NOTICE OF PROPOSED DEVELOPMENT

Notice is hereby given that an application has been made for planning approval for the following development:

SITE: 251 Greens Road, Orielton

PROPOSED DEVELOPMENT:
OUTBUILDING

The relevant plans and documents can be inspected at the Council Offices at 47 Cole Street, Sorell during normal office hours, or the plans may be viewed on Council's website at www.sorell.tas.gov.au until **Monday 28th April 2025.**

Any person may make representation in relation to the proposal by letter or electronic mail (sorell.council@sorell.tas.gov.au) addressed to the General Manager. Representations must be received no later than **Monday 28th April 2025.**

APPLICANT: **J K Altman**

APPLICATION NO: **DA 2025.74.1**
DATE: **04 April 2025**

Part B: Please note that Part B of this form is publicly exhibited.

Full description of Proposal:	*Use:* STORAGE SHED *Development:* 15 x 9 STEEL SHED *Large or complex proposals should be described in a letter or planning report.*
Design and construction cost of proposal:	$ 80,000
Is all, or some the work already constructed:	No: ☑ Yes: ☐
Location of proposed works:	Street address: 251 GREENS ROAD Suburb: ORIELTON Postcode: 7172 Certificate of Title(s) Volume: 103907 Folio: 7
Current Use of Site	NO USE
Current Owner/s:	Name(s): JUSTIN ALTMANN, EMMA ALTMANN

Is the Property on the Tasmanian Heritage Register?	No: ☑ Yes: ☐	*If yes, please provide written advice from Heritage Tasmania*
Is the proposal to be carried out in more than one stage?	No: ☑ Yes: ☐	*If yes, please clearly describe in plans*
Have any potentially contaminating uses been undertaken on the site?	No: ☑ Yes: ☐	*If yes, please complete the Additional Information for Non-Residential Use*
Is any vegetation proposed to be removed?	No: ☑ Yes: ☐	*If yes, please ensure plans clearly show area to be impacted*
Does the proposal involve land administered or owned by either the Crown or Council?	No: ☑ Yes: ☐	*If yes, please complete the Council or Crown land section on page 3*

If a new or upgraded vehicular crossing is required from Council to the front boundary please complete the Vehicular Crossing (and Associated Works) application form
https://www.sorell.tas.gov.au/services/engineering/

Part B continued: Please note that Part B of this form is publicly exhibited

Declarations and acknowledgements
• I/we confirm that the application does not contradict any easement, covenant or restriction specified in the Certificate of Title, Schedule of Easements or Part 5 Agreement for the land. • I/we consent to Council employees or consultants entering the site and have arranged permission and/or access for Council's representatives to enter the land at any time during normal business hours. • I/we authorise the provision of a copy of any documents relating to this application to any person for the purposes of assessment or public consultation and have permission of the copyright owner for such copies. • I/we declare that, in accordance with s52(1) of the *Land Use Planning and Approvals Act 1993*, that I have notified the owner(s) of the intention to make this application. • I/we declare that the information in this application is true and correct. *Details of how the Council manages personal information and how you can request access or corrections to it is outlined in Council's Privacy Policy available on the Council website.*
• I/we acknowledge that the documentation submitted in support of my application will become a public record held by Council and may be reproduced by Council in both electronic and hard copy format in order to facilitate the assessment process, for display purposes during public exhibition, and to fulfil its statutory obligations. I further acknowledge that following determination of my application, Council will store documentation relating to my application in electronic format only.
• Where the General Manager's consent is also required under s.14 of the *Urban Drainage Act 2013*, by making this application I/we also apply for that consent.

Applicant Signature:	Signature: ..... Date: 20/3/25

Crown or General Manager Land Owner Consent
If the land that is the subject of this application is owned or administered by either the Crown or Sorell Council, the consent of the relevant Minister or the Council General Manager whichever is applicable, must be included here. This consent should be completed and signed by either the General Manager, the Minister, or a delegate (as specified in s52 (1D-1G) of the *Land Use Planning and Approvals Act 1993*). Please note: • If General Manager consent if required, please first complete the General Manager consent application form available on our website www.sorell.tas.gov.au • If the application involves Crown land you will also need a letter of consent. • Any consent is for the purposes of making this application only and is not consent to undertaken work or take any other action with respect to the proposed use or development.
I _____ being responsible for the administration of land at _____ declare that I have given permission for the making of this application for _____

Sorell Council
Development Application: Development Application - 251 Greens Road, Orielton - P1 .pdf
Plans Reference:P1
Date Received:20/03/2025

Signature of General Manager, Minister or Delegate:	Signature: ..... Date: .....

GEOTECH 25-022a

ROCK SOLID GEOTECHNICS PTY LTD
Peter Hofto
163 Orielton Road
Orielton
TAS 7172

0417 960 769
peter@rocksolidgeotechnics.com.au

20/2/2025

Geotechnical Assessment / Classification for Proposed Residential Development

251 Greens Road, Orielton

CLIENT:	Justin Altmann	0422784817	service@lewismarine.com.au

CONTENTS

SUMMARY

A shed development is proposed by Justin Altmann at 251 Greens Road, Orielton (Figure 1). Clay subsoils and shallow dolerite bedrock underlies the site.

The site is classified as Class 'S' in accordance with AS2870-2011. The shed should be founded directly onto the dolerite bedrock.

Suitable upslope site drainage should be installed prior to the commencement of construction.

The following Wind Load Classifications (AS4055-2012: Wind Loads for Housing) are appropriate.

• Terrain Category Classification	TC2.5	Terrain with a few obstructions
• Shielding Classification	PS	Partial Shielding
• Topographic Classification	T2	
• Wind Load Classification	N3	

INVESTIGATION

The Tasmanian Geological Survey 1:63360 Geological Atlas – 'Buckland' indicates that the site is underlain by Jurassic dolerite. A site investigation was completed on Friday 14 February, 2025. This included the augering of a test hole to assess the site for foundation conditions (4WD mounted SAMPLA25 mechanical auger with 100mm solid flight augers). The location of the hole is marked on Figure 1.

The site for the proposed shed lies to the northwest and upslope from the residence. The site slopes at 2-4 degrees to the south/southeast. No seepages or springs were observed on the site. The site is covered in grass, and is devoid trees. Surface cracking was observed over the site. A significant amount of uncontrolled fill has been placed to the immediate south of the proposed shed site. The shed should NOT be constructed on this fill.

The profile displayed in Test Hole #1 consisted of:

0.00 – 0.15m	sandy CLAY: high plasticity, dark brown, to 20% fine to medium grained sand trace rootlets – TOPSOIL
0.15 – 0.55m	CLAY: high plasticity, olive brown, trace fine to medium grained sand, moist,
0.55 – 0.65m	gravelly SAND: fine to coarse grained, greyish brown, 20% fine to medium angular dolerite gravel, dry – EXTREMELY WEATHERED DOLERITE
0.65m+	Mechanical auger refusal on presumed dolerite bedrock

Groundwater was not encountered in the hole.

Plate 1 – Test Hole #1 – shed site – looking to the southeast.

CONDITIONS OF INVESTIGATION

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This report should not be used for submission for Building or Development Application until RSG has been paid in full for its production. RSG accepts no liability for the contents of this report until full payment has been received.

The results & interpretation of conditions presented in this report are current at the time of the investigation only. The investigation has been conducted in accordance with the specific client's requirements &/or with their servants or agent's instructions.

This report contains observations & interpretations based often on limited subsurface evaluation. Where interpretative information or evaluation has been reported, this information has been identified accordingly & is presented based on professional judgement. RSG does not accept responsibility for variations between interpreted conditions & those that may be subsequently revealed by whatever means.

Due to the possibility of variation in subsurface conditions & materials, the characteristics of materials can vary between sample & observation sites. RSG takes no responsibility for changed or unexpected variations in ground conditions that may affect any aspect of the project. The classifications in this report are based on samples taken from specific sites. The information is not transferable to different sites, no matter how close (ie. if the development site is moved from the original assessment site an additional assessment will be required).

It is recommended to notify the author should it be revealed that the sub-surface conditions differ from those presented in this report, so additional assessment & advice may be provided.

Investigations are conducted to standards outlined in Australian Standards:

- AS1726-1993: Geotechnical Site Investigations
- AS2870-2011: Residential Slabs and Footings
- AS4055-2012: Wind Loads for Housing

& as specified in 'Guidelines for Geotechnical Assessment of Subdivisions and Recommended Code of Practise for Site Classification to AS2870 in Tasmania' - Institute of Engineers, Tasmanian Division.

All new developments should subject to strict site maintenance. Attention is drawn to the enclosed information reproduced with the permission from Standards Australia:

- CSIRO Information Sheet No. BTF18 – 'Guide to home-owners on foundation maintenance & footing performance'.

PETER HOFTO
ROCK SOLID GEOTECHNICS PTY LTD

LOCALITY MAP
251 GREENS RD. ORIELTON

GDA94 MGA55 : 545134E, 5269713N 1:1,693 **Disclaimer and Copyright Notice**

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Justin Altmann 0422784817 *Owner /Agent*

service@lewismarine.com.au *Address*

Suburb/postcode

Qualified person details:

Qualified person: Peter Hofto - Rock Solid Geotechnics P/L

Address: 163 Orielton Road

Orielton 7172

Phone No: 0417960769

Fax No:

Licence No:

Email address: peter@rocksolidgeotechnics.com.au

Qualifications and Insurance details: BSc (Hons) – Geology / Geophysics
PI Insurance – Lloyds Underwriting
PL Insurance – CGU Insurance Lt
(description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items

Speciality area of expertise: Geotechnical Assessments
(description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

Details of work:

Address: 251 Greens Road, Orielton

Lot No:

Certificate of title No:

The assessable item related to this certificate: Geotechnical Assessment

(description of the assessable item being certified)
Assessable item includes –
- *a material;*
- *a design*
- *a form of construction*
- *a document*
- *testing of a component, building system or plumbing system*
- *an inspection, or assessment, performed*

Certificate details:

Certificate type: Geotechnical Assessment
(description from Column 1 of Schedule 1 of the Director's Determination – Certificates by Qualified Persons for Assessable Items n)

This certificate is in relation to the above assessable items, at any stage, as part of – *(tick one)*

☑ building work, plumbing work or plumbing installation or demolition work

OR

☐ a building, temporary structure or plumbing installation

In issuing this certificate the following matters are relevant –

Documents:	
Relevant calculations:	AS2870
References:	

Substance of Certificate: *(what it is that is being certified)*

Scope and/or Limitations

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		GEOTECH 25-022	20/2/2025

Foundation Maintenance and Footing Performance:
A Homeowner's Guide

CSIRO

BTF 18
replaces
Information
Sheet 10/91

Buildings can and often do move. This movement can be up, down, lateral or rotational. The fundamental cause of movement in buildings can usually be related to one or more problems in the foundation soil. It is important for the homeowner to identify the soil type in order to ascertain the measures that should be put in place in order to ensure that problems in the foundation soil can be prevented, thus protecting against building movement.

This Building Technology File is designed to identify causes of soil-related building movement, and to suggest methods of prevention of resultant cracking in buildings.

Soil Types

The types of soils usually present under the topsoil in land zoned for residential buildings can be split into two approximate groups – granular and clay. Quite often, foundation soil is a mixture of both types. The general problems associated with soils having granular content are usually caused by erosion. Clay soils are subject to saturation and swell/shrink problems.

Classifications for a given area can generally be obtained by application to the local authority, but these are sometimes unreliable and if there is doubt, a geotechnical report should be commissioned. As most buildings suffering movement problems are founded on clay soils, there is an emphasis on classification of soils according to the amount of swell and shrinkage they experience with variations of water content. The table below is Table 2.1 from AS 2870, the Residential Slab and Footing Code.

Causes of Movement

Settlement due to construction
There are two types of settlement that occur as a result of construction:

- Immediate settlement occurs when a building is first placed on its foundation soil, as a result of compaction of the soil under the weight of the structure. The cohesive quality of clay soil mitigates against this, but granular (particularly sandy) soil is susceptible.
- Consolidation settlement is a feature of clay soil and may take place because of the expulsion of moisture from the soil or because of the soil's lack of resistance to local compressive or shear stresses. This will usually take place during the first few months after construction, but has been known to take many years in exceptional cases.

These problems are the province of the builder and should be taken into consideration as part of the preparation of the site for construction. Building Technology File 19 (BTF 19) deals with these problems.

Erosion
All soils are prone to erosion, but sandy soil is particularly susceptible to being washed away. Even clay with a sand component of say 10% or more can suffer from erosion.

Saturation
This is particularly a problem in clay soils. Saturation creates a bog-like suspension of the soil that causes it to lose virtually all of its bearing capacity. To a lesser degree, sand is affected by saturation because saturated sand may undergo a reduction in volume – particularly imported sand fill for bedding and blinding layers. However, this usually occurs as immediate settlement and should normally be the province of the builder.

Seasonal swelling and shrinkage of soil
All clays react to the presence of water by slowly absorbing it, making the soil increase in volume (see table below). The degree of increase varies considerably between different clays, as does the degree of decrease during the subsequent drying out caused by fair weather periods. Because of the low absorption and expulsion rate, this phenomenon will not usually be noticeable unless there are prolonged rainy or dry periods, usually of weeks or months, depending on the land and soil characteristics.

The swelling of soil creates an upward force on the footings of the building, and shrinkage creates subsidence that takes away the support needed by the footing to retain equilibrium.

Shear failure
This phenomenon occurs when the foundation soil does not have sufficient strength to support the weight of the footing. There are two major post-construction causes:

- Significant load increase.
- Reduction of lateral support of the soil under the footing due to erosion or excavation.
- In clay soil, shear failure can be caused by saturation of the soil adjacent to or under the footing.

GENERAL DEFINITIONS OF SITE CLASSES

Class	Foundation
1	Most sand and rock sites with little or no ground movement from moisture changes
S	Slightly reactive clay sites with only slight ground movement from moisture changes
M	Moderately reactive clay or silt sites, which can experience moderate ground movement from moisture changes
H	Highly reactive clay sites, which can experience high ground movement from moisture changes
E	Extremely reactive sites, which can experience extreme ground movement from moisture changes
A to P	Filled sites
P	Sites which include soft soils, such as soft clay or silt or loose sands; landslip; mine subsidence; collapsing soils; soils subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise

Tree root growth

Trees and shrubs that are allowed to grow in the vicinity of footings can cause foundation soil movement in two ways:

- Roots that grow under footings may increase in cross-sectional size, exerting upward pressure on footings.
- Roots in the vicinity of footings will absorb much of the moisture in the foundation soil, causing shrinkage or subsidence.

Unevenness of Movement

The types of ground movement described above usually occur unevenly throughout the building's foundation soil. Settlement due to construction tends to be uneven because of:

- Differing compaction of foundation soil prior to construction.
- Differing moisture content of foundation soil prior to construction.

Movement due to non-construction causes is usually more uneven still. Erosion can undermine a footing that traverses the flow or can create the conditions for shear failure by eroding soil adjacent to a footing that runs in the same direction as the flow.

Saturation of clay foundation soil may occur where subfloor walls create a dam that makes water pond. It can also occur wherever there is a source of water near footings in clay soil. This leads to a severe reduction in the strength of the soil which may create local shear failure.

Seasonal swelling and shrinkage of clay soil affects the perimeter of the building first, then gradually spreads to the interior. The swelling process will usually begin at the uphill extreme of the building, or on the weather side where the land is flat. Swelling gradually reaches the interior soil as absorption continues. Shrinkage usually begins where the sun's heat is greatest.

Effects of Uneven Soil Movement on Structures

Erosion and saturation

Erosion removes the support from under footings, tending to create subsidence of the part of the structure under which it occurs. Brickwork walls will resist the stress created by this removal of support by bridging the gap or cantilevering until the bricks or the mortar bedding fail. Older masonry has little resistance. Evidence of failure varies according to circumstances and symptoms may include:

- Step cracking in the mortar beds in the body of the wall or above/below openings such as doors or windows.
- Vertical cracking in the bricks (usually but not necessarily in line with the vertical beds or perpends).

Isolated piers affected by erosion or saturation of foundations will eventually lose contact with the bearers they support and may tilt or fall over. The floors that have lost this support will become bouncy, sometimes rattling ornaments etc.

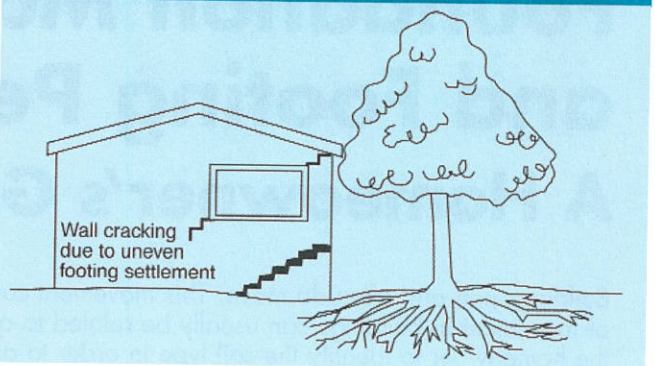
Seasonal swelling/shrinkage in clay

Swelling foundation soil due to rainy periods first lifts the most exposed extremities of the footing system, then the remainder of the perimeter footings while gradually permeating inside the building footprint to lift internal footings. This swelling first tends to create a dish effect, because the external footings are pushed higher than the internal ones.

The first noticeable symptom may be that the floor appears slightly dished. This is often accompanied by some doors binding on the floor or the door head, together with some cracking of cornice mitres. In buildings with timber flooring supported by bearers and joists, the floor can be bouncy. Externally there may be visible dishing of the hip or ridge lines.

As the moisture absorption process completes its journey to the innermost areas of the building, the internal footings will rise. If the spread of moisture is roughly even, it may be that the symptoms will temporarily disappear, but it is more likely that swelling will be uneven, creating a difference rather than a disappearance in symptoms. In buildings with timber flooring supported by bearers and joists, the isolated piers will rise more easily than the strip footings or piers under walls, creating noticeable doming of flooring.

Trees can cause shrinkage and damage



As the weather pattern changes and the soil begins to dry out, the external footings will be first affected, beginning with the locations where the sun's effect is strongest. This has the effect of lowering the external footings. The doming is accentuated and cracking reduces or disappears where it occurred because of dishing, but other cracks open up. The roof lines may become convex.

Doming and dishing are also affected by weather in other ways. In areas where warm, wet summers and cooler dry winters prevail, water migration tends to be toward the interior and doming will be accentuated, whereas where summers are dry and winters are cold and wet, migration tends to be toward the exterior and the underlying propensity is toward dishing.

Movement caused by tree roots

In general, growing roots will exert an upward pressure on footings, whereas soil subject to drying because of tree or shrub roots will tend to remove support from under footings by inducing shrinkage.

Complications caused by the structure itself

Most forces that the soil causes to be exerted on structures are vertical – i.e. either up or down. However, because these forces are seldom spread evenly around the footings, and because the building resists uneven movement because of its rigidity, forces are exerted from one part of the building to another. The net result of all these forces is usually rotational. This resultant force often complicates the diagnosis because the visible symptoms do not simply reflect the original cause. A common symptom is binding of doors on the vertical member of the frame.

Effects on full masonry structures

Brickwork will resist cracking where it can. It will attempt to span areas that lose support because of subsided foundations or raised points. It is therefore usual to see cracking at weak points, such as openings for windows or doors.

In the event of construction settlement, cracking will usually remain unchanged after the process of settlement has ceased.

With local shear or erosion, cracking will usually continue to develop until the original cause has been remedied, or until the subsidence has completely neutralised the affected portion of footing and the structure has stabilised on other footings that remain effective.

In the case of swell/shrink effects, the brickwork will in some cases return to its original position after completion of a cycle, however it is more likely that the rotational effect will not be exactly reversed, and it is also usual that brickwork will settle in its new position and will resist the forces trying to return it to its original position. This means that in a case where swelling takes place after construction and cracking occurs, the cracking is likely to at least partly remain after the shrink segment of the cycle is complete. Thus, each time the cycle is repeated, the likelihood is that the cracking will become wider until the sections of brickwork become virtually independent.

With repeated cycles, once the cracking is established, if there is no other complication, it is normal for the incidence of cracking to stabilise, as the building has the articulation it needs to cope with the problem. This is by no means always the case, however, and monitoring of cracks in walls and floors should always be treated seriously.

