

NOTICE OF PROPOSED DEVELOPMENT

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

SITE:

11 EULARMINNER STREET, CARLTON

PROPOSED DEVELOPMENT:

DWELLING & 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 8th September 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 8th September 2025**.

APPLICATION NO: 5.2025.119.1
DATE: 22 AUGUST 2025

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

Full description of Proposal:	Use: Dwelling
	Development: Construction of a single dwelling
	<i>Large or complex proposals should be described in a letter or planning report.</i>
Design and construction cost of proposal:	\$ <u>300,000</u>

Is all, or some the work already constructed:	No: <input checked="" type="checkbox"/> Yes: <input type="checkbox"/>
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Location of proposed works:	Street address: 11 Eurlamminer Street
	Suburb: CARLTON Postcode: 7173
	Certificate of Title(s) Volume: 84583 Folio: 2

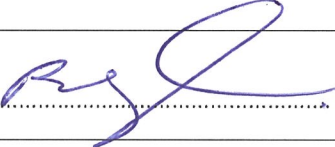
Current Use of Site	Vacant Land
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Current Owner/s:	Name(s) Peter Waters
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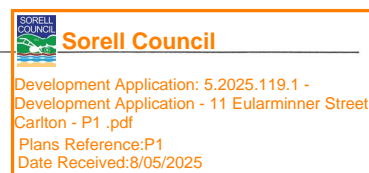
Is the Property on the Tasmanian Heritage Register?	No: <input checked="" type="checkbox"/> Yes: <input type="checkbox"/>	<i>If yes, please provide written advice from Heritage Tasmania</i>
Is the proposal to be carried out in more than one stage?	No: <input checked="" type="checkbox"/> Yes: <input type="checkbox"/>	<i>If yes, please clearly describe in plans</i>
Have any potentially contaminating uses been undertaken on the site?	No: <input checked="" type="checkbox"/> Yes: <input type="checkbox"/>	<i>If yes, please complete the Additional Information for Non-Residential Use</i>
Is any vegetation proposed to be removed?	No: <input checked="" type="checkbox"/> Yes: <input type="checkbox"/>	<i>If yes, please ensure plans clearly show area to be impacted</i>
Does the proposal involve land administered or owned by either the Crown or Council?	No: <input checked="" type="checkbox"/> Yes: <input type="checkbox"/>	<i>If yes, please complete the Council or Crown land section on page 3</i>
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	
<ul style="list-style-type: none"> 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 <i>Land Use Planning and Approvals Act 1993</i>, 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. <p><i>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></p>	
<ul style="list-style-type: none"> 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. 	
<ul style="list-style-type: none"> Where the General Manager's consent is also required under s.14 of the <i>Urban Drainage Act 2013</i>, by making this application I/we also apply for that consent. 	
Applicant Signature:	Signature:  Date: 07/05/2025

Crown or General Manager Land Owner Consent	
<p>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 <i>Land Use Planning and Approvals Act 1993</i>).</p> <p>Please note:</p> <ul style="list-style-type: none"> If General Manager consent is 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. 	
<p>I _____ being responsible for the administration of land at _____</p> <p>declare that I have given permission for the making of this application for _____</p>	
Signature of General Manager, Minister or Delegate:	Signature: _____ Date: _____



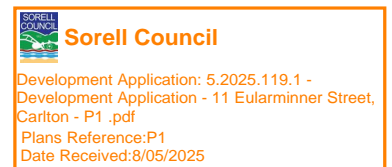
Prepared for:
CMH Industries Pty Ltd

11 Eularminner Street Carlton

FLOOD HAZARD REPORT

FE_25603

05 May 2025



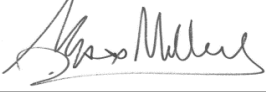




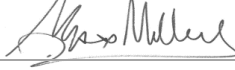
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Document Initial Revision

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Authorised by	Max W. Möller <i>Principal Hydraulic Engineer</i>		05/05/2025

Document Revision History

Rev No.	Description	Reviewed by	Authorised by	Date

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Acronyms

AEP: Annual Exceedance Probability
 ARR: Australian Rainfall and Runoff
 CC: Climate Change
 TPS: Tasmanian Planning Scheme
 RCP: Representative Concentration Pathway
 CFT: Climate Futures Tasmania

1. Introduction

Flüssig Engineers has been engaged by **CMH Industries Pty Ltd**, to undertake a site-specific flood hazard report for the proposed residential development at number 11 Eularminner Street, Carlton in the **Sorell Council** municipality. The purpose of this report is to determine the hydraulic characteristics on the existing and post-development scenarios and the flood hazard for the 1% AEP plus climate change (CC).

1.1 Development

The proposed development consists of a new 180 m² dwelling, a new 80 m² concrete driveway and a new 30 m² shed, introducing impervious area to the property. The site is approximately 1472 m² located within an existing subdivision in Carlton. This development triggers the C12.0 Code of the Tasmanian Planning Scheme as the development falls within Sorell Council, flood prone hazard area.

1.2 Objectives and Scope

This flood analysis has been written to meet the standards of the Tasmanian Planning Scheme - Sorell (TPS) and S.54 of the Tasmanian Building Regulations 2016, with the intent of understanding the development risk with respect to riverine flooding. The objectives of this study are:

- Provide an assessment of the site's flood characteristics under the combined 1% AEP + CC scenario.
- Provide comparison for pre- and post-development against acceptable and performance criteria and mitigation recommendations for the development, where appropriate.

1.3 Limitations

This study is limited to the objectives of the engagement by the client, the availability and reliability of data, and including the following:

- The flood model is limited to a 1% AEP + CC worst case temporal design storm.
- All parameters have been derived from best practice manuals and available relevant studies (if applicable) in the area.
- All data provided by the client or government bodies for the purpose of this study is deemed fit for purpose.
- The study is to determine the effects of the new development on flooding behaviour and should not be used as a full flood study into the area without further assessment.

1.4 Relevant Planning Scheme Requirements

Table 1. TPS Planning Scheme Requirements

Planning Scheme Code	Objective
C12.5.1 Uses within a flood prone area	That a habitable building can achieve and maintain a tolerable risk from flood
C12.6.1 Building and works within a flood prone area	(a) building and works within a flood-prone hazard area can achieve and maintain a tolerable risk from flood; and (b) buildings and works do not increase the risk from flood to adjacent land and public infrastructure.

2. Model Build

2.1 Overview of Catchment

The full contributing catchment for 11 Eularminner Street, Carlton is approximately 224 ha including the tributaries from the hills north of Carlton River Road and west of Lyeena Street, that flows into the Carlton River.

The land use of the catchment is a mix of Rural Living, Low Density Residential, Environmental Management and Open Space with the specific site being listed as Low Density Residential.

Figure 1 below outlines the approximate contributing catchment for the development site at 11 Eularminner Street, Carlton.

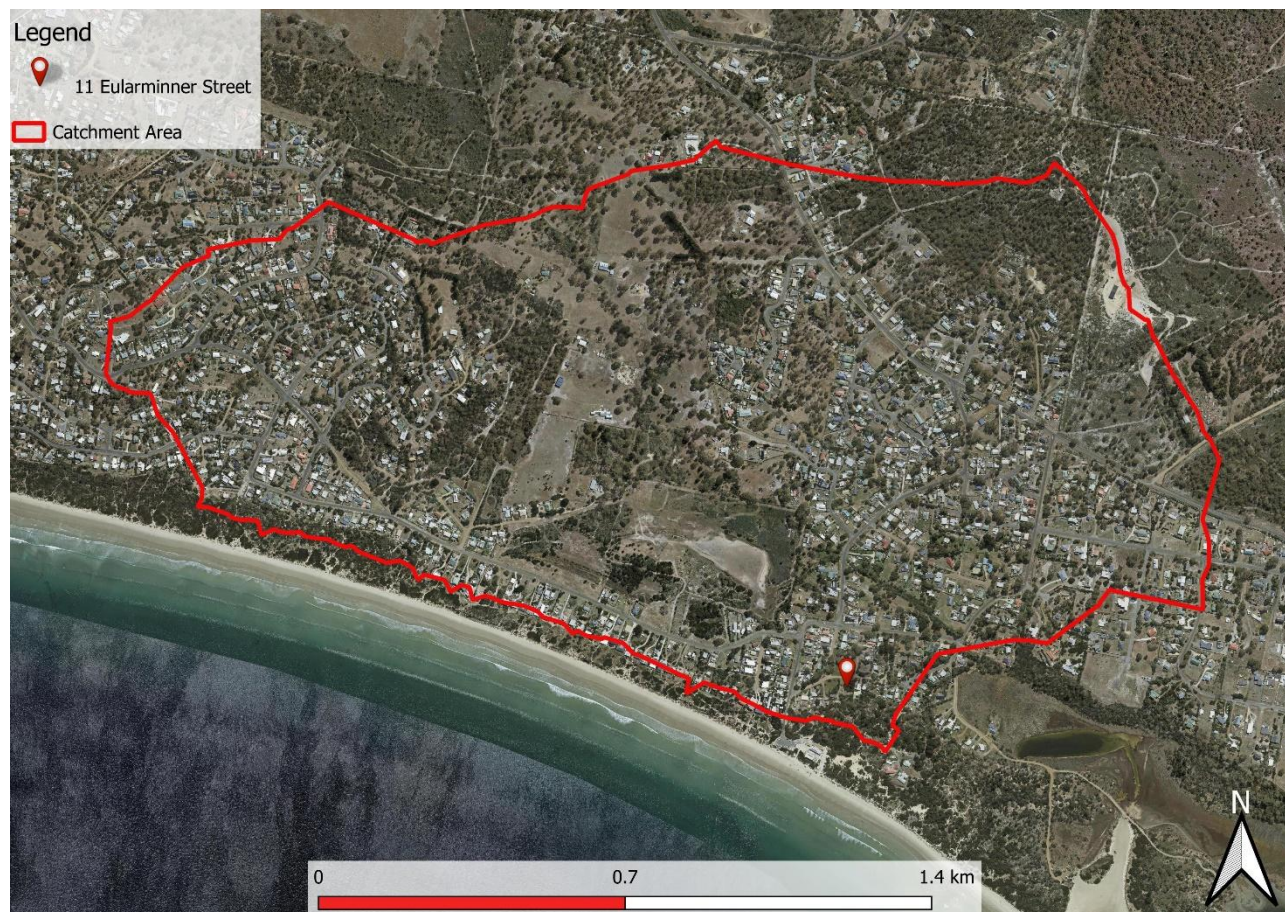


Figure 1. Full Contributing Catchment, 11 Eularminner Street, Carlton

2.2 Hydrology

The following Table 2 shows the combined initial and continuing rainfall loss values adopted for the RAFTS full and localised catchment model. These values were based on detailed aerial imagery, and site visit. The values were conservatively selected using best practice and guidance from the *Australian Rainfall & Runoff Revision Project 6 – Urban Catchments Stage 2 Report*.

Table 2. Parameters for RAFTS catchment

Full Catchment Area (ha)	Initial Loss Perv/imp (mm)	Continuing Loss Perv/imp (mm/hr)	Manning's N pervious	Manning's N impervious	Non-linearity factor
224	29-22/1	3.7-2/0.0	0.045	0.02	-0.285

2.2.1 Design Rainfall Events

Under the Tasmanian Planning Scheme (TPS) 2021, developments must be assessed against the 1% Annual Exceedance Probability (AEP) event (equivalent to the 100-year ARI) across the full design life of the development. This assessment has therefore been based on 1% AEP events with allowances for future climate change (CC).

Due to the characteristics of the site and the surrounding catchment, critical storm durations were assessed across a range from 10 minutes to 4.5 hours. While shorter duration storms, such as the 10-minute event, can produce more intense rainfall rates, it was the longer-duration 4.5-hour storm that resulted in the most severe ponding and flood conditions on site. This is consistent with outcomes from previous studies in the area that have been accepted by Sorell Council.

Figure 3 presents the box-and-whisker results from the 1% AEP storm ensemble. The 4.5-hour storm, particularly under temporal pattern 8, generated the highest flood depths and widespread ponding across the lot. As such, this duration was selected as the critical design event for hydraulic modelling.

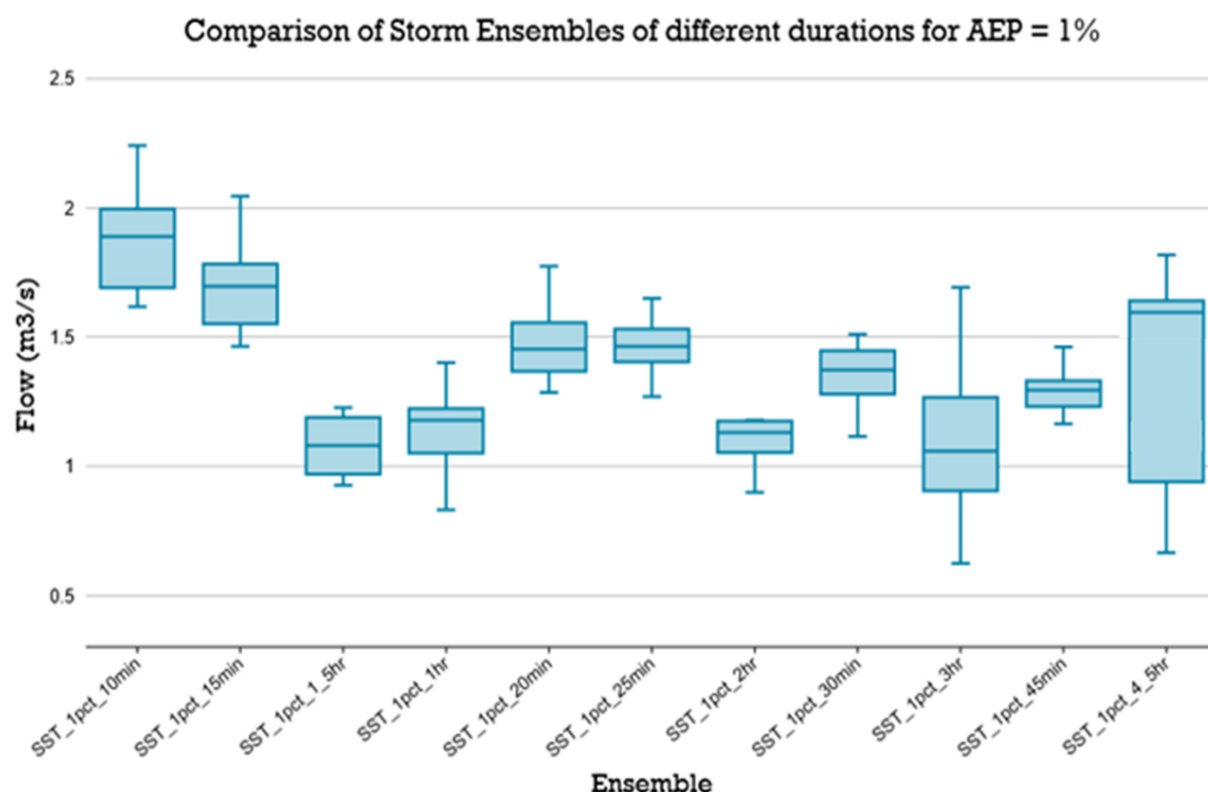


Figure 2. 1% AEP Box and Whisker Plot

2.2.2 Climate Change

As per the ARR 2019 Guide for Flood Estimation (Version 4.2), the recommended approach for estimating increases in rainfall due to climate change projections for the year 2100 scenario.

According to Table 3 of the guide, a multiplication factor of 1.58 is adopted for rainfall durations of less than 1 hour under the SSP5-8.5 2100 scenario for the localised catchment. This factor accounts for the anticipated intensification of extreme rainfall events due to climate change impacts and adopted by the Council. Table 3 below shows the applied climate change factor.

Table 3. Climate Change Increases

Parameter	Localised Catchment SSP5-8.5 @ 2100
4.5 - hours Rainfall Intensity	58% Increase

2.3 Hydraulics

A 1D-2D hydraulic model was created to determine the flood level through the target area.

2.3.1 Calibration/Validation

This catchment has no stream gauge to calibrate the model against a real-world storm event. Similarly, there is little historical information available, and no past flood analysis undertaken to validate against the flows obtained in the model.

2.3.2 Survey

The 2D surface model was taken from LiDAR 2019 and supplied survey data to create a 1m and 0.25m cell size DEM. For the purposes of this report, 1m cells are enough to capture accurate flow paths. The DEM with hill shading can be seen below (Figure 3).

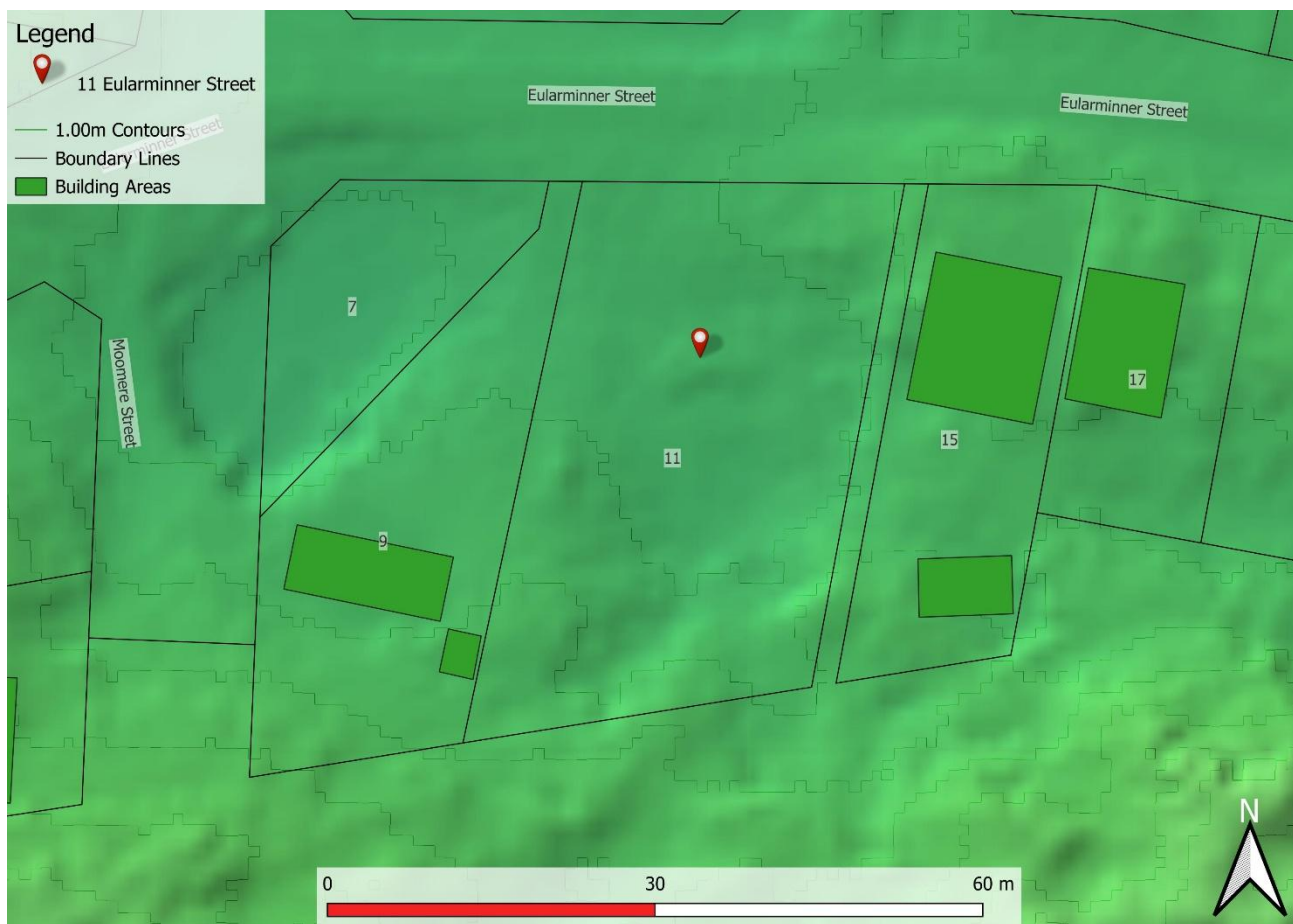


Figure 3. 1m DEM (Hill shade) of Lot Area, 11 Eularminner Street, Carlton

2.3.3 Roads

Roads often form the basis for overland flow in high frequency events, however the kerb and channel are not always picked up by the DEM surface. To correct for the drainage lines, mesh polygons were used to delineate road corridors with the roads incorporating a z-line along the gutter to ensure the kerb invert is represented in the mesh.

In our Digital Elevation Model (DEM), a "z-line" refers to a line representing a constant elevation or contour line. These lines connect the existing kerb points of equal elevation on the terrain surface, allowing for visualisation of the terrain's shape and elevation changes.

