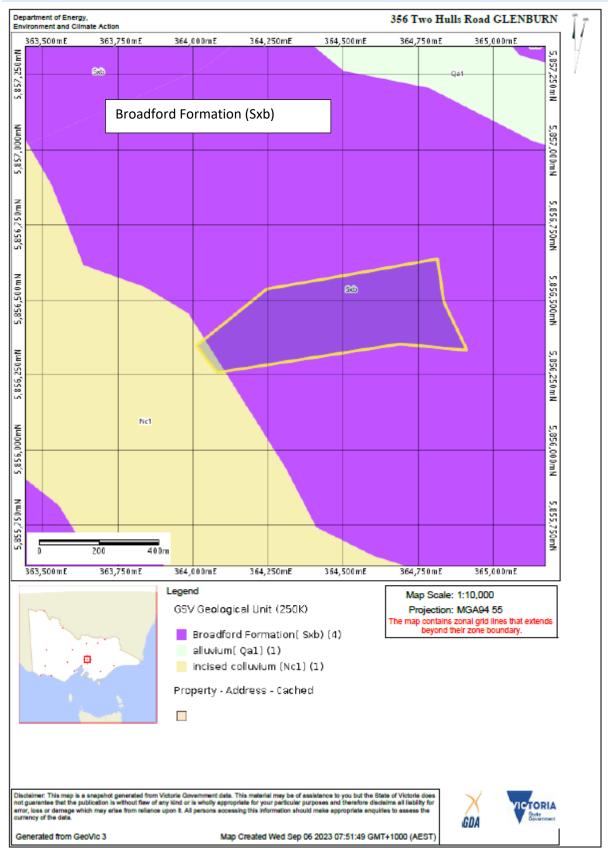
Xavier Smolders

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9.7 Geovic Map



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9.8 Land Channel Property Report

PROPERTY REPORT



From www.planning.vic.gov.au at 06 September 2023 07:54 AM

PROPERTY DETAILS

Address: 356 TWO HILLS ROAD GLENBURN 3717

Lot and Plan Number: Lot 2 LP96010
Standard Parcel Identifier (SPI): 2\LP96010
Local Government Area (Council): MURRINDINDI

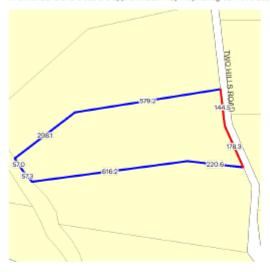
www.murrindindi.vic.gov.au

Council Property Number: 7861

Directory Reference: Vicroads 61 J8

SITE DIMENSIONS

All dimensions and areas are approximate. They may not agree with those shown on a title or plan.



Dimensions for individual parcels require a separate search, but dimensions for individual units are generally not available.

Calculating the area from the dimensions shown may give a different value to the area shown above

For more accurate dimensions get capy of plan at<u>Title and Property</u>

UTILITIES

Rural Water Corporation: Goulburn-Murray Water
Urban Water Corporation: Goulburn Valley Water
Melbourne Water: Outside drainage boundary

Power Distributor: AUSNET

STATE ELECTORATES

Legislative Council: NORTHERN VICTORIA

Legislative Assembly: EILDON

PLANNING INFORMATION

Property Planning details have been removed from the Property Reports to address duplication with the Planning Property Reports which are DELWP's authoritative source for all Property Planning information.

The Planning Property Report for this property can found here - Planning Property Report

Planning Property Reports can be found via these two links

Vicplan https://mapshare.vic.gov.au/vicplan/

Property and parcel search https://www.land.vic.gov.au/property-and-parcel-search

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PROPERTY REPORT: 356 TWO HILLS ROAD GLENBURN 3717

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PROPERTY REPORT Area Map MLATHA THEFT RO. TWO HILL

ERTY REPORT: 356 TWO HILLS ROAD GLENBURN 3717

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PLANNING PROPERTY REPORT



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PROPERTY DETAILS

Address: 356 TWO HILLS ROAD GLENBURN 3717

Lot and Plan Number: Lot 2 LP96010
Standard Parcel Identifier (SPI): 2\LP96010
Local Government Area (Council): MURRINDINDI

www.murrindindi.vic.gov.au

Council Property Number: 7861

Planning Scheme: Murrindindi Planning Scheme - Murrindindi

Directory Reference: Vicroads 61 J8

UTILITIES STATE ELECTORATES

Rural Water Corporation: Goulburn-Murray Water Legislative Council: NORTHERN VICTORIA