Upheaval caused by growth of tree roots under footings is not a simple vertical shear stress. There is a tendency for the root to also exert lateral forces that attempt to separate sections of brickwork after initial cracking has occurred.

The normal structural arrangement is that the inner leaf of brickwork in the external walls and at least some of the internal walls (depending on the roof type) comprise the load-bearing structure on which any upper floors, ceilings and the roof are supported. In these cases, it is internally visible cracking that should be the main focus of attention, however there are a few examples of dwellings whose external leaf of masonry plays some supporting role, so this should be checked if there is any doubt. In any case, externally visible cracking is important as a guide to stresses on the structure generally, and it should also be remembered that the external walls must be capable of supporting themselves.

Effects on framed structures
Timber or steel framed buildings are less likely to exhibit cracking due to swell/shrink than masonry buildings because of their flexibility. Also, the doming/dishing effects tend to be lower because of the lighter weight of walls. The main risks to framed buildings are encountered because of the isolated pier footings used under walls. Where erosion or saturation cause a footing to fall away, this can double the span which a wall must bridge. This additional stress can create cracking in wall linings, particularly where there is a weak point in the structure caused by a door or window opening. It is, however, unlikely that framed structures will be so stressed as to suffer serious damage without first exhibiting some or all of the above symptoms for a considerable period. The same warning period should apply in the case of upheaval. It should be noted, however, that where framed buildings are supported by strip footings there is only one leaf of brickwork and therefore the externally visible walls are the supporting structure for the building. In this case, the subfloor masonry walls can be expected to behave as full brickwork walls.

Effects on brick veneer structures
Because the load-bearing structure of a brick veneer building is the frame that makes up the interior leaf of the external walls plus perhaps the internal walls, depending on the type of roof, the building can be expected to behave as a framed structure, except that the external masonry will behave in a similar way to the external leaf of a full masonry structure.

Water Service and Drainage

Where a water service pipe, a sewer or stormwater drainage pipe is in the vicinity of a building, a water leak can cause erosion, swelling or saturation of susceptible soil. Even a minuscule leak can be enough to saturate a clay foundation. A leaking tap near a building can have the same effect. In addition, trenches containing pipes can become watercourses even though backfilled, particularly where broken rubble is used as fill. Water that runs along these trenches can be responsible for serious erosion, interstrata seepage into subfloor areas and saturation.

Pipe leakage and trench water flows also encourage tree and shrub roots to the source of water, complicating and exacerbating the problem.
Poor roof plumbing can result in large volumes of rainwater being concentrated in a small area of soil:

- Incorrect falls in roof guttering may result in overflows, as may gutters blocked with leaves etc.
- Corroded guttering or downpipes can spill water to ground.
- Downpipes not positively connected to a proper stormwater collection system will direct a concentration of water to soil that is directly adjacent to footings, sometimes causing large-scale problems such as erosion, saturation and migration of water under the building.

Seriousness of Cracking

In general, most cracking found in masonry walls is a cosmetic nuisance only and can be kept in repair or even ignored. The table below is a reproduction of Table C1 of AS 2870.

AS 2870 also publishes figures relating to cracking in concrete floors, however because wall cracking will usually reach the critical point significantly earlier than cracking in slabs, this table is not reproduced here.

Prevention/Cure

Plumbing
Where building movement is caused by water service, roof plumbing, sewer or stormwater failure, the remedy is to repair the problem. It is prudent, however, to consider also rerouting pipes away from the building where possible, and relocating taps to positions where any leakage will not direct water to the building vicinity. Even where gully traps are present, there is sometimes sufficient spill to create erosion or saturation, particularly in modern installations using smaller diameter PVC fixtures. Indeed, some gully traps are not situated directly under the taps that are installed to charge them, with the result that water from the tap may enter the backfilled trench that houses the sewer piping. If the trench has been poorly backfilled, the water will either pond or flow along the bottom of the trench. As these trenches usually run alongside the footings and can be at a similar depth, it is not hard to see how any water that is thus directed into a trench can easily affect the foundation's ability to support footings or even gain entry to the subfloor area.

Ground drainage
In all soils there is the capacity for water to travel on the surface and below it. Surface water flows can be established by inspection during and after heavy or prolonged rain. If necessary, a grated drain system connected to the stormwater collection system is usually an easy solution.

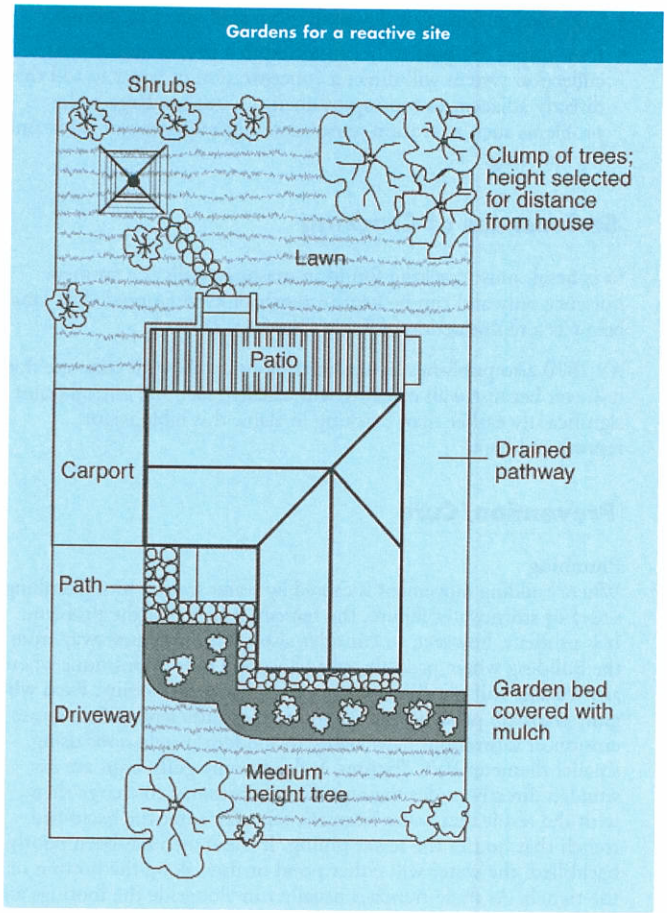
It is, however, sometimes necessary when attempting to prevent water migration that testing be carried out to establish watertable height and subsoil water flows. This subject is referred to in BTF 19 and may properly be regarded as an area for an expert consultant.

Protection of the building perimeter
It is essential to remember that the soil that affects footings extends well beyond the actual building line. Watering of garden plants, shrubs and trees causes some of the most serious water problems.

For this reason, particularly where problems exist or are likely to occur, it is recommended that an apron of paving be installed around as much of the building perimeter as necessary. This paving

CLASSIFICATION OF DAMAGE WITH REFERENCE TO WALLS

Description of typical damage and required repair	Approximate crack width limit (see Note 3)	Damage category
Hairline cracks	<0.1 mm	0
Fine cracks which do not need repair	<1 mm	1
Cracks noticeable but easily filled. Doors and windows stick slightly	<5 mm	2
Cracks can be repaired and possibly a small amount of wall will need to be replaced. Doors and windows stick. Service pipes can fracture. Weathertightness often impaired	5–15 mm (or a number of cracks 3 mm or more in one group)	3
Extensive repair work involving breaking-out and replacing sections of walls, especially over doors and windows. Window and door frames distort. Walls lean or bulge noticeably, some loss of bearing in beams. Service pipes disrupted	15–25 mm but also depend on number of cracks	4



should extend outwards a minimum of 900 mm (more in highly reactive soil) and should have a minimum fall away from the building of 1:60. The finished paving should be no less than 100 mm below brick vent bases.

It is prudent to relocate drainage pipes away from this paving, if possible, to avoid complications from future leakage. If this is not practical, earthenware pipes should be replaced by PVC and backfilling should be of the same soil type as the surrounding soil and compacted to the same density.

Except in areas where freezing of water is an issue, it is wise to remove taps in the building area and relocate them well away from the building – preferably not uphill from it (see BTF 19).

It may be desirable to install a grated drain at the outside edge of the paving on the uphill side of the building. If subsoil drainage is needed this can be installed under the surface drain.

Condensation

In buildings with a subfloor void such as where bearers and joists support flooring, insufficient ventilation creates ideal conditions for condensation, particularly where there is little clearance between the floor and the ground. Condensation adds to the moisture already present in the subfloor and significantly slows the process of drying out. Installation of an adequate subfloor ventilation system, either natural or mechanical, is desirable.

Warning: Although this Building Technology File deals with cracking in buildings, it should be said that subfloor moisture can result in the development of other problems, notably:

- Water that is transmitted into masonry, metal or timber building elements causes damage and/or decay to those elements.
- High subfloor humidity and moisture content create an ideal environment for various pests, including termites and spiders.
- Where high moisture levels are transmitted to the flooring and walls, an increase in the dust mite count can ensue within the living areas. Dust mites, as well as dampness in general, can be a health hazard to inhabitants, particularly those who are abnormally susceptible to respiratory ailments.

The garden

The ideal vegetation layout is to have lawn or plants that require only light watering immediately adjacent to the drainage or paving edge, then more demanding plants, shrubs and trees spread out in that order.

Overwatering due to misuse of automatic watering systems is a common cause of saturation and water migration under footings. If it is necessary to use these systems, it is important to remove garden beds to a completely safe distance from buildings.

Existing trees

Where a tree is causing a problem of soil drying or there is the existence or threat of upheaval of footings, if the offending roots are subsidiary and their removal will not significantly damage the tree, they should be severed and a concrete or metal barrier placed vertically in the soil to prevent future root growth in the direction of the building. If it is not possible to remove the relevant roots without damage to the tree, an application to remove the tree should be made to the local authority. A prudent plan is to transplant likely offenders before they become a problem.

Information on trees, plants and shrubs

State departments overseeing agriculture can give information regarding root patterns, volume of water needed and safe distance from buildings of most species. Botanic gardens are also sources of information. For information on plant roots and drains, see Building Technology File 17.

Excavation

Excavation around footings must be properly engineered. Soil supporting footings can only be safely excavated at an angle that allows the soil under the footing to remain stable. This angle is called the angle of repose (or friction) and varies significantly between soil types and conditions. Removal of soil within the angle of repose will cause subsidence.

Remediation

Where erosion has occurred that has washed away soil adjacent to footings, soil of the same classification should be introduced and compacted to the same density. Where footings have been undermined, augmentation or other specialist work may be required. Remediation of footings and foundations is generally the realm of a specialist consultant.

Where isolated footings rise and fall because of swell/shrink effect, the homeowner may be tempted to alleviate floor bounce by filling the gap that has appeared between the bearer and the pier with blocking. The danger here is that when the next swell segment of the cycle occurs, the extra blocking will push the floor up into an accentuated dome and may also cause local shear failure in the soil. If it is necessary to use blocking, it should be by a pair of fine wedges and monitoring should be carried out fortnightly.

This BTF was prepared by John Lewer FAIB, MIAMA, Partner, Construction Diagnosis.

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FUTURA
PLANNING

Bushfire Hazard Report

Proposed Development: Ancillary Dwelling & Outbuilding

Address: 251 Greens Rd, Orielton 7172

Applicant: Justin Altmann

Prepared by: J S Mayne

Bushfire Practitioner BFP-172

Report Date: February 2025

Job Reference: FP011-2025

www.futuraplanning.com.au – 358B Macquarie Street, South Hobart 7004

ABN 19 248 759 296

Table of Contents

Limitations of this report

The viability of this report's efficacy hinges on the implementation and sustained upkeep of the prescribed measures and recommendations throughout the development's lifespan. Any alterations in site conditions could potentially lead to variations in the Bushfire Attack Level (BAL) classification, rendering this report null and void. It is important to note that the extent of this report's coverage does not ensure the complete prevention of property or life loss in the event of a bushfire. This is primarily due to the intricate nature of vegetation management, the inherently unpredictable behaviour of fires, and the influence of severe weather conditions. It is crucial to clarify that this report does not offer legal counsel, and no responsibility can be assumed for actions taken by property owners, the local council, or any other parties that might undermine the efficacy of this report.

1.0 Summary

The following is a Bushfire Assessment for an existing lot located 251 Greens Rd, Orielton. The development proposal is for a 15x9m Outbuilding and a 6x9m Ancillary Dwelling on a single lot. The client is Justin Altmann who currently lives in the existing established residence on site.

The development is located in a Bushfire Prone Area. The report is based on a site assessment completed on the 31/1/2025 and additional information obtained from various electronic data bases.

The assessments contained in this report have been undertaken in accordance with the Australian Standard 3959:2018 Construction of buildings in bushfire-prone areas and Director's Determination- Bushfire Hazard Areas, Building Act 2016, Version: 1.2, Date: 6th July 2024.

Based on the Bushfire Attack Level (BAL) Assessment undertaken, the overall development has been assigned a BAL rating of BAL 12.5, which indicates a low to moderate risk of ember attack, radiant heat exposure and direct flame contact during a bushfire event. The assessment takes into account the Forest Fire Danger Index (FDI) of 50, but it should be noted that on days with an Extreme or Catastrophic Fire Danger Rating, the buildings built resistance may be exceeded if directly impacted by bushfire. It is therefore recommended that appropriate measures are taken to enhance the building's bushfire resilience, such as installing ember screens on windows, sealing gaps and openings, and ensuring adequate access for firefighting vehicles.

2.0 Location

Site Address: 251 Greens Rd, Orielton 7172

Title Reference: 103907 / 7

Property ID: 7934383

Applicant: Justin Altmann

Municipality: Sorell Council

Planning Scheme: Tasmanian Planning Scheme

Zoning: Rural Living

Overlays: Low landslip hazard band, Medium landslip hazard band, Airport obstacle limitation area, Waterway and coastal protection area, Priority vegetation area, Bushfire-prone areas

Bushfire Attack Level: BAL 12.5

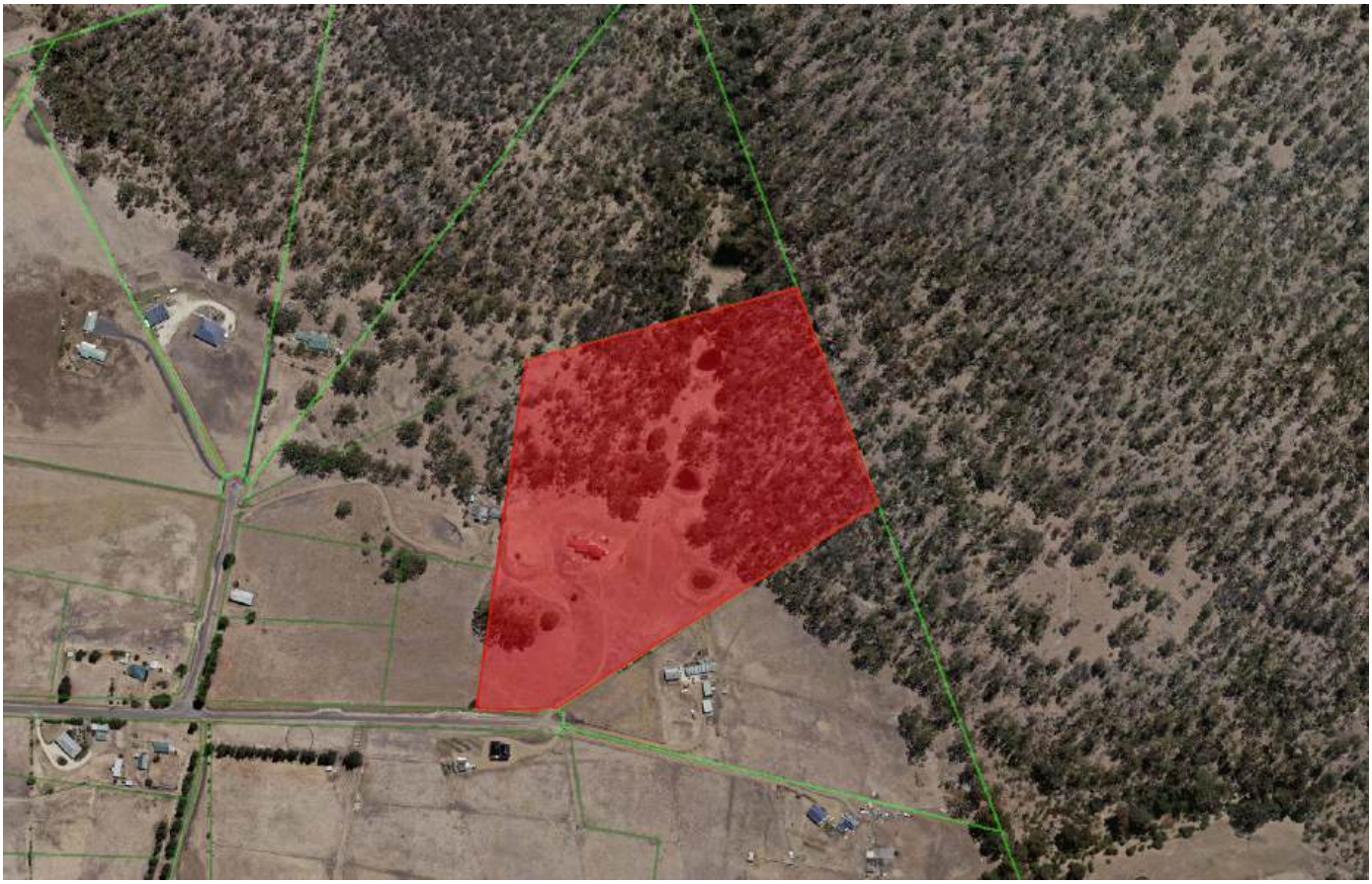


Image 1: Location of Site (Source: LISTMap 2025)

3.0 Site Characteristics

3.1 Topography and aspect

251 Greens Road is situated at the end of Greens Road, which branches off the Tasman Highway. It is located approximately 5 minutes from the main town of Sorell. The property is zoned as Rural Living under the Tasmanian Planning Scheme, with multiple established and proposed dwellings in the surrounding lots. The lot covers an area of 76,580m² and features a relatively uniform crossfall towards the southern quadrant, ranging between 0–10° (refer to Image 2: 100 m Vegetation & Effective Slope Radius for reference).

3.2 Vegetation Description

As demonstrated in the site photos (refer to Attachment 1), the bushland vegetation surrounding the proposed development sites is distinctly divided into two separate vegetation classifications, with a clear and observable distinction between the two types. A comprehensive review of the vegetation characteristics has confirmed these classifications in accordance with AS3959:2018.

To the south of the proposed development site, the vegetation is predominantly classified as Grassland (Classification G – Grassland, AS3959:2018, Table 2.3). This classification is consistent with the broader landscape in the area, where it is common for rural residential properties to be surrounded by open grassland. The vegetation in this section primarily consists of low-growing grasses with minimal tree or shrub coverage, which aligns with the criteria for Grassland classification under the AS3959:2018.

In contrast, the northern section of the proposed development site features a large, continuous area dominated by mixed Eucalyptus species. This area has been classified as Woodland (Classification B – Woodland, AS3959:2018, Table 2.3). The vegetation in this section is characterised by a higher density of trees, with a well-defined canopy and an understory typical of woodland ecosystems. The predominance of native species, particularly mixed Eucalypts, further supports the classification under the applicable standard.

Given that the two proposed development sites are located a significant distance from one another, the vegetation within a 100m radius of each site has been assessed independently. This approach ensures that the appropriate vegetation classification is accurately applied to each site, in line with AS3959:2018 requirements. Dividing the assessment radius into two separate zones allows for a more precise evaluation of the surrounding vegetation and ensures compliance with AS3959:2018.
For a visual reference and further clarification, please refer to Image 2 below.

