DEVELOPMENT APPLICATION

PDPLANPMTD-2026/064582

PROPOSAL: Outbuilding & Demolition (Single Dwelling)

LOCATION: 91 Alford Street, Howrah

RELEVANT PLANNING SCHEME: Tasmanian Planning Scheme - Clarence

ADVERTISING EXPIRY DATE: 30/11/2026 00:00:00

The relevant plans and documents can be inspected at the Council offices, 38 Bligh Street, Rosny Park, during normal office hours until 30/11/2026 00:00:00. In addition to legislative requirements, plans and documents can also be viewed at www.ccc.tas.gov.au during these times.

Any person may make representations about the application to the Chief Executive Officer, by writing to PO Box 96, Rosny Park, 7018 or by electronic mail to clarence@ccc.tas.gov.au. Representations must be received by Council on or before 30/11/2026 00:00:00.

To enable Council to contact you if necessary, would you please also include a day time contact number in any correspondence you may forward.

Any personal information submitted is covered by Council's privacy policy, available at www.ccc.tas.gov.au or at the Council offices.

City of Clarence
38 Bligh St Rosny Park
PO Box 96
Rosny Park TAS, 7018

03 6217 9500
clarence@ccc.tas.gov.au
ccc.tas.gov.au

Planning Application

Use this form to obtain planning approval for the use and development of land, including change of use, subdividing land into smaller lots, lot consolidation, or signage.

Please refer to the Planning Application checklist on the following pages to determine what documentation must be submitted with your application.

Proposal: Outbuilding

Location: 91 Alford Street, Howrah

Personal Information Removed

exemptions may apply which may save you time on your proposal.

If you had pre-application discussions with City of Clarence, please provide planner's name:

Current use of site: Residential

Does the proposal involve land administered or owned by the Crown or Council? Yes ☐ No ☒

Declaration

- I have read the Certificate of Title and Schedule of Easements for the land and am satisfied that this application is not prevented by any restrictions, easements or covenants.
- I authorise the provision of a copy of any documents relating to this application to any person for the purposes of assessment or public consultation. I agree to arrange for the permission of the copyright owner of any part of this application to be obtained. I have arranged permission for Council's representatives to enter the land to assess this application
- I declare that, in accordance with Section 52 of the Land Use Planning and Approvals Act 1993, that I have notified the owner of the intention to make this application. Where the subject property is owned or controlled by Council or the Crown, their signed consent is attached.
- I declare that the information in this declaration is true and correct.

Acknowledgement

- I 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 consultation; 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.

Personal Information Removed

Planning Application checklist

Mandatory Documents
This information is required for the application to be valid. We are unable to proceed with an application without these documents.

- ☐ Details of the location of the proposed use or development.
- ☐ A copy of the current Certificate of Title, Sealed Plan, Plan or Diagram and Schedule of Easements and other restrictions for each parcel of land on which the use or development is proposed.
- ☐ Full description of the proposed use or development.
- ☐ Description of the proposed operation. May include where appropriate: staff/student/customer numbers; operating hours; truck movements; and loading/unloading requirements; waste generation and disposal; equipment used; pollution, including noise, fumes, smoke or vibration and mitigation/management measures.
- ☐ Declaration the owner has been notified if the applicant is not the owner.
- ☐ Crown or Council consent (if publically-owned land).
- ☐ Any reports, plans or other information required by the relevant zone or code.
- ☐ Fees prescribed by the City of Clarence.

Application fees (please phone 03 6217 9550 to determine what fees apply). An invoice will be emailed upon lodgement.

Additional Documents
In addition to the mandatory information required above, Council may, to enable it to consider an application, request further information it considers necessary to ensure that the proposed use or development will comply with any relevant standards and purpose statements in the zone, codes or specific area plan, applicable to the use or development.

- ☐ Site analysis and site plan, including where relevant:
  - Existing and proposed use(s) on site.
  - Boundaries and dimensions of the site.
  - Topography, including contours showing AHD levels and major site features.
  - Natural drainage lines, watercourses and wetlands on or adjacent to the site.
  - Soil type.
  - Vegetation types and distribution, and trees and vegetation to be removed.
  - Location and capacity of any existing services or easements on/to the site.
  - Existing pedestrian and vehicle access to the site.
  - Location of existing and proposed buildings on the site.
  - Location of existing adjoining properties, adjacent buildings and their uses.
  - Any natural hazards that may affect use or development on the site.
  - Proposed roads, driveways, car parking areas and footpaths within the site.
  - Any proposed open space, communal space, or facilities on the site.

- Main utility service connection points and easements.
- Proposed subdivision lot boundaries.

☐ Where it is proposed to erect buildings, detailed plans with dimensions at a scale of 1:100 or 1:200 showing:
- Internal layout of each building on the site.
- Private open space for each dwelling.
- External storage spaces.
- Car parking space location and layout.
- Major elevations of every building to be erected.
- Shadow diagrams of the proposed buildings and adjacent structures demonstrating the extent of shading of adjacent private open spaces and external windows of buildings on adjacent sites.
- Relationship of the elevations to natural ground level, showing any proposed cut or fill.
- Materials and colours to be used on rooves and external walls.

☐ Where it is proposed to erect buildings, a plan of the proposed landscaping showing:
- Planting concepts.
- Paving materials and drainage treatments and lighting for vehicle areas and footpaths.
- Plantings proposed for screening from adjacent sites or public places.

☐ Any additional reports, plans or other information required by the relevant zone or code.

This list is not comprehensive for all possible situations. If you require further information about what may be required as part of your application documentation, please contact City of Clarence Planning team on (03) 6217 9550.

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
60706	155
EDITION	DATE OF ISSUE
3	11-Apr-2026

SEARCH DATE : 29-Sept-2026
SEARCH TIME : 01.02 pm

DESCRIPTION OF LAND

City of CLARENCE
Lot 155 on Sealed Plan 60706 (formerly being SP663)
Derivation : Part of Lot 34386 Gt. to A.V.Jennings Const. Co. (Tas.) Pty.Ltd. Part of Lot 884 Gt. to W. Murray
Prior CT 2162/67

SCHEDULE 1

N101899 TRANSFER to MICHAEL ROBERT HEALY Registered 11-Apr-2026 at 12.01 pm

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP 60706 COVENANTS in Schedule of Easements
SP 60706 FENCING COVENANT in Schedule of Easements
E448621 MORTGAGE to ING Bank (Australia) Limited Registered 11-Apr-2026 at 12.02 pm

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

DIAGRAM FROM ACTUAL SURVEY

TOWN OF HOWRAH

No. OF APPLICATION

Part of ~~192 ac. Gtd. to W. C. Sams~~ &
Part of Lots ~~684 & 685~~ Gtd. to Wm. Murray
Part of Lot 34986 0.3.38½ gl. to A.V. Jennings Construction Co (Tas) Pty Ltd.
Scale ~ 50 Feet to an inch

S.P.663

For L.T.O. Use Only
Filed by
Lodged at the Lands Titles Office
on 23-12-65
at 3.25
Receipt No. 68242
Receiving Clerk

REFERENCE TO CORNERS

COR.	BEARING	DISTANCE IN LINKS	FROM

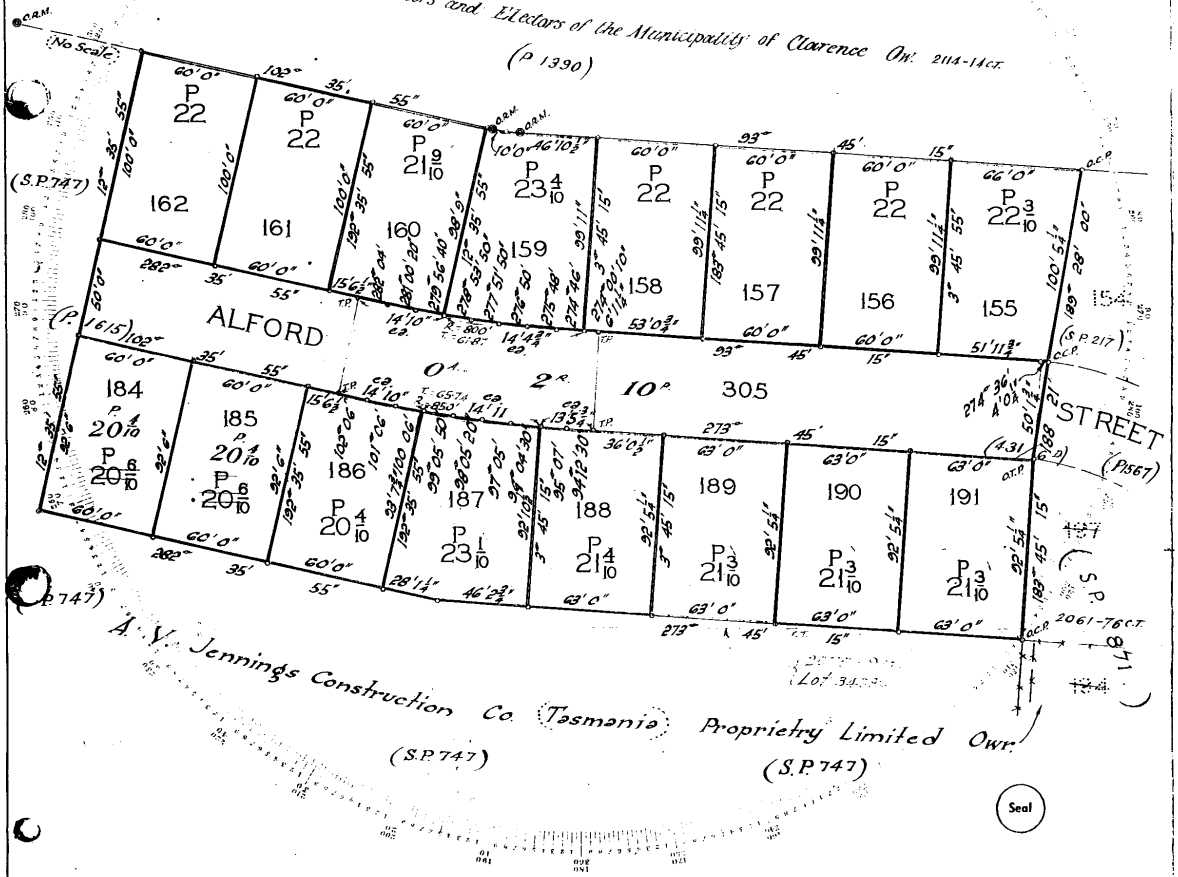
SEE OVER

REGISTERED NUMBER
60706

A.V. Jennings Con.n Co. (Tas.) Pty. Ltd. 2075-9 C.T. 2061-88 C.T.