2.3.4 Buildings

Specifically, residential houses and commercial buildings were integrated into the DEM by elevating the corresponding grid cells representing these structures by a standardised height of 0.3 meters above the

natural ground surface. Subsequently, the re-sampled grids were utilised to establish the Infoworks ICM model, thus forming a foundational framework for the subsequent analysis and simulation of flood dynamics.

This method allows for flow through the building if the flood levels/ pressure become great enough. The aim is to mimic flow through passageways such as doors, windows, and hallways.

2.3.5 Walls

All significant fences and retaining structures were incorporated into the 2D model as 2D linear wall elements. Pallet fences were modelled with a maximum height of 250 mm, representing the estimated depth at which they are likely to collapse during a 1% AEP rainfall event. Solid material walls were modelled using a realistic height to reflect their structural integrity and expected behaviour under flood conditions.

2.3.6 Structures

In the process of crafting a two-dimensional grid to depict the ground surface of the floodplain, we initiated by re-sampling high-resolution LiDAR data to generate a digital elevation model (DEM) through the utilisation of GIS software.

Within this procedure, the attention was directed towards identifying and incorporating pertinent features such as residential structures, commercial buildings, walls, and roadways. Ensuring the comprehensive inclusion of these features within the re-sampled DEM was of utmost importance.

2.3.7 Roughness (Manning's n)

The model grid's roughness and equivalent Manning's n values were derived from land use data. Table 4 shows Manning's values used in the model. Values for this layer were derived from the ARR 2019 Guidelines. These parameters have proven effective in previous flood mapping projects undertaken in Tasmania.

Table 4. Manning's Coefficients (ARR 2019)

Land Use	Roads	Open Channel	Rural	Residential	Parks	Buildings	Piped Infrastructure
Manning's n	0.018	0.035	0.04	0.045	0.05	0.3	0.013

3. Model Results

The result of 1% AEP + CC were run through the pre-development and post-development model scenarios to compare the changes to flooding onsite and to surrounding properties.

3.1 Pre-Development Scenario

The site at 11 Eularminner Street, Carlton is located on gently sloping ground within a local catchment.

As shown in flood modelling maps in Figure 4, during heavy rain, water flows across the property in a shallow, localised pattern, mostly towards the southern boundary and into the vegetated land between the rear of the lot and Carlton Beach.

Flood modelling for the 1% AEP event, including climate change projections to the year 2100, shows that the site experiences shallow ponding, mostly in the central and northern parts of the lot. Most flood depths are less than 300 mm, although lower areas can reach up to 580 mm due to dips in the natural surface. There are no signs of fast or focused flow paths, showing that water spreads out slowly across the site.

Flow speeds are low, generally between 0.1 m/s and 0.4 m/s, meaning the water moves gently and has little potential to cause erosion or damage.

Most runoff from the surrounding area is captured by the council-owned wetland across Eularminner Street, which acts as a natural storage area. Some water still reaches the lot, where it collects briefly before slowly flowing through the back of the site and towards Carlton Beach.

Flood hazard mapping places the entire property in the H1 to H3 categories under ARR 2019, confirming that floodwater depths and speeds are deep enough not to be unsafe for vehicles, children, and the elderly.

3.2 Post-Development Scenario

Post-development modelling for the 1% AEP + climate change (2100) event, as depicted in Figure 5, shows that the proposed development will keep the existing overland flow path, with most surface water still flowing through the central and southern parts of the lot. Local runoff will continue draining into the easement along the southern boundary, maintaining its connection to the downstream shoreline.

Flood depths are expected to rise slightly due to small changes in surface materials and the presence of new buildings. Despite this, flood depths across the site will remain between 0.10 m and 0.59 m, and water will still spread out as shallow sheet flow. The development does not create any focused flow paths or major changes to flow patterns.

Some ponding of around 0.41 m to 0.53 m is expected near the proposed driveway and next to the garage, caused by low points and slight changes in surface levels. These areas are small and don't significantly affect overall flow behaviour on site.

Flow velocities remain similar to pre-development conditions, mostly under 0.25 m/s, which means the development does not create fast-moving water or increase risks such as erosion or damage to structures.

The proposed house is located in an area with a modelled flood depth of up to 0.59 m. To manage this, the dwelling will be built on piers to meet the required minimum floor level.

Hazard mapping shows the site remains within the H1–H3 range after development, meaning the flood could be unsafe for vehicles, children, and the elderly stays the same.

To further reduce risk, the new dwelling will have a finished floor level (FFL) 300mm or above the modelled 1% AEP + climate change flood level, meeting development standards and protecting from flooding.

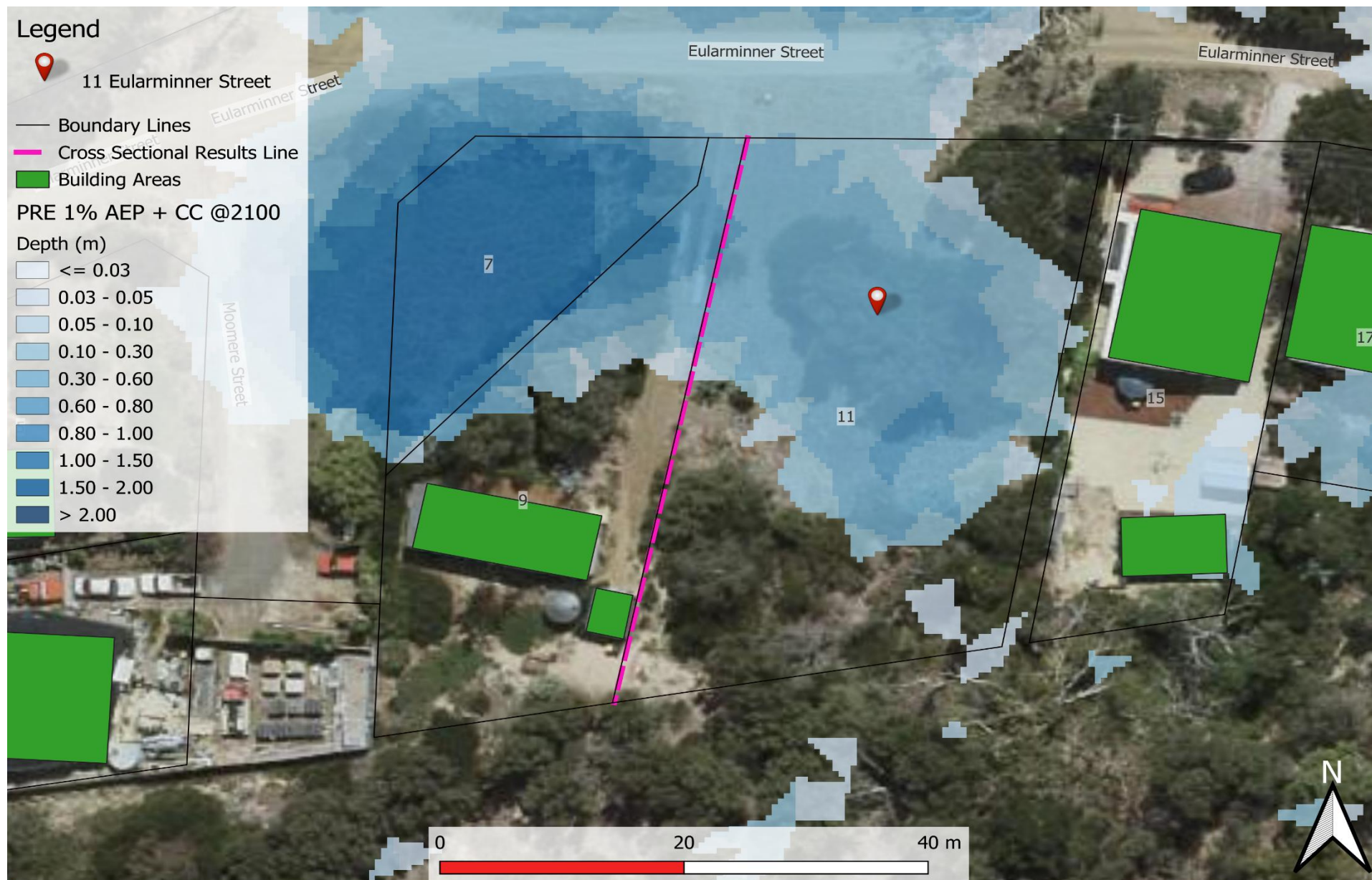


Figure 4. Pre-Development 1%+CC Flood Depths and extents

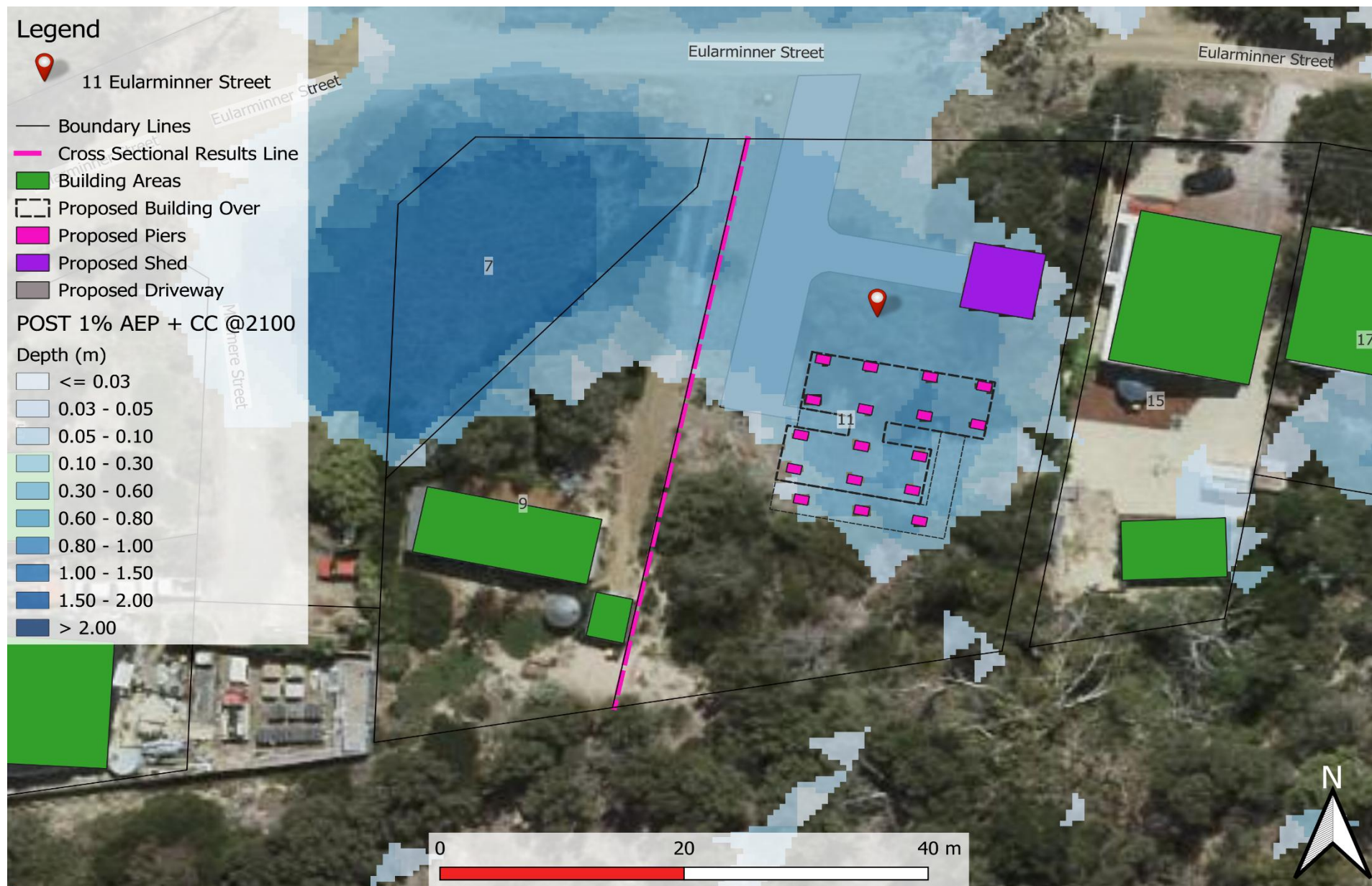


Figure 5. Post Development 1%+CC Flood Depth and extents

3.3 Displacement of Overland Flow on Third Party Property

Figure 5 shows the post-development flow conditions. When compared to the pre-development case, there is no increase in flood levels or extents on the southern neighbouring properties near 11 Eularminner Street, Carlton. The modelling confirms that the proposed development does not have a detrimental impact on flooding either within the site or on surrounding land, with the maximum depth reaching 0.59 m and velocity remaining at 0.4 m/s.

As discussed further in Section 4, the flood hazard on nearby properties and surrounding infrastructure remains the same, classified as H1–H3. This is consistent with pre-development conditions and means that while flooding could be unsafe for vehicles, children, and the elderly, the development does not make it worse.

3.4 Development Effects on Stormwater Discharge

Figure 6 presents the discharge hydrograph for the 11 Eularminner Street site, illustrating the comparative flow characteristics between pre- and post-development conditions. This graph, derived from hydraulic modelling outputs, captures net discharge variations across both scenarios to assess potential impacts resulting from the proposed development.

The analysis indicates that post-development conditions result in a negligible increase of $0.001 \text{ m}^3/\text{s}$ in net discharge, suggesting that any additional runoff generated by the new structures and grading adjustments remains minimal and within acceptable limits. Additionally, a slight increase in velocity of 0.001 m/s is observed, though this change is insignificant in influencing overall flow behaviour or presenting an elevated flood hazard. These results confirm that the development has minimal impact on site hydrology, ensuring that overland flow characteristics remain consistent with pre-development conditions.

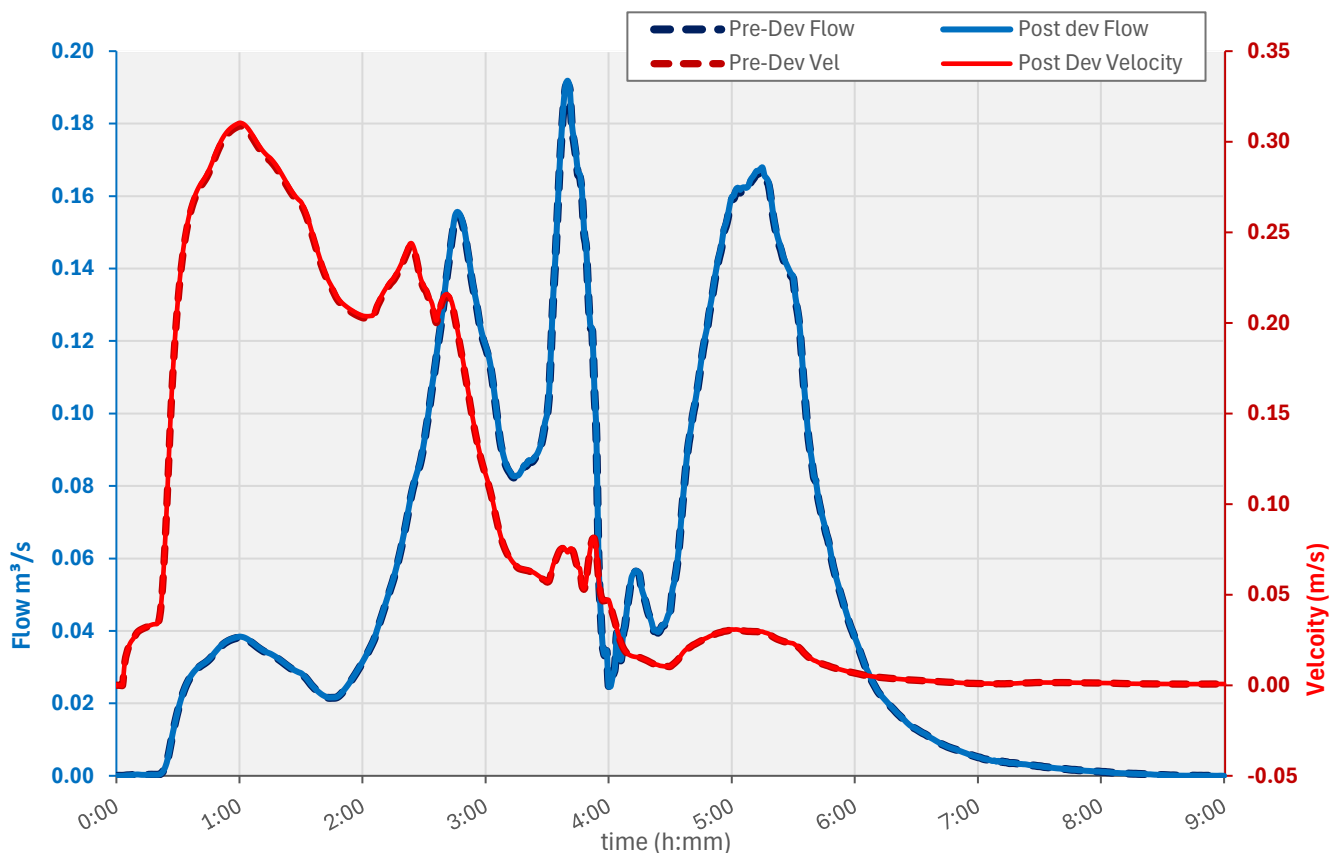


Figure 6. Pre and Post Development Net Discharge 1% AEP +CC, 11 Eularminner Street

3.5 Model Summary

Table 5. Pre-development and post-development results at the cross-sectional line within the lot

	Pre-development	Post-development	Net Change
Depth (m)	0.574	0.577	0.003
Velocity (m/s)	0.191	0.192	0.001
Discharge (m ³ /s)	0.309	0.310	0.001

3.6 New Habitable Building

To meet the performance criteria of the Building Regulations 2016 S.54, the construction of a new habitable building is required to have a habitable floor level is greater than 300mm above the 1% AEP + CC flood level. The new development at 11 Eularminner Street, Carlton must meet this regulation as shown in Table 6. (The floor level >1% AEP + CC flood level + 300 mm does not apply for non-habitable areas).

Table 6. Habitable Floor Construction Levels

Habitable Floor	1% AEP +CC flood level (mAHD)	Minimum Floor Level required (mAHD)
Proposed Dwelling	2.0	2.3

4. Flood Hazard

Appendix A provides a detailed assessment of flood velocity and depth along the northern boundary of the lot, comparing pre- and post-development conditions. In the pre-development scenario, modelling shows a maximum velocity of 0.31 m/s and a flood depth of 0.57 m at the reference cross-section. Based on the Australian Flood Resilience and Design Handbook, this results in a hazard rating of H1–H3, meaning conditions are unsafe for vehicles, children, and the elderly, as shown in Figure 7.

After development, the modelling shows that velocity remains unchanged at 0.31 m/s, while flood depth increases slightly by 0.003 m. These small changes suggest the development causes only minor impacts to local flood behaviour. Importantly, the highest hazard rating remains at H3, which is consistent with the pre-development condition. The hazard rating maps in Appendix A support this outcome.

The assessment focuses on the development site, nearby properties, the road, and close infrastructure. Areas beyond this, such as broader public access routes, were not included in the analysis. This report covers flood behaviour and safety around the site only. During a flood event, occupants and visitors should remain indoors unless directed otherwise by emergency services.