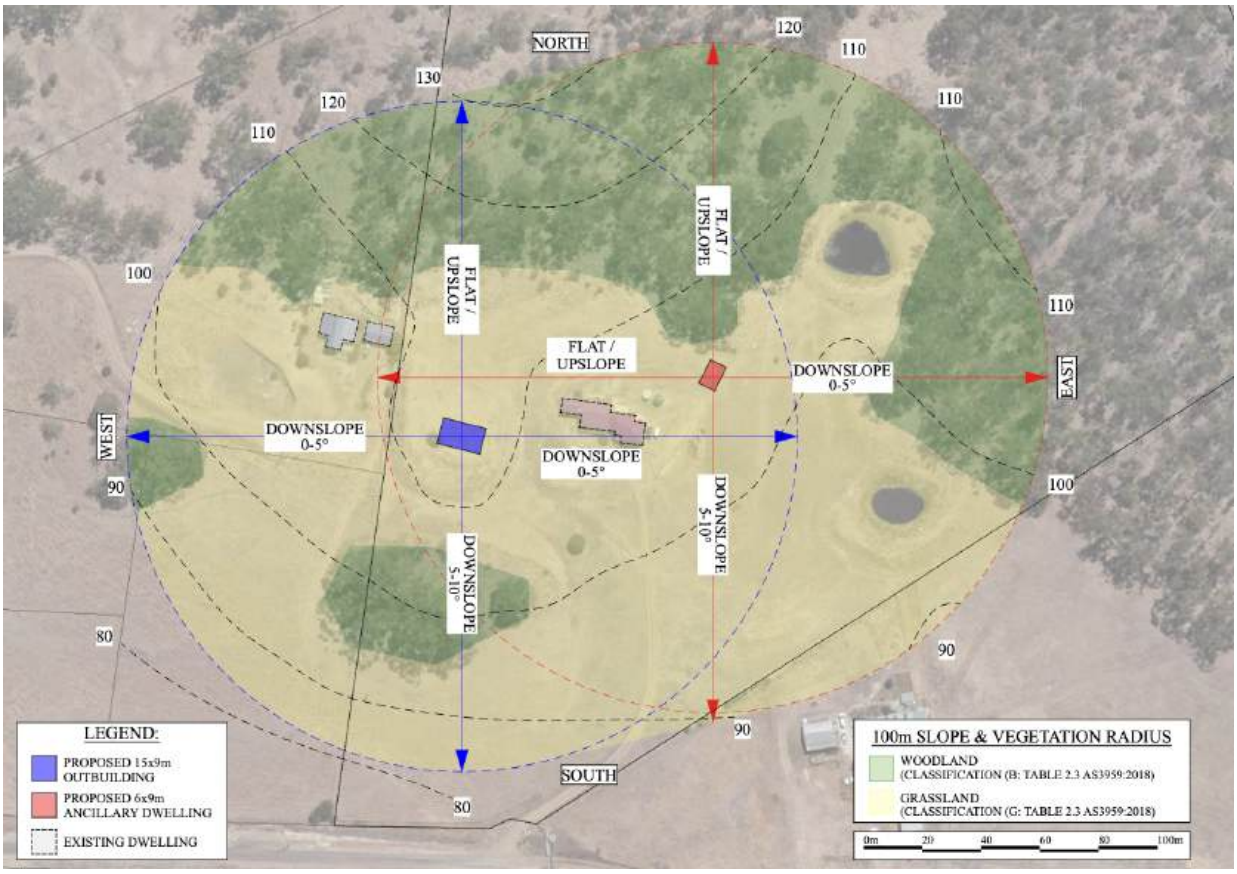


Image 2: 100m Vegetation & Effective Slope Radius – 251 Greens Rd, Orielton (Source: LISTMap 2025) Topography, Vegetation, and directions of bushfire threat.

4.0 Proposed Development

It is proposed that a 15×9m outbuilding and a 6×9m ancillary dwelling will be developed at 251 Greens Road, Orielton. The primary purpose of the outbuilding is to provide additional storage and workspace, while the ancillary dwelling is intended to serve as secondary accommodation to support the existing residential use of the property.

The current use of the lot consists of a single residential dwelling, which is occupied by the client. As part of the development, upgrades to the private access road and firefighting water supply will be undertaken to ensure compliance with safety and regulatory requirements as set out in this report. Additionally, vegetation removal will be necessary to facilitate the construction process and improve access. Note: In some cases, vegetation removal may require planning approval prior to clearing, depending on the extent and type of vegetation involved. This proposal aligns with the current Rural Living zoning and is consistent with the surrounding residential and rural development in the area.

5.0 Bushfire Attack Level Assessment

The Bushfire attack level has been determined through the application of section 2 of AS3959-2018 'Simplified Procedure'. Vegetation has been classified using a combination of onsite observations and remotely sensed data to be consistent with table 2.3 of AS3959-2018. Slope and distances have been determined by infield measurement and/or the use of remotely sensed data (aerial/satellite photography, GIS layers from various sources) analysed with proprietary software systems. Where appropriate vegetation has been classified as low threat.

Table 1. Determination of Bushfire Attack Level (BAL) – FDI 50

Proposed 15x9m Outbuilding

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire Prone Vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland Woodland	Flat / Upslope	0-58m 58-100m	14m	**BAL 12.5**
East	Grassland	Downslope 0-5°	0-100m	16m	**BAL 12.5**
South	Grassland Woodland Grassland	Downslope 5-10°	0-40m 40-70m 70-100m	19m	**BAL 12.5**
West	Grassland Woodland	Downslope 0-5°	0-85m 85-100m	16m	**BAL 12.5**

Proposed 6x9m Ancillary Dwelling

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire Prone Vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland Woodland	Flat / Upslope	0-12m 12-100m	22m	**BAL 12.5**
East	Grassland Woodland	Downslope 0-5°	0-55m 55-100m	16m	**BAL 12.5**
South	Grassland	Downslope 5-10°	0-100m	19m	**BAL 12.5**
West	Grassland	Flat / Upslope	0-100m	14m	**BAL 12.5**

*Note: Road's, internal driveways, and fire breaks have been excluded under AS3959:2018 Section 2.2.3.2 (e), as they are non-vegetated areas that are permanently cleared.

6.0 Compliance

Requirements for construction within a bushfire prone area are to be in accordance with the *Australian Standard 3959:2018 Construction of buildings in bushfire-prone areas* and *Director's Determination- Bushfire Hazard Areas, Building Act 2016, Version: 1.2, Date: 6th July 2025.*

6.1 Construction requirements

Building work (including additions or alterations to an existing building) in a bushfire-prone area must be designed and constructed in accordance with an Acceptable Construction Manual determined by the Building Code of Australia, being either:

(a) AS3959-2018; or

(b) Standard for Steel Construction in Bushfire Areas published by the National Association of Steel Framed Housing Inc. (NASH).

as appropriate for BAL 12.5 as determined for the site. Compliance of the design must be verified to the relevant codes in the Certificate of Likely Compliance and verified prior to occupancy.

6.2 Property Access

The property access is from Greens Road via an existing internal driveway to the proposed development, with an existing gravel crossover. It is proposed that the approximately 135m long gravel driveway is upgraded in accordance with the Deemed-to-Satisfy requirements. The Deemed-to-Satisfy requirement for access is provided in Table 2 of the Determination (see Table 2) and is to be constructed in accordance with the design and construction standards as set out in Element B. The existing gravel driveway is to be widened to 4m wide with a turning head added in accordance with the design and construction requirements.

Table 2. (From Table 2, Requirements for Property Access)

Column 1		**Column 2**
Element		**Requirement**
A.	Property access length is less than 30 metres; or access is not required for a fire appliance to access a firefighting water point.	There are no specified design and construction requirements.
B.	Property access length is 30 metres or greater; or access is for a fire appliance to a water connection point.	The following design and construction requirements apply to property access: (1) All-weather construction; (2) Load capacity of at least 20 tonnes, including for bridges and culverts; (3) Minimum carriageway width of 4 metres; (4) Minimum vertical clearance of 4 metres; (5) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway; (6) Cross falls of less than 3° (1:20 or 5%); (7) Dips less than 7° (1:8 or 12.5%) entry and exit angle; (8) Curves with a minimum inner radius of 10 metres; (9) Maximum gradient of 15° (1:3.5 or 28%) for sealed roads, and 10° (1:5.5 or 18%) for unsealed roads; and 10) Terminate with a turning area for fire appliances provided by one of the following:

		(a) A turning circle with a minimum inner radius of 10 metres; (b) A property access encircling the building; or (c) A hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long.
C.	Property access length is 200 m or greater.	The following design and construction requirements apply to property access: (1) The requirement for B above; (2) Passing bays of 2 metres additional carriageway and 20 metres length provided every 200 metres.
D.	Property access length is greater than 30 metres, and access is provided to 3 or more properties.	The following design and construction requirements apply to property access: (a) Complies with Requirements for B above; and (b) Passing bays of 2 metres additional carriageway width and 20 metres length must be provided every 100 metres.

6.3 Static Water Supply for Fire Fighting

Fire-fighting water supply will be from a metal 10,000 litre tank dedicated for this purpose. The location of this tank is shown in the Bushfire Hazard Management Plan (refer to Attachment 2). The Fire Tank will also have a remote offtake installed as per the BHMP, which is to comply with the Deemed-to-Satisfy requirements. The Deemed-to-Satisfy requirement for Static Water supply is provided in Table 3B of the Determination (see Table 3) and is to be constructed in accordance with Element A, B, C, D & E and is to be verified prior to occupancy.

Table 3. (From Table 3B, Requirements for Static Water Supply for Firefighting)

Column 1		**Column 2**
Element		**Requirement**
A.	Distance between building area to be protected and water supply	The following requirements apply: (a) The building area to be protected must be located within 90 metres of the water connection point of a static water supply; and (b) The distance must be measured as a hose lay, between the water connection point and the furthest part of the building area.

B.	Static Water Supplies	A static water supply: (a) May have a remotely located offtake connected to the static water supply; (b) May be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times; (c) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems; (d) Must be metal, concrete or lagged by non-combustible materials if above ground; and (e) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS 3959-2009, the tank may be constructed of any material provided that the lowest 400 mm of the tank exterior is protected by: (i) metal; (ii) non-combustible material; or (iii) fibre-cement a minimum of 6 mm thickness.
C.	Fittings, pipework and accessories (including stands and tank supports)	Fittings and pipework associated with a firefighting water point for a static water supply must: (a) have a minimum nominal internal diameter of 50mm; (b) be fitted with a valve with a minimum nominal internal diameter of 50mm; (c) be metal or lagged by non-combustible materials if above ground; (d) if buried, have a minimum depth of 300mm; (e) provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to firefighting equipment; (f) ensure the coupling is accessible and available for connection at all times; (g) ensure the coupling is fitted with a blank cap and securing chain (minimum 220mm length); and (h) ensure underground tanks have either an opening at the top of not less than 250mm diameter or a coupling compliant with this Table; and (i) where a remote offtake is installed, ensure the offtake is in a position that is: (i) visible; (ii) accessible to allow connection by firefighting equipment;

		(iii) at a working height of 450mm – 600mm above ground level; and (iv) protected from possible damage, including damage by vehicles.
D.	Signage for static water connections	The firefighting water point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must: (a) comply with water tank signage requirements within AS 2304; or (b) comply with the TFS Water Supply Signage Guideline.
E.	Hardstand	A hardstand area for fire appliances must be provided: (a) no more than three metres from the firefighting water point measured as a hose lay (including the minimum water level in dams, swimming pools and the like); (b) no closer than six metres from the building area to be protected; (c) a minimum width of three metres constructed to the same standard as the carriageway; and (d) connected to the property access by a carriageway equivalent to the standard of the property access.

6.4 Hazard Management Areas

A Bushfire Hazard Management Plan (Attachment 2) has been designed in accordance with the requirements specified in Table 4. *(Requirements for Hazard Management Areas)* have been established to manage risks, as well as implementing the relevant requirements for fighting fires. The Deemed-to-Satisfy requirement for access is provided in Table 4 of the Determination (see Table 4 below) and is to be constructed in accordance with Element B of the Determination and is to be verified prior occupancy.

Table 4. (From Table 4, Requirements for Hazard Management Area)

Column 1		**Column 2**
Element		**Requirement**
A.	Hazard management areas for new buildings on lots provided with a BAL at the time of subdivision.	A new building must: (a) be located on the lot so as to be provided with a HMA no smaller than the required separation distances for the BAL determined at the time of subdivision; and (b) have a HMA established in accordance with a certified bushfire hazard management plan.

B.	Hazard management areas for new buildings on lots not provided with a BAL at the time of subdivision.	A new building must: (a) be located on the lot so as to be provided with a HMA no smaller than the separation distances required for BAL 29; and (b) have a HMA established in accordance with a certified bushfire hazard management plan
C.	Hazard management areas or alterations or additions to buildings.	An alteration or addition to a building must: (a) be located on the lot so as to be provided with a HMA which: (i) has the separation distances required for the BAL assessed for the Construction of the existing building; or (ii) in the case of a building without an existing BAL assessment, is no smaller than the separation distances required for BAL 29; and (b) have a HMA established in accordance with a certified bushfire hazard management plan
D.	Hazard management areas for new buildings and additions and alterations to buildings classified as an accommodation building BCA Class 1b, BCA Class 2, or BCA Class 3, other than Communal residence for persons with a disability, a respite centre or a residential aged care facility or similar.	A new building or an addition or alteration including change of use must: (a) be located on the lot so as to be provided with HMAs no smaller than the separation distances required for BAL 12.5; and (b) have a HMA established in accordance with a certified bushfire hazard management plan.
E.	Hazard management areas for new buildings and additions and alterations to existing buildings classified as vulnerable use as defined in the Bushfire=-Prone Areas Code (Planning Directive 5.1)	A new building or an addition or alteration including change of use must: (a) Be: (i) located on the lot so as to be provided with HMAs no smaller than the separation distances required for BAL 12.5; or (ii) provided with a certificate from an accredited person that a bushfire hazard management plan provides, to the degree necessary, separation of the building from the bushfire hazard, appropriate resistance to ignition from bushfire, property access and water supply for firefighting; and (b) Have a HMA established in accordance with a certified bushfire hazard management plan.

F.	Hazard management areas for new buildings or additions and alterations to buildings associated with a hazardous use	A new building or an alteration or addition, including change of use, for a building determined as a hazardous use must: (a) Be located on the lot so as to be provided with a HMA no smaller than the required separation distances for the BAL determined in the certified bushfire hazard management plan; and (b) Have a HMA established in accordance with a certified bushfire hazard management plan.

7.0 Conclusion

BAL RATING: BAL 12.5

Based on the site analysis and assessment of the vegetation, it has been determined that the subject land falls under BAL 12.5 rating. To comply with the requirements, set out in AS3959:2018, a Hazard Management Area (HMA) will be established and maintained as mowed grassland, lawns, gardens, areas of gravel, driveway, and a hardstand, as detailed in the Bushfire Hazard Management Plan (refer to Attachment 2).

Furthermore, the design of the proposed Outbuilding and Ancillary Dwelling will be required to comply with BAL 12.5 requirements with special design requirements for firefighting access and water supplies will need to be incorporated into the overall design. The firefighting water supply will be readily available a 10,000ltr fire fighting tank with a remote offtake, that is installed in accordance with Directors Determination requirements. The proposed developments fall within the 90m hose lay requirements and is required to comply with the elements as set out in Table 3B in Directors Determination V1.2.
The existing gravel driveway is to be widened to 4m wide with a turning head added in accordance with the design and construction requirements, in accordance with Element B of Table 2 in the Directors Determination V1.2

It is recommended that all construction and vegetation removal activities on the site are carried out in accordance with the planning approval, with particular attention paid to vegetation removal. With proper adherence to all applicable regulations and standards, to be verified prior to occupancy of the dwelling.

8.0 References

Australian Building Codes Board, *National Construction Code, Building Code of Australia,* Australian Building Codes Board, Canberra.

Building Amendment (Bushfire-Prone Areas) Regulations 2016
Determination, Director of Building Control – Bushfire Hazard Areas, version 1.2 6th July 2025. Consumer, Building and Occupational Services, Department of Justice, Tasmania.

Tasmanian Planning Scheme 2015, Tasmanian Planning Commission 2015, Tasmanian Planning Commission, Hobart.

Standards Australia, AS3959-2018 Construction of buildings in bushfire-prone areas. Sydney, NSW., Australia.

Attachment 1: Site Photos

Image 3: Northern Azimuth (Proposed Outbuilding) (Photo taken on site 31/1/2025)

Image 4: Eastern Azimuth (Proposed Outbuilding) (Photo taken on site 31/1/2025)

Image 5: Southern Azimuth (Proposed Outbuilding) (Photo taken on site 31/1/2025)

Image 6: Western Azimuth (Proposed Outbuilding) (Photo taken on site 31/1/2025)

Image 7: Northern Azimuth (Proposed Ancillary Dwelling) (Photo taken on site 31/1/2025)

Image 8: Eastern Azimuth (Proposed Ancillary Dwelling) (Photo taken on site 31/1/2025)

Image 9: Southern Azimuth (Proposed Ancillary Dwelling) (Photo taken on site 31/1/2025)

Image 10: Western Azimuth (Proposed Ancillary Dwelling) (Photo taken on site 31/1/2025)

Image 11: Existing Gravel Driveway / Site Access (Photo taken on site 31/1/2025)

Image 12: Existing Dwelling / Gravel Driveway (Photo taken on site 31/1/2025)

Image 13: Typical Woodland Vegetation to the North (Photo taken on site 31/1/2025)

Image 14: Typical Grassland Vegetation to the West (Photo taken on site 31/1/2025)

BUSHFIRE HAZARD MANAGEMENT PLAN

251 Greens Road, Orielton
Title: 103907/1 - Dated February 2025
This plan is to be read in conjuction with 251 Greens Road, Orielton Bushfire Hazard Report, Prepared by J S Mayne, Dated February 2025 (Job Ref# FP011-2025)

BUSHFIRE MITIGATION MEASURES BAL 12.5

Refer to specifications as set out in Part 6.0 Compliance in accompanying report 251 Greens Road, Orielton Bushfire Hazard Report, prepared by J S Mayne, dated February 2025. Compliance to be verified prior to occupancy.

HAZARD MANAGEMENT AREA PRESCRIPTIONS

Hazard reduction and removal
· The Hazard Management Area is to be maintained in minimal fuel condition as mowed grassland with paddock trees, mowed lawns, gardens, areas of gravel, driveway and a hardstand.
· Ground cover vegetation (grasses, herbs and graminoids) to be maintained no higher than 100mm. · Remove fallen branches, bark and leaves and keep ground litter to a maximum of 20mm depth from around trees.
· Prune to create and maintain a separation distance of 2m (vertically) between the ground cover (maintained to <100mm) and the lowest branches of trees in the HMA.
· Clear private access of any trees and branches within 0.5m of carriageway and 4m over carriageway.
· Remove any fire hazards such as woodpiles and garden waste to at least 10m from dwelling.
· Keep roofs and guttering clear of flammable debris.
· Minimise the storage of petroleum fuels and store fuels at least 10m from dwelling in a suitable enclosed shed.