SEALED PLAN No. 663
EFFECTIVE FROM 18-2-66
DEPUTY RECORDER OF TITLES

Clarence Municipal Commission Own.
The Warden Councillors and Electors of the Municipality of Clarence Own. 2114-14 C.T.
(P 1390)



A.V. Jennings Construction Co. Tasmania Proprietry Limited Own.

Seal

To be filled in by Surveyor.
Survey commenced 13.10.65
Survey finished 14.10.65
Error of close 1 in

To be filled in by Examination.
Plotted by K&C
Examined as to boundaries
Mathematically checked
Entered on Card by

I, Ross Dymock Cassell of Lindisfarne
Registered Surveyor, of Tasmania, do hereby certify that this plan has been made from surveys executed by me or under my own personal supervision, inspection, and field check, and that both plan and survey are correct, and have been made in accordance with the Land Surveyors' By-Law No. 2, dated 3rd July, 1946.

Dated this 8TH. day of , 19 Authorised Surveyor.

APPROVAL BY LOCAL AUTHORITY N°1294

APPROVED UNDER SECTION 16(1) OF THE LOCAL GOVT. ACT 1962 AND AMENDMENTS FOR CONDITIONS SEE BACK

The Common Seal of the Municipality of Clarence has been hereunto affixed in the presence of us this 16th day of DECEMBER one thousand nine hundred and Sixty FIVE in pursuance of authorisation given at a meeting of the Commissioners held on the 16th day of December 1965

Chairman
Commissioner
Secretary

Sheet of Sheets

SCHEDULE OF EASEMENTS

Office use only

PLAN No. S.P.663

This is the schedule of easements attached to the plan of 155 to 162 inclusive and 184 to 191 inclusive comprising part of the land in Certificates of Title Regd. Vol. 2075 Folio 9, 2061 Folio 76 and 2061 Folio 77 Sealed by .....
(insert title reference)

Clarence Commission on [illegible] 1965

.....
Council Clerk/~~Town Clerk~~

No easements or profits a prender are created to benefit or burden any lots shown on the plan.

The Owner of each lot on the said plan covenants:

FIRSTLY with A.V. Jennings Construction Co. (Tasmania) Proprietary Limited ~~that the said A.V. Jennings Construction Co. (Tasmania) Proprietary Limited~~ (hereinafter called "the Vendor") "that the Vendor shall not be required to fence".

SECONDLY with the said A.V. Jennings Construction Co. (Tasmania) Proprietary Limited and the owners for the time being of every other lot to the intent that the burden of this covenant may run with and bind the covenantors' lot and every part thereof and that the benefit thereof may be annexed to and devolve with each and every part of every other lot to observe the following stipulations:

(a) NOT to erect on the said lot anydwelling house of a less value than THREE THOUSAND POUNDS (£3,000. 0. 0) such value to be the actual cost in labour and materials only any question as to value shall be settled by such valuer as A.V. Jennings Construction Co. (Tasmania) Proprietary Limited may select and all necessary vouchers shall be produced to such Valuer.

(b) NOT to carry on nor permit to be carried on any trades noisome noxious or offensive or otherwise upon the said lot.

(c) NOT to erect more than one message on the said lot and not to use or permit to be used any message upon the said lot for any other purposes other than as a private dwelling house.

(d) NOT to erect or permit to be erected on the said lot or any part thereof or attach or permit to be attached to the dwelling house or outbuildings erected thereon any advertisement hoarding bill or poster or any similar erection of an unsightly nature.

(e) THE said A.V. Jennings Construction Co. (Tasmania) Proprietary Limited reserves the right to sell any part of the unsold land shown on the said Survey Plan freed and exempt from any one or more of the restrictive covenants or conditions or to waive or alter any of such restrictive covenants as to any land not transferred.

The provision that the Vendor shall not be required to fence shall have the same effect as such provision has in an instrument under Section 71B of "the Conveyancing and Law of Property Act 1884".

THE COMMON SEAL OF A.V. JENNINGS CONSTRUCTION CO. (TASMANIA) PROPRIETARY LIMITED was hereunto affixed by resolution of the Board of Directors dated the 24th day of November 1965 in the presence of:

[illegible]
Director.

[illegible]
A person appointed by the Directors to countersign the affixing of the Seal.

WRITE ON THIS SIDE OF THE PAPER ONLY

TOWN OF HOWRAH

Part of 120a. [illegible]

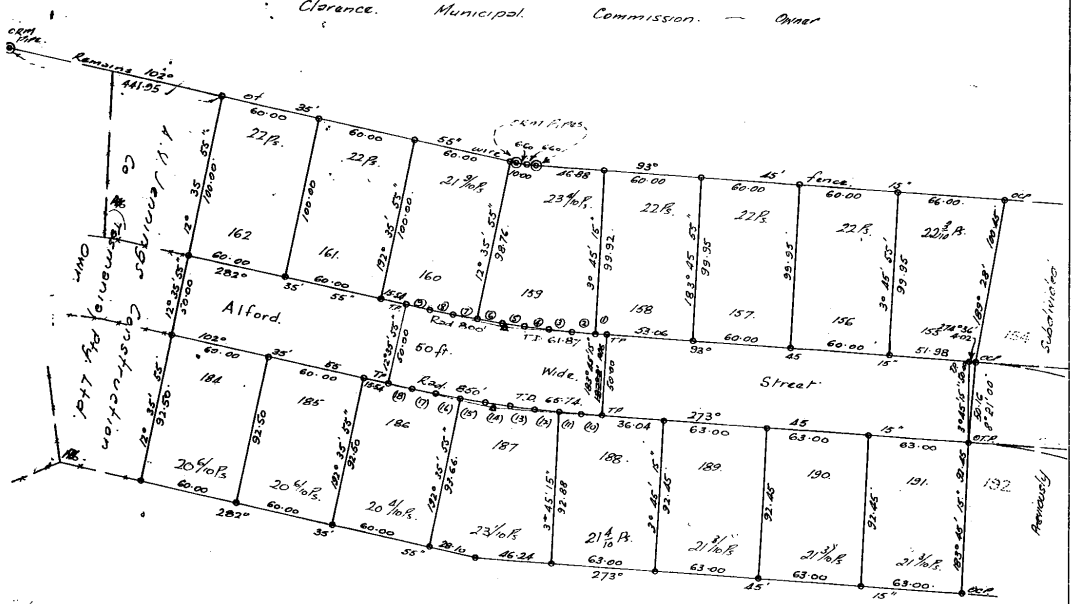
& Part of Lots 884 & [illegible]

All corners C.P.S.

For Info. in red See Inside.

S.P. 663

Clarence. Municipal. Commission. — Owner



A.V. Jennings Construction Co. (Tasmania) Proprietary Limited

Owr

Bearing	Dist
271° 00' 10"	42.34
272° 22'	14.41
275° 48'	"
276° 50'	"
277° 57' 50"	"
279° 58' 30"	"
272° 56' 40"	14.88
280° 00' 20"	"
282° 04'	"
327° 18' 30"	12.48
34° 07'	"
36° 49' 40"	14.88
37° 05'	"
39° 03' 20"	"
39° 05' 20"	"
100° 06'	14.88
141° 32'	"
102° 00'	"

NO INFORMATION TO BE WRITTEN WITHIN THIS SPACE

CHECK CAREFULLY ALL ASPECTS OF THESE
DOCUMENTS BEFORE COMMENCING WORK.

ANY ERRORS OR ANOMALIES TO BE REPORTED
TO THE DRAWER BEFORE WORK IS CONTINUED

CONFIRM ALL SIZES AND HEIGHTS ON SITE

DO NOT SCALE OFF PLAN

ALL CONSTRUCTION IS TO COMPLY WITH THE
BUILDING CODE OF AUSTRALIA AND ALL
RELEVANT AUSTRALIAN STANDARDS

CONSTRUCTION STANDARDS:
ALL WORKS SHOULD BE GENERALLY INLINE WITH THE PRACTICES SET OUT IN
THE 'GUIDE TO STANDARDS AND TOLERANCES 2007'

WIND LOADS DETERMINED IN ACCORDANCE WITH
AS 4055 - WIND LOADS FOR HOUSING

THESE DOCUMENTS TO BE USED WITH ALL
DOCUMENTATION PREPARED BY AN ENGINEER

THESE DOCUMENTS ARE INTENDED FOR COUNCIL APPLICATIONS AND
NORMAL CONSTRUCTION, THEY ARE NOT TO BE USED FOR TENDERING
PURPOSES OR INSPECTIONS.

THIS DESIGN IS COVERED UNDER COPYRIGHT AND ANY
CHANGES MUST BE CONFIRMED BY "WILKIN DESIGN & DRAFTING"
THE DRAWER RETAINS ALL "INTELLECTUAL PROPERTY"

REQUIREMENTS OF SCHEDULE 1

DESIGNER : T. WILKIN - CC678X
PROJECT ADDRESS : 91 ALFORD ST HOWRAH TAS 7018
CLIENT NAME : M. HEALY
TITLE REF : 60706/155
FLOOR AREA : 64.00m²
DESIGN WIND SPEED : N2
SOIL CLASSIFICATION : M
CLIMATE ZONE : 7
BAL LEVEL : 29
ALPINE AREA : N/A
CORROSION ENVIRONMENT : N/A
KNOWN SITE HAZARDS : NONE

INDEX OF APPLICATION SET:
ARCHITECTURAL DRAWINGS - PAGE 00 - 02
ENGINEERING DRAWINGS - NO
SPECIFICATIONS - NO
ADDITIONAL PAGES - FORM 35

BHMP CONSTRUCTION NOTES:

THE PROPOSED SHED IS TO HAVE THE FOLLOWING PROVISIONS;

- IF SARKING IS NOT FITTED TO WALLS ALL WALL SHEETING TO HAVE A MAXIMUM 2mm GAP ANYWHERE. USE SPECIAL ATTENTION AROUND DOORS AND WINDOWS.
- OPENING SASH OF WINDOWS TO HAVE CORROSION RESISTANT STEEL MESH SCREENS WITH MAXIMUM APERTURE OF 2mm AND FITTED AROUND WINDOW WITH MAXIMUM 2mm GAPS.