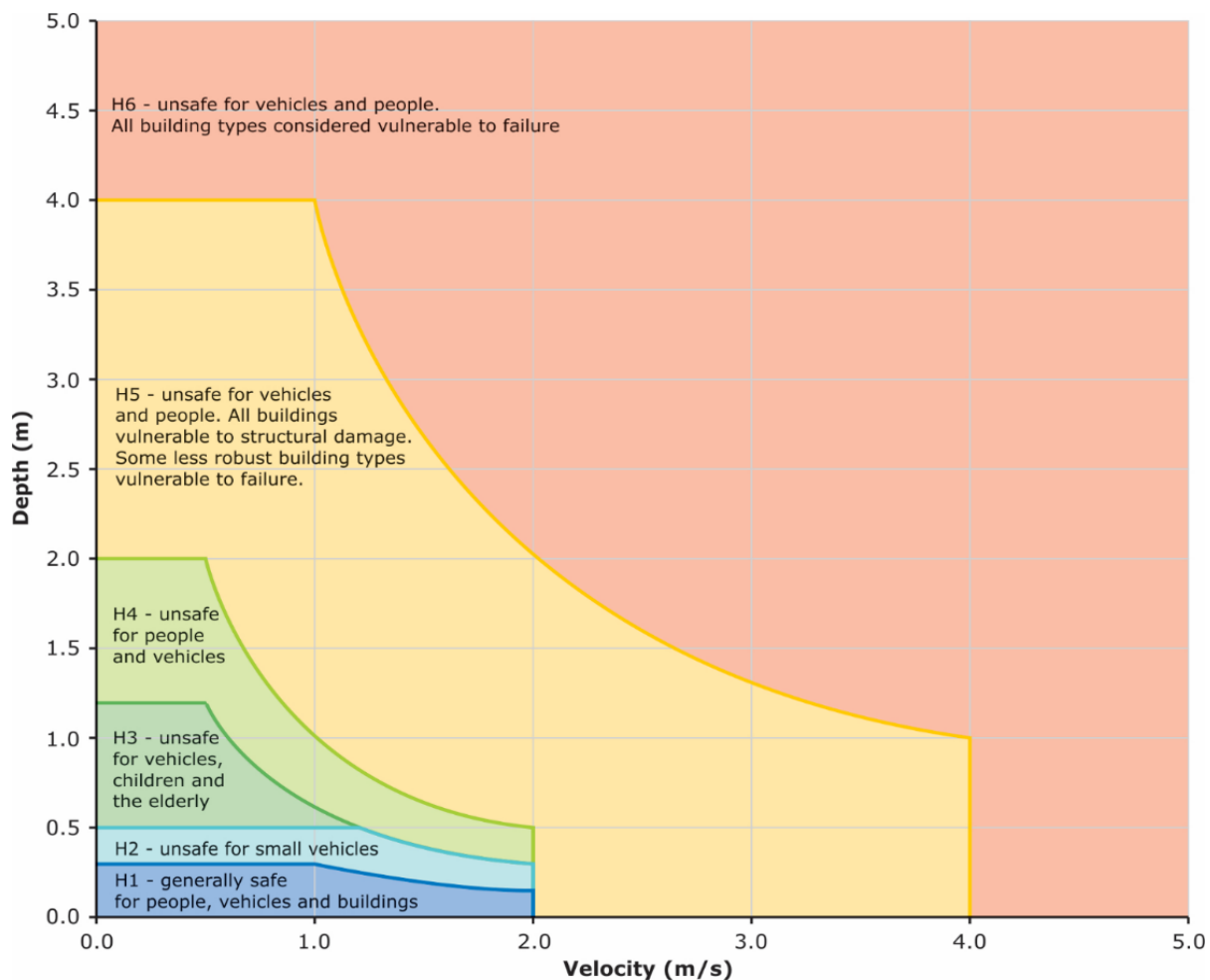


Figure 7. Hazard Categories Australian Disaster and Resilience Handbook

4.1 Tolerable Risk

Flood analysis for 11 Eularminner Street, Carlton shows that the proposed house and driveway are located within an overland flow path with moderate flood depths. Most of the area is rated as H3 hazard under the 1% AEP plus climate change scenario, meaning floodwaters in this location are unsafe for vehicles, children, and the elderly. While this rating indicates a manageable risk, local flow conditions still need to be carefully addressed in the design and construction of the development.

Flood depths and velocities on the lot may still cause erosion, sediment movement, and carry debris or vehicles during storm events. To reduce these risks, all parts of the structure must be built to handle water pressure, buoyancy, and flow forces. Construction methods should use flood-resistant materials and designs that limit damage and keep the structure stable during flooding. Bollards and a chain barrier must be installed along the driveway and boundary with No. 9 Eularminner Street to prevent vehicles from being moved into the neighbouring property during a 1% AEP flood.

If these structural measures are followed, the proposed dwelling, classified as a Class 1a habitable building under the BCA 2019, is expected to maintain an acceptable level of flood risk over its 50-year design life. However, this depends on full compliance with the report's recommendations, including proper construction practices, site grading, and resilient design. To further reduce risk to future occupants, a shelter-in-place strategy should be adopted, requiring residents to remain safely inside the building until floodwaters drop to safe evacuation levels.

Table 7 TPS C12.5.1 Uses within a flood prone area

C12.5.1 Uses within a flood prone area			
Objectives: That a habitable building can achieve and maintain a tolerable risk from flood			
Performance Criteria			
P1.1		P1.1	
A change of use that, converts a non-habitable building to a habitable building, or a use involving a new habitable room within an existing building, within a flood-prone hazard area must have a tolerable risk, having regard to:		Response from flood report	
(a)	the location of the building;	(a)	Proposed new dwelling at 11 Eularminner Street, Carlton, within a slow moving overland flood path.
(b)	the advice in a flood hazard report;	(b)	Assuming recommendations of this report are implemented along with the recommended finished floor levels, no additional flood protection measures required for the life expectancy of a habitable building.
(c)	any advice from a state authority, regulated entity or a council;	(c)	N/A
P1.2		P1.2	
A flood hazard report also demonstrates that:		Response from flood report	
(a)	any increase in the level of risk from flood does not require any specific hazard reduction or protection measures;	(a)	No increase in level of risk from pre-development scenario.
(b)	the use can achieve and maintain a tolerable risk from a 1% annual exceedance probability flood event for the intended life of the use without requiring any flood protection measures	(b)	Maximum hazard rating at the proposed development is at H3.

Table 8. TPS C12.6.1 Building and works within a flood-prone hazard area

C12.6.1 Building and works within a flood-prone hazard area			
Objective: (a) building and works within a flood-prone hazard area can achieve and maintain a tolerable risk from flood; and (b) buildings and works do not increase the risk from flood to adjacent land and public infrastructure.			
Performance Criteria			
P1.1		P1.1	
Buildings and works within a flood-prone hazard area must achieve and maintain a tolerable risk from a flood, having regard to:		Response from flood report	
(a)	the type, form, scale and intended duration of the development;	(a)	Proposed new dwelling development.
(b)	whether any increase in the level of risk from flood requires any specific hazard reduction or protection measures;	(b)	No increase in level of risk observed following the development.
(c)	any advice from a state authority, regulated entity or a council; and	(c)	N/A
(d)	the advice contained in a flood hazard report.	(d)	Flood report and recommendations provided within.
Performance Criteria			
P1.2		P1.2	
A flood hazard report also demonstrates that the building and works:		Response from Flood Report	
(a)	do not cause or contribute to flood on the site, on adjacent land or public infrastructure; and	(a)	There is no increase in the level of risk within the lot, adjacent land and to surrounding infrastructure.
(b)	can achieve and maintain a tolerable risk from a 1% annual exceedance probability flood event for the intended life of the use without requiring any flood protection measures.	(b)	Can achieve tolerable risk without mitigation measures provided the minimum floor level recommendations are followed.

5. Conclusion

The flood modelling and assessment for 11 Eularminner Street, Carlton confirms that the proposed development can proceed with moderated flood risk, provided that all design and construction measures outlined in this report are followed.

- Under pre-development conditions, the site experiences shallow overland flow and ponding primarily in the central and northern sections of the lot. Flood depths remain mostly under 0.30 m, with localised depressions reaching up to 0.58 m. Flow velocities are low (0.1–0.4 m/s), and the entire site falls within the H1–H3 hazard range, indicating present but manageable flood risk.
- Post-development modelling shows that the proposed dwelling and associated works maintain the existing overland flow path. Slight increases in flood depth are observed (up to 0.59 m), with velocities remaining below 0.4 m/s. These changes do not result in increased flood impact on neighbouring properties or internal flow concentration. The hazard classification remains unchanged at H1–H3.
- The habitable floor level of the proposed dwelling has been designed to comply with the Building Regulations 2016 (S.54), setting the finished floor level (FFL) at 2.3 m AHD, 300 mm above the modelled 1% AEP + CC (2100) flood level of 2.0 m AHD.
- Structural design measures, including flood-resistant materials, hydrostatic and hydrodynamic load considerations, and barriers to prevent vehicle displacement, are required to ensure long-term resilience of the development. The proposed installation of bollards and a chain barrier along the boundary with 9 Eularminner Street is necessary to control flood-driven vehicle movement.
- The development does not introduce adverse flood impacts to adjacent properties, and site-specific flood behaviour remains consistent with pre-development conditions.
- Given the flood characteristics and hazard ratings, a shelter-in-place approach is recommended. Occupants should remain indoors during flood events until water levels recede to safe evacuation thresholds, as advised by emergency services.

6. Recommendations

Based on the outcomes of the hydraulic modelling and flood hazard assessment for 11 Eularminner Street, Carlton, the following recommendations are made to ensure the proposed development meets acceptable flood risk standards:

- The habitable floor level must be set no lower than 2.3 m AHD. This allows a minimum 300 mm freeboard above the modelled 1% AEP + climate change (Year 2100) flood level of 2.0 m AHD, as required under the Building Regulations 2016 (Section 54).
- All structural elements of the proposed dwelling must be designed to resist hydrostatic and hydrodynamic forces, including water pressure, buoyancy, and flow impact. Construction should incorporate flood-resistant materials and design strategies suited for prolonged water exposure.
- Bollards and a chain barrier must be installed along the driveway and the shared boundary with No. 9 Eularminner Street to prevent vehicle movement during flood events, reducing the risk of property damage and off-site impacts.
- Site grading must direct overland flow away from habitable areas and into designated drainage paths. The reshaping of local surface depressions should avoid creating concentrated flow or increasing ponding.
- A shelter-in-place emergency response plan should be adopted, with future occupants advised to remain indoors during flood events until floodwaters recede to safe evacuation levels, unless directed otherwise by emergency services.

- Ensure that the overland flow path remains unobstructed over time. Landscaping, fencing, and future works underneath sub-floor must not block or divert surface flows.
- All construction and flood mitigation measures must meet Sorell Council requirements and align with the Tasmanian Planning Scheme 2021 (C12.0) and Building Code of Australia provisions for flood-affected areas.

7. Limitations

This Flood Hazard Report has been prepared by Flüssig Engineers for **CMH Industries Pty Ltd**, for the proposed residential development at 11 Eularminner Street, Carlton. The assessment has been carried out in accordance with the requirements of Clauses C12.5.1 and C12.6.1 of the Tasmanian Planning Scheme – Sorell 2021, and is based on the site conditions, development layout, and available information at the time of assessment.

The findings, modelling results, and recommendations presented in this report are specific to the proposed development layout, finished floor levels, and surrounding catchment conditions as understood at the time of reporting. Should any modifications occur to the site layout, building location, surface levels, drainage infrastructure, or relevant design parameters, this report may no longer reflect the actual flood behaviour or hazard conditions. In such cases, a revised flood assessment must be undertaken to ensure ongoing compliance with flood risk provisions and regulatory requirements.

This document must be read and used in full. It must not be quoted, reproduced, or relied upon in part, or for any purpose other than that specifically outlined in this report, without the prior written consent of Flüssig Engineers.

This report relies on supporting information such as site surveys, development plans, and background flood data provided by third parties. Flüssig Engineers accepts no responsibility for the accuracy or completeness of third-party information used in this assessment. The conclusions drawn are based solely on the assumptions and data available at the time of modelling.

No liability will be accepted by Flüssig Engineers for any use of this report beyond the original scope or intended purpose, particularly where used to support alternate developments, planning applications, or design changes not assessed within this study.

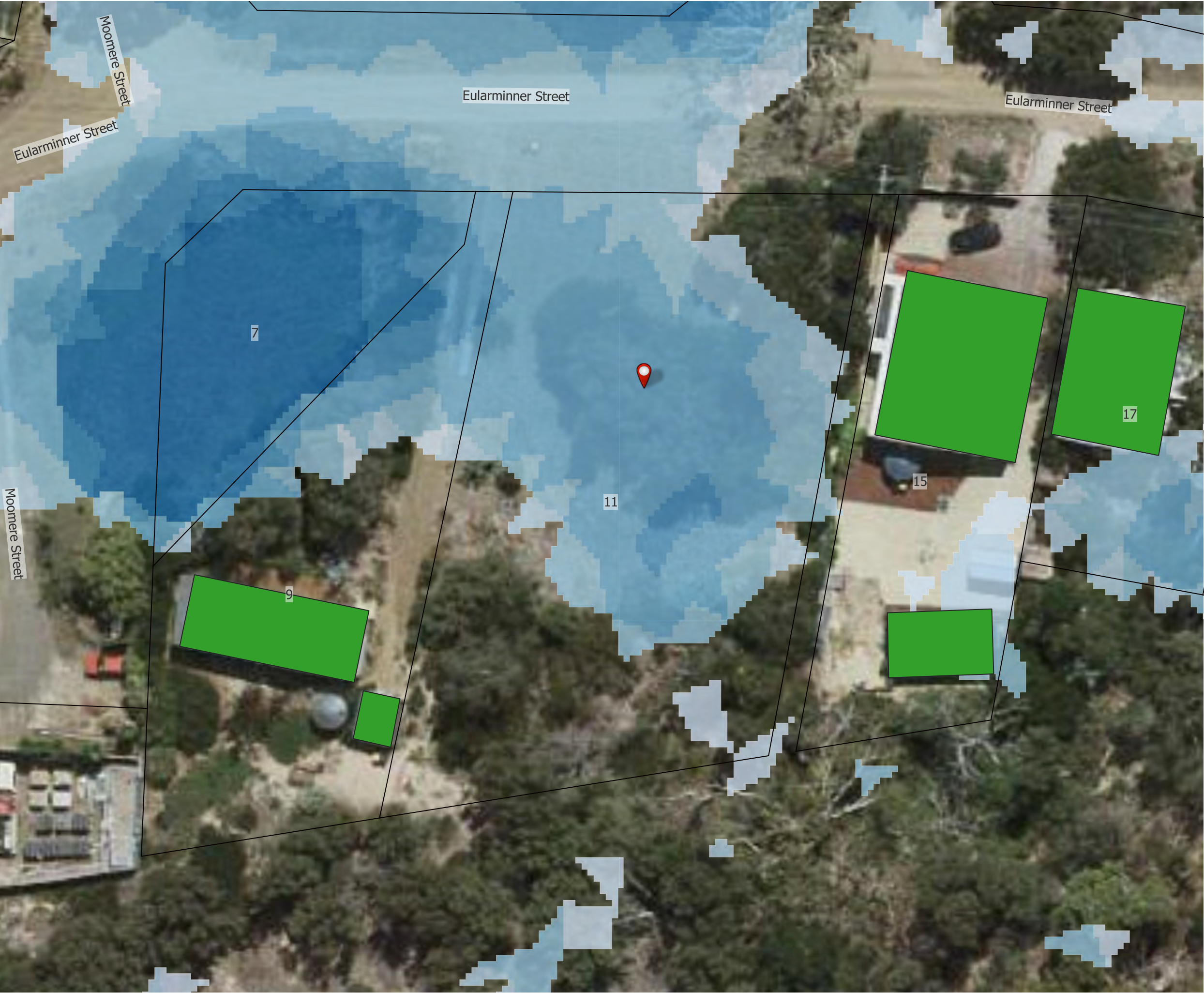
8. References

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9. Appendices

Appendix A Flood Maps


PRE 1% AEP + CC @2100



Legend











 11 Eularminner Street

— Boundary Lines

 Building Areas

PRE 1% AEP + CC @2100

Depth (m)

-  <= 0.03
-  0.03 - 0.05
-  0.05 - 0.10
-  0.10 - 0.30
-  0.30 - 0.60
-  0.60 - 0.80
-  0.80 - 1.00
-  1.00 - 1.50
-  1.50 - 2.00
-  > 2.00



0 9 18 m

meters



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PRE 1% AEP + CC @2100



Legend

11 Eularminner Street

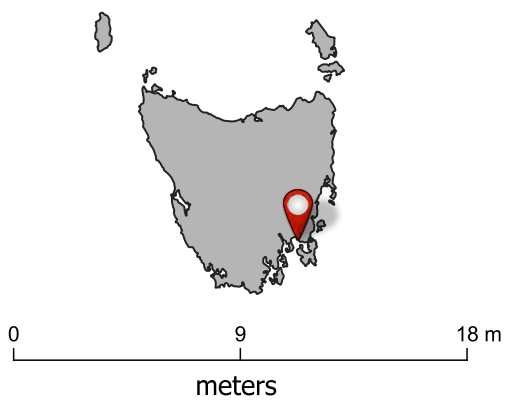
Boundary Lines

Building Areas

PRE 1% AEP + CC @2100

Velocity (m/s)

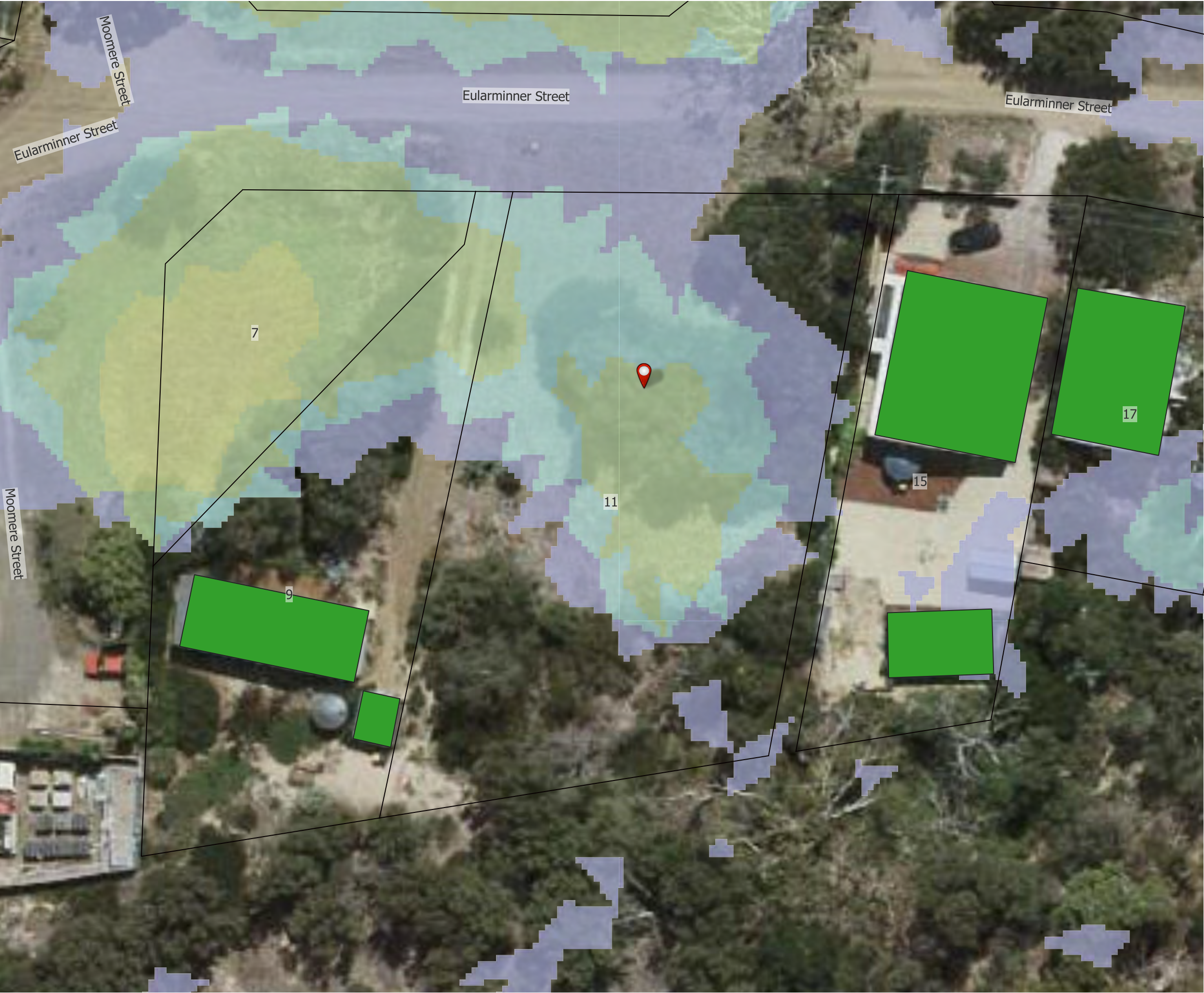
	≤ 0.50
	0.50 - 1.00
	1.00 - 1.50
	1.50 - 2.00
	> 2.00



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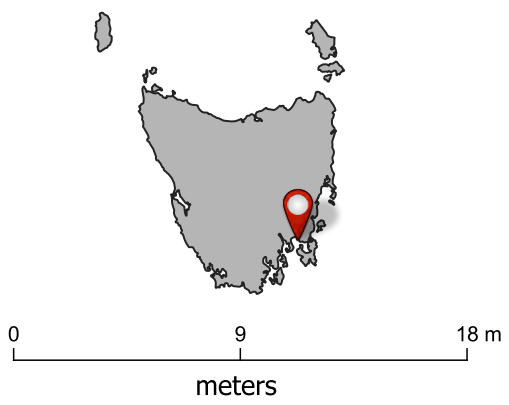
— Boundary Lines