Landscaping
· Use low flammability plants in the garden and refrain from plantings within 1m of the dwelling (see Fire resisting garden plants Tasmanian Fire Service Brochure).
· Include non-flammable areas adjacent to dwelling such as paths

LEGEND

- EXISTING DWELLING
- PROPOSED DEVELOPMENTS
- UPGRADED DRIVEWAY
- -HAZARD MANAGEMENT AREA
- REMOTE OFFTAKE
- 10,000L FIRE FIGHTING TANK
- HOSE LAY
- 'Y' TURNING HEAD

PREPARED BY:
J S Mayne - Accreditation No. BFP-172
358B Macquarie St, South Hobart
0456 449 823
josh@futuraplanning.com.au
ABN 19 248 759 296

FUTURA PLANNING

N

SCALE
1:500 @ A3

0m 10 20 30 40 50m

REVISION SCHEDULE

DESCRIPTION	ISSUE	DATE

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form 55

To: Justin Altmann *Owner /Agent*

251 Greens Rd *Address*

Orielton 7172 *Suburb/postcode*

Qualified person details:

Qualified person: Joshua Mayne

Address: 2/4 Bosco Street

Glenorchy 7010

Phone No: 0456 449 823

Fax No: N/A

Licence No: BFP-172

Email address: josh@futuraplanning.com.au

Qualifications and Insurance details: Accredited to report on bushfire hazards under the Fire Service Act 1979.
Insurance covered by Webber Insurance FPII16194 & FPII16195

(description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items

Speciality area of expertise: Analysis of bushfire hazards in bushfire prone areas

(description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

Details of work:

Address: 251 Greens Rd

Orielton TAS 7172

Lot No: 7

Certificate of title No: 103907

The assessable item related to this certificate: Bushfire hazard management plan and supporting bushfire hazard report

(description of the assessable item being certified)
Assessable item includes –
- *a material;*
- *a design*
- *a form of construction*
- *a document*
- *testing of a component, building system or plumbing system*
- *an inspection, or assessment, performed*

Certificate details:

Certificate type: Bushfire Hazard Report

(description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)

This certificate is in relation to the above assessable items, at any stage, as part of – *(tick one)*

◉ building work, plumbing work or plumbing installation or demolition work

OR

○ a building, temporary structure or plumbing installation

In issuing this certificate the following matters are relevant –

Documents:	Bushfire Hazard Report at 251 Greens Rd, Orielton (inc. bushfire hazard management plan), Job Ref: FP011-2025, Dated: February 2025
Relevant calculations:	AS 3959:2018 - Method 1 BAL assessment
References:	Determination, Director of Building Control Requirements for Building in Bushfire-Prone Areas, version 1.2 16th July 2024. Consumer, Building and Occupational Services, Department of Justice, Tasmania. Building Amendment (Bushfire-Prone Areas) Regulations 2014 Standards Australia 2018, Construction of buildings in bushfire prone areas, Standards Australia, Sydney. Australian Standard 3959:2018 Construction of buildings in bushfire-prone areas

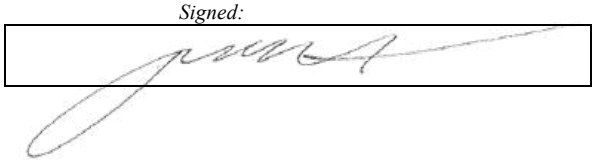
Substance of Certificate: *(what it is that is being certified)*

1. The assessed Bushfire Attack Level (BAL) is BAL 12.5.
2. The proposed building work – if designed and implemented in accordance with the bushfire hazard management plan referred to in this certificate – will comply with the deemed-to-satisfy requirements of the Director's Determination – Requirements for Building in Bushfire-Prone Areas v1.2.

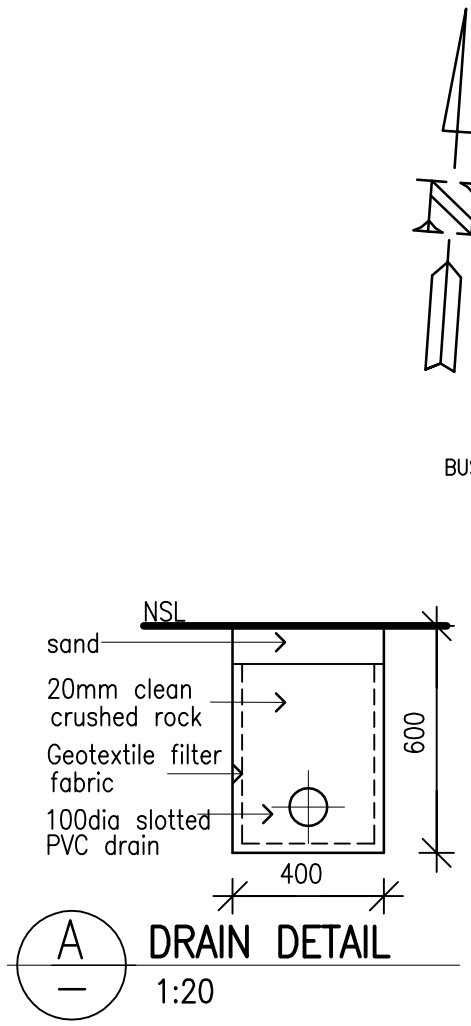
Scope and/or Limitations

1. The scope of this certification is limited to compliance with the requirements of the Director's Determination – Requirements for Building in Bushfire-Prone Areas V1.2.
2. This certification may only be used for compliance purposes for 6 years from the date of certification.
3. The effectiveness of the measures prescribed in the bushfire hazard management plan and supporting report are dependent on their correct implementation and maintenance for the life of the development.
4. There is no guarantee that the building work will survive every bushfire event.

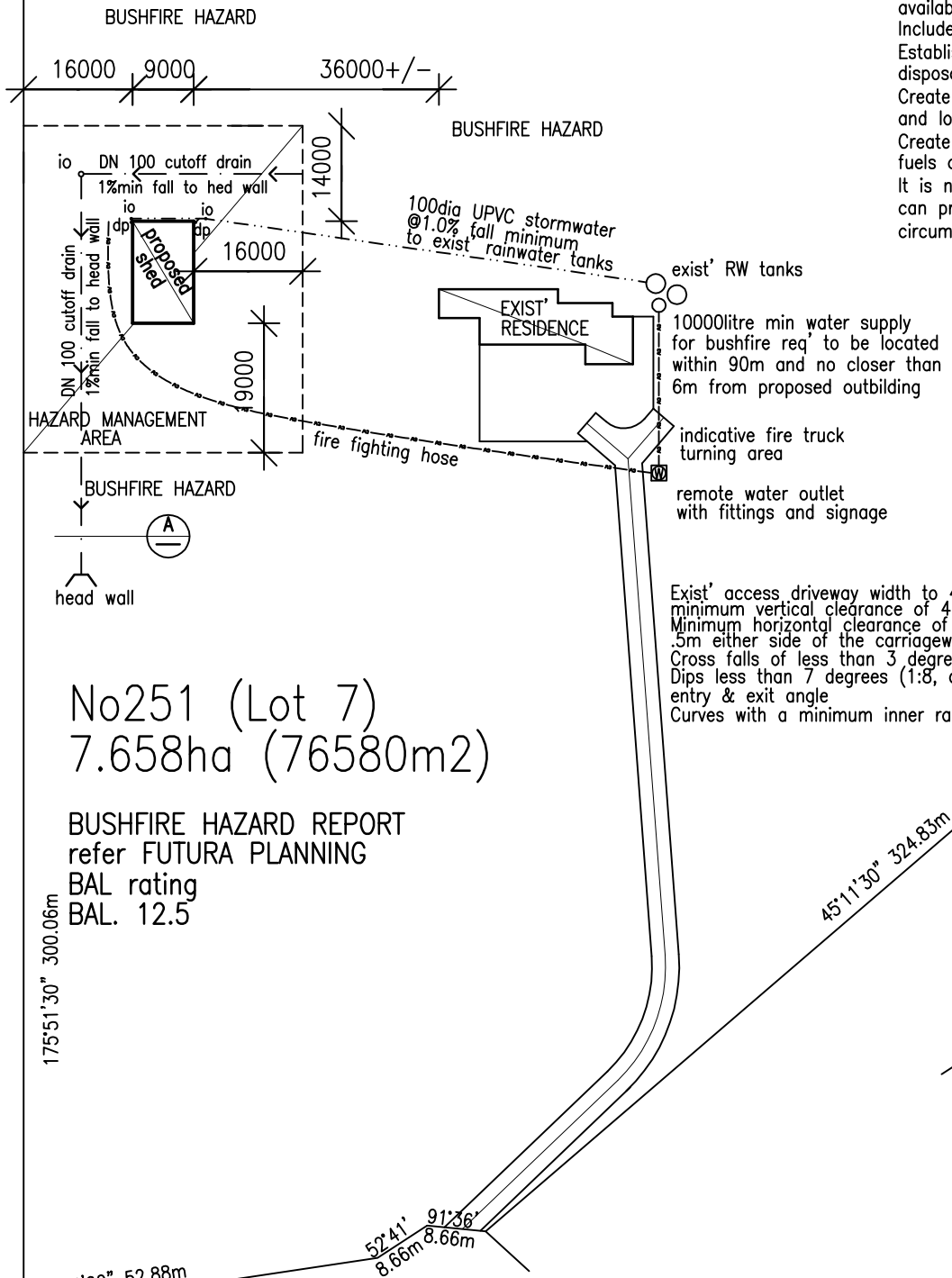
I certify the matters described in this certificate.

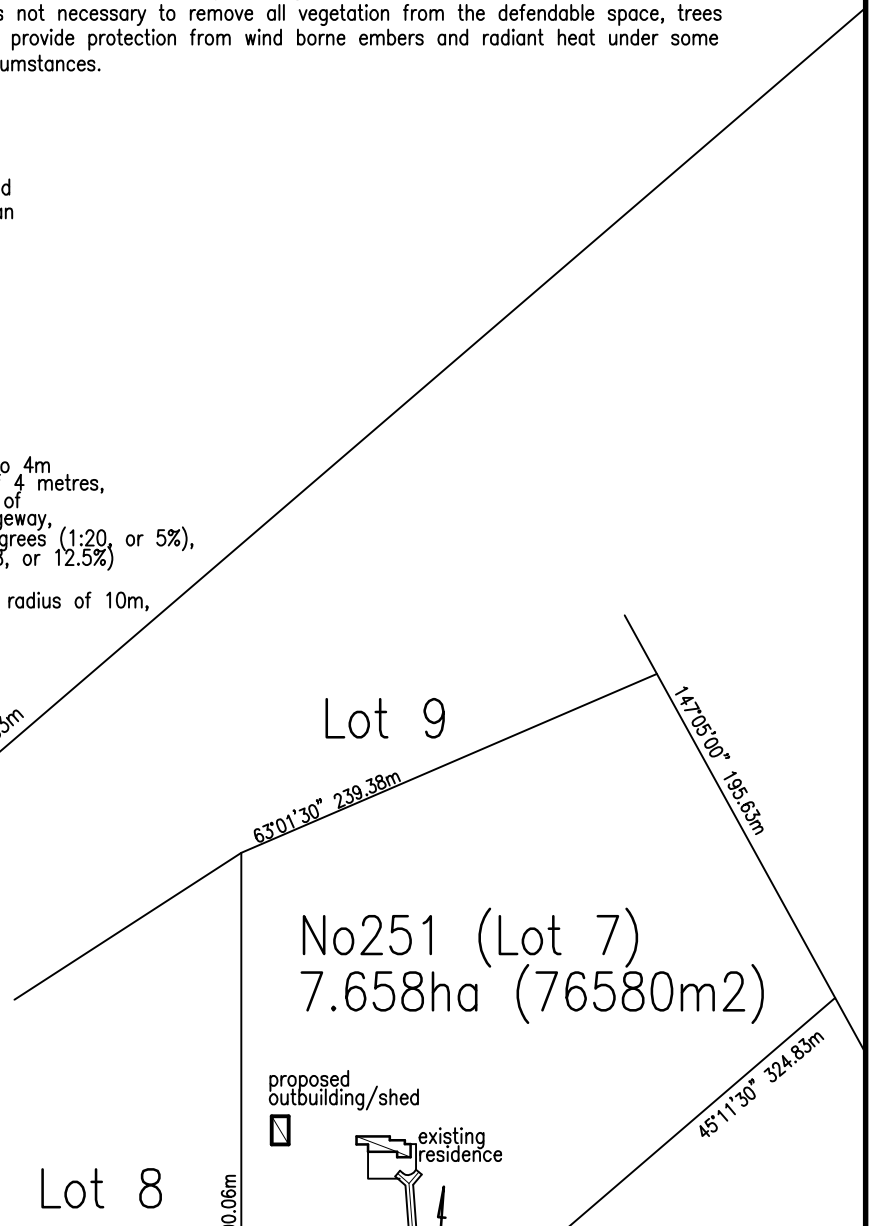
	Signed:	*Certificate No:*	*Date:*
Qualified person:		BFP-172	12/02/2024

Notes on individual drawings to be read in conjunction with Construction Notes sheet.



A — DRAIN DETAIL
1:20





PART SITE PLAN
Scale: 1.1000

Building Specifications to BAL–12.5 of AS3959–2009 Hazard Management Area

Is to be managed in a minimum fuel condition. This means there is insufficient fuel available to significantly increase the severity of the bushfire attack.

GUIDANCE

Hazard management area to be maintained in a minimum fuel condition
Locate fire hazards such as wood piles, rubish heaps and stored fuels away from habitable buildings
The areas directly adjacent to the building has a significant amount of flammable material removed such that there is little to no material available to burn around the building.
Includes non flammable areas such as paths, driveways, short cropped lawns.
Establishing orchards, vegetable gardens, dams or waste water effluent disposal areas on the fire prone side of the building where practical.
Create wind breaks and radiation sheilds such as non combustable fences and low flammability hedges.
Create and maintain vertical as well as horizontal seperation between ground fuels and tree canopies by pruning.
It is not necessary to remove all vegetation from the defendable space, trees can provide protection from wind borne embers and radiant heat under some circumstances.

LOCATION PLAN
Scale: 1.4000

use figure dimensions in preference to scale – all dimensions and levels to be verified on site

AMENDMENTS:

LYNNELG P/L (drafting)
Glen Harris CC. 290'Q'
PO Box 243
CAIRNS NORTH
QUEENSLAND
Mob: 0402 867929

Client
Justin ALTMANN

project & address:
DEVELOPMENT APPLICATION for PROPOSED OUTBUILDING (SHED)
@No251 (Lot 7) Greens Road, ORIELTON

title:
LOCATION and PART SITE PLAN and DRAINAGE

scale: 1:1000, 1:4000
drawn: GWH
date: 15/03/2025
job no: 2025–04
drawing no:
04–DA01

DEVELOPMENT APPLICATION for PROPOSED OUTBUILDING (SHED)

@ No251 (Lot7)Greens Road, ORIELTON

For: Justin ALTMANN

DRAWING SCHEDULE.

ARCHITECTURAL DRAWINGS

DA00. Cover Sheet
DA01. Part Site/Location Plan and Drainage Plan
DA02. Floor Plan and Elevations

ENGINEERING DRAWINGS

Venn Engineering P/L
Drawing No's: EALB99407859 revision A, Sheets, 1–11incl'

LYNNELG P/L (drafting)
GLEN HARRIS (CC.290Q)
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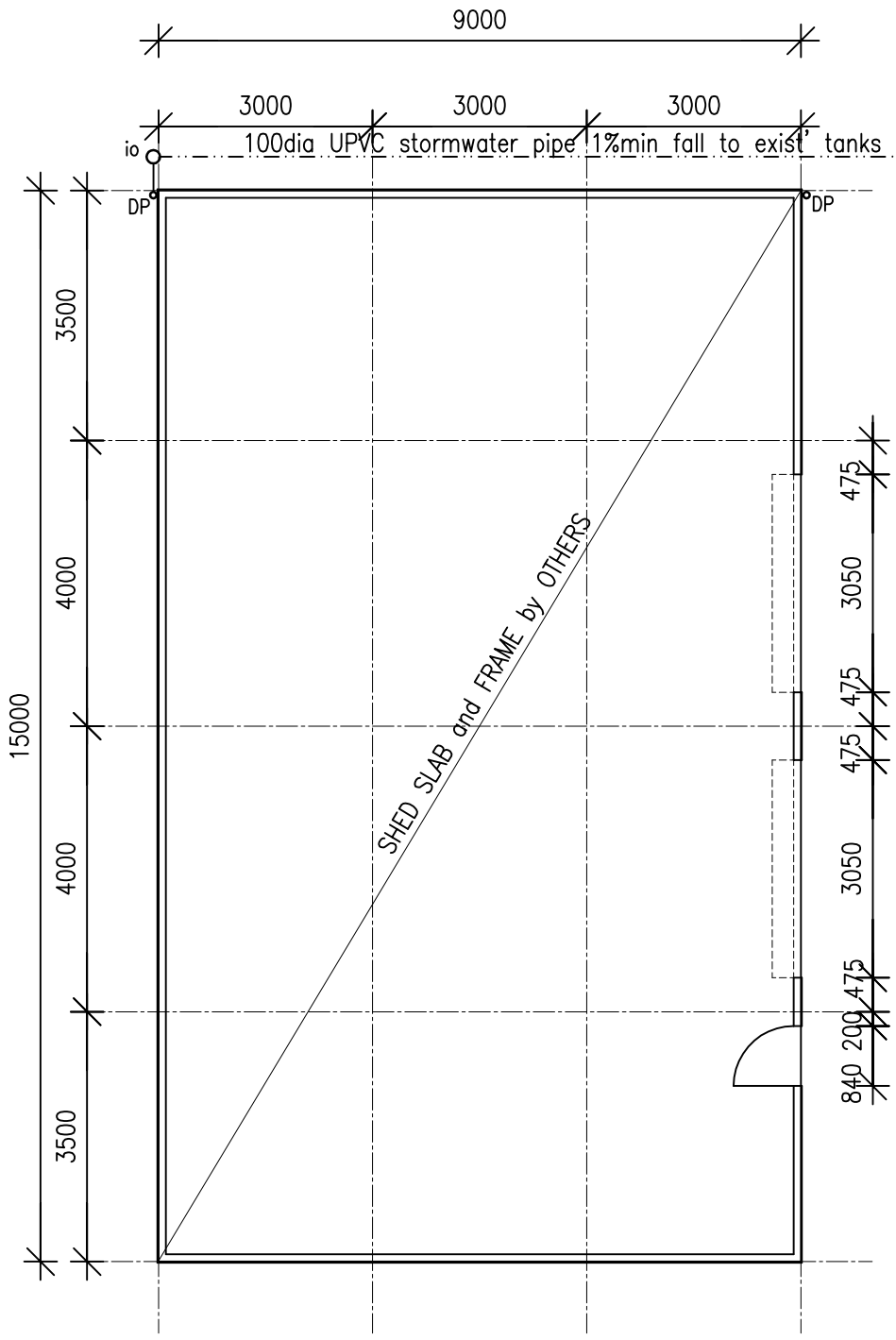
DEVELOPMENT APPLICATION for PROPOSED OUTBUILDING (SHED) @No251 (Lot 7) Greens Road, ORIELTON

JOB NO: 2025.04

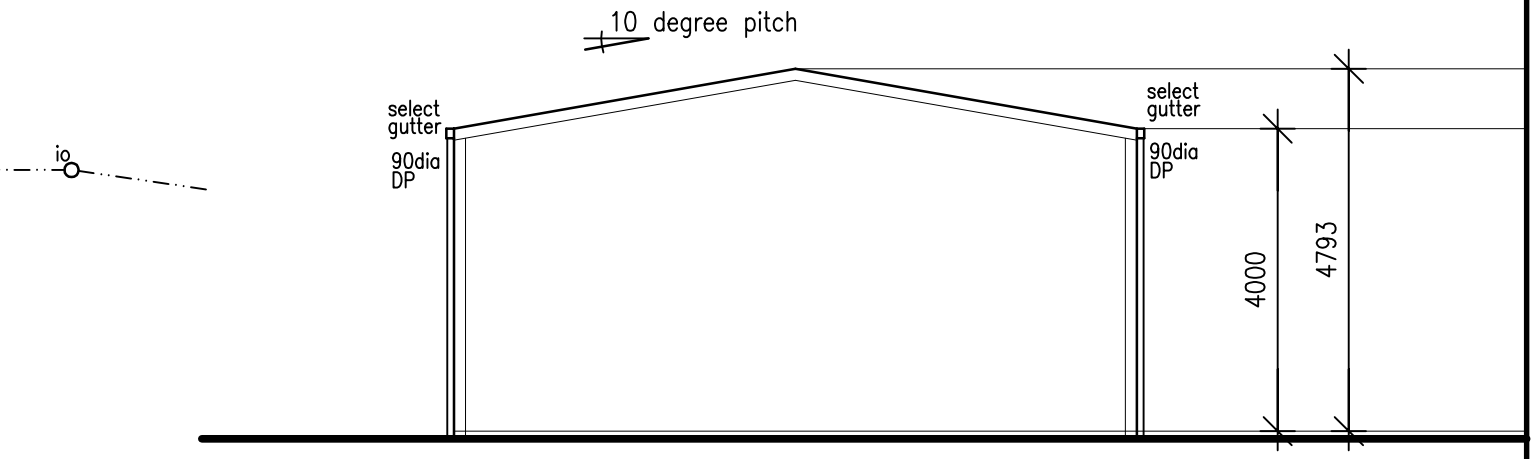
MARCH 2025

Notes on individual drawings to be read in conjunction with Construction Notes sheet.