OR WINDOW BE OF 5mm TOUGHENED GLASS

- ROOF SHEETING TO HAVE MAXIMUM 2mm GAPS INCLUDING AT INTERSECTION OF WALL AND ROOF.
- ROOF TO BE FULLY SARKED WITH A NON-FLAMMABLE SARKING AND AREA UNDER RIDGE AND BEHIND SPOUTING TO BE FITTED WITH 2mm MESH OR MINERAL WOOL.
- ROLLER DOORS TO HAVE SUITABLE WEATHER STRIPS, DRAUGHT EXCLUDERS, DRAUGHT SEALS OR BRUSHES. NO VENTILATION SLOTS ARE PERMITTED.

LEGEND:
COVER PAGE
PAGE 1# SITE PLAN
PAGE 2# FLOOR PLAN/ELEVATIONS

PROPOSED SHED FOR M. HEALY AT 91 ALFORD ST HOWRAH TAS 7018

wilkin design
P.O. BOX 478
LAUNCESTON
TASMANIA 7250

ACCREDITATION NO:
CC678 X

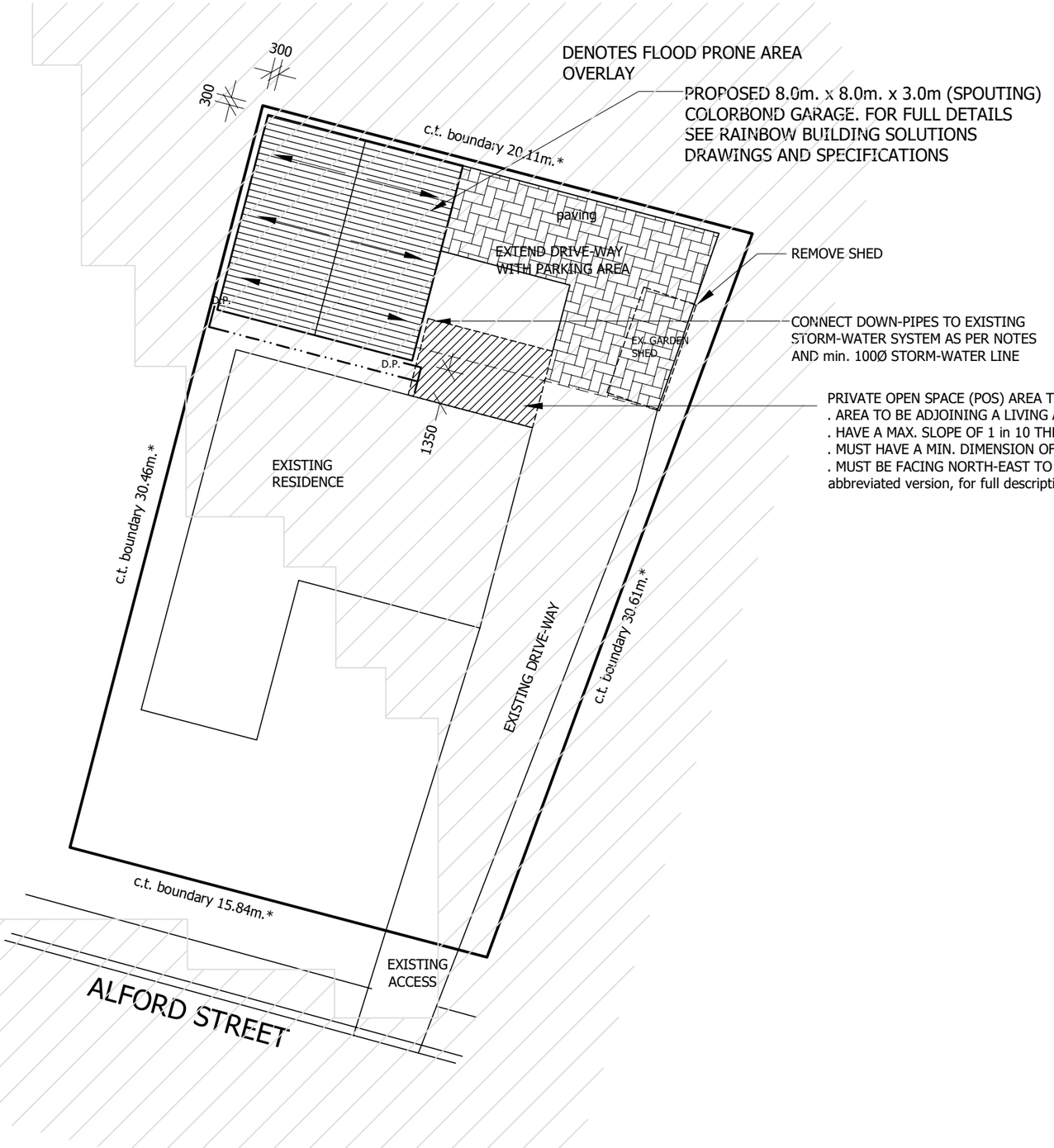
DATE:
30/09/2026

JOB NUMBER:
DA/BA-26SRHEAL

© WDD '26

RAINBOW building solutions

NOTE: TABLE FOR UNPROTECTED EMBANKMENT SLOPES SLOPE = H:L			
SOIL TYPE		COMPACTED FILL	CUT
STABLE ROCK		2:3	8:1
SAND		1:2	1:2
SILT		1:4	1:4
CLAY	(FIRM)	1:2	1:1
	(SOFT)	NOT SUITABLE	2:3
SOFT SOILS		NOT SUITABLE	NOT SUITABLE



91 ALFORD ST
HOWRAH TAS 7018

TITLE REF: 60706/155
PROPERTY ID: 5067431
TITLE AREA = 564.03m²*

NOTE:
THESE PLANS HAVE BEEN PREPARED ALONGSIDE INFORMATION AND DIMENSIONS FROM BOTH THE DIRECT CLIENT, TheList AND ONLINE INFORMATION.
ALL ASPECTS OF THE DRAWING SHOULD BE CHECKED THOROUGHLY BEFORE COMMENCEMENT OF WORK. IF IN DOUBT SEEK ADVICE FROM WILKIN DESIGN.

SET OUT NOTES:
- THE BUILDER IS TO SET OUT THE WORKS IN CONJUNCTION WITH THE ACCOMPANYING PLANS. THE FINAL POSITION IS TO BE CONFIRMED BY THE CLIENT AS TO BEING CORRECT. ALL DIMENSIONS HEIGHTS AND LEVELS ARE TO BE CONFIRMED ON SITE BY ALL PARTIES INCLUDING LOCAL COUNCIL, OWNER AND ENGINEER BEFORE ANY EXCAVATION IS TO BE CARRIED OUT.

PLUMBING NOTES:
- ALL PLUMBING WORK BOTH WASTE AND WATER TO COMPLY WITH CURRENT BCA AND AS 3500 WITH ALL LOCAL COUNCIL REQUIREMENTS SATISFIED.
- ALL DRAINS ARE TO BE 100mm PVC SEWER PIPE SET IN 12mm BLUEMETAL WITH A MINIMUM DEPTH OF 500mm ALL AS PER AS 3500 "PLUMBING AND DRAINAGE".
- STORMWATER DRAIN INSTALLATION SHALL COMPLY WITH AS 3500.

SITE PLAN
1:200

NOTE: ALL DIMENSIONS TO BE CONFIRMED ON SITE.

NOTE: ALL DIMENSIONS TO BE CONFIRMED ON SITE.
* TITLE DIMENSIONS HAVE BEEN CONVERTED FROM LINKS, PERCHES AND ROODS AND MUST NOT BE USED FOR SETTING OUT OR ANY OTHER REFERENCE FOR SURVEYING, THEY ARE INDICATIVE ONLY

wilkin design
P.O. BOX 478
LAUNCESTON
TASMANIA 7250

ACCREDITATION NO:
CC678 X

NOTES:
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PROJECT TITLE:
HEALY SHED

ALFORD ST
HOWRAH

REVISION:
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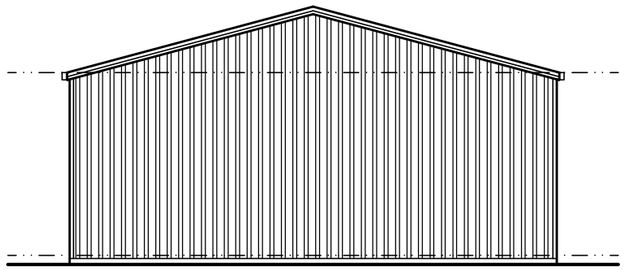
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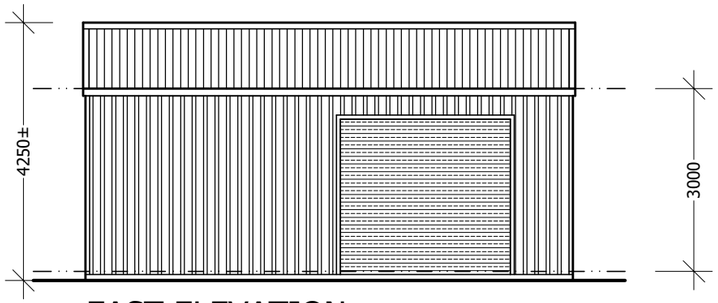
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PAGE:
01 of 02