Building Areas

PRE 1% AEP + CC @2100

Hazard

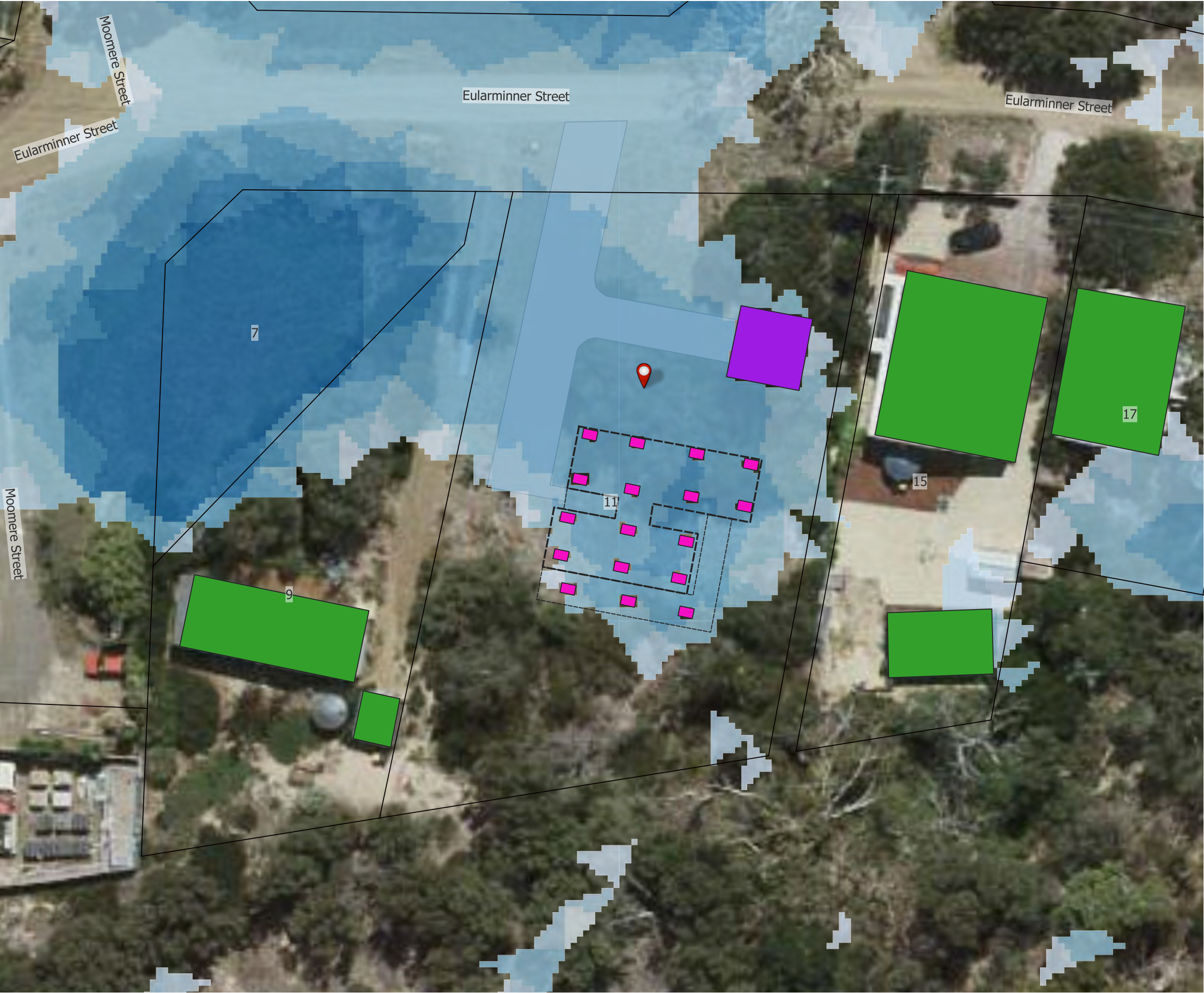
- H1
- H2
- H3
- H4
- H5
- H6



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Legend

11 Eularminner Street

- Boundary Lines
- Building Areas
- Proposed Building Over
- Proposed Piers
- Proposed Shed
- Proposed Driveway

POST 1% AEP + CC @2100

Depth (m)

- <= 0.03
- 0.03 - 0.05
- 0.05 - 0.10
- 0.10 - 0.30
- 0.30 - 0.60
- 0.60 - 0.80
- 0.80 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00



0 9 18 m
meters



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Legend

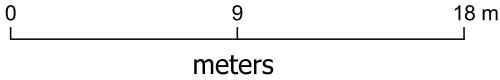
11 Eularminner Street

- Boundary Lines
- Building Areas
- Proposed Building Over
- Proposed Piers
- Proposed Shed
- Proposed Driveway

POST 1% AEP + CC @2100

Velocity (m/s)

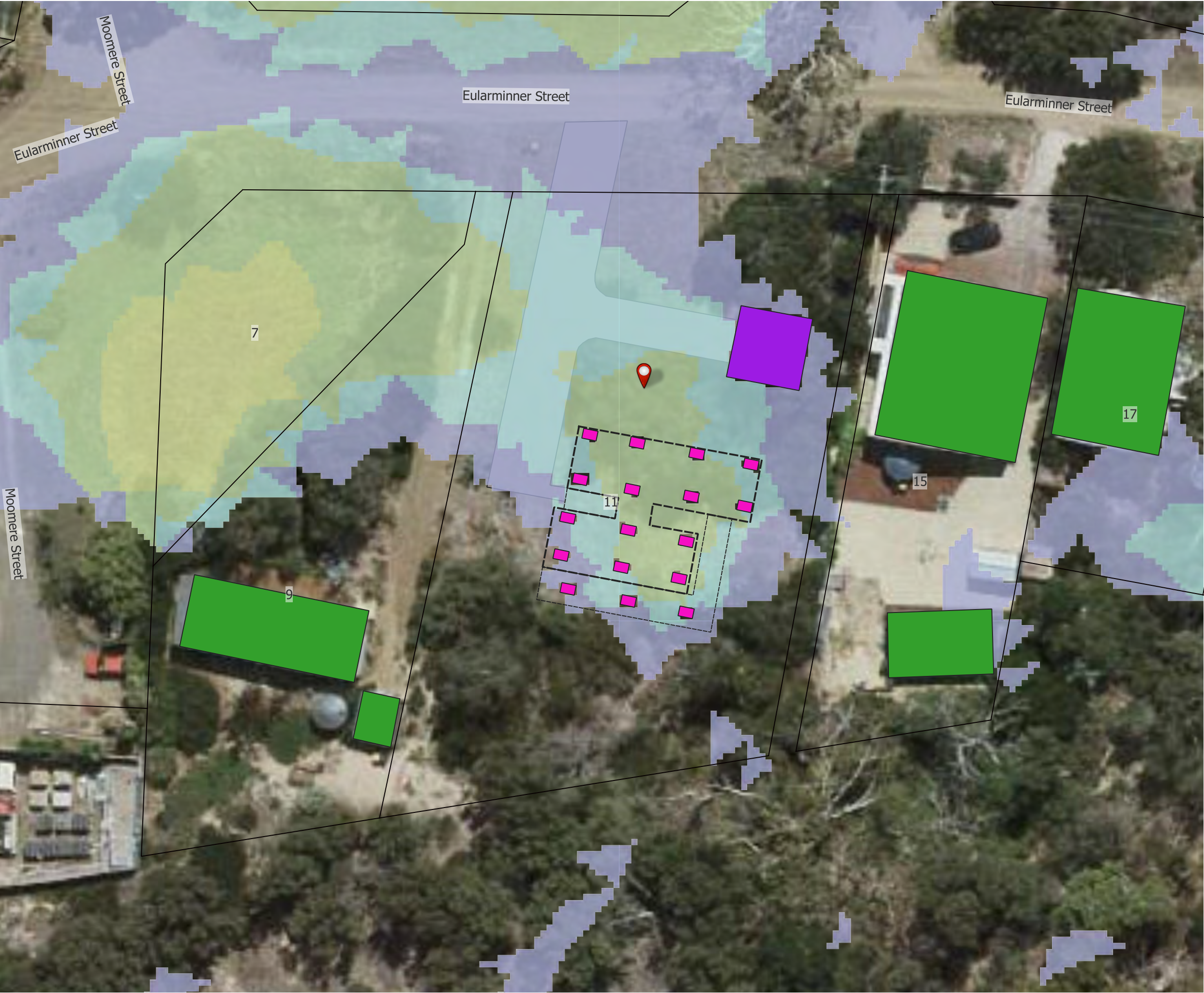
- <= 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00



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Legend

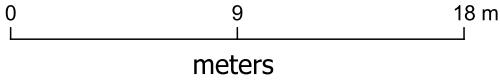
11 Eularminner Street

- Boundary Lines
- Building Areas
- Proposed Building Over
- Proposed Piers
- Proposed Shed
- Proposed Driveway

POST 1% AEP + CC @2100

Hazard

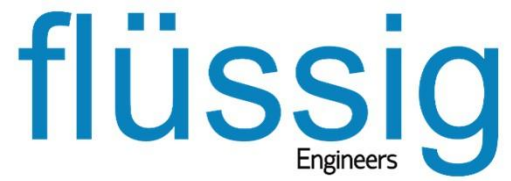
- H1
- H2
- H3
- H4
- H5
- H6



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STORMWATER ASSESSMENT

11 Eularminner Street

Carlton

July 2025



GEO-ENVIRONMENTAL

S O L U T I O N S

Disclaimer: The author does not warrant the information contained in this document is free from errors or omissions. The author shall not in any way be liable for any loss, damage or injury suffered by the User consequent upon, or incidental to, the existence of errors in the information.

Investigation Details

Client:	CMH Industries Pty Ltd
Site Address:	11 Eularminner Street, Carlton
Date of Inspection:	10/06/2025
Proposed Works:	New house
Investigation Method:	Hand Auger
Inspected by:	C. Cooper

Site Details

Certificate of Title (CT):	84583/2
Title Area:	Approx. 1476 m ²
Applicable Planning Overlays:	Bushfire-prone areas, Flood-prone Areas
Slope & Aspect:	1° N facing slope
Vegetation:	Grass & Weeds

Background Information

Geology Map:	MRT
Geological Unit:	Quaternary Sediments
Climate:	Annual rainfall 500mm
Water Connection:	Tank
Sewer Connection:	Unserviced-On-site required
Testing and Classification:	Onsite Stormwater Retention

Investigation

A number of bore holes were completed to identify the distribution and variation of the soil materials at the site, bore hole locations are indicated on the site plan. See soil profile conditions presented below. Tests were conducted across the site to obtain bearing capacities of the material at the time of this investigation.

Soil Profile Summary

BH1 Depth (m)	BH2 Depth (m)	USCS	Description
0.00-0.40	0.00-0.20	SP	SAND: dark grey, slightly moist, loose,
0.40-0.70	0.20-0.60	SP	SAND: light grey, slightly moist, loose,
0.70-1.00	0.60-0.80	SP	SAND: pale brown, moist to wet, medium dense,
1.00-1.2+	0.80-1.2+	SP	SAND: grey, wet, medium dense, no refusal

Site Notes

The soil onsite has formed from Quaternary sediments and consist of relatively deep sandy profiles. A watertable was encountered at approx. 0.7m in BH1 and 0.6m in BH2.

Soil Conditions

The soil on site has developed from Quaternary sediments and consists of deep sandy profiles. The soil has an estimated permeability of approximately 3-5m/day

GES have identified the following at the site:

- The site has a <5% grade and presents a low risk to slope stability and landslip.
- There are no proposals for cuts or changes of grade which may impact on any proposed onsite stormwater absorption.
- The soil onsite has been identified as comprising of sands. No soil dispersion was identified.
- A water table was observed between 0.6-0.7m at the time of the investigation
- There is a low risk of the natural soils being impacted by contamination
- No bedrock was encountered

Soil Dispersion

The soil is non-dispersive.

Existing Conditions and Assumptions

The site covers an area of approximately 1476m² with a total roof area of approx. 186m² consisting of a proposed dwelling with roof area of approx. 150m² and a proposed shed with roof area approx. 36m².

There is no public stormwater system that the property can connect to, and it is therefore it is proposed that stormwater from the site would be routed through the proposed conventional underground drainage system comprising of Grated Sumps and PVC Pipes, coupled with tank detention and soakage trench elements for on-site detention.

The stormwater management report is prepared in accordance with the design criteria listed below:

- The stormwater drainage system is designed using Bureau of Meteorology (BOM) published rainfall Intensity Frequency Duration (IFD) data as a minor / major system to accommodate the 5% AEP / 20 min storm events.
- The flow rate of stormwater leaving the site shall be designed so that it does not exceed the pre-developed flow rate for both the minor and major rain events.
- The total site discharges are modelled as described in *Storm Drainage Design in Small Urban Catchments*, a handbook for Australian practice by *Australian Rainfall and Runoff (ARR2019)*, Book 9 – Runoff in Urban Areas.

Detention Calculations

Detention calculations area provided in Appendix A

Summary and Conclusions

- Detention design to be adopted as per design and documentation.
- The designed solution complies with the performance solution design check carried out.
- The 12m² base (6m x 2m), 0.45m deep soakage trench is designed over a 20-minute storm duration for proposed development based on the use of a rainwater tank with a minimum of 3000L detention required
- DN100 slotted PVC pipe with geotextile covering on top of aggregate to be installed within the soakage trench.

It is also recommended that regular inspection and maintenance is conducted to ensure the stormwater system is operating without obstruction. A schematic of recommended checks is attached.

GES Stormwater Maintenance Plan Checklist

Indicative frequency	Inspection and criteria	Maintenance activities (where required)
Annual	Check whether any tree branches overhang the roof or are likely to grow to overhang the roof	If safe and where permitted, consider pruning back any overhanging branches
	Check that access covers to storage tanks are closed	Secure any open access covers to prevent risk of entry
	Check that screens on inlets, overflows and other openings do not have holes and are securely fastened	Repair any defective screens to keep out mosquitoes
	Inspect tank water for presence of rats, birds, frogs, lizards or other vermin or insects	Remove any infestations, identify point of entry and close vermin and insect-proof mesh
	Inspect tank water for presence of mosquito larvae (inspect more frequently in sub-tropical and tropical northern Australia, based on local requirements)	Identify point of entry and close with insect-proof mesh with holes no greater than 1.6 mm in diameter
	Inspect gutters for leaf accumulation and ponding	Clean leaves from gutters-remove more regularly if required. If water is ponding, repair gutter to ensure water flows to downpipe
	Check signage at external roof water taps and that any removable handle taps are being properly used	Replace or repair the missing or damaged signage and fittings
	Check plumbing and pump connections are watertight/without leakage	Repair any leaks as necessary
	Check suction strainers, in-line strainers and pump location for debris	Clean suction strainers, in-line strainers or debris from pump location
	Check pump installation is adequate for reliable ongoing operation	Modify and repair as required
	Check first flush diverter, if present	Clean first flush diverter, repair and replace if necessary
	Check health of absorption trench area and surrounding grass or plants	Investigate any adverse impacts observed that might be due to irrigation
	Check condition of roof and coatings	Investigate and resolve any apparent changes to roof condition, such as loss of material coatings
Triennial	Drain, clean out and check the condition of the tank walls and roof to ensure no holes have arisen due to tank deterioration	Repair any tank defects

	Check sediment levels in the tank	Organise a suitable contractor to remove accumulated sediment if levels are approaching those that may block tank outlets
	Undertake a systematic review of operational control of risks to the system	Identify the reason for any problems during inspections and take actions to prevent failures occurring in future
After 20 years and then every 5 years	Monitor the effectiveness of the stormwater absorption area to assess for any clogging due to algal growth, or blocking due to tree roots/grass growth/trench failure.	Clean or replace clogged equipment
Ongoing	Inspect and follow up on any complaints or concerns raised that could indicate problems with the system	Repair or replace any problems that are notified

APPENDIX A: STORMWATER DETENTION CALCULATIONS

STORAGE TRENCH							
Hydrology							
Total Catchment Area		186	m ²				
Runoff Coefficient		1					
Annular Recurrence Interval (ARI)		20	yr				
Ground Conditions							
Hydraulic conductivity (K)		5.000	m/day				
		3.470	mm/min				
Adjusted Rate (15% clogging factor)		2.950	mm/min				
Trench Design							
Length		6	m				
Width		2	m				
Depth		0.45	m				
Infiltration Area		12	m ²				
Porosity		0.35	%				
Trench Storage		1.9	m ³				
		1890	L				
Detention tank data				Final Check			
Tank Storage		3	m ³	Criteria	Requirement	Design	Check
Tank Underflow		0.734	L/s	Total Detention needed	2340	4890	OK
Tank Underflow		44.04	L/min	Trench Capacity underflow for 5% AEP 20-minute storm	1399	1890	OK
Total Available storage		4.9	m ³				
		4890	L				

STORM CHECK					
Storm Duration	Intensity	Inflow Volume	Outflow Volume	Required Storage	Emptying time
	(mm/hr)	(m ³)	(L)	(L)	(hr)
1 min	142	440	35	405	0.19
2 min	113	701	71	630	0.30
3 min	102	949	106	842	0.40
4 min	93.7	1162	142	1020	0.48
5 min	87.2	1352	177	1175	0.55
10 min	65.7	2037	354	1683	0.79
15 min	53.4	2483	531	1952	0.92
20 min	45.4	2815	708	2107	0.99
25 min	39.8	3085	885	2200	1.04
30 min	35.7	3320	1062	2258	1.06
45 min	27.8	3878	1593	2285	1.08
1 hour	23.3	4334	2124	2210	1.04
1.5 hour	18.3	5106	3185	1920	0.90
2 hour	15.5	5766	4247	1519	0.72
3 hour	12.3	6863	6371	492	0.23
4.5 hour	9.98	8353	9556	-	-
6 hour	8.62	9620	12742	-	-
9 hour	7.03	11768	19113	-	-
12 hour	6.06	13526	25484	-	-
18 hour	4.87	16305	38226	-	-
24 hour	4.11	18347	50967	-	-
30 hour	3.56	19865	63709	-	-
36 hour	3.15	21092	76451	-	-
48 hour	2.55	22766	101935	-	-
72 hour	1.83	24507	152902	-	-
			Full volume	1890	1.08
Notes:					
Inflow volume calculated using Equation 10.1 (WSUD Guidelines: Chapter 10)					
Outflow volume calculated using Equation 10.2 (WSUD Guidelines: Chapter 10)					
Required storage and emptying time is left blank when outflow volume exceeds inflow volume					

Location

Label: 11 Eularminner Street, Carlton
Easting: 552211
Northing: 5253202
Zone: 55
Latitude: Nearest grid cell: 42.8625 (S)
Longitude: Nearest grid cell: 147.6375 (E)



IFD Design Rainfall Intensity (mm/h)

Issued: 07 July 2025

Rainfall intensity for Durations, Exceedance per Year (EY), and Annual Exceedance Probabilities (AEP).
[FAQ for New ARR probability terminology](#)

Table

Chart

Unit: **mm/h** ▼

Duration	Annual Exceedance Probability (AEP)						
	63.2%	50%#	20%*	10%	5%	2%	1%
1 min	64.8	72.9	100	121	142	172	198
2 min	55.1	61.5	82.5	97.5	113	131	145
3 min	48.9	54.7	73.9	87.6	102	119	133
4 min	44.2	49.6	67.5	80.4	93.7	111	125
5 min	40.6	45.6	62.3	74.5	87.2	105	119
10 min	29.6	33.3	46.1	55.6	65.7	80.5	93.0
15 min	23.9	27.0	37.4	45.1	53.4	65.6	76.0
20 min	20.5	23.1	31.9	38.5	45.4	55.7	64.3
25 min	18.1	20.4	28.0	33.8	39.8	48.6	55.9
30 min	16.3	18.4	25.2	30.3	35.7	43.3	49.7
45 min	13.0	14.6	19.9	23.8	27.8	33.3	37.8
1 hour	11.1	12.5	16.9	20.0	23.3	27.7	31.1
1.5 hour	8.91	9.99	13.4	15.8	18.3	21.4	23.8
2 hour	7.65	8.57	11.5	13.5	15.5	18.0	19.9
3 hour	6.19	6.95	9.29	10.8	12.3	14.3	15.7
4.5 hour	5.02	5.65	7.56	8.80	9.98	11.5	12.6
6 hour	4.31	4.87	6.54	7.62	8.62	9.96	11.0
9 hour	3.46	3.93	5.32	6.20	7.03	8.18	9.04
12 hour	2.94	3.34	4.56	5.34	6.06	7.10	7.88
18 hour	2.29	2.62	3.61	4.26	4.87	5.76	6.44
24 hour	1.89	2.17	3.02	3.58	4.11	4.90	5.50
30 hour	1.62	1.86	2.60	3.09	3.56	4.27	4.82
36 hour	1.41	1.62	2.28	2.72	3.15	3.79	4.28
48 hour	1.13	1.30	1.83	2.20	2.55	3.08	3.49
72 hour	0.808	0.929	1.31	1.57	1.83	2.21	2.51
96 hour	0.631	0.724	1.02	1.22	1.41	1.70	1.94
120 hour	0.520	0.595	0.831	0.989	1.14	1.38	1.56
144 hour	0.445	0.509	0.704	0.833	0.956	1.15	1.31
168 hour	0.391	0.447	0.614	0.720	0.820	0.985	1.12

Note:

The 50% AEP IFD **does not** correspond to the 2 year Average Recurrence Interval (ARI) IFD. Rather it corresponds to the 1.44 ARI.