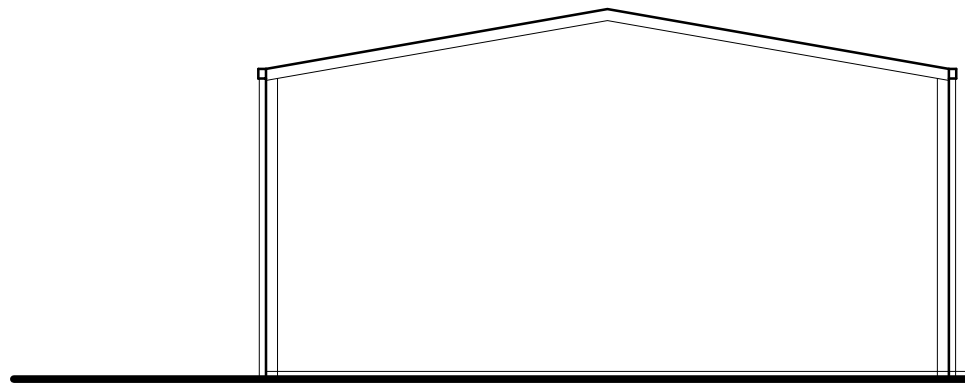
FLOOR PLAN
Scale: 1.100

SHED SUPPLIED and INSTALLED by OTHERS
ENGINEERING BY.
Venn Engineering P/L
Drawing No's: EALB99407859 revision A, Sheets, 1–11incl'

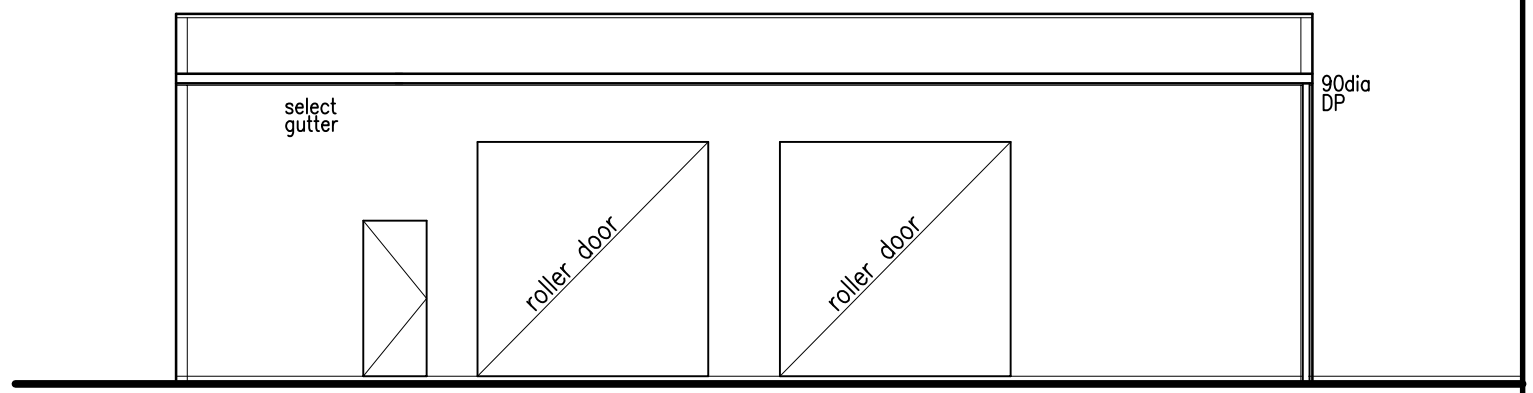


NORTH ELEVATION

WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION
Scale: 1.100

use figure dimensions in preference to scale – all dimensions and levels to be verified on site

AMENDMENTS:

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PO Box 243
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Mob: 0402 867929

Client
Justin ALTMANN

project & address:
DEVELOPMENT APPLICATION for PROPOSED OUTBUILDING (SHED)
@No251 (Lot 7) Greens Road, ORIELTON

title:
FLOOR PLAN and ELEVTIONS

scale: 1:100
drawn: GWH
date: 19/03/2025
job no: 2025–034
drawing no:
04–DA02

STRUCTURAL GENERAL NOTES

1.0 General

1.1 These drawings are
- a) Jointly owned by Easy Shed and Venn Engineering Pty Ltd
- b) Provided for the sole purpose of obtaining building approval and guiding construction of a single building at the job address shown in the title block
- c) Prohibited to be used for any other purpose without written authorisation from Easy Shed and Venn Engineering Pty Ltd.
- d) Only valid if signed by the engineer and must not be altered in any way without signed approval from the engineer.
- e) Produced to scale but dimensions shall not be obtained by measuring the drawings. All dimensions are in millimeters unless stated otherwise.

1.2 The engineer accepts no liability or responsibility for the contents of drawings that are invalid.

1.3 The word 'the engineer' used in these notes refers to an employee or nominated representative of Venn Engineering Pty Ltd.

1.4 The engineer is not the project manager or site supervisor for this project. It is the responsibility of the project manager or site supervisor in charge to ensure that the non-structural requirements of the Governing Building Code are considered and appropriately designed. This includes, but not limited to, fire & bushfire design, access requirements, future roof access requirements, lighting, glazing and electrical design, etc.

2.0 Structural Design

2.1 The structural framing components detailed in these drawings have been designed in accordance with the following documents for the design criteria detailed in these notes

Governing Building Code	2022 National Construction Code – Building Code of Australia Volume 2 and 2022 Housing Provisions Standard
Loading Standards	AS/NZS 1170.0:2002(+A5)
	AS/NZS 1170.1:2002(+A2)
	AS/NZS 1170.2:2021
Cold formed Steel member standard	AS/NZS 4600:2018

2.2 These drawings are also the limit of the Structural Design, any requirements for additional structural design of other items included in the project are specifically excluded if not shown on these drawings. This includes, but not limited to, requirements for additional loads that aren't specified including flood design loads, additional roof loads from solar panels, retaining walls required on site, driveway design etc.

2.3 These structural drawings and specifications represent the finished structure. The building is not considered complete until the installation of all components and details shown herein are installed according to the drawings.

2.4 No alterations are to be made to this structure without written approval of the engineer. This includes, but not limited to, modification to the plans and/or specifications, be the installation of additional openings, increased roof loads, skylight roof sheets or removal of cladding. If changes are made without written approval, such changes shall the legal and financial responsibility of the contractor or sub-contractors involved and it shall be their full responsibility to replace or repair the condition of the building as directed by the engineer.

3.0 Design Criteria

Building class	10a
Building Importance level	2
Wind region	A4
Terrain category	2.15
Topographic multiplier	1
Shielding multiplier	1
Ultimate design wind speed	40.4 m/s
Snow load	0.00 kPa
Slab imposed load	2.5 kPa or 9kN applied over 0.3x0.3m area (light vehicles)
Mezzanine imposed load	1.5 kPa
Earthquake design category	II
Allowable bearing capacity of foundation supporting footings	100 kPa
Allowable bearing capacity of foundation supporting slab	50 kPa
Allowable skin friction of foundation	25 kPa
Soil Type	Non-aggressive (not saline or acid sulfate)

4.0 Installation Building Contractor Responsibilities

4.1 The contractor shall verify and confirm all site conditions and dimensions. Any discrepancies between drawings and site conditions shall be referred to the engineer for decision before proceeding with the work.

4.2 All workmanship and materials are to be in accordance with the Governing Building Code including all relevant Australian Standards and local statutory authorities except where varied by the contract documents.

4.3 The contractor shall be responsible for maintaining the structure in a stable condition and ensuring no part is overstressed under construction activities. They shall provide all temporary bracing, shoring or other means to avoid excessive stresses and to hold structural elements in place during erection. These temporary provisions shall remain in place until sufficient permanent members are erected to ensure the safety of partially erected structures. The contractor is responsible for meeting all laws regulating the erection of steel buildings including, but not limited to, Safe Work Australia guidelines.

4.4 The contractor shall be responsible for the location of all services in the vicinity of the works. Any services shown are provided for information only. The contractor shall confirm the location of all services prior to commencing and shall be responsible for the repair of any damage caused to services, as well as any loss incurred because of the damage to any service.

5.0 Foundation

5.1 The bearing capacity of the foundation supporting the footings and slab shall be confirmed before any concrete is placed.

5.2 No earth or debris is to fall into the footings or piers before and during placing of concrete.

5.3 All footings shall be located centrally under walls and columns unless noted otherwise.

5.4 Concrete embedment depths do not apply to locations where any uncompacted fill or disturbed ground exists or where walls of the excavation will not stand without support. Request further advice from the engineer in these circumstances.

5.5 Fill used for the support of a slab on ground shall be controlled fill or rolled fill as in accordance with clause 6.4.2 of AS 2870-2011.

5.6 Slabs less than 100sq.m in plan area are suitable for AS 2870-2011 site classes A, S & M. For larger slabs or for site classes M-D, H1, H1-D, H2, H2-D, E & E-D, the slab may experience cracking more than is considered normally acceptable. The cracking is considered of aesthetic concern only and should not effect the structural performance of the slab or shed. If this is not desired, contact the engineer for further advice.

6.0 Concrete

6.1 Concrete placement and workmanship shall be in accordance with AS 3600-2018 & AS 2870-2011.

6.2 Concrete shall be
- a) N25 with slump of 100 mm in accordance with AS 1379-2007, with 20 mm maximum nominal aggregate size and no admixtures.
- b) consolidated by mechanical vibration.
- c) Cured for a minimum of 7 days using continuous ponding with potable water.

6.3 No holes, chases or embedment of pipes other than those shown on the drawings shall be made in concrete members without prior approval of the engineer.

7.0 Reinforcement

7.1 Reinforcement shall comply with AS/NZ 4671-2019.

7.2 Reinforcement is represented diagrammatically and not necessarily shown in true projection.

7.3 Welding of reinforcement shall not be permitted without the approval of the engineer.

7.4 All reinforcement shall be securely supported in its correct position ensuring the correct cover during placing of concrete by approved bar chairs, spacers or support bars. Approved chairs include stainless steel or plastic bar chairs for bottom reinforcement and plastic tipped wire bar chairs for top reinforcement. All chairs to be spaced at maximum of 750mm centres.

7.5 Cover to reinforcment shall be:
- a) 50mm for surfaces of concrete in contact with the ground;
- b) 30mm for top surfaces of slabs fully enclosed by the building without open bays or
- c) 60mm for top surfaces of slabs more than 1 km from the coastline with open bays.
- d) For buildings with open bays within 1km of the coast, contact the engineer for cover and concrete grade requirements.

7.6 Reinforcement shall be lapped 500mm for 12mmØ bars and 800mm for 16mmØ bars.

7.7 Mesh reinforcement shall be lapped such that the two outermost wires of one sheet overlap the two outermost wires of the other sheet by 25 mm.

7.8 Hooks, bends and cogs to be in accordance with AS 3600-2018 unless noted otherwise on drawings.

8.0 Anchor Bolts

8.1 All anchors bolts shall be installed in accordance with the manufacturer's installation instructions.

8.2 Drill holes using a percussion drill (coring not permitted) to the correct hole diameter and depth as specified in the drawings.

8.3 Thoroughly clean and blow the dust out of the holes using the cleaning accessories prescribed by the manufacturer's instructions.

8.4 Substitution of anchors bolts and chemical epoxy adhesive is not permitted unless written confirmation from the engineer is provided.

8.5 For chemical anchors, ensure load is not applied to the anchors whilst epoxy adhesive is curing.

9.0 Light Gauge Cold-formed Steel

9.1 All light gauge cold-formed steel shall comply with AS 1397-2021 and be the following grades

Thickness(mm)	Steel grade (yield stress, MPa)	Protective coating (g/m2)
BMT ≤ 1.0mm	G550	Z350
1.0mm < BMT < 1.5mm	G500	Z350
1.5mm ≤ BMT ≤ 3.0mm	G450	Z350

9.2 Welding of light gauge cold-formed steel shall not be permitted.

9.3 Column and rafter members shall not be drilled or notched without prior approval of the engineer.

9.4 Round holes may be drilled through any girt or purlin member within the middle third of the depth of that member and not within 600mm of member end unless noted otherwise.

9.5 All bolts used to connect light gauge cold-formed steel members shall be
- a) Zinc coated M12 (min.) grade 4.6 snug tightened complying to AS 1111.1-2015 & AS 1112.3-2015 unless noted otherwise.
- b) Spaced no less than 3 bolt diameters between centres.
- c) Located no less than 1.5 bolt diameters from bolt centre to the end or edge of any light gauge member.

9.6 All screws used to connect light gauge cold formed steel members (excluding sheeting) shall be
- a) 10g (min.) self-drilling screws complying with AS 3566.1-2002.
- b) Corrosion resistance class 4 in accordance with AS 3566.2-2002 for buildings within 1 km from the coastline with open bays or class 3 otherwise.
- c) Spaced no less than 3 bolt diameters between centres.
- d) Located no less than 1.5 bolt diameters from bolt centre to the end or edge of any light gauge member.

10.0 Roof & Wall Sheeting

10.1 Roof & wall sheeting shall comply with AS 1397-2018 and have suitable corrosion protection complying with Table 7.2.2a of the 2022 Housing Provisions Standard.

10.2 During construction and maintenance, no foot traffic shall occur within end spans of sheeting, foot traffic shall occur
- a) Evenly across at least two ribs for corrugated profiled sheeting or
- b) In the pans for pan-type profiled sheeting.

10.3 Any roof skylights shall be approved by the engineer

10.4 Safety mesh shall be installed in accordance with the building code

11.0 Door & Window Components

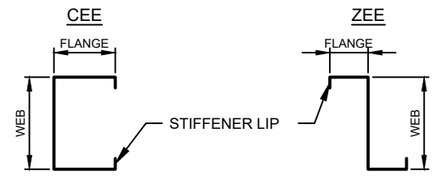
11.1 Wind-locked roller doors are assumed to remain in-place and resist the ultimate limit state wind loading except for in cyclonic regions

11.2 Non-wind-locked roller doors are assumed to have failed at the ultimate limit state wind loading

11.3 Personal access doors shall be rated for the wind loading parameters stated in the design criteria (see section 3.0)

11.4 All windows shall be in accordance with AS 1288-2021 & AS 2047-2014(+A2) as appropriate for the wind loading parameters stated in the design criteria (see section 3.0)

COMPONENT DIAGRAM



TYP. = TYPICAL U.N.O. = UNLESS NOTED OTHERWISE

REV	DATE	DESCRIPTION
A	13-02-2025	-

COLD FORMED BUILDINGS

ANOTHER COLD FORMED BUILDING DESIGNED BY ACT BUILDING SYSTEMS

VENN ENGINEERING

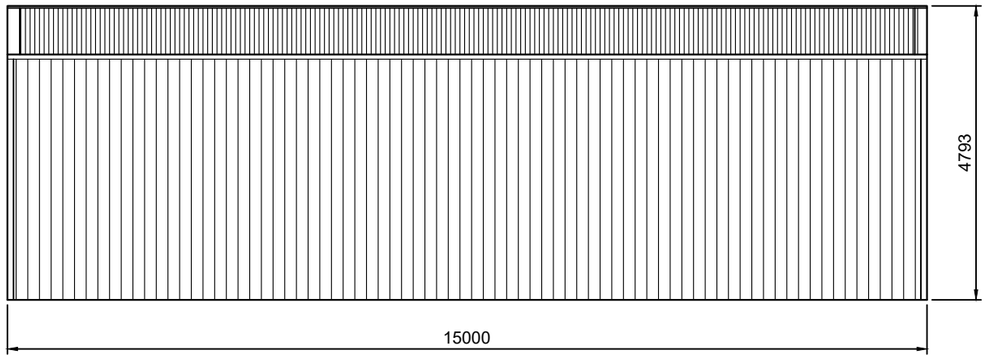
PO Box 3084
THIRROUL NSW 2515
sheds@venn.engineering
ABN 39 626 802 257

Signed ..... Date 13-02-2025

Grant J Wood MIEAust CPEng NER RPEQ
Registered EA Chartered Professional Engineer (No. 2383009)
Registered Professional Engineer QLD (No. 14384)
Registered Civil Engineer Building Practitioner VIC (No. PE0002499)
Registered Certifying Engineer (structural) NT (No. 306371ES)
Building Services Provider (Engineer Civil) TAS (No. 690930425)

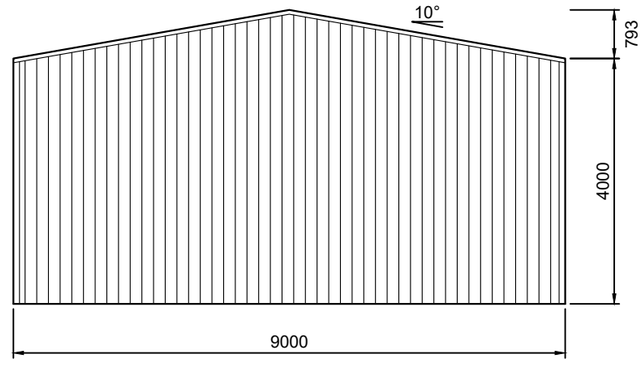
Customer Name: Justin Altmann
Site Address: 251 Greens Road
Orielton,
TAS, 7172

DATE 13-02-2025
JOB NO. EALB99407859
SHEET 1 of 11



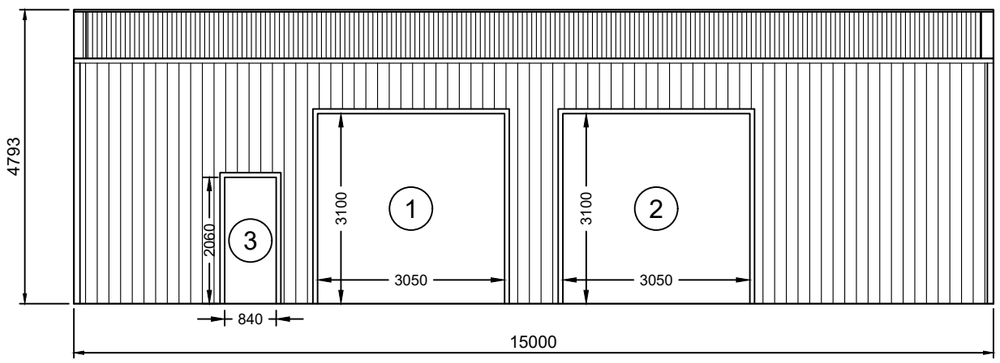
2/2 SIDEWALL B BUILDING ELEVATION

SCALE: 1:100



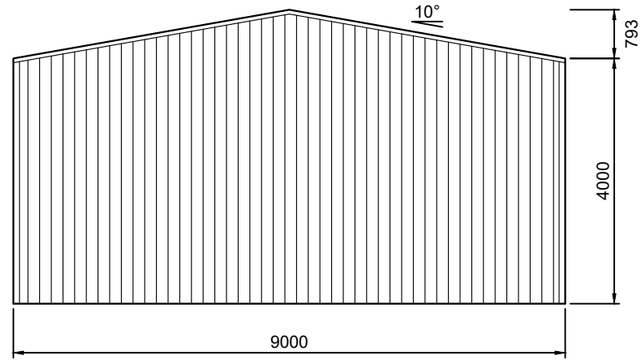
3/2 REAR BUILDING ELEVATION

SCALE: 1:100 FRAME #5



1/2 SIDEWALL A BUILDING ELEVATION

SCALE: 1:100



4/2 FRONT BUILDING ELEVATION

SCALE: 1:100 FRAME #1

Sorell Council

Development Application: Development Application - 251 Greens Road, Orielton - P1 .pdf

Plans Reference:P1
Date Received:20/03/2025

REV	DATE	DESCRIPTION
A	13-02-2025	-

COLD FORMED BUILDINGS

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sheds@venn.engineering
ABN 39 626 802 257