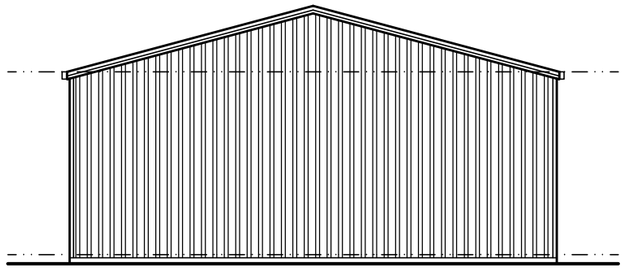
A3



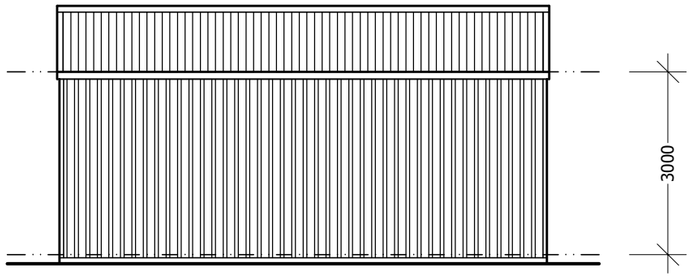
NORTH ELEVATION
1:100



EAST ELEVATION
1:100

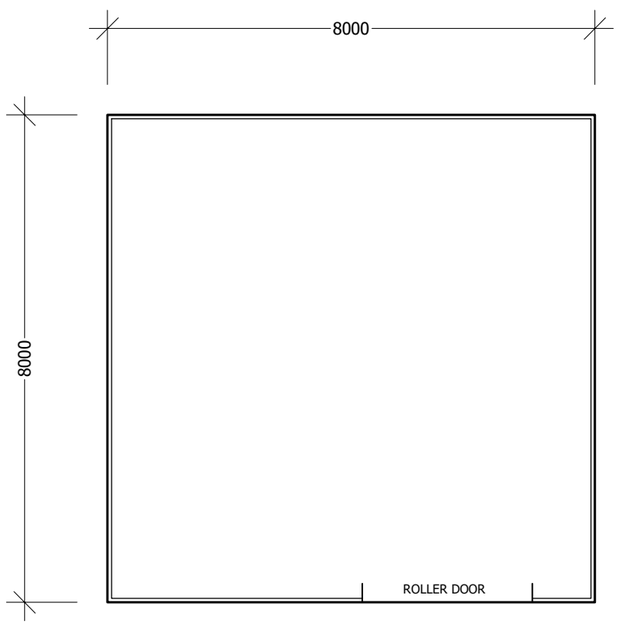


SOUTH ELEVATION
1:100



WEST ELEVATION
1:100

BUILT UP FROM NGL



FLOOR PLAN
1:100

A3

P.O. BOX 478
LAUNCESTON
TASMANIA 7250

ACCREDITATION NO:
CC678 X

NOTES:
----------.

PROJECT TITLE:
HEALY SHED

ALFORD ST
HOWRAH

REVISION:
----------.

DATE:
30/09/2026

SCALE:
AS SHOWN

JOB NUMBER:
DA/BA-26SRHEAL

PAGE:
02 of 02

Prepared for:
Michael Healy



91 Alford Street
Howrah

FLOOD HAZARD REPORT

FE_26172
28 October 2026

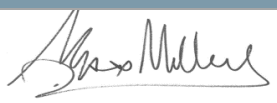
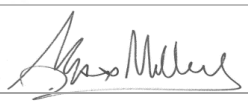
flüssig Engineers

L4/ 116 BATHURST ST
HOBART TASMANIA 7000
ABN: 16 639 276 181

Document Information

Title	Client	Document Number	Project Manager
91 Alford Street, Howrah, Flood Hazard Report	**Michael Healy**	FE_26172	**Max W. Möller** *BEng, FIEAust, EngExec, CPEng, NER, APEC Engineer, IntPE (Aus.)* *Managing Director / Principal Hydraulic Engineer*

Document Initial Revision

REVISION 00	Staff Name	Signature	Date
Prepared by	Max W. Moller ***Principal Hydraulic Engineer***		22/10/2026
Prepared by	Ash Perera ***Hydraulic Engineer***		23/10/2026
Prepared by	Christine Keane ***Water Resources Analyst***		23/10/2026
Prepared By	Fraser Cumming ***Graduate Civil Engineer***		23/10/2026
Reviewed by	John Holmes ***Senior Engineer***		27/10/2026
Authorised by	Max W. Möller ***Principal Hydraulic Engineer***		28/10/2026

Document Revision History

Rev No.	Description	Reviewed by	Authorised by	Date

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Acronyms

AEP: Annual Exceedance Probability
CC: Climate Change
ARR: Australian Rainfall and Runoff
TPS: Tasmanian Planning Scheme
DEM: Digital Elevation Model
RAFTS: Runoff Analysis Flow Training System
SSP: Shared Socioeconomic Pathways
LiDAR: Light Detection and Ranging
GIS: Geographic Information System
AHD: Australian Height Datum
FFL: Finished Floor Level

1. Introduction

Flüssig Engineers has been engaged by **Michael Healy,** to undertake a site-specific flood hazard report for the proposed shed and driveway extension at number 91 Alford Street, Howrah in the **Clarence City 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 65 m^2 shed with an approximate 48 m^2 extension of the existing concrete driveway located within an overland flow path. The site is approximately 565 m^2 and contains an existing dwelling and shed of 135 m^2 and 10 m^2 respectively that are to remain. This development triggers the inundation code as the development falls within Clarence City Council, flood prone area.

1.2 Objectives and Scope

This flood analysis has been written to meet the standards of the Tasmanian Planning Scheme with the intent of understanding the development risk with respect to overland 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 of flooding for pre- and post-development through mapping and analysis.
- Assess changes in flood depth, velocity, discharge and hazard resulting from the proposed development.
- Consider the proposed development against the relevant provisions of the Flood-Prone Areas Hazard Code.

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
C12.6.1 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 91 Alford Street, Howrah is approximately 55.7 ha, originating approximately 750 m north and northwest of the site, with an average slope of 17.2 – 22.4%. The land use of the catchment is a mix of General Residential, Landscape Conservation, Open Space and utilities with the specific site being listed as General Residential.

Figure 1 below outlines the approximate contributing catchment for the development site at 91 Alford Street, Howrah.



Figure 1. Full Contributing Catchment, 91 Alford Street, Howrah

2.2 Hydrology

The following Table 2 shows the combined initial and continuing rainfall loss values adopted for the RAFTS catchment model. These values were based on detailed aerial imagery. 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
55.7	28-12/1	3.7-1.5/0.0	0.045	0.02	-0.285

2.2.1 Design Rainfall Events

Under the Tasmanian Planning Scheme (TPS), developments must be assessed against the 1% Annual Exceedance Probability (AEP) event (equivalent to the 100-year ARI) over the full design life of the development. Accordingly, this analysis focuses on 1% AEP events incorporating climate change (CC) allowances.

Given the size and slope of the catchment, critical storm durations ranged from 10 minutes to 6 hours, consistent with previous studies for this area. Figure 2 below presents the box-and-whisker results for the 1% AEP model run. The 10-minute duration produced the highest median flow across the temporal-pattern ensemble, with temporal pattern 5 subsequently adopted for hydraulic modelling.

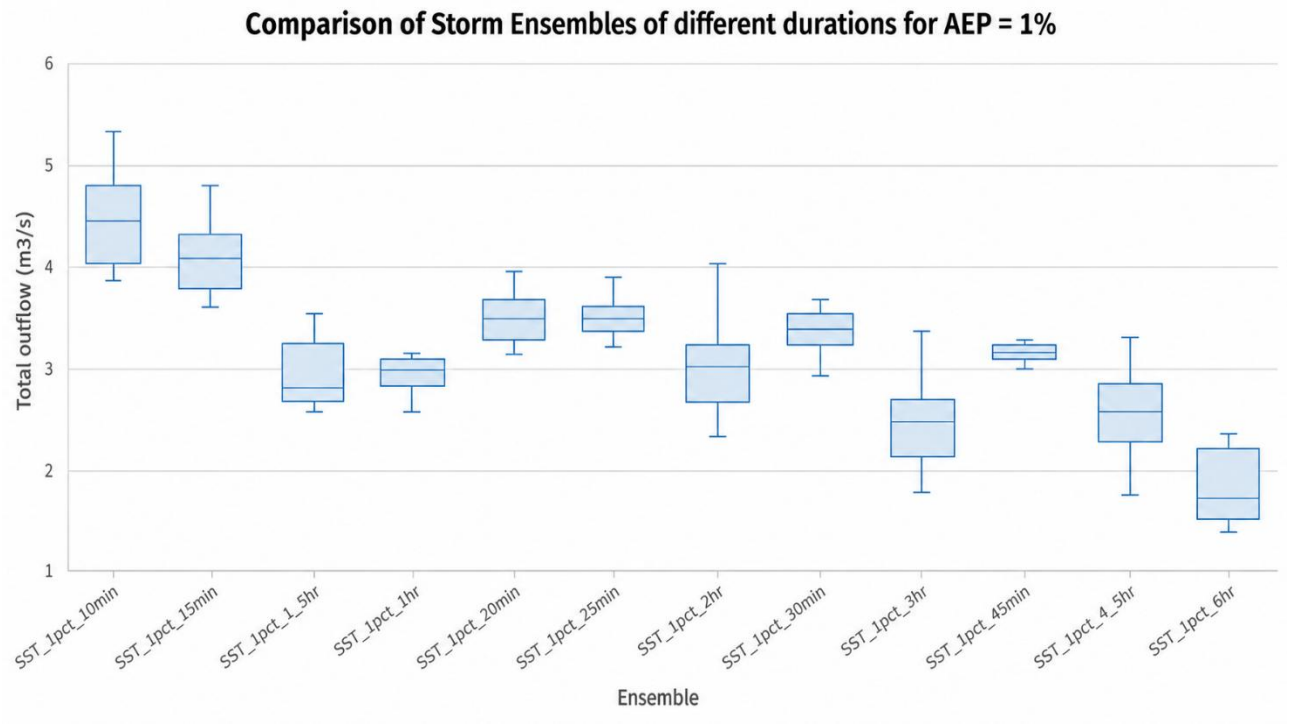


Figure 2. 1% AEP Box and Whisker Plot

2.2.2 Climate Change

The ARR 2019 Guide for Flood Estimation, Version 4.2, is regarded as the industry standard for assessing projected increases in rainfall under climate change conditions for the year 2100 scenario.

According to the guide, a multiplication factor of 1.66 is adopted for rainfall durations of less than 1 hour under the SSP3-7.0 at 2100 scenario for the localised catchment. This factor accounts for the anticipated intensification of extreme rainfall events due to climate change impacts and is generally adopted by councils which is shown below in Table 3.

Table 3. Climate Change Increases

Parameter	Localised Catchment SSP3-7.0 @ 2100
<1 Hour Rainfall Intensity	66% Increase

2.3 Hydraulics

A detailed one-dimensional–two-dimensional (1D–2D) hydraulic model was developed to simulate and quantify flood behaviour across the target study area. The 1D component of the model was configured to represent any existing infrastructure, enabling accurate routing of flows through defined hydraulic structures. This ensured that conveyance within the formal drainage system was properly captured, including surcharge behaviour during periods of high flow.

2.3.1 Calibration/Validation

This catchment has no stream gauge to calibrate the model against a real-world storm event. Similarly, there is no 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 a combination of LiDAR tiles to create a 1m cell size a Digital Elevation Model (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).