* The 20% AEP IFD **does not** correspond to the 5 year Average Recurrence Interval (ARI) IFD. Rather it corresponds to the 4.48 ARI.

Location: Carlton
Site: 186m² with tc = 20 and tcs = 15 mins.
PSD: AEP of 5%, Above ground PSD = 0.73L/s
Storage: AEP of 5%, Above ground volume = 2.34m³

Design Criteria (Custom AEP IFD data used)

Location = Carlton
Method = E (A)RI 2001,A(E)P 2019

PSD annual exceedance probability (APE) = 5 %
Storage annual exceedance probability (APE) = 5 %

Storage method = A (A)bove,(P)ipe,(U)nderground,(C)ustom

Site Geometry

Site area (As) = 186 m² = 0.0186 Ha
Pre-development coefficient (Cp) = 0.30
Post development coefficient (Cw) = 1.00

Total catchment (tc) = 20 minutes
Upstream catchment to site (tcs) = 15 minutes

Coefficient Calculations

Pre-development				Post development			
Zone	Area (m ²)	C	Area * C	Zone	Area (m ²)	C	Area * C
Concrete	0	0.90	0	Concrete	0	0.90	0
Roof	0	1.00	0	Roof	186	1.00	186
Gravel	0	0.50	0	Gravel	0	0.50	0
Garden	186	0.30	56	Garden	0	0.30	0
Total	186	m²	56	Total	186	m²	186
Cp = $\Sigma \text{Area} * C / \text{Total} = 0.300$				Cw = $\Sigma \text{Area} * C / \text{Total} = 1.000$			

Permissible Site Discharge (PSD) (AEP of 5%)

PSD Intensity (I) = 45.4 mm/hr For catchment tc = 20 mins.
Pre-development (Qp = Cp*I*As/0.36) = 0.70 L/s
Peak post development (Qa = 2*Cw*I*As/0.36) = 4.69 L/s =(0.103 x I) Eq. 2.24

Storage method = A (A)bove,(P)ipe,(U)nderground,(C)ustom
Permissible site discharge (Qu = PSD) = 0.734 L/s

Above ground - Eq 3.8

$$0 = \text{PSD}^2 - 2 * Q_a / t_c * (0.667 * t_c * Q_p / Q_a + 0.75 * t_c + 0.25 * t_{cs}) * \text{PSD} + 2 * Q_a * Q_p$$

Taking x as = PSD and solving

$$a = 1.0 \quad b = -9.7 \quad c = 6.6$$

$$\text{PSD} = \frac{-b \pm \sqrt{b^2 - 4ac}}{(2a)}$$

$$\text{PSD} = 0.734 \text{ L/s}$$

Below ground pipe - Eq 3.3

$$Q_p = \text{PSD} * [1.6 * t_{cs} / \{t_c * (1 - 2 * \text{PSD} / (3 * Q_a))\} - 0.6 * t_{cs}^{2.67} / \{t_c * (1 - 2 * \text{PSD} / (3 * Q_a))\}^{2.67}]$$

$$= 0.70$$

$$\text{PSD} = 0.729 \text{ L/s}$$

Below ground rectangular tank - Eq 3.4

$$t = t_{cs} / (t_c * (1 - 2 * \text{PSD} / (3 * Q_a))) = 0.834$$

$$Q_p = \text{PSD} * [0.005 - 0.455 * t + 5.228 * t^2 - 1.045 * t^3 - 7.199 * t^4 + 4.519 * t^5]$$

$$= 0.70$$

$$\text{PSD} = 0.707 \text{ L/s}$$

Design Storage Capacity (AEP of 5%)

$$\begin{aligned} \text{Above ground (Vs)} &= [0.5 \cdot Q_a \cdot t_d - [(0.875 \cdot \text{PSD} \cdot t_d)(1 - 0.917 \cdot \text{PSD}/Q_a) + (0.427 \cdot t_d \cdot \text{PSD}^2/Q_a)]] \cdot 60/10^3 \text{ m}^3 & \text{Eq 4.23} \\ \text{Below ground pipe (Vs)} &= [(0.5 \cdot Q_a - 0.637 \cdot \text{PSD} + 0.089 \cdot \text{PSD}^2/Q_a) \cdot t_d] \cdot 60/10^3 \text{ m}^3 & \text{Eq 4.8} \\ \text{Below ground rect. tank (Vs)} &= [(0.5 \cdot Q_a - 0.572 \cdot \text{PSD} + 0.048 \cdot \text{PSD}^2/Q_a) \cdot t_d] \cdot 60/10^3 \text{ m}^3 & \text{Eq 4.13} \end{aligned}$$

td (mins)	I (mm/hr)	Qa (L/s)	Above Vs (m³)	Pipe Vs (m³)	B/G Vs (m³)
5	87.2	9.0	1.17		
16	51.5	5.3	1.98		
22	43.0	4.4	2.14		
28	37.2	3.8	2.24		
34	33.0	3.4	2.29		
39	30.4	3.1	2.32		
45	27.8	2.9	2.33		
51	25.7	2.7	2.34		
56	24.3	2.5	2.33		
62	22.8	2.4	2.32		

Table 1 - Storage as function of time for AEP of 5%

Type	td (mins)	I (mm/hr)	Qa (L/s)	Vs (m³)
Above	49.3	26.3	2.7	2.34
Pipe				
B/ground				

Table 2 - Storage requirements for AEP of 5%

Frequency of operation of Above Ground storage

$$\begin{aligned} Q_{p2} &= 0.75 \text{ CI 2.4.5.1} \\ Q_{p2} &= Q_{p2} \cdot Q_{p1} \text{ (where } Q_{p1} = \text{PSD)} = 0.55 \text{ L/s at which time above ground storage occurs} \\ I &= 360 \cdot Q_{p2} / (2 \cdot C_w \cdot A_s \cdot 10^3) = 5.3 \text{ mm/h} & \text{Eq 4.24} \end{aligned}$$

Period of Storage

Time to Fill:

$$\begin{aligned} \text{Above ground (tf)} &= t_d \cdot (1 - 0.92 \cdot \text{PSD}/Q_a) & \text{Eq 4.27} \\ \text{Below ground pipe (tf)} &= t_d \cdot (1 - 2 \cdot \text{PSD}/(3 \cdot Q_a)) & \text{Eq 3.2} \\ \text{Below ground rect. tank (tf)} &= t_d \cdot (1 - 2 \cdot \text{PSD}/(3 \cdot Q_a)) & \text{Eq 3.2} \end{aligned}$$

Time to empty:

$$\begin{aligned} \text{Above ground (te)} &= (V_s + 0.33 \cdot \text{PSD}^2 \cdot t_d / Q_a \cdot 60/10^3) \cdot (1.14 / \text{PSD}) \cdot (10^3/60) & \text{Eq 4.28} \\ \text{Below ground pipe (te)} &= 1.464 / \text{PSD} \cdot (V_s + 0.333 \cdot \text{PSD}^2 \cdot t_d / Q_a \cdot 60/10^3) \cdot (10^3/60) & \text{Eq 4.32} \\ \text{Below ground rect. tank (te)} &= 2.653 / \text{PSD} \cdot (V_s + 0.333 \cdot \text{PSD}^2 \cdot t_d / Q_a \cdot 60/10^3) \cdot (10^3/60) & \text{Eq 4.36} \end{aligned}$$

$$\text{Storage period (Ps = tf + te)} \quad \text{Eq 4.26}$$

Type	td (mins)	Qa (L/s)	Vs (L/s)	tf (mins)	te (mins)	Ps (mins)
Above	49.3	2.7	2.3	37.0	65.5	102.6
Pipe						
B/ground						

Table 3 - Period of Storage requirements for AEP of 5%

Orifice

$$\begin{aligned} \text{Permissible site discharge (Qu=PSD)} &= 0.73 \text{ L/s (Above ground storage)} \\ \text{Orifice coefficient (CD)} &= 0.61 \text{ For sharp circular orifice} \\ \text{Gravitational acceration (g)} &= 9.81 \text{ m/s}^2 \\ \text{Maximum storage depth above orifice (H)} &= 150 \text{ mm} \\ \text{Orifice flow (Q)} &= CD \cdot A_o \cdot \sqrt{2 \cdot g \cdot H} \\ \text{Therefore:} \\ \text{Orifice area (Ao)} &= 701 \text{ mm}^2 \\ \text{Orifice diameter (D = } \sqrt{4 \cdot A_o / \pi} \text{)} &= 29.9 \text{ mm} \end{aligned}$$

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

To: Owner name
 Address
 Suburb/postcode

Form **35**

Designer details:

Name: Category:
Business name: Phone No:
Business address:
 Fax No:
Licence No: Email address:

Details of the proposed work:

Owner/Applicant Designer's project reference No.
Address: Lot No:

Type of work: Building work ☐ Plumbing work ☒ (X all applicable)

Description of work:

On-Site stormwater system - design

(new building / alteration /
addition / repair / removal /
re-erection
water / sewerage /
stormwater /
on-site wastewater
management system /
backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions): (X all applicable certificates)

Certificate Type:	Certificate	Responsible Practitioner
	<input type="checkbox"/> Building design	Architect or Building Designer
	<input type="checkbox"/> Structural design	Engineer or Civil Designer
	<input type="checkbox"/> Fire Safety design	Fire Engineer
	<input checked="" type="checkbox"/> Civil design	Civil Engineer or Civil Designer
	<input type="checkbox"/> Hydraulic design	Building Services Designer
	<input type="checkbox"/> Fire service design	Building Services Designer
	<input type="checkbox"/> Electrical design	Building Services Designer
	<input type="checkbox"/> Mechanical design	Building Service Designer
	<input type="checkbox"/> Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	<input type="checkbox"/> Other (specify)	

Deemed-to-Satisfy: ☐ Performance Solution: ☒ (X the appropriate box)

Other details:

Onsite stormwater retention

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by: Geo-Environmental Solutions	Date: Jul-25
Schedules:	Prepared by:	Date:
Specifications:	Prepared by: Geo-Environmental Solutions	Date: Jul-25
Computations:	Prepared by:	Date:
Performance solution proposals: Onsite stormwater retention	Prepared by: Geo-Environmental Solutions	Date: Jul-25
Test reports:	Prepared by: Geo-Environmental Solutions	Date: Jul-25

Standards, codes or guidelines relied on in design process:

AS3500 (Parts 0-5)-2013 Plumbing and drainage set.

Any other relevant documentation:


Stormwater Assessment - 11 Eularminner Street Carlton - Jul-25

Attribution as designer:

I Vinamra Gupta, am responsible for the design of that part of the work as described in this certificate;

The documentation relating to the design includes sufficient information for the assessment of the work in accordance with the *Building Act 2016* and sufficient detail for the builder or plumber to carry out the work in accordance with the documents and the Act;

This certificate confirms compliance and is evidence of suitability of this design with the requirements of the National Construction Code.

	<i>Name: (print)</i>	<i>Signed</i>	<i>Date</i>
Designer:	Vinamra Gupta		09/07/2025
Licence No:	685982720		

Assessment of Certifiable Works: (TasWater)

Note: single residential dwellings and outbuildings on a lot with an existing sewer connection are not considered to increase demand and are not certifiable.

If you cannot check ALL of these boxes, LEAVE THIS SECTION BLANK.

TasWater must then be contacted to determine if the proposed works are Certifiable Works.


I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- ☒ The works will not increase the demand for water supplied by TasWater
- ☒ The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- ☒ The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- ☒ The works will not damage or interfere with TasWater's works
- ☒ The works will not adversely affect TasWater's operations
- ☒ The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- ☒ I have checked the LISTMap to confirm the location of TasWater infrastructure
- ☒ If the property is connected to TasWater's water system, a water meter is in place, or has been applied for to TasWater.

Certification:

I Vinamra Gupta..... being responsible for the proposed work, am satisfied that the works described above are not Certifiable Works, as defined within the *Water and Sewerage Industry Act 2008*, that I have answered the above questions with all due diligence and have read and understood the Guidelines for TasWater CCW Assessments.

Note: the Guidelines for TasWater Certification of Certifiable Works Assessments are available at: www.taswater.com.au

	<i>Name: (print)</i>	<i>Signed</i>	<i>Date</i>
Designer:	Vinamra Gupta		09/07/2025

New Services

- STORMWATER PIPE WITH FLOW DIRECTION
- GRATED STORMWATER PIT 450x450 CLASS A ACO GALVANISED HEELGUARD OR SIMILAR ENGINEER APPROVED

Performance Solution Compliance Notes:

- AS 3500.3 - CL 7.10
- 7.10.1 - OVERFLOW IS SAFE AND DOES NOT COMPROMISE FREEBOARD TO HABITABLE SPACES.
- GENERAL
- AS/NZS 3500.3: PART 3 STORMWATER DRAINAGE AUSTRALIAN RAINFALL AND RUN-OFF VOLUME 8: URBAN STORMWATER MANAGEMENT
 - AUSTRALIAN RUNOFF QUALITY - A GUIDE TO WATER SENSITIVE URBAN DESIGN
 - STORM DRAINAGE DESIGN IN SMALL URBAN CATCHMENTS: A HANDBOOK FOR AUSTRALIAN PRACTICE
 - WATER SENSITIVE URBAN DESIGN (WSUD) ENGINEERING PROCEDURE: STORMWATER
 - WATER SERVICES ASSOCIATION OF AUSTRALIA CODE (WSAA)

Stormwater Services Notes:

- ALL SITE SAFETY & MANAGEMENT PROCEDURES SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF STATE GROWTH SPECIFICATIONS: SECTION 168 OCCUPATIONAL HEALTH AND SAFETY & SECTION 176 ENVIRONMENTAL MANAGEMENT.
- ALL PIPES UNDER TRAFFICABLE AREAS ARE TO BE BACKFILLED FULL DEPTH WITH 20 F.C.R. AND FULLY COMPACTED.
- ALL STORMWATER PIPES TO BE PVC-U-SWJ CLASS "SN8" TO AS1254 UNO.
- ALL DRAIN AND TRENCH CONSTRUCTION SHALL COMPLY WITH THE LGAT STANDARD DRG TSD G01.
- ANY EXCAVATED TRENCHES IN EXCESS OF 1.5M IN DEPTH ARE TO BE ADEQUATELY SHORED TO PREVENT COLLAPSE DURING WORKS.

THE NEW CROSSOVER IS TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH (IPWEA) LGAT- STANDARD DRAWINGS TSD R09-V1 URBAN ROADS & DRIVEWAYS & TSD R14-V1 TYPE KC VEHICULAR CROSSING AT DEVELOPER'S COST

CONCRETE SLAB TO ENGINEER'S DETAILS

CAR PARKING SPACE AT MAX GRADIENT 1: 20 PARALLEL TO PARKING ANGLE AND CONSTRUCTED IN ACCORDANCE WITH AS2890.1

INDICATIVE LOCATION OF WATER TANK
TANK SIZE TBC
MIN 3000L DETENTION

GPS DATA SCALE LOCATION
JOB CONTROL POINT
POINT NO: 1
DESCRIPTION: SPIKE#
GPS SCALE FACTOR = 1.000366952
E: 552166.642
N: 5253238.175
RL: 1.85
EPU = 0.04±

•DP 90mm DOWNPIPE

NOTE: ALL PROPOSED STORMWATER TO BE DISCHARGED TO EXISTING INFRASTRUCTURE

EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE IMPLEMENTED ON THE SITE IN ACCORDANCE WITH COUNCIL REQUIREMENTS

PROPOSED SITE PLAN

PRELIMINARY

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02



CONTRACTOR MUST VERIFY ALL DIMENSIONS AND LEVELS AT THE JOB PRIOR TO COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS.

DO NOT SCALE DRAWINGS. ALWAYS USE WRITTEN DIMENSIONS.

REV:	DESCRIPTION:	BY:	DATE:
D	MOVE THE HOUSE TO THE PREVIOUS SETBACKS	QT	07/5/25
E	ADD THE WASTE WATER AREA	NN	02/6/25
F	FLIPPING DESIGN, MOVE THE SHED, CHANGE ROOF	NN	02/7/25
G	CHANGE WINDOW& EXTEND ENTRY, LAUNDRY	NN	03/7/25



CREATIVE HOMES
HOBART

CREATIVE HOMES HOBART, CNR OF ELWICK ROAD & BROOKER HIGHWAY, GLENORCHY 7010 PH: 03 6272 3000

JOB ADDRESS: 11 Eularminner Street Carlton	ACCRED. NO.: CC6652
DESIGNER: I. Brown	DATE: April 2025
DRAWN: N. Nguyen	REV: G
CHECKED:	DATE:
SCALE: 1:250	

CLIENT: Troy Mason	SHEET: 2 of 11
DESIGN TYPE: Custom	DRAWING NO: ---

NOTES

SITE PREPARATION

THE SITE IS TO BE DISTURBED AS MINIMALLY AS POSSIBLE TO THE EXTENT REQUIRED TO CARRY OUT THE BUILDING WORKS.

EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH NCC PART 3.2.

UN-RETAINED EMBANKMENT GRADIENTS SHALL BE IN ACCORDANCE WITH NCC TABLE 3.2.1.

DRAINAGE SHALL BE IN ACCORDANCE WITH NCC PART 3.3.2.

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

LOCATION OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.

ATTENTION OF OWNER

THE OWNERS ATTENTION IS DRAWN TO THE FACT THAT FOUNDATIONS AND ASSOCIATED DRAINAGE FOR ALL SITES REQUIRES CONTINUING MAINTENANCE TO ASSIST FOOTING PERFORMANCE. ADVICE FOR FOUNDATION MAINTENANCE IS CONTAINED IN THE CSIRO BUILDING TECHNOLOGY FILE 18 AND IT IS THE OWNERS RESPONSIBILITY TO MAINTAIN THE SITE IN ACCORDANCE WITH THIS DOCUMENT.

SOIL AND WATER MANAGEMENT NOTES:

DRAINAGE LINES ARE TO BE INSTALLED PRIOR TO THE PLACEMENT OF ROOF AND GUTTERING. ONCE DWELLING IS ROOFED, CONNECT IMMEDIATELY.

APPLY TEMPORARY COVERING TO DISTURBED AREAS THAT WILL REMAIN EXPOSED FOR 14 DAYS OR MORE DURING CONSTRUCTION (EG. WATERPROOF BLANKET, VEGETATION OR MULCH)

PROTECT ANY NEARBY OR ON-SITE DRAINAGE PITS FROM SEDIMENT BY INSTALLING SEDIMENT TRAPS AROUND THEM.

LIMIT ENTRY/EXIT TO ONE POINT AND STABILISE. INSTALL FACILITIES TO REMOVE DIRT/ MUD FROM VEHICLE WHEELS BEFORE THEY LEAVE THE SITE.

SITE TO BE VEGETATED AND PLANTED ACCORDING TO THE HOBART REGIONAL SOIL AND WATER MANAGEMENT CODE OF PRACTICE.

BUILDER AND SUBCONTRACTORS TO VERIFY ALL DIMENSIONS AND LEVELS PRIOR TO THE COMMENCEMENT OF ANY WORK. GIVE 24 HOURS MINIMUM NOTICE WHERE AMENDMENTS ARE REQUIRED TO DRAWINGS. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH DOCUMENTATION LISTED ON THE COVER PAGE. DO NOT SCALE DRAWINGS.

DIMENSIONS ARE TO TAKE PREFERENCE OVER SCALE. BUILDING SPECIFICATION AND ENGINEERS DRAWINGS SHALL OVERRIDE ARCHITECTURAL DRAWINGS.