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Registered Certifying Engineer (structural) NT (No. 306371ES)
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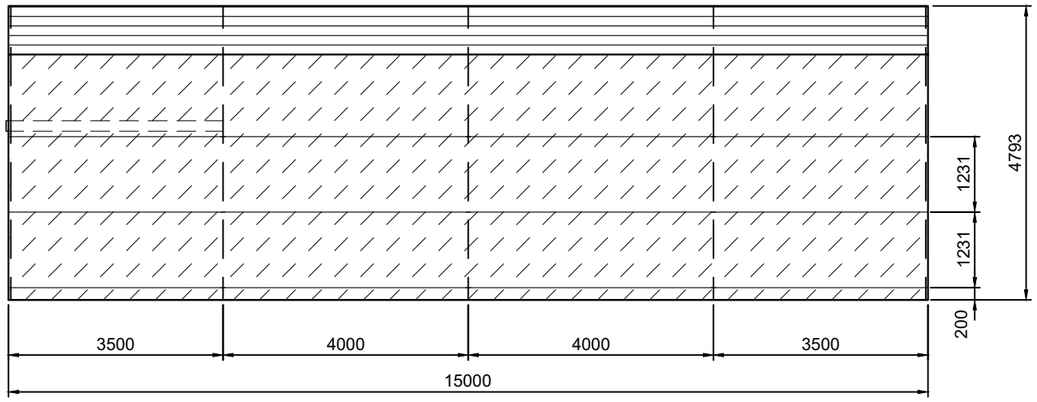
DATE 13-02-2025
JOB NO. EALB99407859
SHEET 2 of 11



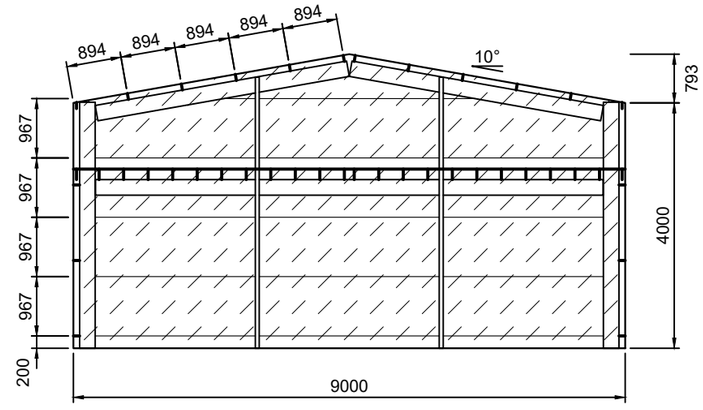
2/3 SIDEWALL B FRAMING ELEVATION

SCALE: 1:100

DIAPHRAGM SCHEDULE

SHEETING IN DIAPHRAGM SECTIONS (SHOWN AS HATCHED AREA ON ELEVATIONS) NOT TO BE CUT UNDER ANY CIRCUMSTANCES

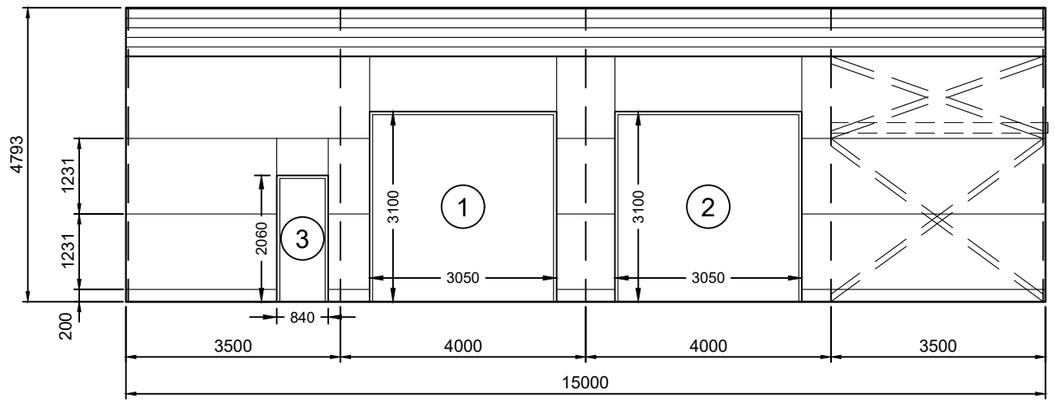
WALL	DISTANCE FROM WALL EDGE
Sidewall 'B'	0-15000
Endwall 'A'	0-9000
Endwall 'B'	0-9000



3/3 REAR FRAMING ELEVATION

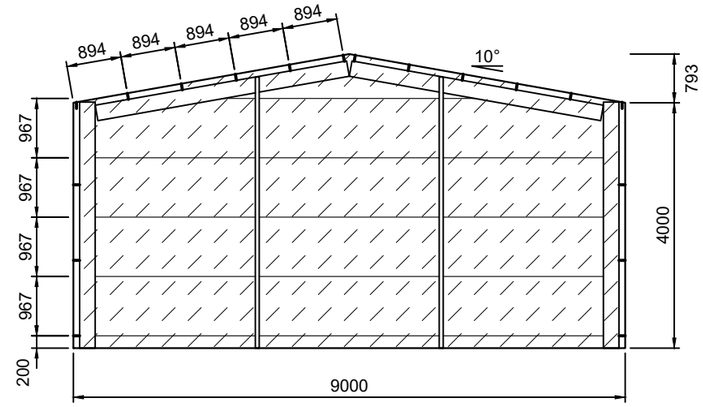
SCALE: 1:100

FRAME #5



1/3 SIDEWALL A FRAMING ELEVATION

SCALE: 1:100



4/3 FRONT FRAMING ELEVATION

SCALE: 1:100

FRAME #1

REV	DATE	DESCRIPTION
A	13-02-2025	-

COLD FORMED BUILDINGS

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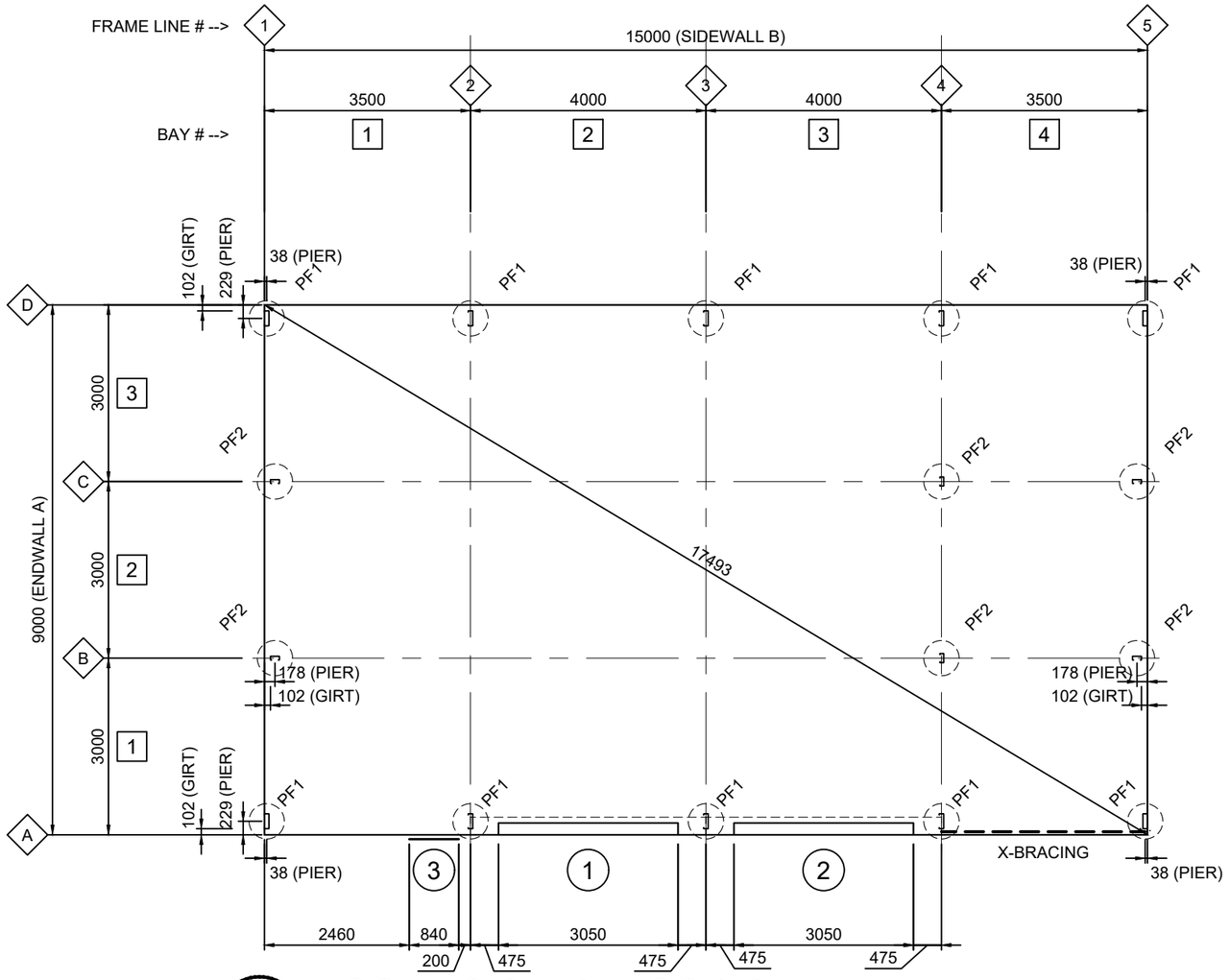
SHEET 3 of 11



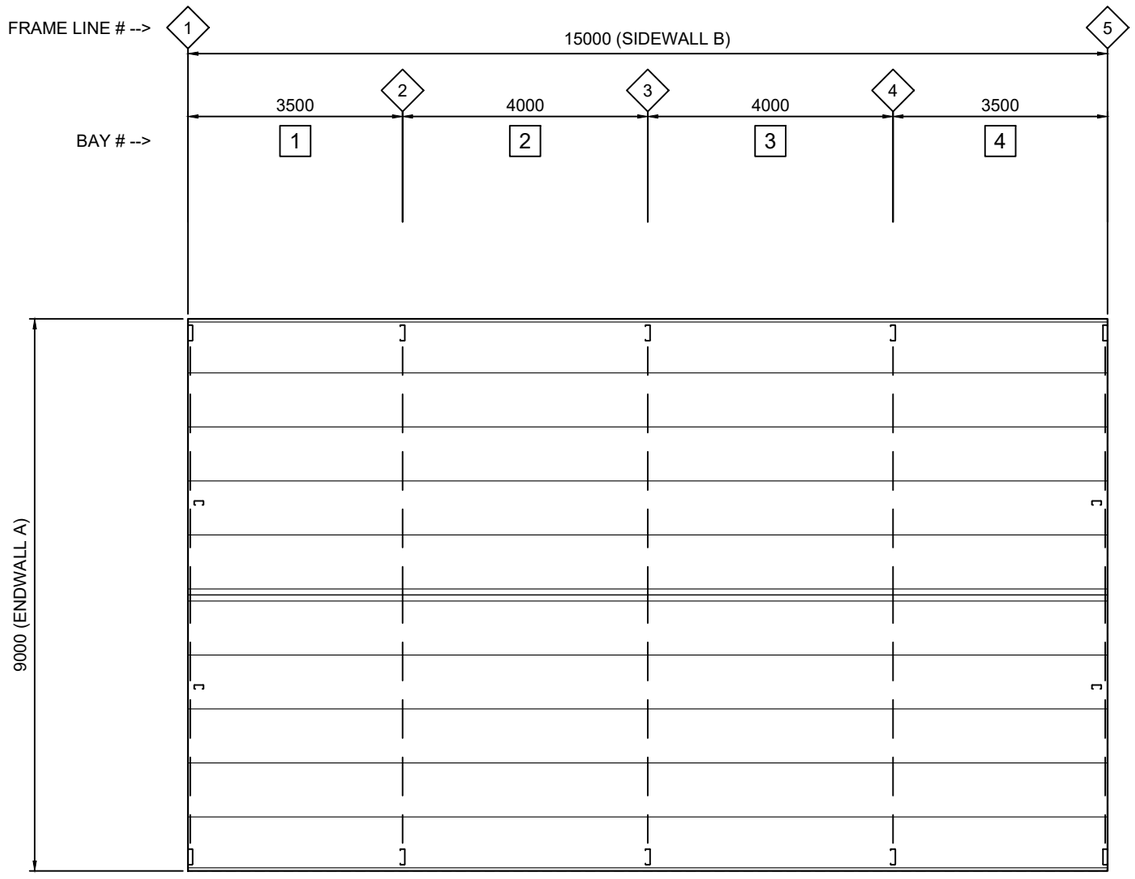
1/4 FOOTING/SLAB FLOOR PLAN

SCALE: 1:100

PF1 - 600Ø REINFORCED CONCRETE PIERS TO DETAIL
PF2 - 600Ø REINFORCED CONCRETE PIERS TO DETAIL

SLAB IS DESIGNED FOR CARS AND LIGHT VANS NOT EXCEEDING 3500kg GROSS MASS

CONCRETE CONTROL JOINTS SHALL BE PROVIDED IN SLAB TO DETAIL AT NOT MORE THAN 10m CENTRES IN EACH DIRECTION, APPROXIMATELY EQUALLY SPACED AND LOCATED APPROXIMATELY MIDWAY BETWEEN COLUMNS/MULLIONS



2/4 ROOF FRAMING PLAN

SCALE: 1:100

ROOF SHEETING IS USED AS DIAPHRAGM TO BRACE THE BUILDING AND IS NOT TO BE CUT UNDER ANY CIRCUMSTANCES

Sorell Council

Development Application: Development Application - 251 Greens Road, Orielton - P1 .pdf

Plans Reference:P1
Date Received:20/03/2025

REV	DATE	DESCRIPTION
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COLD FORMED BUILDINGS
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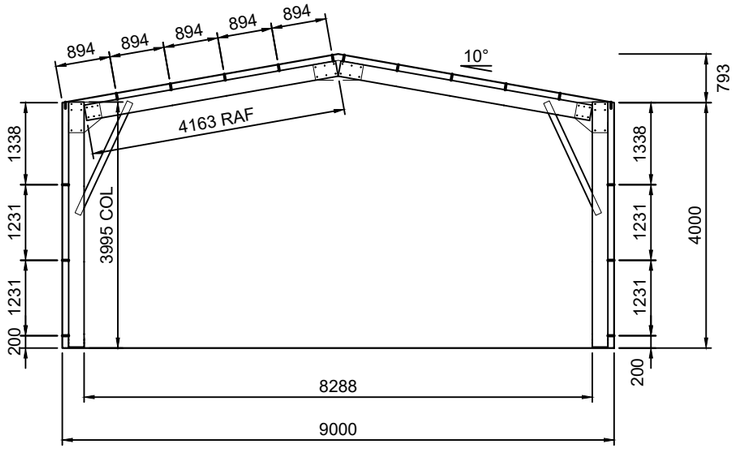
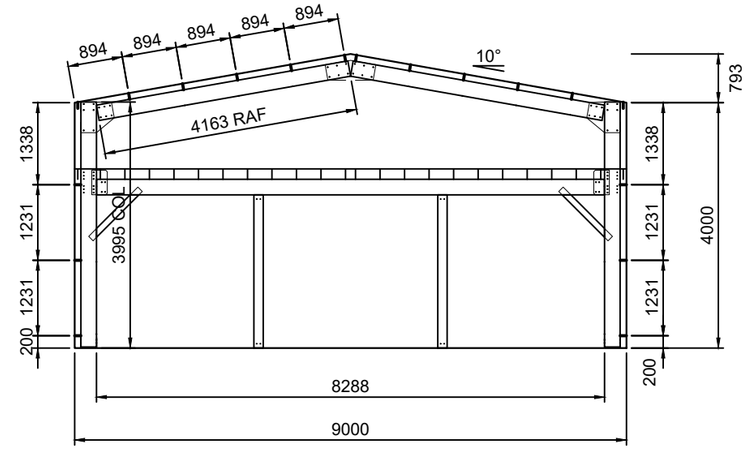
DATE 13-02-2025
JOB NO. EALB99407859
SHEET 4 of 11



2/5 INTERNAL FRAMING ELEVATION

SCALE: 1:100

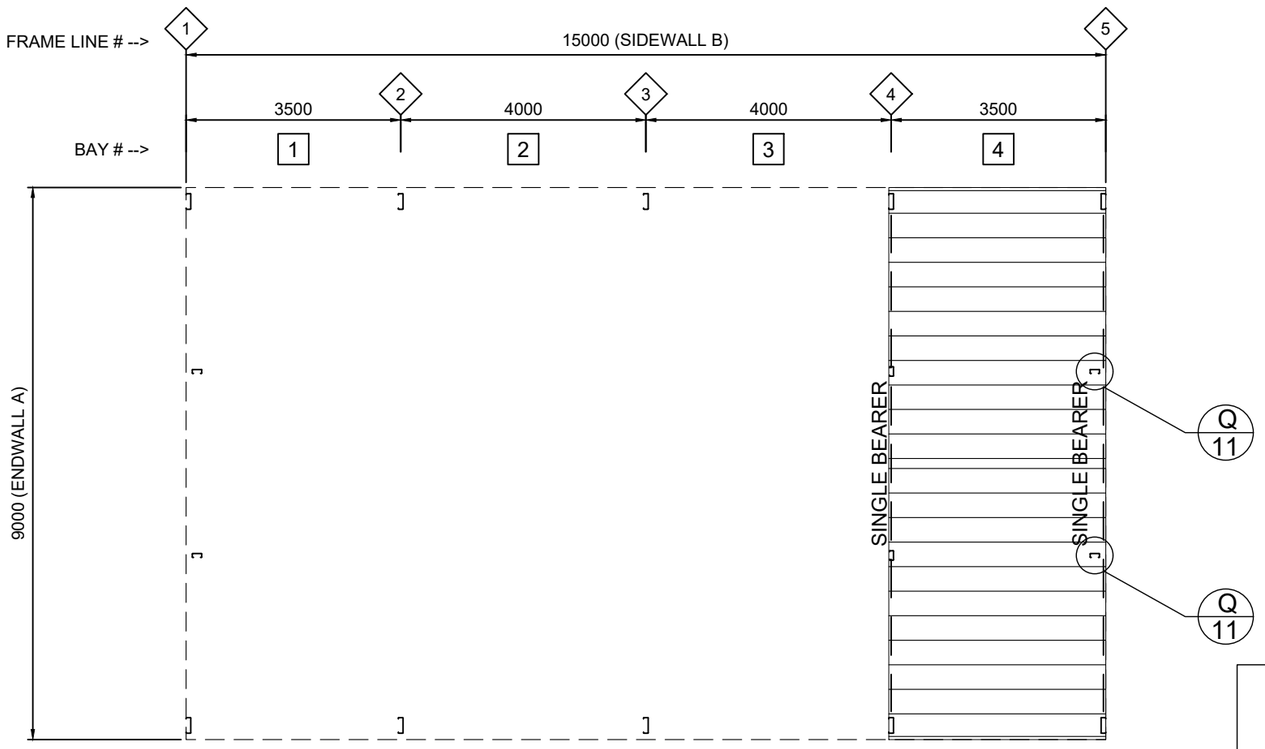
FRAMES 2, 3



3/5 INTERNAL FRAMING ELEVATION

SCALE: 1:100

FRAME #4



1/5 MEZZANINE FLOOR FRAMING PLAN

SCALE: 1:100

MEZZ FLOOR LIVE LOAD: 1.5 kPa
MEZZ FLOOR COVERING: 19mm PARTICLE BOARD IN ACCORDANCE WITH AS 1860 PARTS 1 & 2

THE FOLLOWING COMPONENTS ARE REQUIRED FOR THIS MEZZANINE AND SHALL BE DESIGNED BY OTHERS TO RESIST THE THE ACTIONS AND COMBINATION OF ACTIONS IN AUSTRALIAN STANDARD AS/NZS 1170 PARTS 0 & 1:

- STAIRS FOR ACCESS TO THE MEZZANINE IN ACCORDANCE WITH HEIGHTS, LENGTHS & CLEARANCE REQUIREMENTS OF THE BUILDING CODE; AND
- A 1000mm HIGH BALUSTRADE TO THE PERIMETER OF THIS MEZZANINE, AS WELL AS ANY STAIR OPENING.