Urban Water Corporation: Goulburn Valley Water Legislative Assembly: EILDON

Melbourne Water: Outside drainage boundary

Power Distributor: AUSNET OTHER

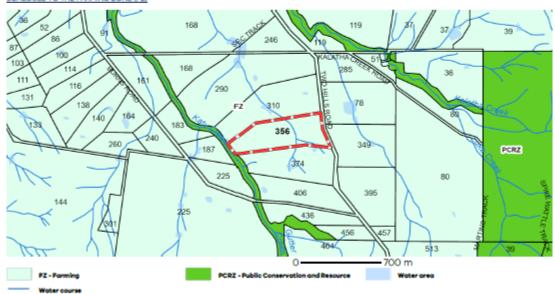
Registered Aboriginal Party: Taungurung Land and Waters

View location in VicPlan Council Aboriginal Corporation

Planning Zones

FARMING ZONE (FZ)





Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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Notwithstanding this disclaimer, a vendor may rely on the information in this report for the purpose of a statement that land is in a bushfire prone area as required by section 3DC (b) of the Sale of Land 1962 (Vic.).

PLANNING PROPERTY REPORT: 356 TWO HILLS ROAD GLENBURN 3717

Page 1 of 5

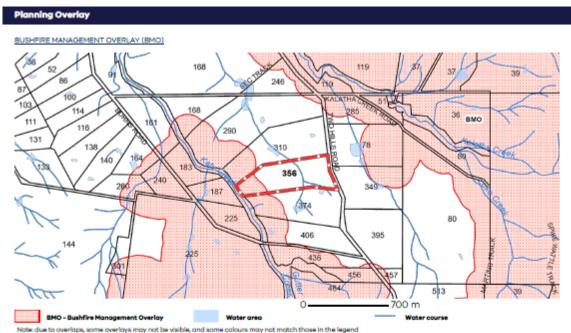
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PLANNING PROPERTY REPORT



Areas of Aboriginal Cultural Heritage Sensitivity

All or part of this property is an 'area of cultural heritage sensitivity'

'Areas of cultural heritage sensitivity' are defined under the Aboriginal Heritage Regulations 2018, and include registered Aboriginal cultural heritage places and land form types that are generally regarded as more likely to contain Aboriginal cultural heritage.

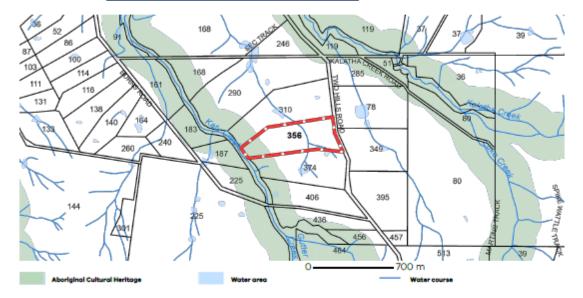
Under the Aboriginal Heritage Regulations 2018, 'areas of cultural heritage sensitivity' are one part of a two part trigger which require a 'cultural heritage management plan' be prepared where a listed 'high impact activity' is proposed.

If a significant land use change is proposed (for example, a subdivision into 3 or more lats), a cultural heritage management plan may be triggered. One or two dwellings, works ancillary to a dwelling, services to a dwelling, alteration of buildings and minor works are examples of works exempt from this requirement.

Under the Aboriginal Heritage Act 2006, where a cultural heritage management plan is required, planning permits, licences and work authorities cannot be issued unless the cultural heritage management plan has been approved for the activity.

For further information about whether a Cultural Heritage Management Plan is required go to http://www.aav.nrms.net.au/aavQuestionLaspx

More information, including links to both the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018, can also be found here - https://www.aboriginalvictoria.vic.gov.au/aboriginal-heritage-legislation



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PLANNING PROPERTY REPORT: 356 TWO HILLS ROAD GLENBURN 3717

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PLANNING PROPERTY REPORT



Further Planning Information

Planning scheme data last updated on 1 September 2023.

A **planning scheme** sets out policies and requirements for the use, development and protection of land. This report provides information about the zone and overlay provisions that apply to the selected land. Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting https://www.planning.vic.gov.du

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the **Planning and Environment Act 1987.**It does not include information about exhibited planning scheme amendments, or zonings that may abut the land.
To obtain a Planning Certificate go to Titles and Property Certificates at Landata - https://www.landata.vic.gov.au

For details of surrounding properties, use this service to get the Reports for properties of interest.