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWING SHEETS, CONSULTANTS DRAWINGS, DOCUMENTS, SCHEDULES AND SPECIFICATIONS (AS APPLICABLE).
- THE BUILDER AND SUBCONTRACTOR SHALL ENSURE THAT ALL STORMWATER DRAINS, SEWER PIPES AND THE LIKE ARE LOCATED AT A SUFFICIENT DISTANCE FROM ANY BUILDINGS FOOTING AND/OR SLAB EDGE BEAMS SO AS TO PREVENT GENERAL MOISTURE PENETRATION, DAMPNES, WEAKENING & UNDERMINING OF ANY BUILDING AND ITS FOOTING SYSTEM.
- LOCATION OF ALL EXISTING ONSITE SERVICES TO BE CONFIRMED ONSITE PRIOR TO CONSTRUCTION

IMPORTANT!

SITE INFORMATION AS DRAWN IS APPROXIMATE ONLY. FINAL SITE INFORMATION IS SUBJECT TO A DETAILED CONTOUR SURVEY BY LICENSED SURVEYOR.

SOIL CLASSIFICATION: --

WIND CLASSIFICATION: --

SITE COVERAGE

SITE AREA	1471.8 m²
PROPOSED BUILDING FOOTPRINT	161.7 m²
PROPOSED SITE COVERAGE	10.99

BAL: 29
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH NCC REQUIREMENTS & AS. 3959-2018

JOB ADDRESS:
11 Eularminner Street
Carlton

DESIGNER: I. Brown

DRAWN: N. Nguyen

CHECKED:

SCALE: 1:250

ACCRED. NO.: CC6652

DATE: April 2025

DATE:

REV: G

CLIENT:
Troy Mason

SHEET: 2 of 11

DESIGN TYPE: Custom

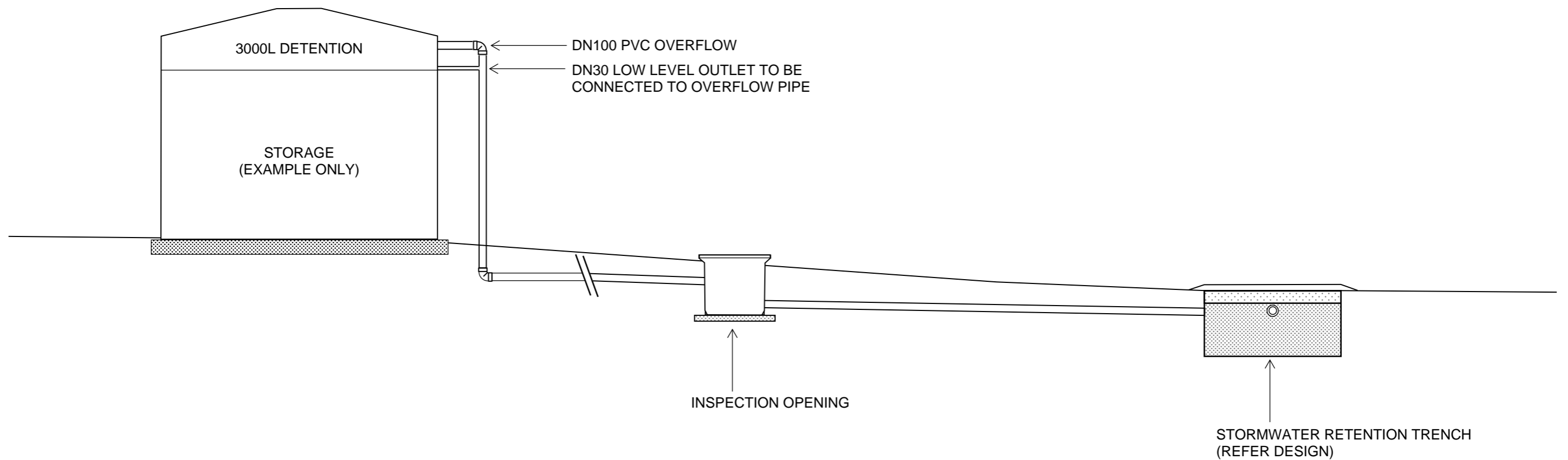
DRAWING NO:



GEO-ENVIRONMENTAL

S O L U T I O N S

29 Kirksway Place, Battery Point
T| 62231839 E| office@geosolutions.net.au



Do not scale from these drawings.
Dimensions to take precedence
over scale.

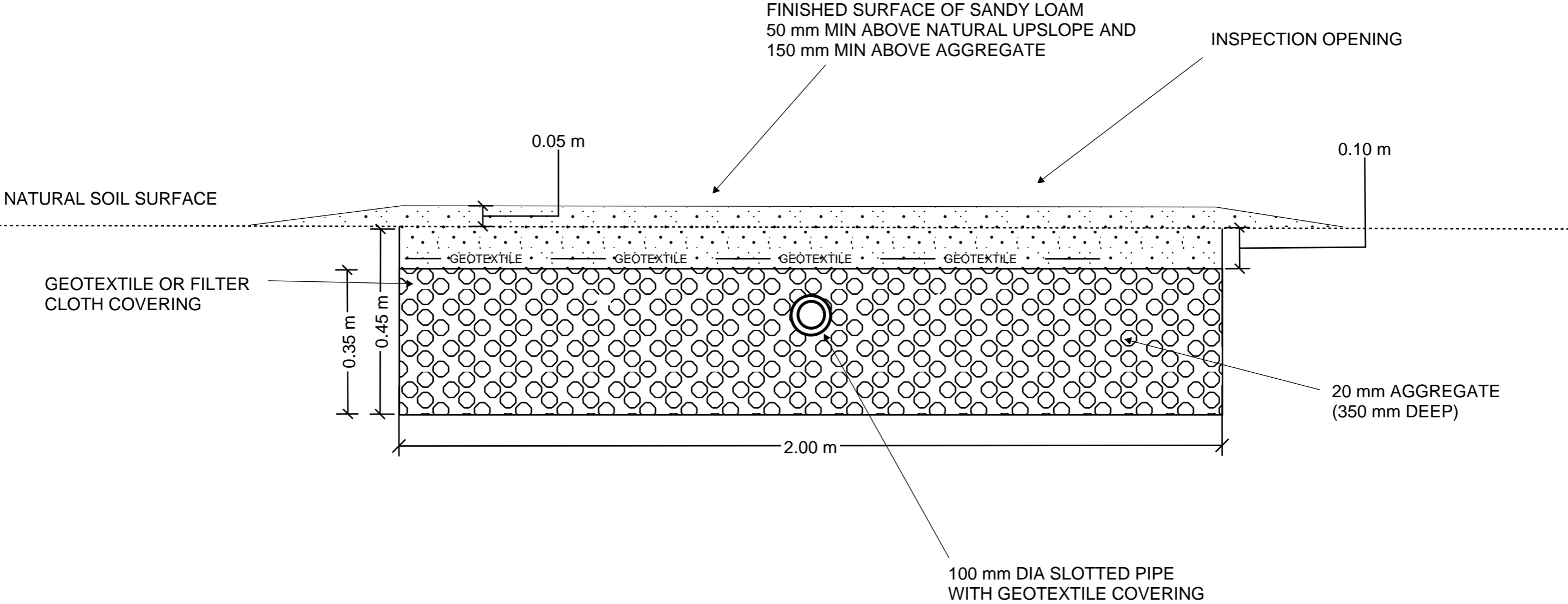
STORMWATER DETENTION
SCHEMATIC CROSS-SECTION

RAINWATER TANK - SIZE TBC
WITH 3000L DETENTION

Sheet 1 of 1
Drawn by: SR

Design notes:

1. Absorption bed dimensions of up to 20m long by 0.45m deep by 2m wide
– total storage volume calculated at average 35% porosity.
2. Base of bed to be excavated level and smearing and compaction avoided.
3. 90-100mm slotted pipe should be placed in the top 100mm of the 20mm aggregate
4. Geotextile or filter cloth to be placed over the pipe to prevent clogging of the pipes and aggregate
5. Construction on slopes up to 20% to allow trench depth range 550mm upslope edge to 400mm on down slope edge.
6. All works on site to comply with AS3500 and Tasmanian Plumbing code.



Do not scale from these drawings.
Dimensions to take precedence
over scale.

Geo-Environmental Solutions
Stormwater trench

Stormwater Absorption Detail

PROJECT ADDRESS: 11 EULARMINNER STREET, CARLTON

TITLE REFERENCE: VOLUME: 84583 FOLIO: 2

CLIENTS: TROY MASON

DESIGNER: Inge Brown, CC 6652

- DRAWINGS:**
- 01 COVER PAGE
 - 02 PROPOSED SITE PLAN
 - 03 PROPOSED FLOOR PLAN
 - 04 PROPOSED ROOF PLAN
 - 05 PROPOSED ELEVATIONS
 - 06 PROPOSED ELEVATIONS
 - 07 PROPOSED SHED ELEVATIONS
 - 08 SECTION A-A
 - 09 TYPICAL SECTION DETAILS
 - 10 WINDOW SCHEDULE
 - 11 BAL 29 REQUIREMENTS

FLOOR AREAS:

FLOOR AREA:	148.4 m²
PORCH:	13.3 m²
TOTAL AREA:	161.7 m²
DECK:	75.8 m²

SOIL CLASSIFICATION: --

WIND CLASSIFICATION: --

CLIMATE ZONE: 7

BUSHFIRE ATTACK LEVEL: BAL 29

ALPINE AREA: N/A

CORROSION ENVIRONMENT: N/A

DOCUMENTATION INDEX

The documentation listed below should be read in conjunction with these drawings and form the basis of construction documentation for the project

Document	Revision	By
Working drawings planning issue (these drawings)	G	Creative Homes Hobart
Survey plan SP251848-01	A	Survey Plus
Soil assessment		Doyle Soil Consulting

Sorell Council

Development Application: 5.2025.119.1 -
Response to Request For Information - 11
Eularminner Street, Carlton -P3.pdf
Plans Reference: P3
Date Received: 07/08/2025

BAL: 29
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH
NCC REQUIREMENTS & AS. 3959-2018

AREAS:	
FLOOR AREA:	148.4 m ²
PORCH:	13.3 m ²
TOTAL AREA:	
DECK:	75.8 m ²

LEGEND:	
DP	DOWNPIPE LOCATION
SHR	SHOWER
BTH	BATH
VB	VANITY BASIN
WC	TOILET
OHC	OVERHEAD CUPBOARDS
REF	REFRIGERATOR
P	PANTRY
RH	RANGE HOOD
UBO	UNDER BENCH OVEN
CT	COOK TOP
S	SINK
DW	DISH WASHER
T	TROUGH
WM	WASHING MACHINE
MH	MANHOLE
CSD	CAVITY SLIDING DOOR
AAW	ALUM. AWNING WINDOW
AFW	ALUM. FIXED WINDOW
ASD	ALUM. SLIDING DOOR
B/O	BEAM OVER
BAL	BALUSTRADE

BAL SELECTED BALUSTRADE TO BUILDER'S STANDARD DETAIL INSTALLED IN ACCORDANCE WITH NCC

MASONRY ARTICULATION JOINT - LOCATION TO ENGINEER'S DETAILS

CEILING MOUNTED INTERCONNECTED SMOKE DETECTORS, MAINS WIRED WITH BATTERY BACKUP, ALL IN ACCORDANCE WITH AS 3786.

DP 90mm DOWNPIPE

NOTE: LIFT OFF HINGES TO WC TO BE INSTALLED AS REQUIRED IN ACCORDANCE WITH NCC.

BAL: 29
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH NCC REQUIREMENTS & AS. 3959-2018



Development Application: 5.2025.119.1 -
Response to Request For Information - 11
Eularminner Street, Carlton -P3.pdf
Plans Reference: P3
Date Received: 07/08/2025

PROPOSED FLOOR PLAN

FLOOR AREA: 161.7m²

PRELIMINARY

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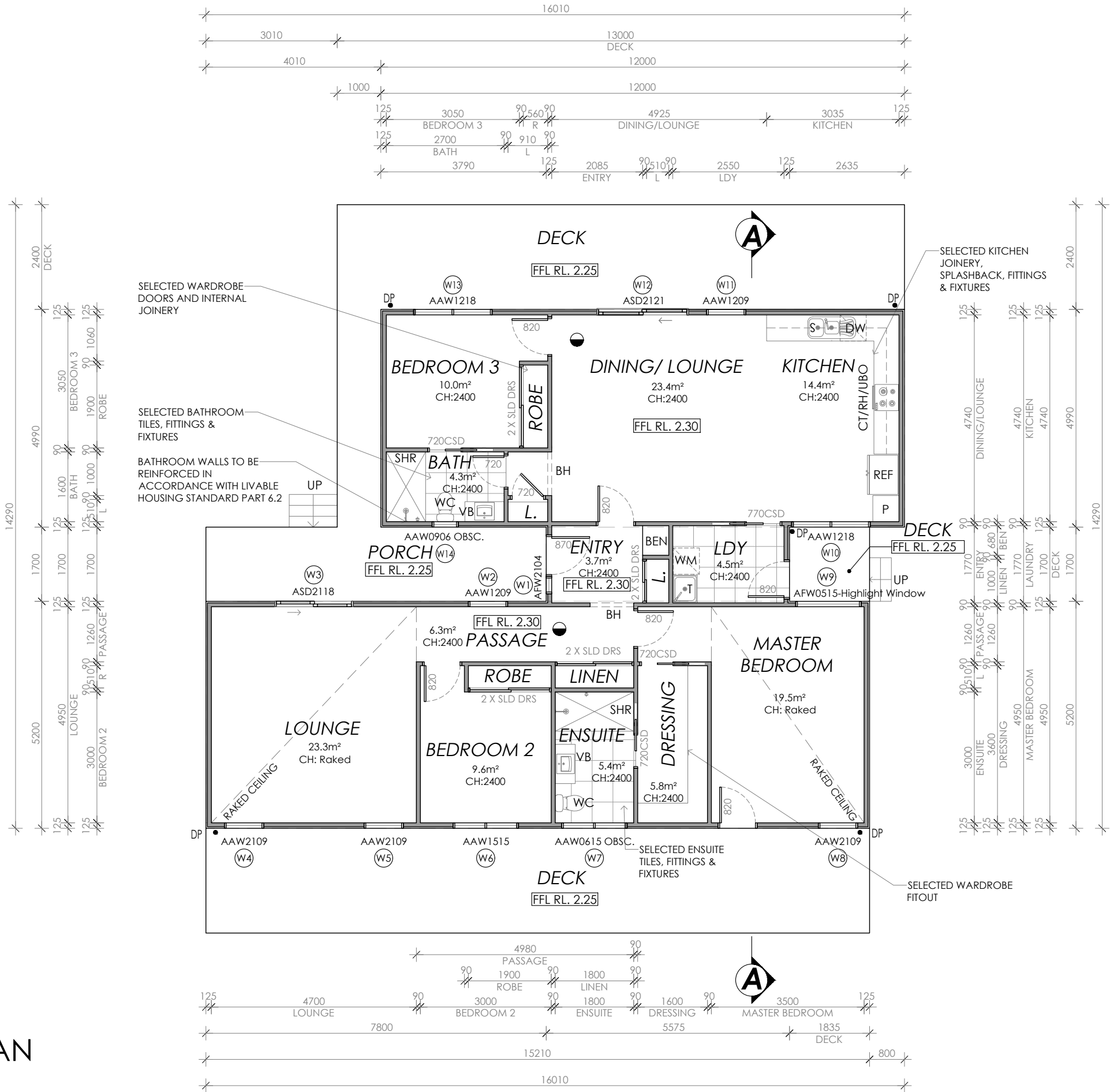
CONTRACTOR MUST VERIFY ALL DIMENSIONS AND LEVELS AT THE JOB PRIOR TO COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS.

DO NOT SCALE DRAWINGS.
ALWAYS USE WRITTEN DIMENSIONS.

REV:	DESCRIPTION:	BY:	DATE:
D	MOVE THE HOUSE TO THE PREVIOUS SETBACKS	QT	07/5/25
E	ADD THE WASTE WATER AREA	NN	02/6/25
F	FLIPPING DESIGN, MOVE THE SHED, CHANGE ROOF	NN	02/7/25
G	CHANGE WINDOW& EXTEND ENTRY, LAUNDRY	NN	03/7/25



JOB ADDRESS: 11 Eularminner Street Carlton		CLIENT: Troy Mason
DESIGNER: I. Brown	ACCRED. NO.: CC6652	SHEET: 3 of 11
DRAWN:N. Nguyen	DATE: April 2025	DESIGN TYPE: Custom
CHECKED:	DATE:	DRAWING NO: ---
SCALE: 1:100	REV: G	



Framing NCC H1D6
All timber framing, fixing and bracing shall comply with AS 1684 and the requirements of NCC H1D6. Manufactured sizes must not be undersized to those specified, for all timber sizes, stress grades, spacing and wall bracing refer to Engineer's details. Tie-down details shall be in accordance with Engineer's details and comply with NCC H1D6 (4). Structural steel members shall comply with the requirements of clauses in NCC H1D6 (3). Refer to Engineer's details where provided.

Glazing NCC H1D8
All windows to be aluminium awning style, double glazed (obscured safety glass to bathrooms as shown on drawings) All glazing shall comply with the requirements of AS 2047 & AS 1288 and NCC H1D8.

Human impact safety requirements shall comply with NCC H1D8 (3) and Part 8.4 of the ABCB Housing provisions.

Note:
Builder and subcontractors to verify all dimension and levels prior to the commencement of any work. Give 24hrs minimum notice where amendments are required to design of working drawings. These drawings are to be read in conjunction with Engineer's and Surveyor's drawings and notes. Do not scale drawings. Dimensions are to take preference over scale. Building specification and Engineer's drawings shall override architectural drawings. All construction work shall be carried out in accordance with the state building regulations, local council by-laws and relevant NCC and AS codes.

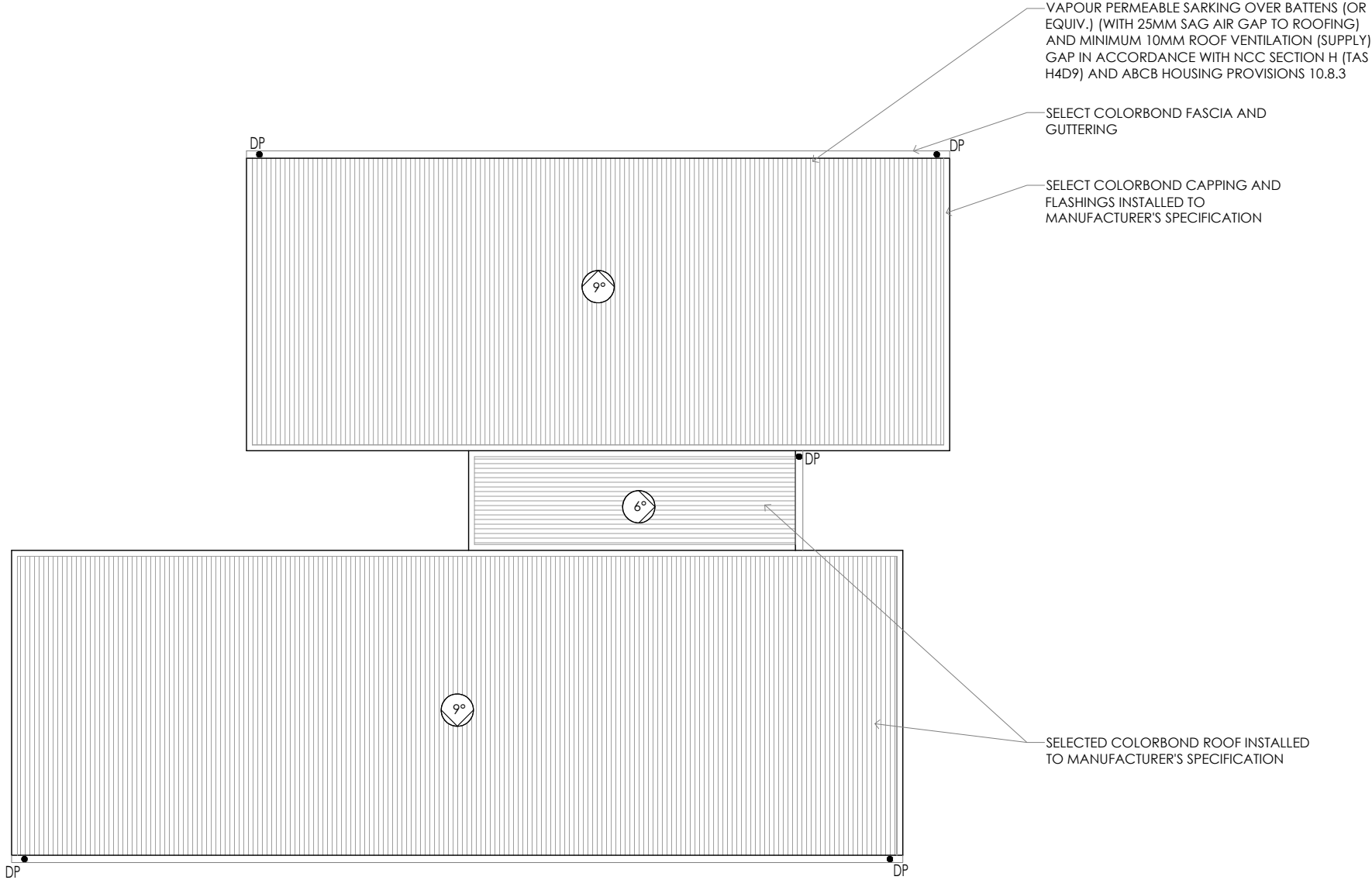
Important notice for attention of Owners: the Owners attention is drawn to the fact that foundations and associated drainage in all sites requires continuing maintenance to assist footing performance. Advice for foundation maintenance is contained in the CSIRO building technology file 18 and it is the Owners responsibility to maintain the site in accordance with this document.