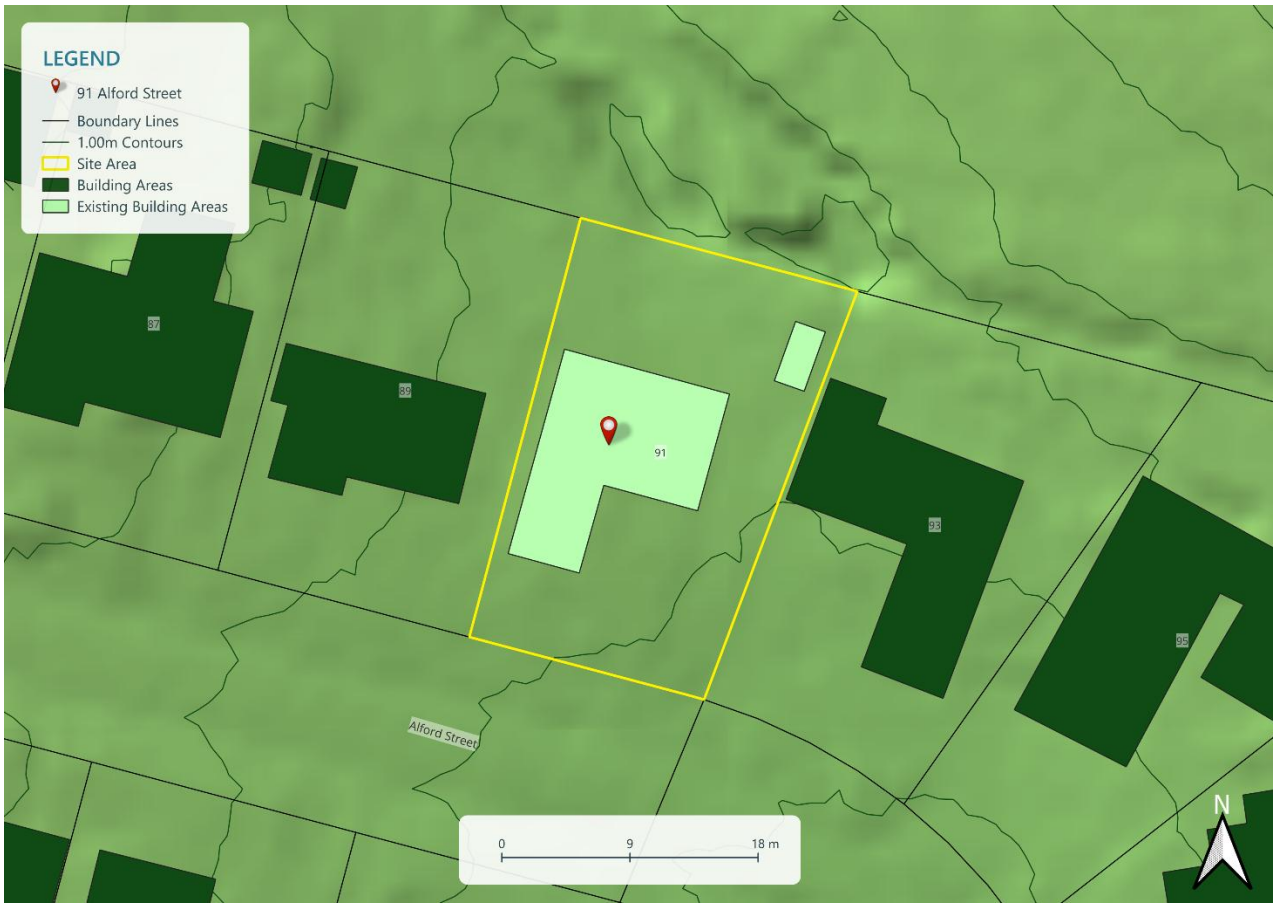


Figure 3. 1m DEM (Hill shade) of the Site Area, 91 Alford Street, Howrah

2.3.3 Key Stormwater Assets including pipes and pits

Pipes and pits were modelled as 1D underground network within the catchment model and included identified culverts and discharge outlets. All upstream stormwater infrastructure was included within the model to provide insight into the capacity of the stormwater system. Where data was missing, this was inferred from surrounding data and where invert levels were missing, a 600 mm cover was applied.

2.3.4 Roads

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

In the Digital Elevation Model, z-lines were used to improve the representation of road gutters and kerb alignments within the 2D surface. The z-lines enforce the derived gutter elevations along the road corridor, allowing the model mesh to better represent local grade changes, kerb low points and the longitudinal drainage path. This assists in directing shallow overland flow along the road network in a manner consistent with the existing terrain.

2.3.5 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.

2.3.6 Walls

All significant fences and retaining structures were incorporated into the 2D model as 2D linear wall elements. Timber paling fences were modelled with a maximum height of 300 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.

2.3.7 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.

Particular attention was given to identifying and incorporating relevant features such as residential and commercial buildings, walls, fences and roadways. These features can influence local flow direction, conveyance and ponding behaviour and were therefore included where considered hydraulically significant. The inclusion of these features improves representation of the existing built environment and supports a more reliable assessment of flood behaviour across the modelled area.

2.3.8 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

Figure 4 presents the predevelopment flood conditions at 91 Alford Street, Howrah for the 1% AEP event including climate change to year 2100. The assessment represents the terrain, dwelling, outbuilding, driveway and fencing before any proposed works are introduced. Flood behaviour is controlled by a defined overland flow path originating from Mornington Hill to the north and travelling downslope through the site toward Alford Street.

The depth mapping indicates that the central and eastern portions of the property are affected by shallow to moderate inundation as runoff moves through the site. Flood depths are generally within the 0.10 m to 0.60 m range across the principal flow corridor, with localised deeper areas toward the northern and northeastern portions where runoff enters from the Mornington Hill catchment. Depths vary through the central site as flow spreads around buildings and ground features before continuing south toward Alford Street. Shallower conditions occur along the western and southwestern margins, where the ground is less influenced by the main conveyance route. The dwelling occupies an elevated portion of the property and is largely separated from deeper mapped inundation.

The velocity mapping confirms the north to south conveyance pattern through the property. The greatest flow energy is concentrated through the eastern portions of the site, where velocities generally increase from approximately 1.0 m/s to 1.9 m/s. Localised velocities exceeding 2.0 m/s occur toward the southern part of the property as runoff becomes more concentrated before discharging toward Alford Street. Lower velocities, generally below approximately 0.50 m/s to 1.0 m/s, occur around the western side of the lot and adjacent to the existing dwelling.

The hazard mapping reflects the combined influence of depth and velocity. H1 and H2 conditions are present around the western side of the property and portions of the existing dwelling area. Hazard increases through the central and eastern flow corridor, where H3 and H4 conditions coincide with deeper and faster moving runoff. Localised higher hazard occurs toward the southern and northeastern portions where overland flow becomes concentrated.

The predevelopment results establish a hydraulic pathway from Mornington Hill through the lot at 91 Alford Street toward Alford Street, with lower flood influence around the existing dwelling and western site margin. These conditions provide the baseline for assessing whether the proposed development alters flood depth, velocity, hazard or flow distribution within the property or on adjoining land.

3.2 Post-Development Scenario

The post development scenario in Figure 5, represents the proposed works at 91 Alford Street for the 1% AEP event including climate change to year 2100. The model incorporates the proposed shed, hardstand driveway extension and removal of the existing shed. The principal overland flow direction remains from Mornington Hill to the north, travelling south through the property toward Alford Street. The proposed works locally redistribute this flow but do not alter the broader north to south drainage mechanism affecting the site.

The depth mapping indicates that floodwater approaching from the north encounters the proposed shed, creating a localised impediment and causing flow to spread around the eastern and western sides of the structure before continuing south. Flood depths around the proposed shed are generally within the approximate 0.10 m to 0.60 m range, with shallower conditions immediately west and deeper localised areas toward the eastern side where flow becomes more concentrated. Through the central and eastern parts of the property, depths remain generally within approximately 0.10 m to 0.60 m, with localised areas approaching 0.60 m to 0.80 m. The deeper conditions continue to occur within the established eastern side overland flow corridor rather than around to the west of the existing dwelling.

The velocity mapping shows that flow around the proposed shed is generally between approximately 0.50 m/s and 1.50 m/s. A localised increase occurs along the eastern and southeastern side of the shed where runoff moves across the proposed hardstand driveway extension. This smoother surface reduces hydraulic resistance compared with the existing ground and allows flow to accelerate locally. Further south through the main conveyance corridor, velocities generally increase to between approximately 1.50 m/s and 1.95 m/s, with localised areas exceeding 2.00 m/s before runoff continues toward Alford Street. The western side of the dwelling remains subject to substantially lower velocities.

The hazard mapping reflects these changes in depth and velocity. H1 and H2 conditions remain present around the western side of the dwelling and parts of the northern site. H2 to H3 conditions occur around the proposed shed and hardstand area, while H3 and H4 hazard becomes more prominent through the central and eastern flow corridor. Localised higher hazard remains concentrated farther south where the greatest velocities and depths coincide. Importantly, the proposed shed causes a widening of the local flood affected area but does not produce a substantial increase in hazard classification across the broader site.

The post development results therefore indicate that the proposed shed and driveway extension modify flood behaviour locally through redistribution and acceleration around the new structures and hardstand surfaces. The established Mornington Hill to Alford Street flow path remains clearly defined, and the changes remain principally contained within the existing hydraulic corridor.