REV	DATE	DESCRIPTION
A	13-02-2025	-

COLD FORMED BUILDINGS

ANOTHER COLD FORMED BUILDING DESIGNED BY ACT BUILDING SYSTEMS

VENN ENGINEERING

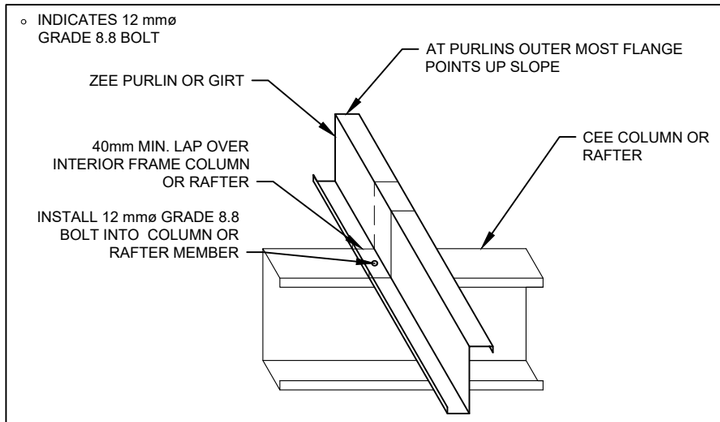
PO Box 3084
THIRROUL NSW 2515
sheds@venn.engineering
ABN 39 626 802 257

Signed ..... Date 13-02-2025

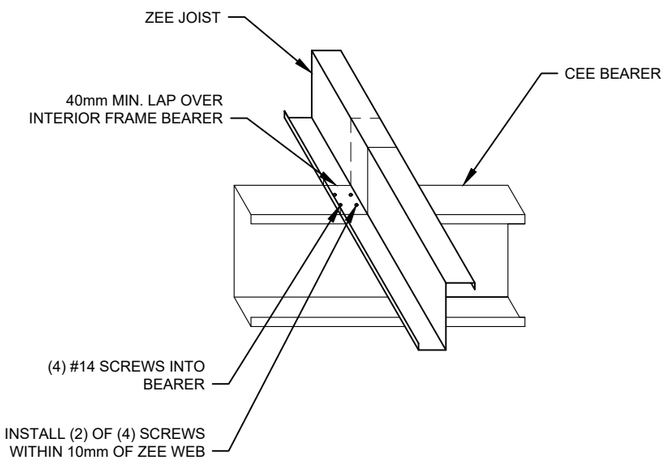
Grant J Wood MIEAust CPEng NER RPEQ
Registered EA Chartered Professional Engineer (No. 2383009)
Registered Professional Engineer QLD (No. 14384)
Registered Civil Engineer Building Practitioner VIC (No. PE0002499)
Registered Certifying Engineer (structural) NT (No. 306371ES)
Building Services Provider (Engineer Civil) TAS (No. 690930425)

Customer Name: Justin Altmann
Site Address: 251 Greens Road
Orielton,
TAS, 7172

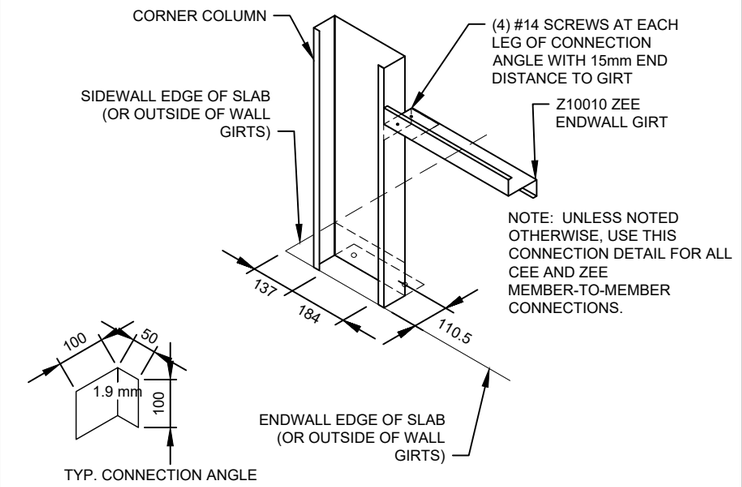
DATE 13-02-2025
JOB NO. EALB99407859
SHEET 5 of 11



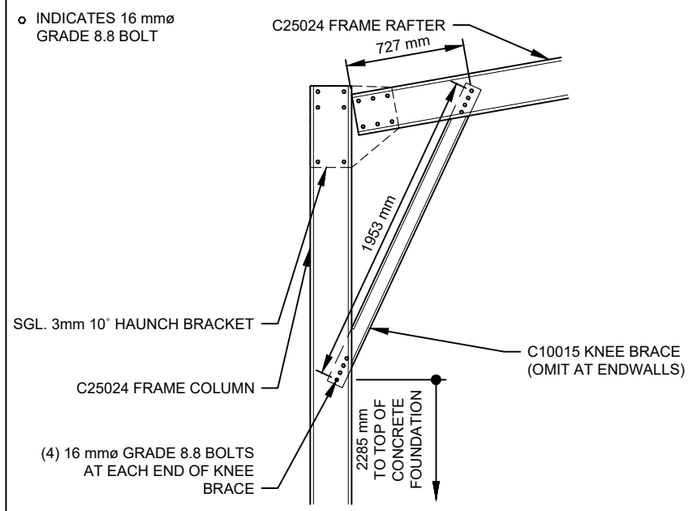
D1 ZEE PURLIN/GIRT CONNECTION



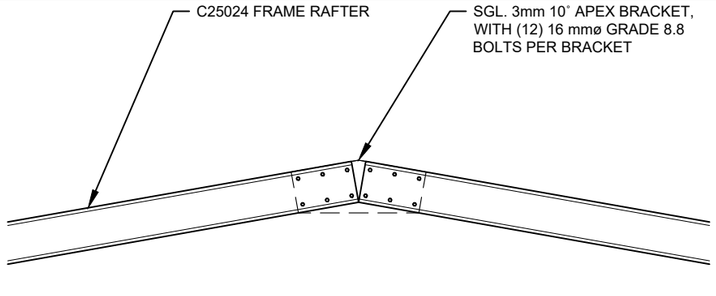
D2 JOIST CONNECTION



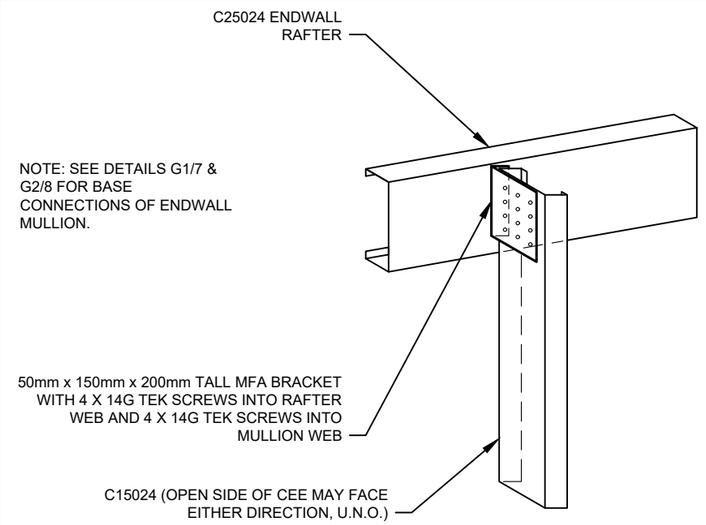
E GIRTS IN-LINE CORNER COLUMN CONNECTIONS



A HAUNCH CONNECTION



B APEX CONNECTION



C ENDWALL MULLION TO RAFTER

DETAIL DIMENSIONS ARE SHOWN IN MM UNLESS SPECIFIED OTHERWISE

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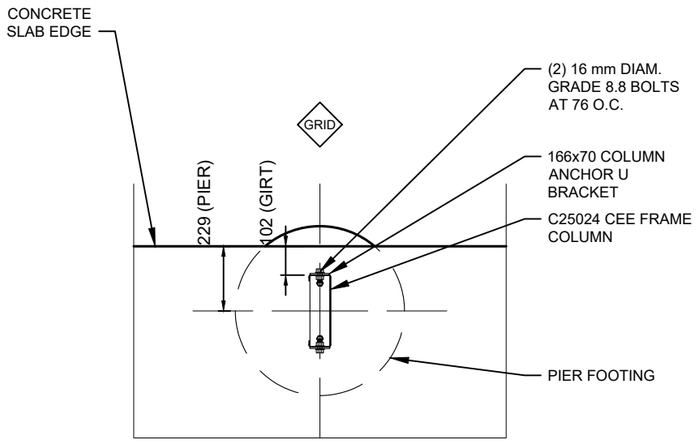
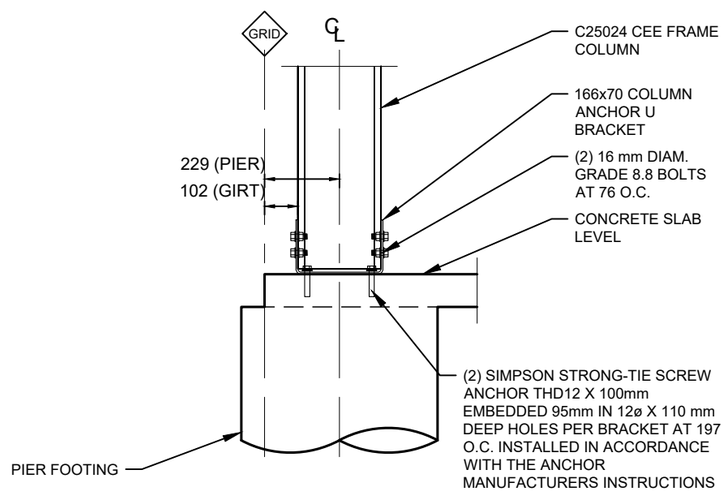
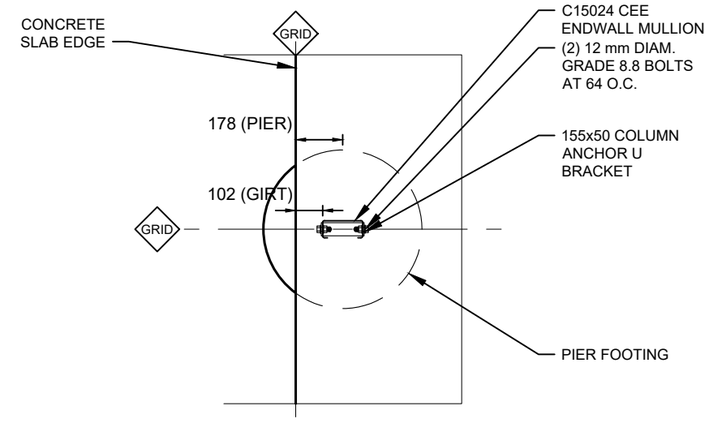


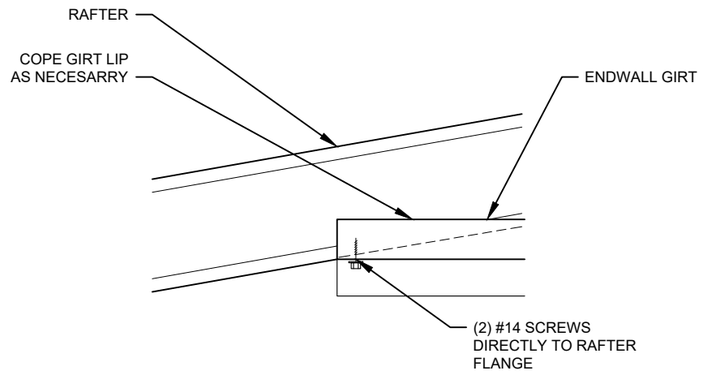
F3 FRAME COLUMN BASE DETAIL



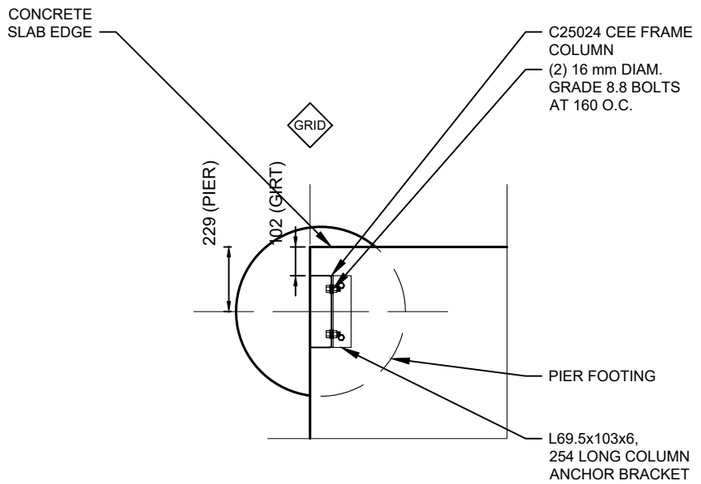
F4 FRAME COLUMN BASE DETAIL 2



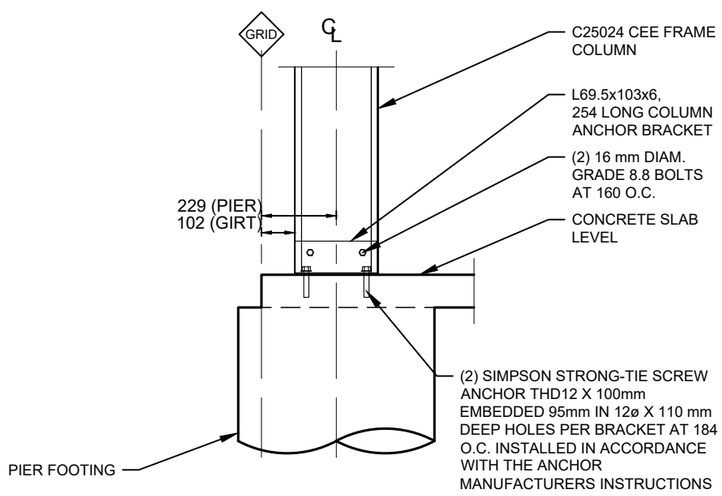
G1 ENDWALL MULLION BASE DETAIL



E2 END GIRT TO RAFTER



F1 CORNER COLUMN BASE DETAIL



F2 CORNER COLUMN BASE DETAIL 2

DETAIL DIMENSIONS ARE SHOWN IN MM UNLESS SPECIFIED OTHERWISE

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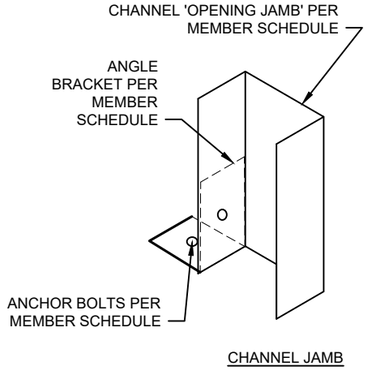
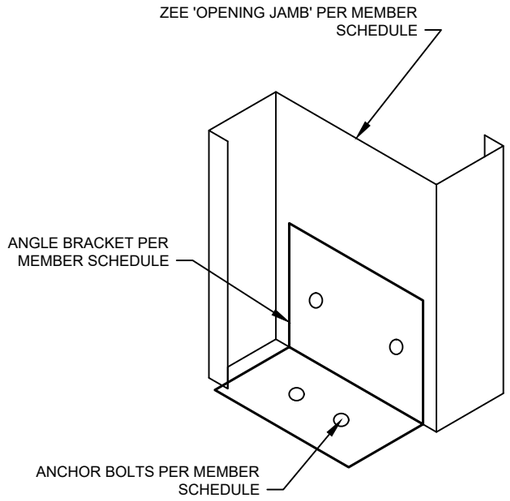
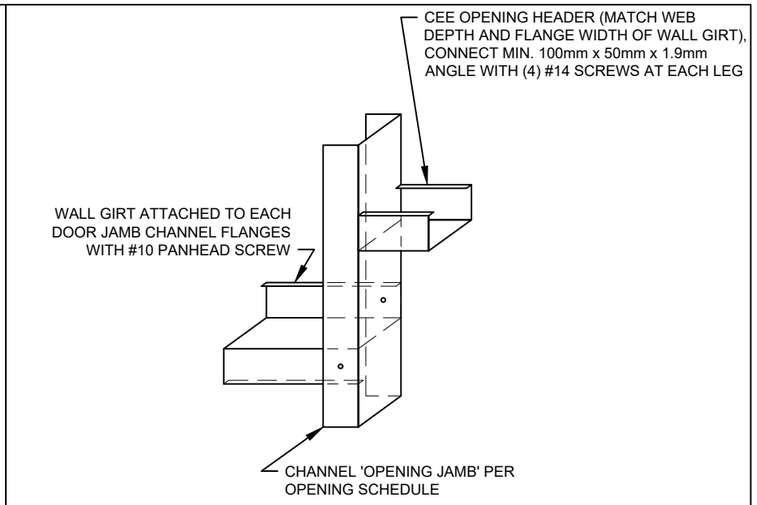
SHEET 7 of 11



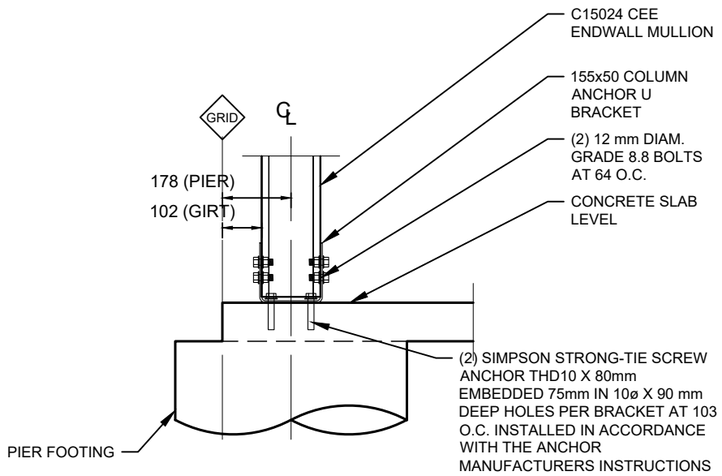
J1 PA DOOR JAMB BASE CONNECTION



J2 ROLLER DOOR JAMB BASE CONNECTION



K1 OPENING CHANNEL JAMB GIRT CONNECTION



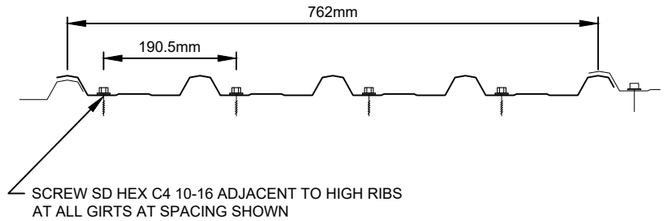
G2 ENDWALL MULLION BASE DETAIL 2

NOTE: ONLY STRUCTURAL INFORMATION IS INCLUDED IN THIS DETAIL. CONSULT PANEL MANUFACTURER FOR ADDT'L WEATHERTIGHTNESS RECOMMENDATIONS.

H ROOF SHEETING

Stramit
Corrugated 0.42

NOTE: ONLY STRUCTURAL INFORMATION IS INCLUDED IN THIS DETAIL. CONSULT PANEL MANUFACTURER FOR ADDT'L WEATHERTIGHTNESS RECOMMENDATIONS.