Energy efficiency:
Insulation must comply with AS/NZS4859.1 and be installed in accordance with ABCB housing provisions Part 13.2.2 and comply with minimum R values for climate zone 7.
Bulk insulation between external studs to be insulated with min R2.0. (Ensure batts fit within cavity without compression, making sure that there is at least 25mm gap from the reflective surface). External walls are to be clad with vapour permeable reflective foil over the outside of the timber frame. Ceiling to be insulated with R4.0 and vapour permeable sarking. Floor to be insulated with Min R1.7 batts where applicable. Seal exhaust fans to Ensuite, Bathroom, Laundry and Kitchen. All downlights to be IC rated. Construction of the external walls, floor and roof for compliance with building sealing requirements shall comply with BCA 2019 Part 3.12

General:
All flashings, weep holes and damp proof coursing to be in accordance with NCC Housing provisions Part 5.7. Fibre cement sheet in accordance with NCC Housing provisions Part 7.5. Block construction in accordance NCC Housing provisions Part 5. Plasterboard linings to internal walls and ceilings with selected cornice. (see below for wet areas)

Wet areas: All wet areas shall comply with the requirements of ABCB Housing provisions Part 10.2. Provide waterproof plasterboard sheeting to all walls and ceilings. Provide ceramic tiles or other approved water resistant lining in accordance with Part 10.2.9 to a minimum height of 1800mm to shower walls and to a height of min 150mm behind baths, basins, sinks, troughs, washing machines and wall fixtures.

For construction of floor wastes refer to NCC ABCB Housing provisions part 10.2.12. For typical installation requirements for substrate preparation, penetrations, flashings/ junctions, membranes, screeds, hobs, baths, showers, door jambs and screens refer to ABCB Housing provisions part 10.2.14-32.



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BAL: 29
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH NCC REQUIREMENTS & AS. 3959-2018
● DP 90mm DOWNPIPE

PROPOSED ROOF PLAN

PRELIMINARY

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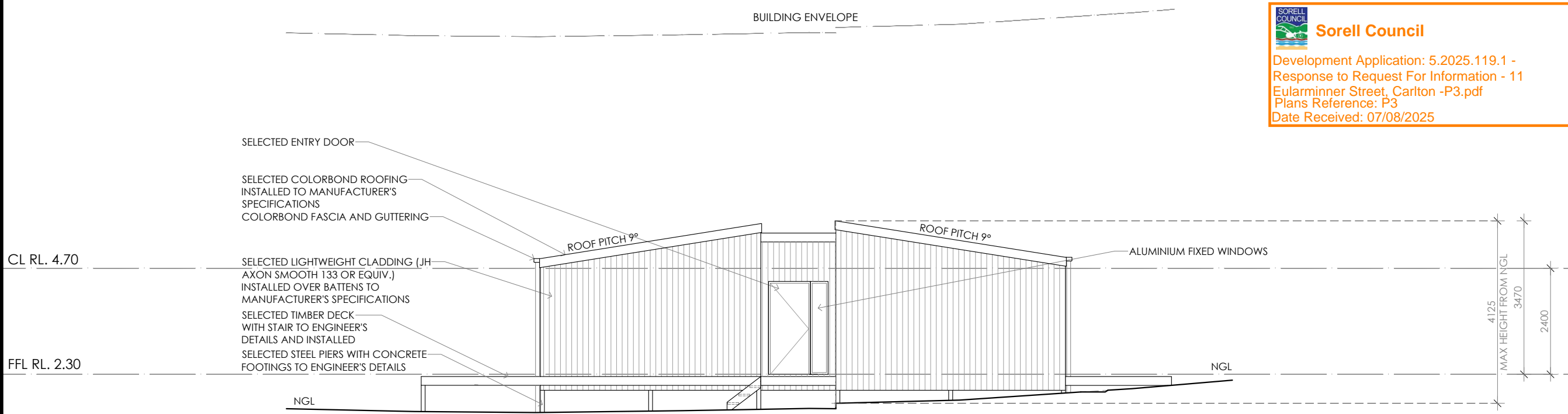
04		CONTRACTOR MUST VERIFY ALL DIMENSIONS AND LEVELS AT THE JOB PRIOR TO COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS. DO NOT SCALE DRAWINGS. ALWAYS USE WRITTEN DIMENSIONS.	REV:	DESCRIPTION:	BY:	DATE:
			D	MOVE THE HOUSE TO THE PREVIOUS SETBACKS	QT	07/5/25
			E	ADD THE WASTE WATER AREA	NN	02/6/25
			F	FLIPPING DESIGN, MOVE THE SHED, CHANGE ROOF	NN	02/7/25
			G	CHANGE WINDOW& EXTEND ENTRY, LAUNDRY	NN	03/7/25



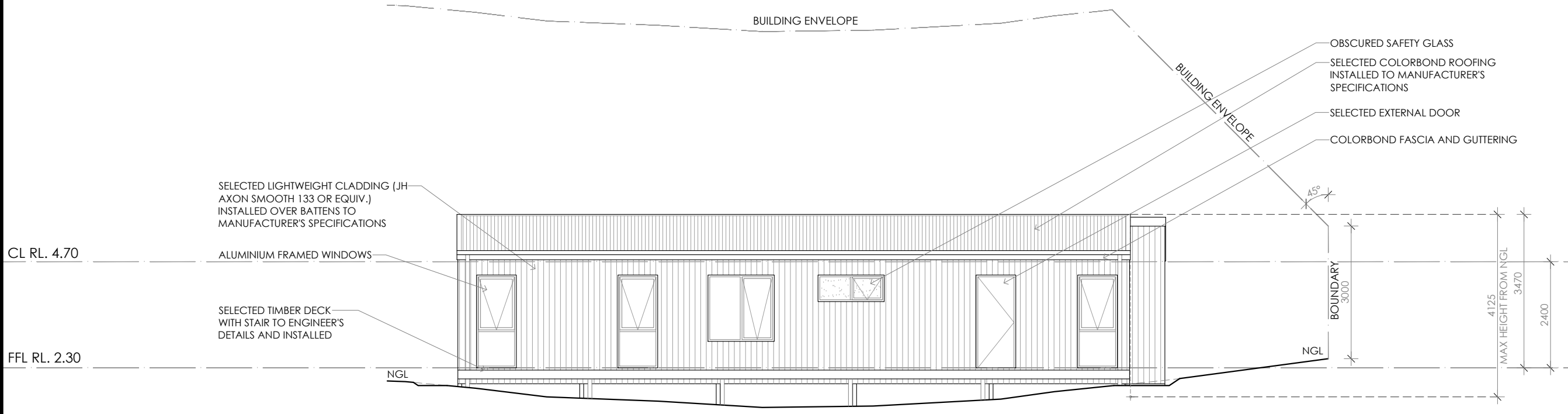
CREATIVE HOMES
HOBART

CREATIVE HOMES HOBART, CNR OF ELWICK ROAD & BROOKER HIGHWAY, GLENORCHY 7010 PH: 03 6272 3000

JOB ADDRESS: 11 Eularminner Street Carlton		CLIENT: Troy Mason	
DESIGNER: I. Brown	ACCRED. NO.: CC6652	SHEET: 4 of 11	
DRAWN:N. Nguyen	DATE: April 2025	DESIGN TYPE: Custom	
CHECKED:	DATE:	DRAWING NO: ---	
SCALE: 1:100	REV: G		



WESTERN ELEVATION



SOUTHERN ELEVATION



Sorell Council

Development Application: 5.2025.119.1 -
Response to Request For Information - 11
Eularminner Street, Carlton -P3.pdf
Plans Reference: P3
Date Received: 07/08/2025

Framing NCC H1D6
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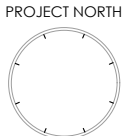
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BAL: 29
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH NCC REQUIREMENTS & AS. 3959-2018

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05		CONTRACTOR MUST VERIFY ALL DIMENSIONS AND LEVELS AT THE JOB PRIOR TO COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS. DO NOT SCALE DRAWINGS. ALWAYS USE WRITTEN DIMENSIONS.	REV:	DESCRIPTION:	BY:	DATE:
			D	MOVE THE HOUSE TO THE PREVIOUS SETBACKS	QT	07/5/25
			E	ADD THE WASTE WATER AREA	NN	02/6/25
			F	FLIPPING DESIGN, MOVE THE SHED, CHANGE ROOF	NN	02/7/25
			G	CHANGE WINDOW& EXTEND ENTRY, LAUNDRY	NN	03/7/25



CREATIVE HOMES
HOBART

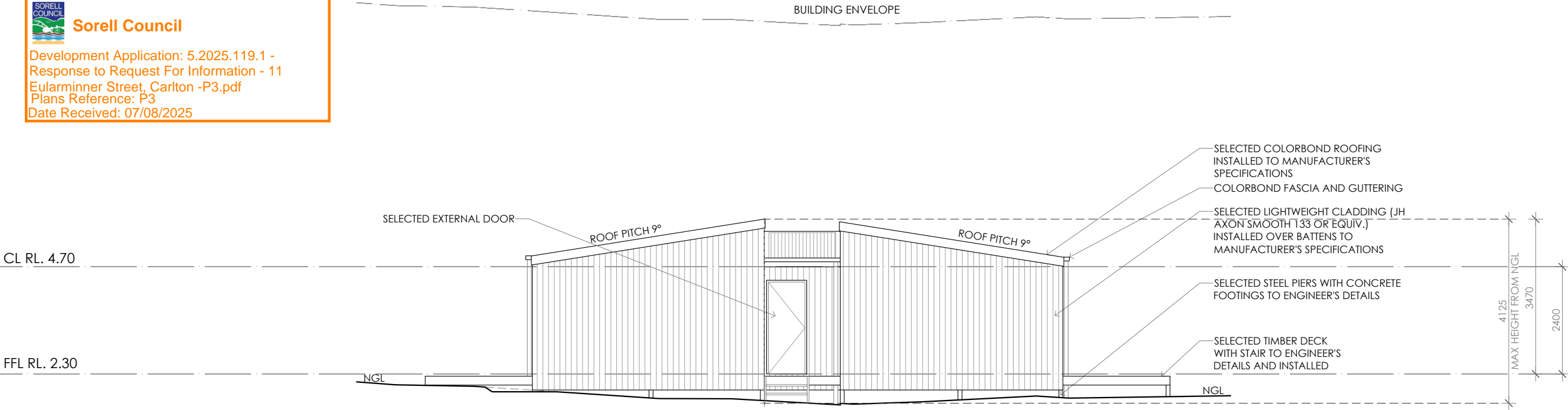
CREATIVE HOMES HOBART, CNR OF ELWICK ROAD & BROOKER HIGHWAY, GLENORCHY 7010 PH: 03 6272 3000

JOB ADDRESS: 11 Eularminner Street Carlton		CLIENT: Troy Mason
DESIGNER: I. Brown	ACCRED. NO.: CC6652	SHEET: 5 of 11
DRAWN:N. Nguyen	DATE: April 2025	DESIGN TYPE: Custom
CHECKED:	DATE:	DRAWING NO: ---
SCALE: 1:100	REV: G	

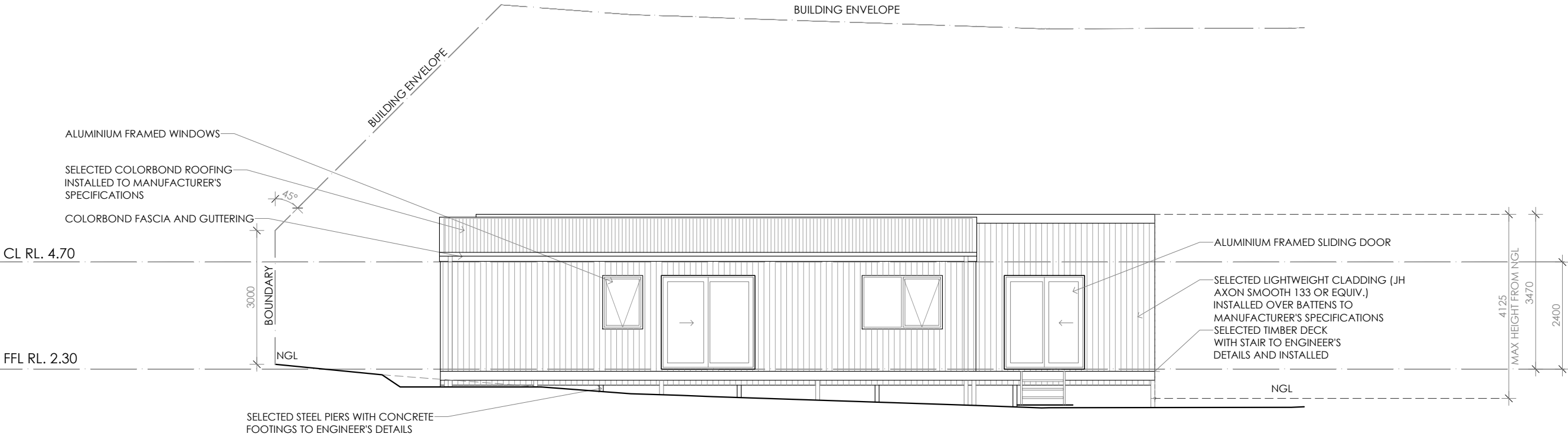


Sorell Council

Development Application: 5.2025.119.1 -
Response to Request For Information - 11
Eularminner Street, Carlton -P3.pdf
Plans Reference: P3
Date Received: 07/08/2025



EASTERN ELEVATION



NORTHERN ELEVATION

Framing NCC H1D6
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BAL: 29
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH NCC REQUIREMENTS & AS. 3959-2018

PRELIMINARY

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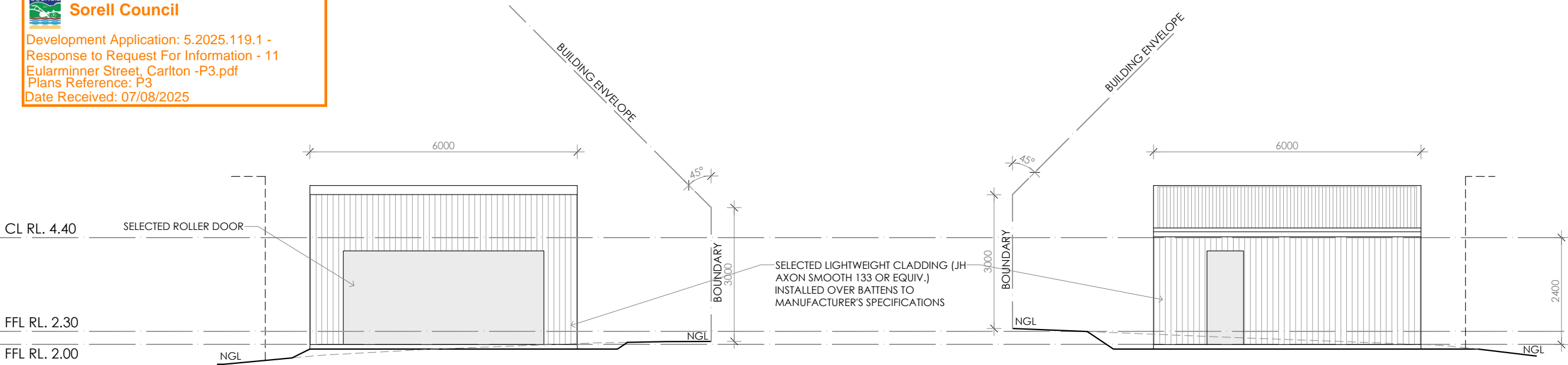
06	PROJECT NORTH 	CONTRACTOR MUST VERIFY ALL DIMENSIONS AND LEVELS AT THE JOB PRIOR TO COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS. DO NOT SCALE DRAWINGS. ALWAYS USE WRITTEN DIMENSIONS.	REV:	DESCRIPTION:	BY:	DATE:
			D	Merge the house to the previous setbacks	QT	07/5/25
			E	ADD THE WASTE WATER AREA	NN	02/6/25
			F	FLIPPING DESIGN, MOVE THE SHED, CHANGE ROOF	NN	02/7/25
			G	CHANGE WINDOW& EXTEND ENTRY, LAUNDRY	NN	03/7/25



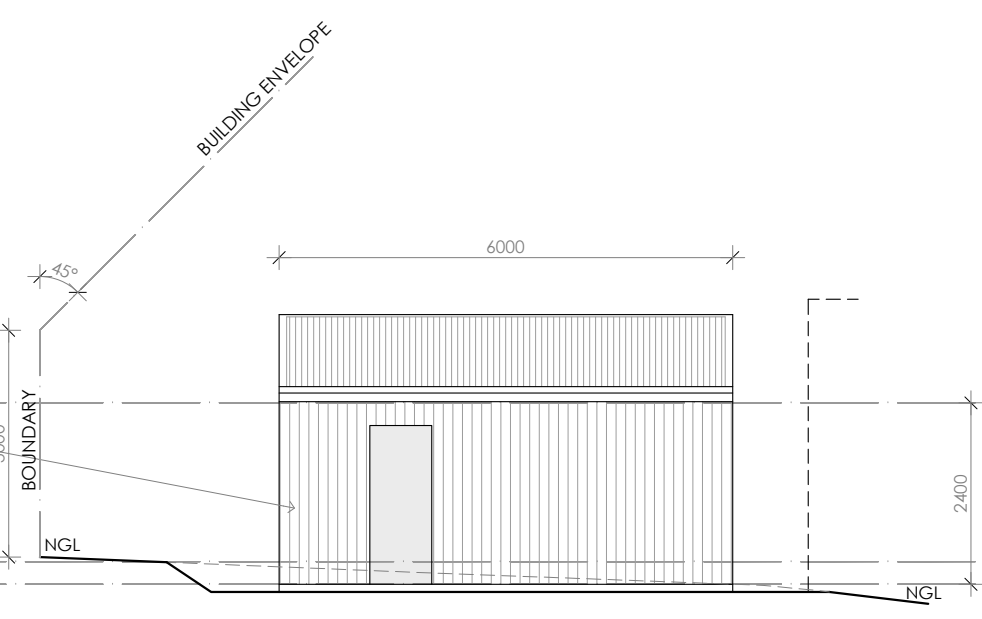
CREATIVE HOMES
HOBART

CREATIVE HOMES HOBART, CNR OF ELWICK ROAD & BROOKER HIGHWAY, GLENORCHY 7010 PH: 03 6272 3000

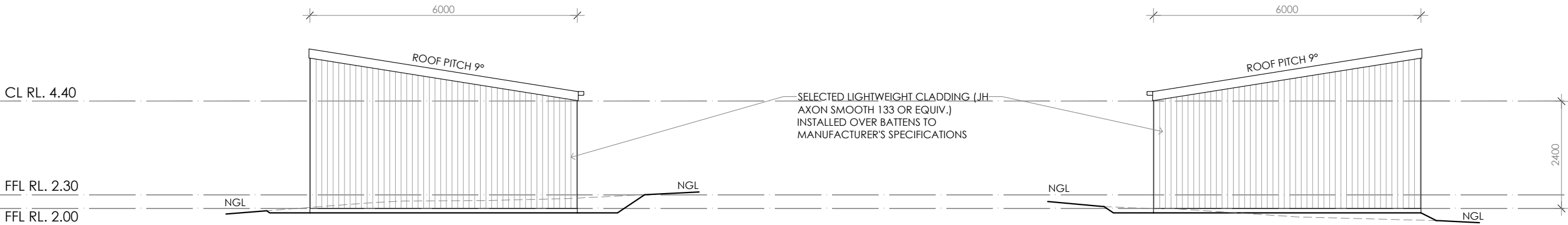
JOB ADDRESS: 11 Eularminner Street Carlton		CLIENT: Troy Mason	
DESIGNER: I. Brown	ACCRED. NO.: CC6652	SHEET: 6 of 11	
DRAWN:N. Nguyen	DATE: April 2025	DESIGN TYPE: Custom	
CHECKED:	DATE:	DRAWING NO: ---	
SCALE: 1:100	REV: G		



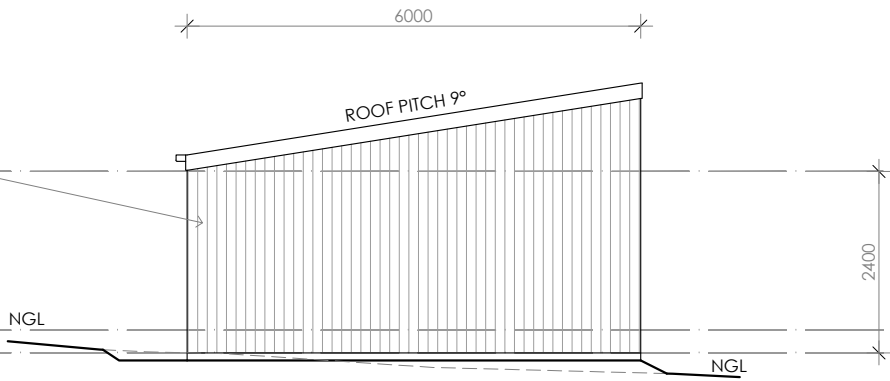
NORTHERN ELEVATION



SOUTHERN ELEVATION



WESTERN ELEVATION



EASTERN ELEVATION

PROPOSED SHED ELEVATION

PRELIMINARY

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07



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ALWAYS USE WRITTEN DIMENSIONS.