To view planning zones, overlay and heritage information in an interactive format visit https://mapshare.maps.vic.gov.au/vicplan

For other information about planning in Victoria visit https://www.planning.vic.gov.au

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PLANNING PROPERTY REPORT: 356 TWO HILLS ROAD GLENBURN 3717

Page 4 of 5

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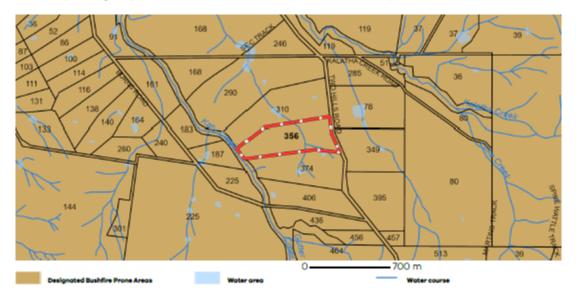


Designated Bushfire Prone Areas

This property is in a designated bushfire prone area. Special bushfire nated bushfire prone area (BPA). Planning provisions may apply.

Where part of the property is mapped as BPA, if no part of the building envelope or footprint falls within the BPA area, the BPA construction requirements do not apply

Note: the relevant building surveyor determines the need for compliance with the bushfire construction requirements



Designated BPA are determined by the Minister for Planning following a detailed review process. The Building Regulations 2018, through adoption of the Building Code of Australia, apply bushfire protection standards for building works in designated BPA

Designated BPA maps can be viewed on VicPlan at https://mapshare.vic.gov.au/vicplan/ or at the relevant local council.

Create a BPA definition plan in VicPlan to measure the BPA.

rmation for lot owners building in the BPA is available at https://www.planning.vic.gov.au.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website https://www.bavic.gav.au. Copies of the Building Act and Building Regulations are available from http://www.legislation.vic.gav.au. For Planning Scheme Provisions in bushfire areas visit https://www.planning.vic.gov.au.

Native Vegetation

Native plants that are indigenous to the region and important for biodiversity might be present on this property. This could include trees, shrubs, herbs, grasses or aquatic plants. There are a range of regulations that may apply including need to obtain a planning permit under Clause 52.17 of the local planning scheme. For more information see Native Vegetation (Clause 52.17) with local variations in Native Vegetation (Clause 52.17) Schedule

To help identify native vegetation on this property and the application of Clause 52.17 please visit the Native Vegetation Information Management system https://nvim.delwp.vic.gov.au/ and Native vegetation (environment.vic.gov.au) or please contact your relevant council.

You can find out more about the natural values on your property through NatureKit NatureKit (environment vic.gov.au)

Notwithstanding this disclaimer, a vendor may rely on the infor Land 1962 (Vic.)

PLANNING PROPERTY REPORT: 356 TWO HILLS ROAD GLENBURN 3717

Page 5 of 5

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as part Consideration and Suprementation of Experimental Properties of Properties of Experimental P

The Victorian Government acknowledges the Traditional Owners of Victoria and pays respects to their ongoing connection to their Country, History and Culture. The Victorian Government extends this respect to their Elders, past, present and emerging.

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

Page 1 of 1

VOLUME 08963 FOLIO 833

Security no : 124112233457Q Produced 30/01/2024 02:36 PM

LAND DESCRIPTION

Lot 2 on Plan of Subdivision 096010. PARENT TITLE Volume 06698 Folio 500 Created by instrument LP096010 15/03/1973

REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
ANGELA STUBBS
DANIEL LUKE THWAITES both of 29 THOMAS ROAD HEALESVILLE VIC 3777
AS163486E 14/05/2019

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE AS163487C 14/05/2019 WESTPAC BANKING CORPORATION

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

DIAGRAM LOCATION

SEE LP096010 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

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

Street Address: 356 TWO HILLS ROAD GLENBURN VIC 3717

ADMINISTRATIVE NOTICES

NIL

eCT Control 16320Q WESTPAC BANKING CORPORATION Effective from 14/05/2019

DOCUMENT END

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Document Assembled	30/01/2024 14:36

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EDITION 1
APPROVED 4 //2/72

PLAN OF SUBDIVISION OF

CROWN ALLOTMENT 4A

PARISH OF WOODBOURNE

COUNTY OF ANGLESEY



The land coloured blue, purple and green is encumbered vide C/T VOL. 6698 FOL. 500

COLOUR CONVERSION E-1 = BLUE E-2 = GREEN

Lot 4 is not based on this survey.

E-3 - PURPLE

NOTATIONS

WATERWAY NOTATION:

LOTS 1,2 & 3 IN THIS PLAN MAY ABUT CROWN LAND THAT MAY BE SUBJECT

TO A CROWN LICENCE TO USE