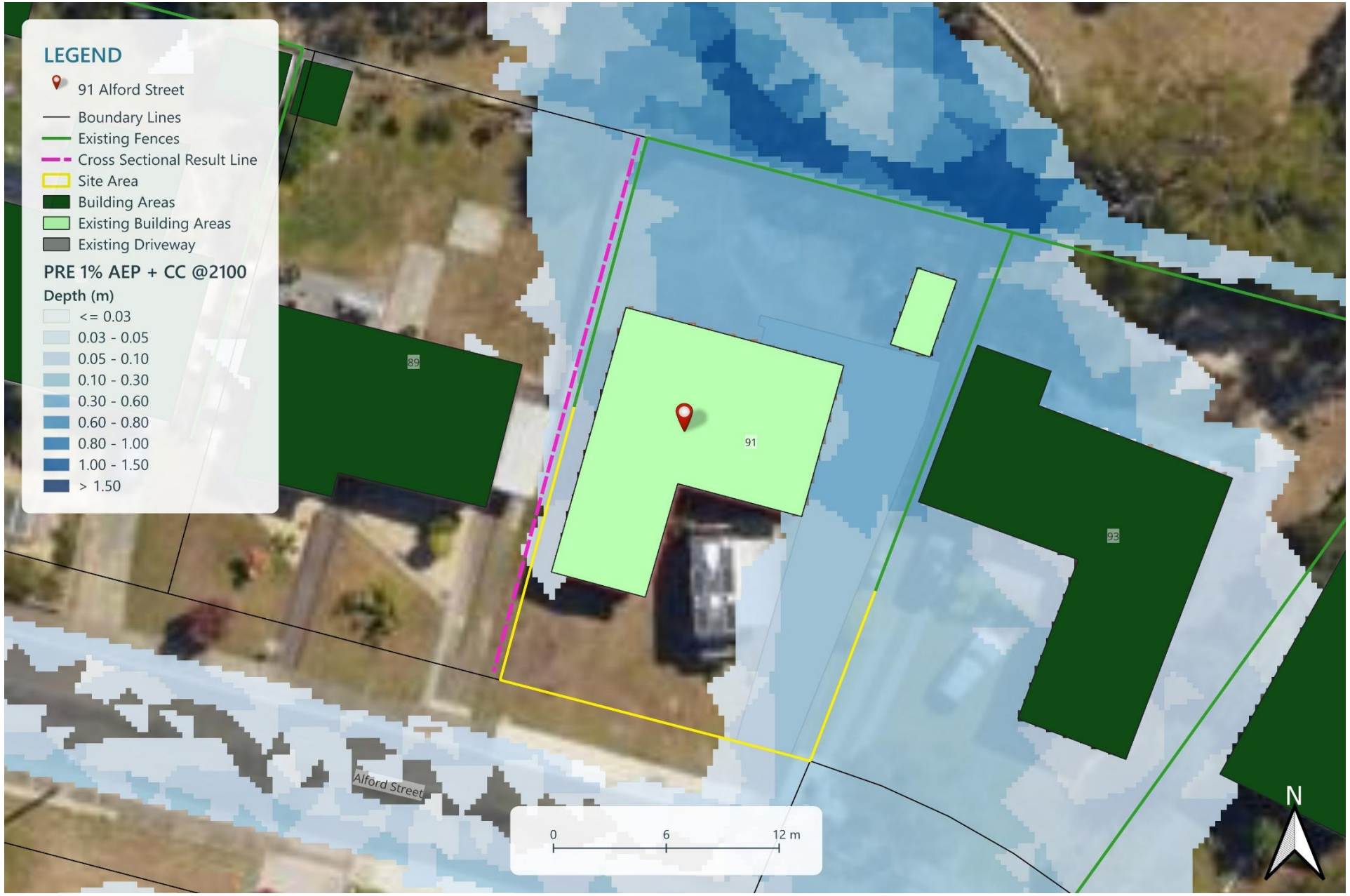


Figure 4. Pre-Development 1% + CC Flood Depths and Extents



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

3.3 Displacement of Overland Flow on Third Party Property

The post development hydraulic results have been reviewed to determine whether the proposed shed, hardstand driveway extension and removal of the existing shed cause a material displacement of overland flow onto adjoining third party properties. The principal flow path continues to originate from Mornington Hill to the north and travel south through 91 Alford Street toward Alford Street.

The proposed shed creates a localised obstruction within the existing flow corridor, causing floodwater to spread around the structure before reconnecting with the established downstream pathway. Flood depths around the shed remain generally within approximately 0.10 m to 0.60 m, with the deeper conditions remaining associated with the existing central and eastern flow corridor.

A localised increase in velocity occurs along the eastern and southeastern side of the proposed shed, primarily due to the hardstand driveway extension and its lower hydraulic roughness. Velocities in this area remain generally between approximately 0.50 m/s and 1.50 m/s.

The hazard distribution remains broadly consistent with the predevelopment condition, with local changes confined to the subject property. Accordingly, the proposed works are not expected to cause a material displacement of overland flow onto adjoining third party land.

3.4 Development Effects on Stormwater Discharge

Figure 6, presents the predevelopment and post development discharge and velocity hydrographs for the 1% AEP event including climate change to year 2100 taken from the cross sectional results line on the western boundary. The results indicate a small increase in flood depth from approximately 0.30 m to 0.34 m and a minor increase in velocity from approximately 0.18 m/s to 0.21 m/s.

These changes are associated with the local redistribution of overland flow around the proposed shed and the smoother hardstand driveway extension. Modelled discharge also increases slightly from approximately 0.026 m^3/s under predevelopment conditions to 0.033 m^3/s under post development conditions, representing an increase of approximately 0.007 m^3/s.

The increase in discharge is minor and remains associated with the local hydraulic response within the subject property. When considered together with the small changes in depth and velocity, the results do not indicate a substantial change in the broader overland flow behaviour. Subject to maintaining the modelled site arrangement and existing flow corridor, the proposed development is not expected to result in a material adverse downstream stormwater impact.

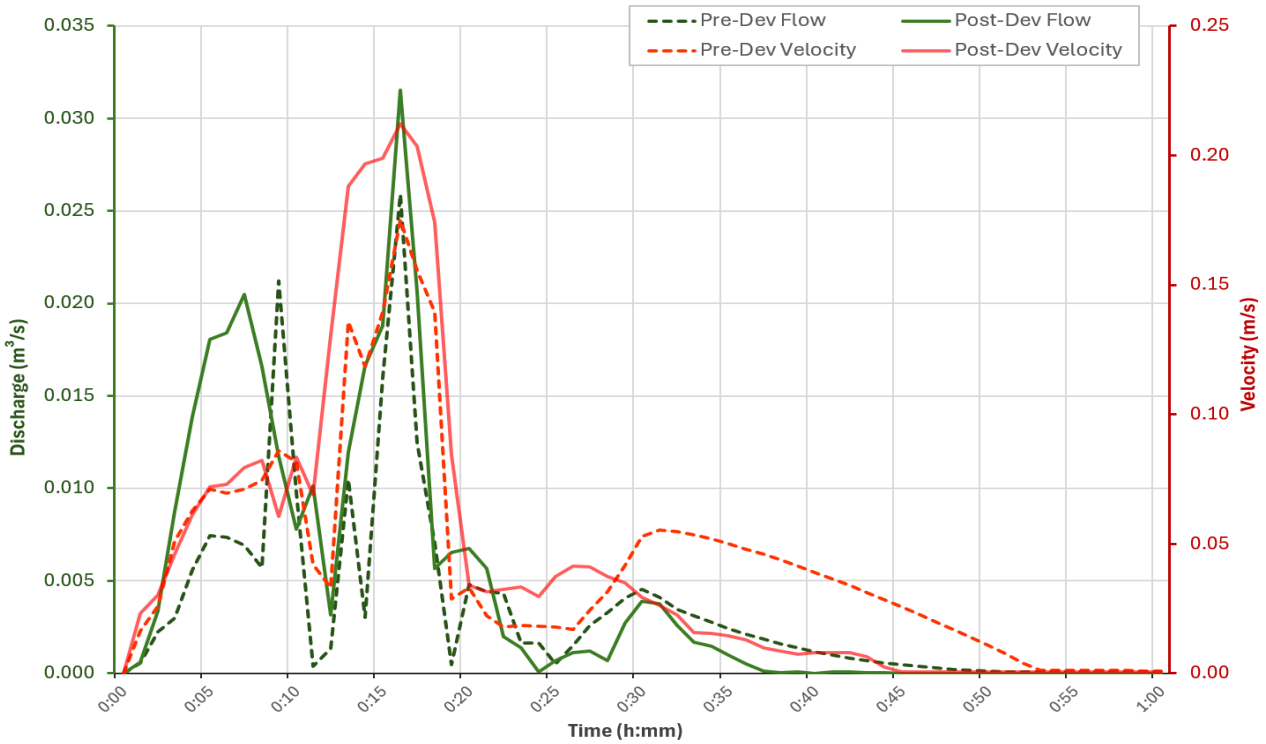


Figure 6. Pre- and Post-Development Discharge and Velocity Hydrograph

3.5 Model Summary

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

	Pre-Development	Post-Development	Net Change
Depth (m)	0.30	0.34	+ 0.04
Velocity (m/s)	0.18	0.21	+ 0.04
Discharge (m^3/s)	0.026	0.033	+ 0.007

4. Flood Hazard

Appendix A presents the flood hazard assessment maps for 91 Alford Street has been undertaken for the 1% AEP event including climate change to year 2100. The hazard pattern remains governed by the established north to south overland flow path originating from Mornington Hill and continuing through the property toward Alford Street.

Around the proposed shed and hardstand driveway extension, hazard is generally within the H2 to H3 range, reflecting the local combination of approximately 0.10 m to 0.60 m flood depth and velocities commonly between 0.50 m/s and 1.50 m/s. Localised H4 conditions occur where flow becomes more concentrated through the central and eastern parts of the property.

The highest hazard remains farther south within the established conveyance corridor, where increased velocity and depth coincide before runoff reaches Alford Street. The proposed shed locally widens the flood affected area by redistributing flow around the structure, but this does not produce a substantial increase in hazard classification across the broader site.

The existing dwelling remains comparatively separated from the higher hazard flow corridor, with lower H1 to H2 conditions continuing around much of the western portion of the property.