REV:	DESCRIPTION:	BY:	DATE:
D	MOVE THE HOUSE TO THE PREVIOUS SETBACKS	QT	07/5/25
E	ADD THE WASTE WATER AREA	NN	02/6/25
F	FLIPPING DESIGN, MOVE THE SHED, CHANGE ROOF	NN	02/7/25
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CREATIVE HOMES
HOBART

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JOB ADDRESS: 11 Eularminner Street Carlton		CLIENT: Troy Mason
DESIGNER: I. Brown	ACCRED. NO.: CC6652	SHEET: 7 of 11
DRAWN:N. Nguyen	DATE: April 2025	DESIGN TYPE: Custom
CHECKED:	DATE:	DRAWING NO: ---
SCALE: 1:100	REV: G	

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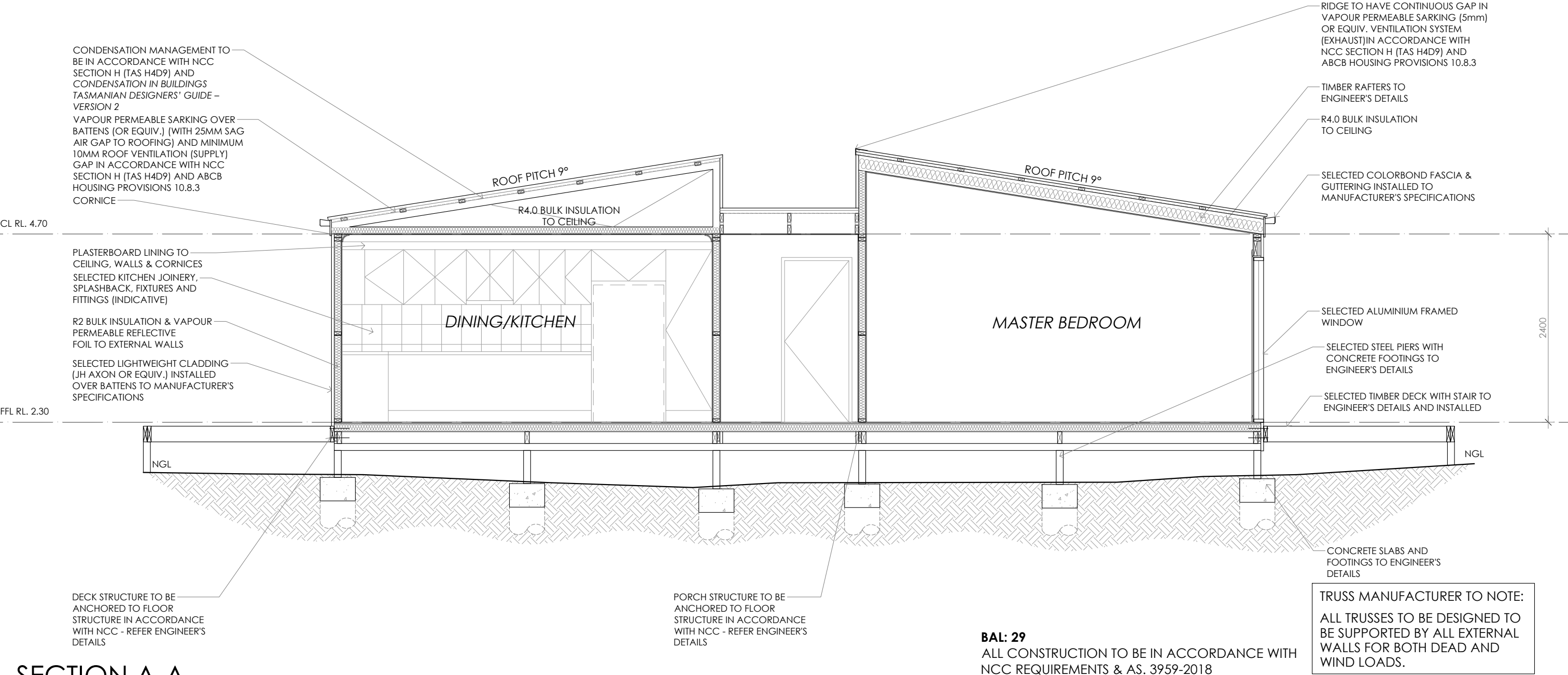
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Sorell Council
Development Application: 5.2025.119.1 -
Response to Request For Information - 11
Eularminner Street, Carlton -P3.pdf
Plans Reference: P3
Date Received: 07/08/2025



SECTION A-A

PRELIMINARY

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08



CONTRACTOR MUST VERIFY ALL DIMENSIONS AND LEVELS AT THE JOB PRIOR TO COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS.

DO NOT SCALE DRAWINGS. ALWAYS USE WRITTEN DIMENSIONS.

REV:	DESCRIPTION:	BY:	DATE:
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E	ADD THE WASTE WATER AREA	NN	02/6/25
F	FLIPPING DESIGN, MOVE THE SHED, CHANGE ROOF	NN	02/7/25
G	CHANGE WINDOW& EXTEND ENTRY, LAUNDRY	NN	03/7/25



CREATIVE HOMES
HOBART

CREATIVE HOMES HOBART, CNR OF ELWICK ROAD & BROOKER HIGHWAY, GLENORCHY 7010 PH: 03 6272 3000

JOB ADDRESS: 11 Eularminner Street Carlton		CLIENT: Troy Mason	
DESIGNER: I. Brown	ACCRED. NO.: CC6652	SHEET:	8 of 11
DRAWN:N. Nguyen	DATE: April 2025	DESIGN TYPE:	Custom
CHECKED:	DATE:	DRAWING NO:	---
SCALE: 1:50	REV: G		

FLOOR, WALL & ROOF DETAIL SCALE 1:20

TYPICAL SECTION DETAILS

PRELIMINARY

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09		PROJECT NORTH	CONTRACTOR MUST VERIFY ALL DIMENSIONS AND LEVELS AT THE JOB PRIOR TO COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS.	DO NOT SCALE DRAWINGS. ALWAYS USE WRITTEN DIMENSIONS.	REV:	DESCRIPTION:	BY:	DATE:	 <div>CREATIVE HOMES HOBART, CNR OF ELWICK ROAD & BROOKER HIGHWAY, GLENORCHY 7010 PH: 03 6272 3000</div>	DESIGNER:	I. Brown	ACCRED. NO.:	CC6652	SHEET:	9 of 11
					D	MOVE THE HOUSE TO THE PREVIOUS SETBACKS	QT	07/5/25		DRAWN:	N. Nguyen	DATE:	April 2025	DESIGN TYPE:	Custom
					E	ADD THE WASTE WATER AREA	NN	02/6/25		CHECKED:		DATE:		DRAWING NO:	---
					F	FLIPPING DESIGN, MOVE THE SHED, CHANGE ROOF	NN	02/7/25		SCALE:	AS SHOWN	REV:	G		
					G	CHANGE WINDOW& EXTEND ENTRY, LAUNDRY	NN	03/7/25							



Framing NCC H1D6
All timber framing, fixing and bracing shall comply with AS 1684 and the requirements of NCC H1D6. Manufactured sizes must not be undersized to those specified, for all timber sizes, stress grades, spacing and wall bracing refer to Engineer's details. Tie-down details shall be in accordance with Engineer's details and comply with NCC H1D6 (4). Structural steel members shall comply with the requirements of clauses in NCC H1D6 (3). Refer to Engineer's details where provided.

Glazing NCC H1D8
All windows to be aluminium awning style, double glazed (obscured safety glass to bathrooms as shown on drawings) All glazing shall comply with the requirements of AS 2047 & AS 1288 and NCC H1D8.

Human impact safety requirements shall comply with NCC H1D8 (3) and Part 8.4 of the ABCB Housing provisions.

Note:
Builder and subcontractors to verify all dimension and levels prior to the commencement of any work. Give 24hrs minimum notice where amendments are required to design of working drawings. These drawings are to be read in conjunction with Engineer's and Surveyor's drawings and notes. Do not scale drawings. Dimensions are to take preference over scale. Building specification and Engineer's drawings shall override architectural drawings. All construction work shall be carried out in accordance with the state building regulations, local council by-laws and relevant NCC and AS codes.

Important notice for attention of Owners: the Owners attention is drawn to the fact that foundations and associated drainage in all sites requires continuing maintenance to assist footing performance. Advice for foundation maintenance is contained in the CSIRO building technology file 18 and it is the Owners responsibility to maintain the site in accordance with this document.

Energy efficiency:
Insulation must comply with AS/NZS4859.1 and be installed in accordance with ABCB housing provisions Part 13.2.2 and comply with minimum R values for climate zone 7.

Bulk insulation between external studs to be insulated with min R2.0. (Ensure batts fit within cavity without compression, making sure that there is at least 25mm gap from the reflective surface). External walls are to be clad with vapour permeable reflective foil over the outside of the timber frame. Ceiling to be insulated with R4.0 and vapour permeable sarking. Floor to be insulated with Min R1.7 batts where applicable. Seal exhaust fans to Ensuite, Bathroom, Laundry and Kitchen. All downlights to be IC rated. Construction of the external walls, floor and roof for compliance with building sealing requirements shall comply with BCA 2019 Part 3.12

General:
All flashings, weep holes and damp proof coursing to be in accordance with NCC Housing provisions Part 5.7. Fibre cement sheet in accordance with NCC Housing provisions Part 7.5. Block construction in accordance NCC Housing provisions Part 5. Plasterboard linings to internal walls and ceilings with selected cornice. (see below for wet areas)

Wet areas: All wet areas shall comply with the requirements of ABCB Housing provisions Part 10.2. Provide waterproof plasterboard sheeting to all walls and ceilings. Provide ceramic tiles or other approved water resistant lining in accordance with Part 10.2.9 to a minimum height of 1800mm to shower walls and to a height of min 150mm behind baths, basins, sinks, troughs, washing machines and wall fixtures.

For construction of floor wastes refer to NCC ABCB Housing provisions part 10.2.12. For typical installation requirements for substrate preparation, penetrations, flashings/junctions, membranes, screeds, hobs, baths, showers, door jambs and screens refer to ABCB Housing provisions part 10.2.14-32.

WINDOW SCHEDULE

BAL: 29
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH
NCC REQUIREMENTS & AS. 3959-2018

fg FIXED GLAZING

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CREATIVE HOMES
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JOB ADDRESS: 11 Eularminner Street Carlton		CLIENT: Troy Mason	
DESIGNER: I. Brown	ACCRED. NO.: CC6652	SHEET: 10 of 11	
DRAWN:N. Nguyen	DATE: April 2025	DESIGN TYPE: Custom	
CHECKED:	DATE:	DRAWING NO: ---	
SCALE: 1:50	REV: G		

BUILDING ELEMENTS		BAL 29 REQUIREMENTS
TILED ROOF		FULLY SARKED (FLAMMABILITY INDEX <5) <ul style="list-style-type: none">• INSTALLED DIRECTLY BELOW TILE BATTENS• MUST COVER ENTIRE ROOF AREA, INCLUDING RIDGE & BE INSTALLED SO THAT THERE ARE NO GAPS WHERE SARKING MEETS FASCIA, GUTTERS, VALLEYS & THE LIKE
SHEET ROOF		FULLY SARKED (FLAMMABILITY INDEX <5) INSTALLED DIRECTLY BELOW BATTENS <ul style="list-style-type: none">• FOIL-BACKED INSULATION BLANKETS MAY BE INSTALLED OVER BATTENS• GAPS GREATER THAN 3mm TO BE SEALED BY:<ul style="list-style-type: none">A. MESH WITH MAX 2mm APERTURE, MADE OF CORROSION RESISTANT STEEL OR BRONZEB. MINERAL WOOLC. OTHER NON-COMUSTIBLE MATERIALD. COMBINATION OF ABOVE ITEMS
FASCIA & BARGEBOARDS		BUSH-FIRE RESISTING TIMBER, OR METAL (TO BE FIXED AT 450 CENTRES)
EAVES LININGS		FIBRE-CEMENT SHEET MINIMUM 4.5mm THICKNESS
WINDOWS		BEHIND BUSH-FIRE SHUTTERS (COMPLETELY PROTECTED), OR <ul style="list-style-type: none">• ALL FRAMES, JOINERY & HARDWARE TO BE METAL• ALL FRAMES & JOINERY TO BE BUSH-FIRE RESISTING TIMBER• ALL GLAZING TO BE 5mm TOUGHENED GLASS• ALL FRAMES & JOINERY TO BE METAL-REINFORCED PVC-U• OPENABLE PORTIONS OF WINDOW SHALL BE SCREENED ECTERNALLY OR INTERNALLY<ul style="list-style-type: none">A. SHALL HAVE A MESH OR PERFORATED SHEET WITH MAX 2mm APERTURE, MADE OF CORRSION-RESISTANT STEEL OR BRONZEB. GAPS BETWEEN PERIMETER OF SCREEN ASSEMBLY & BUILDING ELEMENT IT IS FITTED TO SHALL NOT EXCEED 3mmC. THE FRAME SUPPORTING THE MESH OR PERFORATED STEEL SHALL BE METAL OR FIRE RESISITING TIMBER
EXTERNAL SLIDING DOORS		BEHIND BUSH-FIRE SHUTTERS OR EXTERNAL SCREENS (COMPLETELY PROTECTED), OR <ul style="list-style-type: none">• ALL FRAMES & HARDWARE TO BE METAL• ALL GLAZING TO BE 6mm TOUGHENED GLASS• ALL FRAMES TO BE FIRE-RESISITING TIMBER• ALL FRAMES TO BE METAL-REINFORCED PVC-U• SLIDING DOORS SHALL BE TIGHT-FITTING IN THE FRAMES
EXTERNAL WALLS	LIGHTWEIGHT CLADDING	ANY CLADDING FIXED EXTERNALLY TO A FULLY-SARKED TOMBER OR STEEL FRAMED WALL TO BE: <ul style="list-style-type: none">• FIBRE-CEMENT MIN 6mm THICKNESS• STEEL SHEETING• BUSHFIRE-RESISITING TIMBERCOMBINATION OF ABOVE ITEMS
	BRICK	90mm MINIMUM THICKNESS
	FRAMING	NOT REQUIRED
	JOINTS	ALL EXTERNAL SURFACE JOINTS SHALL BE COVERED, SEALED, OVERLAPPED, BACKED OR BUTT-JOINTED TO PREVENT GAPS GREATED THAN 3mm
	VENTS & WEEPHOLES	ALL GAPS WIDER THAN 3mm TO BE SCREENED WITH MESH WITH MAX 2mm APERTURE, MADE OF CORRSION-RESISTANT STEEL OR BRONZE, UNLESS IN EXTERNAL WALL OF SUBFLOOR SPACE

BAL 29 REQUIREMENTS

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			G	CHANGE WINDOW& EXTEND ENTRY, LAUNDRY	NN	03/7/25

BUILDING ELEMENTS		BAL 29 REQUIREMENTS
EXTERNAL HINGED DOORS		BEHIND BUSH-FIRE SHUTTERS OR EXTERNAL SCREENS (COMPLETELY PROTECTED), OR <ul style="list-style-type: none">• NON-COMBUSTIBLE MATERIALS• IF SOLID TIMBER, MIN 35mm THICK FOR <400mm ABOVE THRESHOLD• IF FULLY FRAMED GLAZED DOOR (GLAZING AS PER WINDOWS) WITH FRAMING MADE OF NO-COMBUSTIBLE MATERIAL OR BUSHFIRE-RESISTING TIMBER• ALL FRAMES TO BE METAL OR BUSHFIRE-RESISTING TIMBER OR METAL REINFORCED PVC-U• ALL HARDWARE TO BE METAL• DOORS SHALL BE TIGHT-FITTING IN THE FRAMES & TO AN ABUTTING DOOR, IF APPLICABLE WEATHER STRIP, DRAUGHT EXCLUDERS/SEALS SHALL BE INSTALLED AT THE BASE OF ALL EXTERNAL DOORS
DOORS: VEHICLE ACCESS DOORS		THE FOLLOWING APPLY TO VEHICLE ACCESS DOORS: <ul style="list-style-type: none">• ALL DOORS SHALL BE NON-COMBUSTIBLE OR BUSH-FIRE RESISTING TIMBER.• PANEL LIFT, TILT DOORS OR SLIDE-HUNG DOOR SHARE BE FITTED WITH SUITABLE WEATHER STRIPS, DAUGHT EXCLUDERS/SEALS AS APPROPRIATE TO THE DOOR TYPE, WITH A GAP NOT GREATER THAN 3mm ROLLER DOOR SHALL HAVE GUIDE TRACKS WITH A MAX. GAP NO GREATER THAN 3mm & SHALL BE FITTED WITH A NYLON BRUSH THAT IS IN CONTACT WITH DOORS
FLOORS: FLOORING JOISTS BEARERS	ENCLOSED SUB-FLOOR	ENSURE EXTERNAL WALL IS BAL 29 COMPLIANT AS NOTED PREVIOUSLY
	UNENCLOSED SUB-FLOOR	ALL MATERIALS SHALL BE NON-COMBUSTIBLE OR BUSH-FIRE RESISTING TIMBER
DECKING RAMPS ETC	ENCLOSED	<ul style="list-style-type: none">• ENSURE EXTERNAL WALL IS BAL 29 COMPLIANT AS NOTED PREVIOUSLY• ALL OPENINGS GREATER THAN 3mm TO BE SCREENED WITH MESH OR PERFORATED SHEET WITH MAX 2mm APERTURE, MADE OF CORRSION-RESISTANT STEEL OR BRONZE• SUPPORTS-NRFRAMING-NR
	UNENCLOSED	ALL MATERIAS SHALL BE NON-COMBUSTIBLE OR BUSH-FIRE RESISTANT TIMBER
BALUSTRADES, HANDRAILS & OTHER BARRIERS		<ul style="list-style-type: none">• THOSE PARTS OF THE HANDRAILS & BALUSTRADES THAT ARE > 125mm FROM THE BUILDING HAVE NO REQUIREMENTSTHOSE PARTS OF THE HANDRAILS & BALUSTRADES THAT ARE < 125mm FROM ANY GLAZING & COMBUSTIBLE WALLS SHALL BE NON-COMBUSTIBLE MATERIALS OR BUSH-FIRE RESISTANT TIMBER
ROOF PENETRATIONS & VENT		<ul style="list-style-type: none">• ALL OPENINGS & VENTILATORS SHALL BE FITTED WITH NON-COMBUSTIBLE EMBER GUARDS• ANY PENETRATING PIPE OF COUNDUIT SHALL BE NON-COMBUSTIBLE• ALL GLAZED ASSEMBLIES FOR ROOF LIGHTS WHERE ROOF PITCH IS <18⁰, NON-COMBUSTIBLE EMBER GUARDS SHALL BE FITTEDGAPS > 3mm TO BE SEALED WITH NON-COMBUSTIBLE MATERIAL
GUTTER & DOWNPIPES		DOWNPIPES- NR ALL GUTTERS & ASSOCIATED HARDARE TO BE NON-COMBUSTIBLE



Sorell Council
Development Application: 5.2025.119.1 -
Response to Request For Information - 11
Eularminner Street, Carlton -P3.pdf
Plans Reference: P3
Date Received: 07/08/2025



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