I WALL SHEETING

Stramit
Monoclad 0.42

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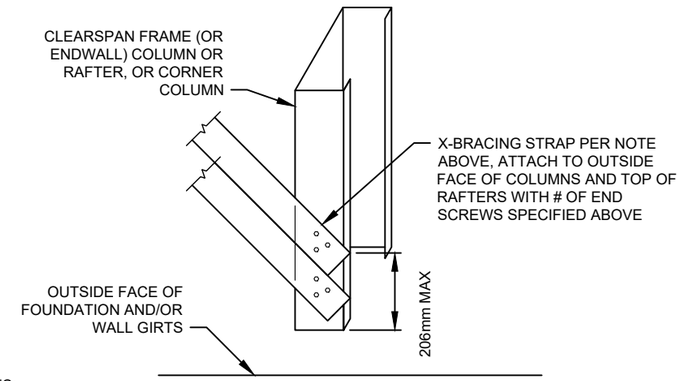
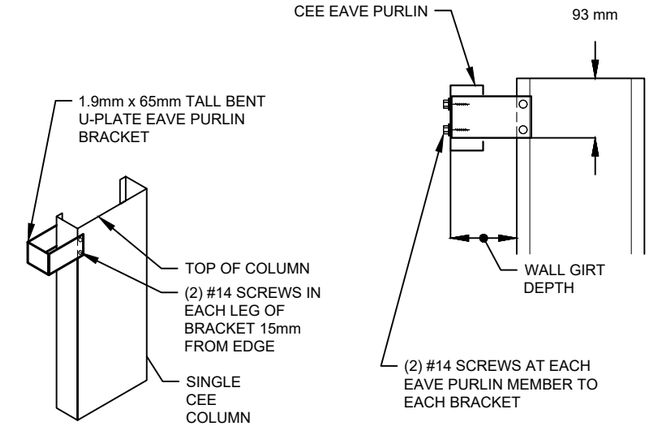
ENDWALL: N/A
SIDEWALLS & ROOF: DBL. 30MM 1MM STRAP WITH (3) #14 SCREWS AT EACH END OF EACH STRAP

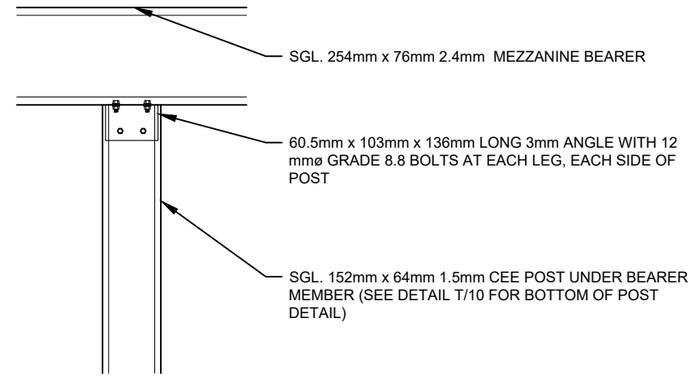


NOTES:
1) CONNECT STRAP AT TOP OF ADJACENT COLUMN OR RAFTER IN SAME MANNER.
2) IF DOUBLE STRAPS ARE SPECIFIED ABOVE, INSTALL SIDE-BY-SIDE, NOT ON TOP OF EACH OTHER.

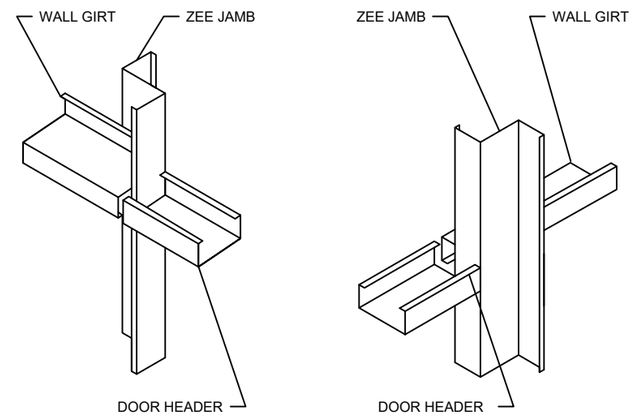
M ROOF AND WALL X-BRACING CONNECTION



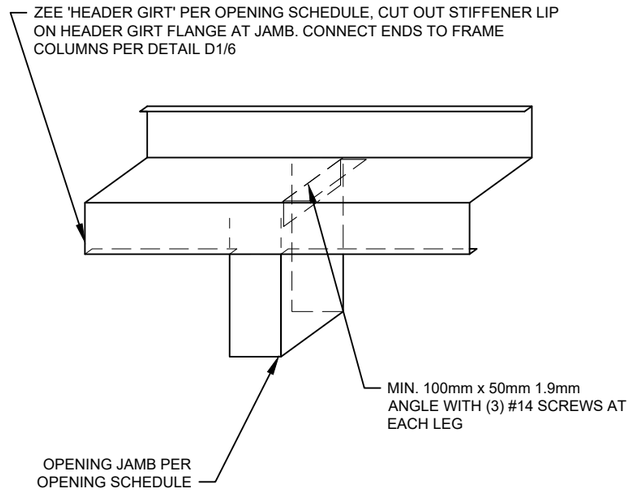
O EAVE PURLIN BRACKET



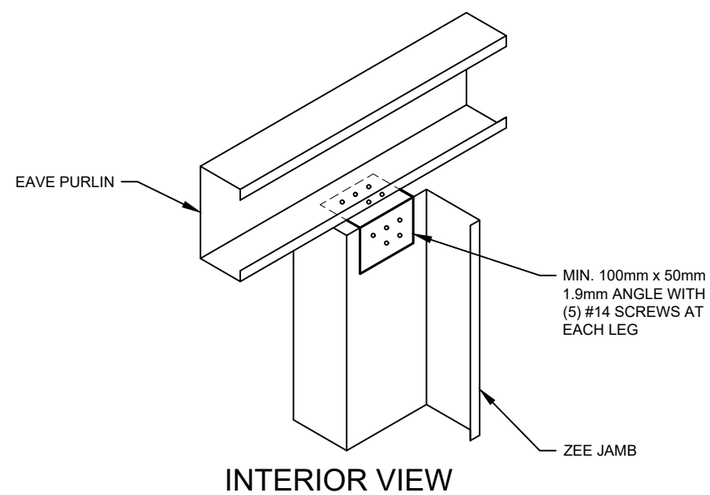
P MEZZANINE POST DETAIL



K2 OPENING ZEE JAMB GIRT CONNECTION



L1 CHANNEL JAMB TO HEADER GIRT CONNECTION



L2 ZEE JAMB TO EAVE PURLIN CONNECTION

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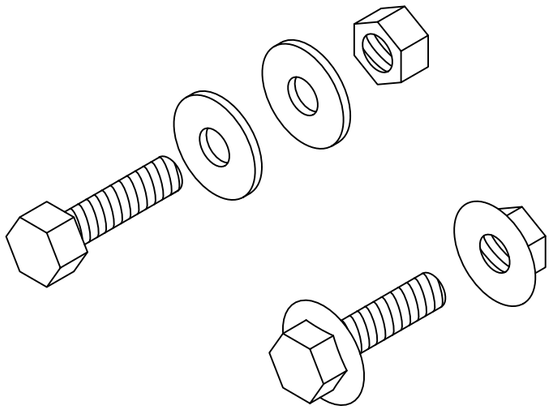
SHEET 9 of 11

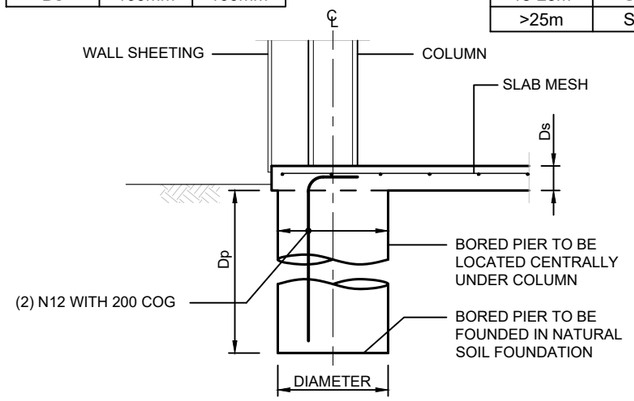
ALL NUTS AND BOLTS TO HAVE WASHER OR FLANGED HEADS



X BOLT OPTIONS

	PF1	PF2
Dp	800mm	600mm
Diameter	600mm	600mm
Ds	100mm	100mm

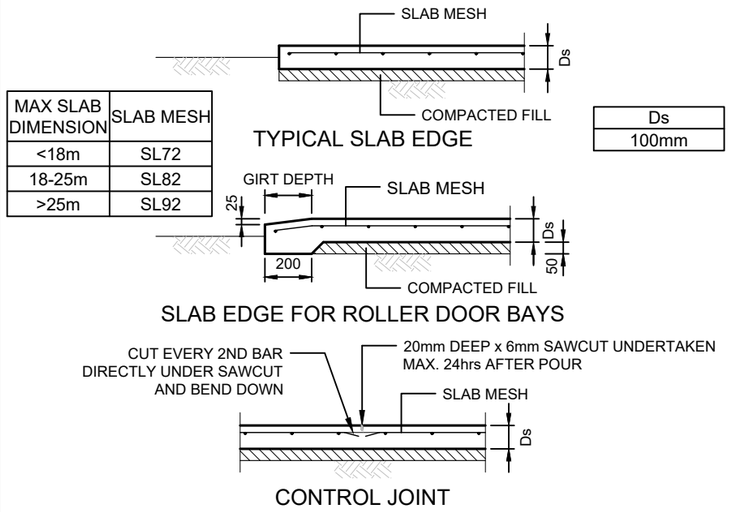
MAX SLAB DIMENSION	SLAB MESH
<18m	SL72
18-25m	SL82
>25m	SL92



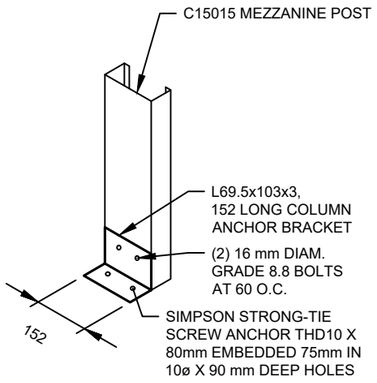
Y SLAB WITH PIER FOOTING DETAIL

MAX SLAB DIMENSION	SLAB MESH
<18m	SL72
18-25m	SL82
>25m	SL92

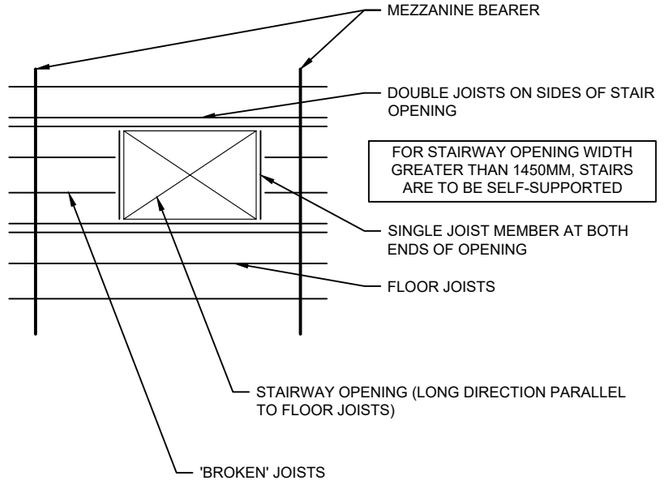
Ds
100mm



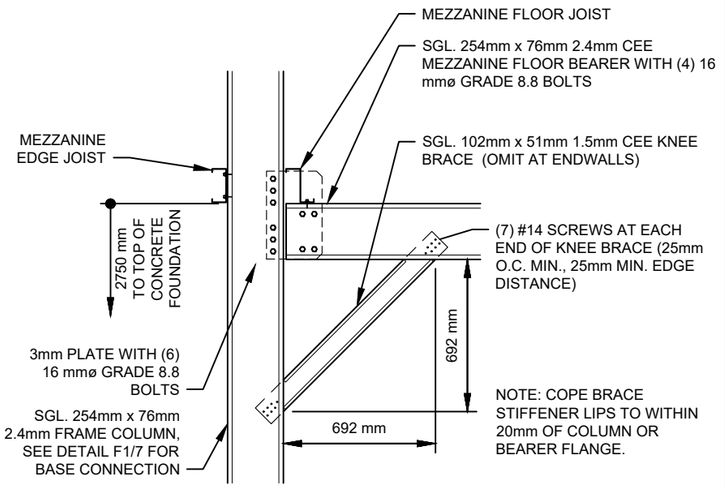
Z SLAB DETAIL



T MEZZANINE POST BASE DETAIL



U MEZZ. FLOOR FRAMING AT STAIR OPENING



V MEZZANINE BEARER CONNECTION

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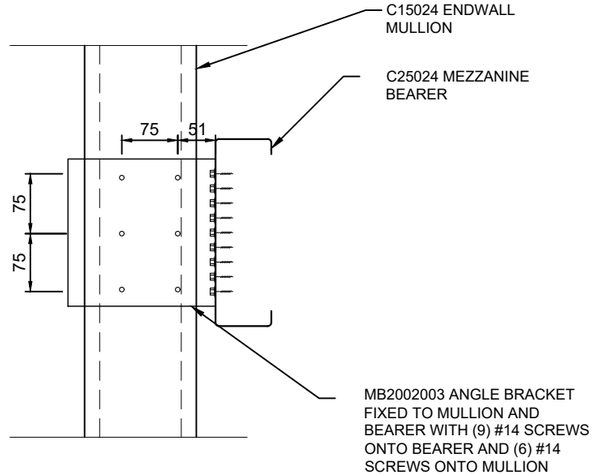

Q MEZZANINE BEARER TO MULLION CONNECTION DETAIL

MEMBER SCHEDULE			
COMPONENT			TYPE
CLEAR SPAN PORTAL (FRAMES 2, 3)	MEMBER	RAFTER	Single C25024
		COLUMN	Single C25024
		APEX BRACE	-
		KNEE BRACE	Single C10015
	BASE CONNECTION	BRACKET TYPE	Base cleat bolt down bracket BC.250
		ANCHOR BOLTS	(2) Simpson Strong-Tie Screw Anchor THD12 x 100mm embedded 95mm
MEZZANINE PORTAL (FRAME 4)	MEMBER	RAFTER	Single C25024
		COLUMN	Single C25024
		APEX BRACE	-
		MEZZ KNEE BRACE	Single C10015
		MEZZ JOIST	Single Z15012 @ 400mm centres
		MEZZ BEARER	Single C25024
		MEZZ POST	Single C15015
	BASE CONNECTION	BRACKET TYPE	Base cleat bolt down bracket BC.250
		ANCHOR BOLTS	(2) Simpson Strong-Tie Screw Anchor THD12 x 100mm embedded 95mm
ENDWALL A PORTAL (FRAME 1)	MEMBER	RAFTER	Single C25024
		COLUMN	Single C25024
		APEX BRACE	-
		KNEE BRACE	-
	BASE CONNECTION	BRACKET TYPE	Angle base connection ABC.C250.160
		ANCHOR BOLTS	(2) Simpson Strong-Tie Screw Anchor THD12 x 100mm embedded 95mm
ENDWALL B PORTAL (FRAME 5)	MEMBER	RAFTER	Single C25024
		COLUMN	Single C25024
		MEZZ KNEE BRACE	Single C10015
		MEZZ JOIST	Single Z15012 @ 400mm centres
		MEZZ BEARER	Single C25024
	BASE CONNECTION	BRACKET TYPE	Angle base connection ABC.C250.160
		ANCHOR BOLTS	(2) Simpson Strong-Tie Screw Anchor THD12 x 100mm embedded 95mm
ENDWALL MULLION	MEMBER	COLUMN	Single C15024
	BASE CONNECTION	BRACKET TYPE	Base cleat bolt down bracket BC.150
		ANCHOR BOLTS	(2) Simpson Strong-Tie Screw Anchor THD10 x 80mm embedded 75mm
ROOF PURLINS		MEMBER	Single Z10015 @ 894mm centres
EAVE PURLIN		MEMBER	Single C10015
SIDEWALL GIRTS		MEMBER	Single Z10012 @ 1231mm centres
ENDWALL GIRTS		MEMBER	Single Z10010 @ 967mm centres
OPENINGS (1-2)	MEMBER	JAMB	Single Z20024
		HEADER/SILL	Single C10012
	BASE CONNECTION	BRACKET TYPE	Angle base connection ABC.C200.110
		ANCHOR BOLTS	(2) Simpson Strong-Tie Screw Anchor THD10 x 80mm embedded 75mm
OPENING (3)	MEMBER	JAMB	Single Unlipped 102 x 1.5 Cee
		HEADER/SILL	Single C10012
	BASE CONNECTION	BRACKET TYPE	Angle base connection ABC.SINGLE
		ANCHOR BOLTS	(1) Simpson Strong-Tie Screw Anchor THD10 x 80mm embedded 75mm
X-BRACING	STRAP		(2) 30mm x 1.0 strap

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SHEET 11 of 11

Generic Temporary Bracing Information
The installation of temporary bracing is critical to avoid building collapse or damaging structural movement during construction. This collapse can occur with no notice and as such the installation of appropriate temporary bracing is critical to avoid damage, injury, and possible death. Determination, procurement, and correct installation of temporary bracing is the responsibility of the builder / primary contractor / installer.

Bracing Materials
The constructor / installer is to supply suitably sized materials for temporary bracing. These materials are generally capable of tension, but in some circumstances will need to be capable of tension and compression. Load rated ratchet strapping of an appropriate size can be used to temporarily 'x-brace' bays in both directions, until the final bracing systems are fullyinstalled. This is especially critical for buildings where X Bracing is not required in the final structure due to the use of moment frames or diaphragm bracing.

Temporary Bracing Location
The location of Temporary bracing will depend on the installation method used. Installation should be completed in accordance with the Construction Package, Engineering Plans, and Instruction Manuals. If the Frame First Method (most common) is used, then the use of tension only bracing and creating temporarily braced bays as per Fig 1 and Fig 2. can be used. As a basic guide, a minimum of every 4th bay should have temporary bracing installed as per Fig 2.

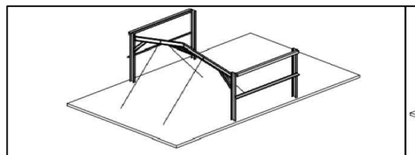
Fig 1. Frame First Temporary Bracing on First Rafter Installed

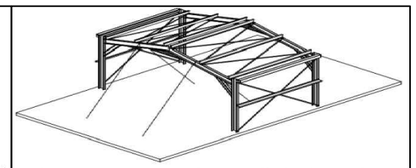
Fig 2. Temporary Bracing Installed as X Bracing

If the Tilt Up Method Is used (where walls are constructed on the ground And then tilted into place), then the tops of columns are braced with a tension and compression brace in the same direction Fig 3. Then rafters and purlins can be installed with temporary bracing holding rafters in place (similar to Fig 1) until final bracing of diaphragm sheeting is installed.

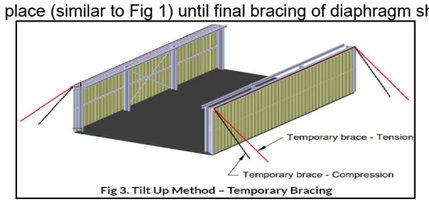

Fig 3. Tilt Up Method – Temporary Bracing

Typically, braces should be positioned diagonally across the structure from the top to the bottom, intersecting near the midpoint to provide stability, optimally at a 45-degree angle but no less than a 20-degree angle. The connection strength of temporary bracing is a critical consideration and these connections must be capable of resisting the potentially substantial temporary bracing loads – whether this connection point be to the building, the foundations or to the ground. Dependent upon building size this may include heavy angles and post installed concrete anchors. The temporary bracing methods used must be capable of fully stabilising the structure during the construction process.

Additional Temporary Bracing
The temporary bracing described is a minimum requirement for a standard-sized building in average conditions. Additional consideration should be given to larger building spans and/or challenging site conditions. There may also be an increased risk in relation to partially completed buildings and exposed sites. It is recommended that extra temporary bracing is utilized if moderate wind speeds are expected on site. Additional support elements, such as steel cables may need to be introduced that can be attached to the building's framework and anchored to the ground or other stable structures to provide extra stability. The frame should remain rigid throughout and such responsibility lies with the constructor. Buildings should not be left in a partially completed state longer than necessary.

Bracing Removal
The temporary bracing should not be removed until all purlins, girts and permanent cross bracing, diaphragm bracing or moment frames where used are installed. The temporary bracing is to remain in place where possible, until the roof and wall cladding is fully installed. If you need any further information regarding the installation of temporary bracing or are at all unsure of the necessary requirements for this specific building, there are guides available through various industry bodies:

https://www.safeworkaustralia.gov.au/ ‘Construction work – steel erection. Information sheet’, 2016.
https://www.steel.org.au/ ‘Structural steelwork fabrication and erection code of practice’, 2014.
https://www.standards.org.au/ AS/NZS 5131:2016 ‘Structural steelwork – Fabrication and erection.

Support is also available at support@actbuildingsystems.com.

THE ABOVE INFORMATION REGARDING TEMPORARY BRACING DOES NOT FORM PART OF THE ENGINEERING CERTIFICATION FOR THIS DESIGN AND IS PROVIDED AS A GUIDE TO AID INSTALLATION ONLY.