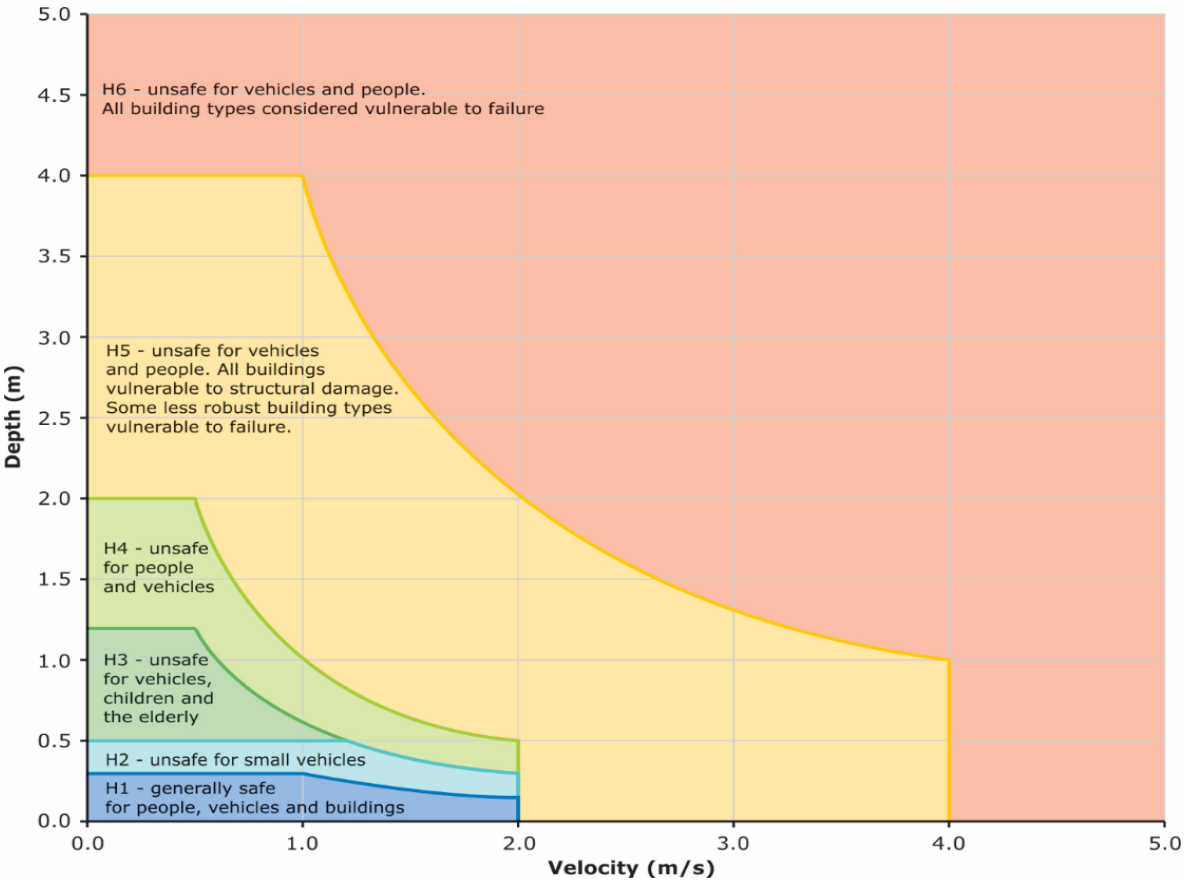


Figure 7. Hazard Categories from the Australian Disaster and Resilience Handbook Collection

4.1 Tolerable Risk

The tolerable risk assessment for 91 Alford Street considers the post development flood conditions for the 1% AEP event including climate change to year 2100. The assessment recognises that the property is affected by an established overland flow path originating from Mornington Hill to the north and travelling south through the site toward Alford Street.

The proposed shed and hardstand driveway extension locally modify this flow pattern by redistributing floodwater around the new structure. Flood depths around the proposed shed are generally within the shallow to moderate range, while velocities locally increase as flow passes around the eastern and southeastern sides of the structure and across the proposed hardstand surface.

The proposed shed is exposed to modelled flood conditions of approximately 0.45 m depth and velocities up to approximately 1.5 m/s. The shed materials, structural system, foundations and construction methodology must therefore be specifically selected and designed to resist the applicable hydrostatic and hydrodynamic forces associated with these hydraulic conditions. Consideration should also be given to potential debris impact, scour, erosion, buoyancy and localised differential loading. The structural design and construction requirements should be determined and certified by a suitably qualified structural engineer using the hydraulic parameters provided in this report.

The proposed shed creates a localised impediment within the existing overland flow path, resulting in some widening and redistribution of the flood affected area. The modelling indicates that this effect remains primarily contained within the subject property and does not create a substantial increase in hazard or a new concentrated flow path onto adjoining land.

The existing dwelling remains comparatively separated from the higher hazard corridor. Subject to appropriate structural design of the shed, use of stable non erosive hardstand materials, maintenance of the modelled site arrangement and avoidance of additional obstructions within the overland flow corridor, the proposed works are considered capable of achieving a tolerable level of flood risk.

5. Tasmanian Planning Scheme Summary

The following tables summarise the proposed development's response to the applicable Flood-Prone Areas Hazard Code provisions.

Table 6. 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 shed and adjoining driveway development.
(b)	whether any increase in the level of risk from flood requires any specific hazard reduction or protection measures;	(b)	There is no increase in risk following construction of the proposed shed and therefore no requirement to provide hazard reduction protection measures.
(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 material 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)	The proposed shed can achieve and maintain a tolerable level of flood risk subject to the recommendations of this report. No additional flood protection measures are required.

6. Conclusion

The flood assessment for 91 Alford Street confirms that the proposed shed and hardstand driveway extension can be accommodated within the site, subject to the recommendations and design requirements identified in this report. The principal overland flow path remains from Mornington Hill to the north, travelling south through the property toward Alford Street, with the proposed works causing only local redistribution of floodwater around the structures.

The modelling indicates that flood depths around the proposed shed are approximately 0.45 m, with velocities reaching approximately 1.5 m/s. The shed must therefore be constructed using robust, flood compatible materials and a structural system specifically designed to withstand the applicable hydrostatic and hydrodynamic forces. The foundations, wall system, connections and construction methodology should also consider debris impact, scour, erosion, buoyancy and local differential loading, with the structural design undertaken and certified by a suitably qualified structural engineer.

The proposed hardstand driveway extension creates a local increase in velocity due to the lower surface roughness, but the broader flood hazard pattern remains consistent with the predevelopment condition. The local widening of the flood affected area remains primarily contained within the subject property and does not create a material displacement of overland flow onto adjoining land.

Subject to maintaining the modelled site arrangement, flood compatible construction and unobstructed flow paths, the proposed development is considered capable of achieving a tolerable level of flood risk.

7. Recommendations

Flussig Engineers therefore recommend the following engineering design be adopted for proposed shed to ensure the works meets the Flood Prone Areas Hazard Code:

1. The proposed shed and hardstand driveway extension should be constructed generally in accordance with the layout represented in the hydraulic model. Any material change to the shed location, dimensions, driveway extent or finished surface levels should be reviewed to confirm that the flood assessment remains applicable.
2. The proposed shed must be designed to withstand modelled flood conditions of approximately 0.45 m depth and 1.5 m/s velocity. The structural design must consider the applicable hydrostatic and hydrodynamic forces acting on the shed during the design flood event.
3. The shed foundations, framing, wall system, connections and anchoring must be designed and certified by a suitably qualified structural engineer. The assessment should also consider potential debris impact, buoyancy, local scour, erosion and differential loading.
4. The proposed hardstand driveway extension should be constructed using a stable, non-erosive surface capable of withstanding localised flow velocities of approximately 1.5 m/s without scour, erosion or mobilisation of surface material.
5. The established overland flow path must remain free from unnecessary obstruction.
6. Additional filling, solid fencing, storage, landscaping, retaining structures or other permanent obstructions should not be introduced within the mapped flow corridor where they could redirect, concentrate or restrict overland flow.
7. The existing shed should be removed as represented in the post development hydraulic model. Retaining the structure or replacing it with another obstruction in the same location may alter the assessed flow distribution.
8. Any future changes to the site layout, ground levels, shed configuration or flood affected areas should be reviewed by a suitably qualified hydraulic engineer before construction.

8. Limitations

Flüssig Engineers were engaged by **Michael Healy,** for the purpose of a site-specific Flood Hazard Report for 91 Alford Street, Howrah as per C12.6.1 of the Tasmanian Planning Scheme. This study is deemed suitable for purpose at the time of undertaking the study. If the conditions of the development should change, the plan will need to be reviewed against all changes.

The results, findings, and interpretations contained in this report are based on the existing site conditions, available LiDAR surface data, hydraulic modelling, and other third-party information provided to Flüssig Engineers. Should any aspect of the site, catchment, or proposed development design change, including modifications to ground levels, drainage patterns, or surrounding infrastructure, the flood behaviour and associated risks may also change. In such cases, this report must be re-evaluated and updated to reflect those modifications before further use.

This report must be read and used in its entirety. It may not be quoted, reproduced, or relied upon in part or for any purpose other than that expressly stated within, unless prior written consent is obtained from Flüssig Engineers.

Flüssig Engineers accepts no responsibility or liability for errors or inaccuracies arising from information supplied by external sources, third-party consultants, or other data providers used in preparing this report. The outcomes and conclusions presented herein are valid only for the conditions and assumptions explicitly described in this document.

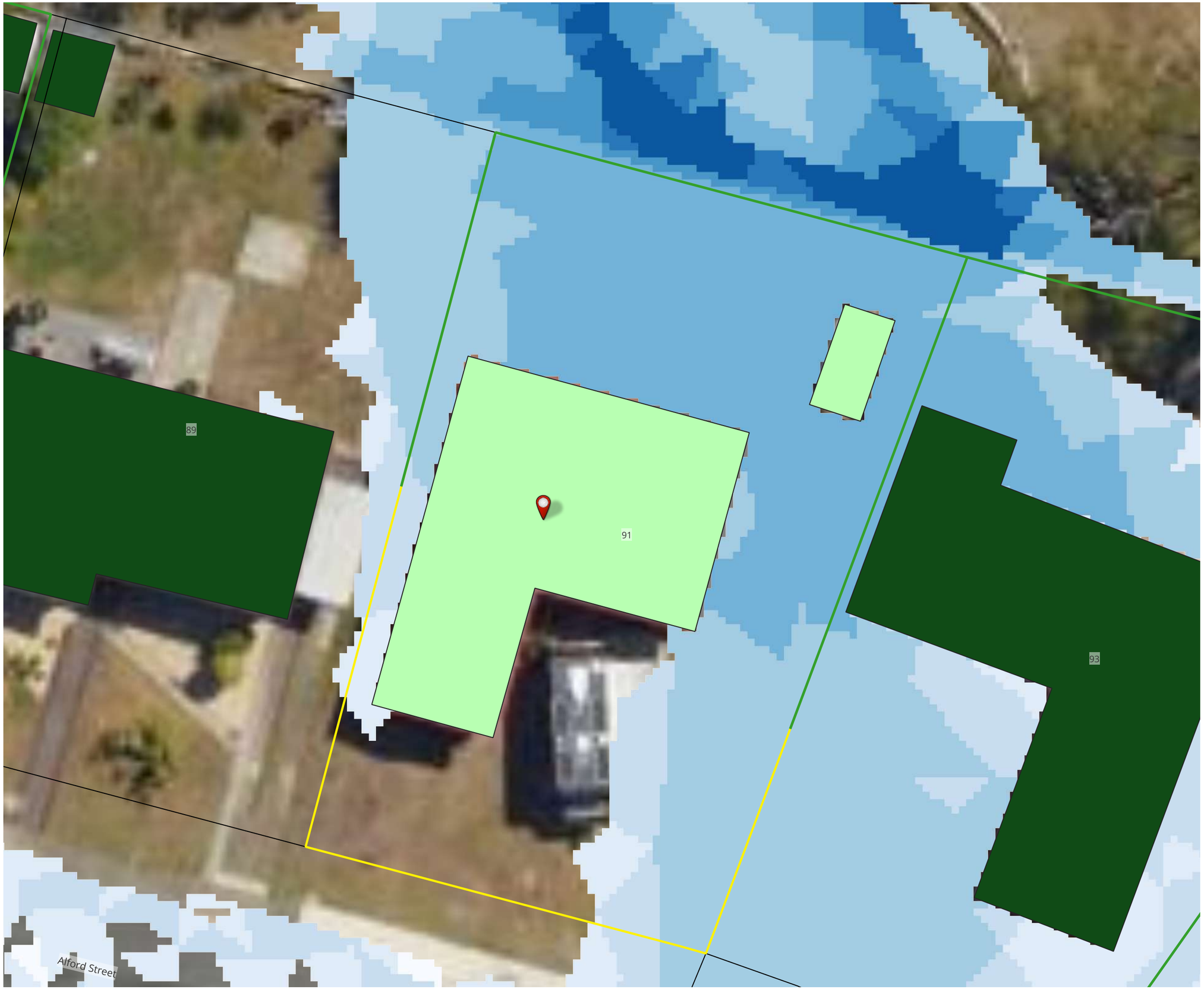
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10. Appendices

Appendix A Flood Maps

PRE 1% AEP + CC @ 2100



LEGEND

91 Alford Street

- Boundary Lines
- Existing Fences
- Site Area
- Building Areas
- Existing Building Areas
- Existing Driveway

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



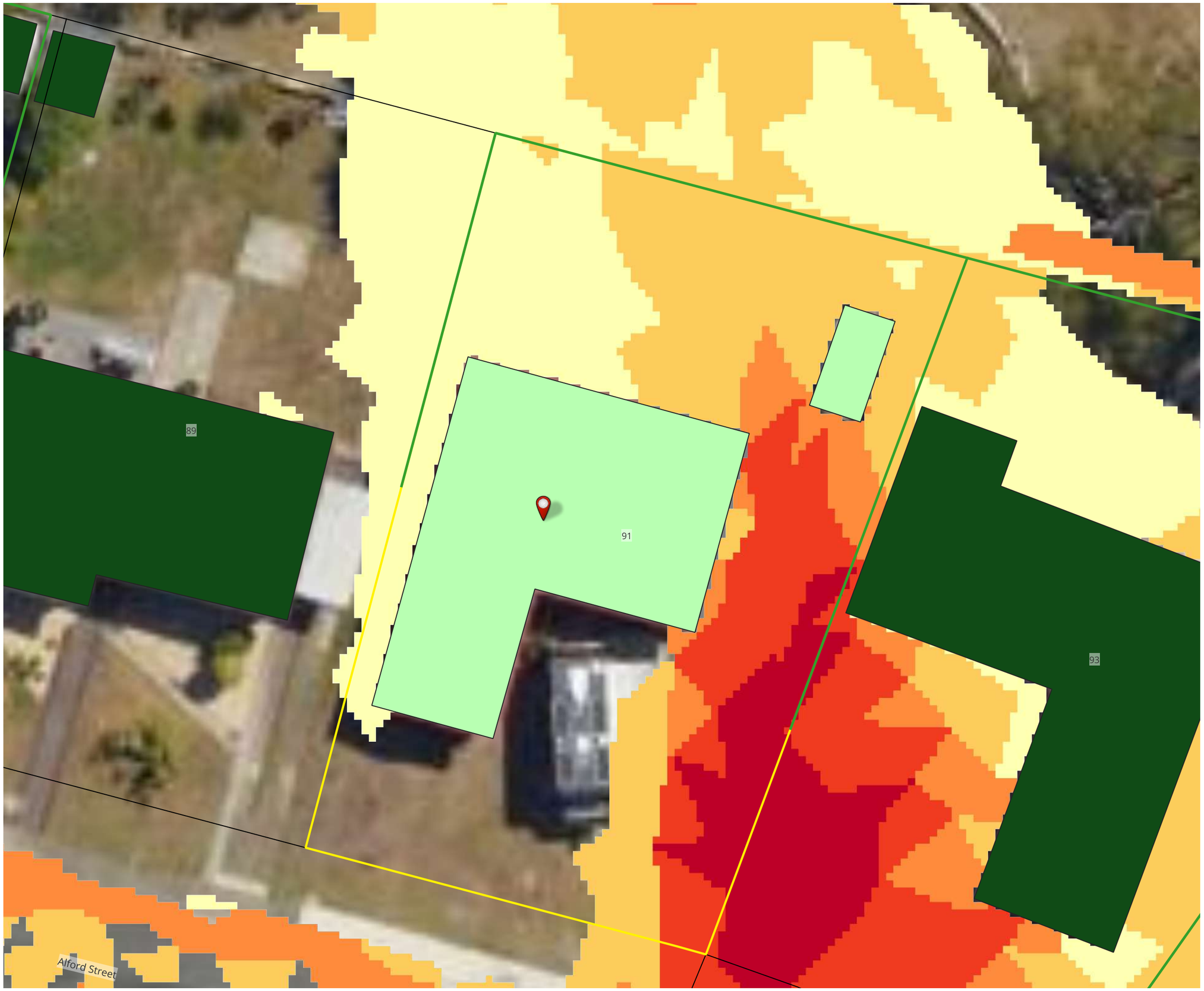
0 3 6 m

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Flussig Engineers Map CRS: GDA94 / MGA zone 55

PRE 1% AEP + CC @ 2100



LEGEND

91 Alford Street

- Boundary Lines
- Existing Fences
- Site Area
- Building Areas
- Existing Building Areas
- Existing Driveway

PRE 1% AEP + CC @2100

Velocity (m/s)

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

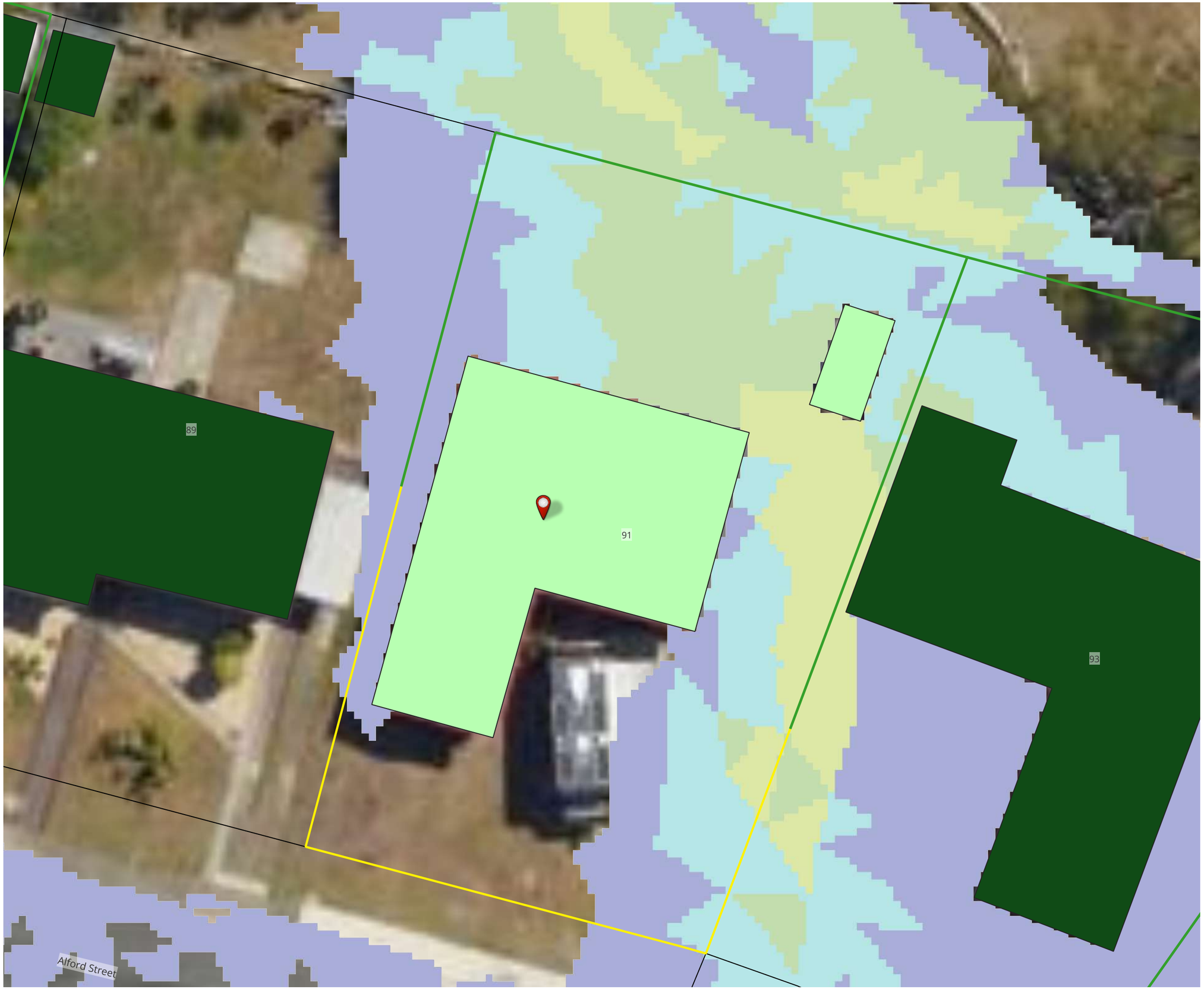


0 3 6 m

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PRE 1% AEP + CC @ 2100



LEGEND

91 Alford Street

- Boundary Lines
- Existing Fences
- Site Area
- Building Areas
- Existing Building Areas
- Existing Driveway

PRE 1% AEP + CC @2100

Hazard

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

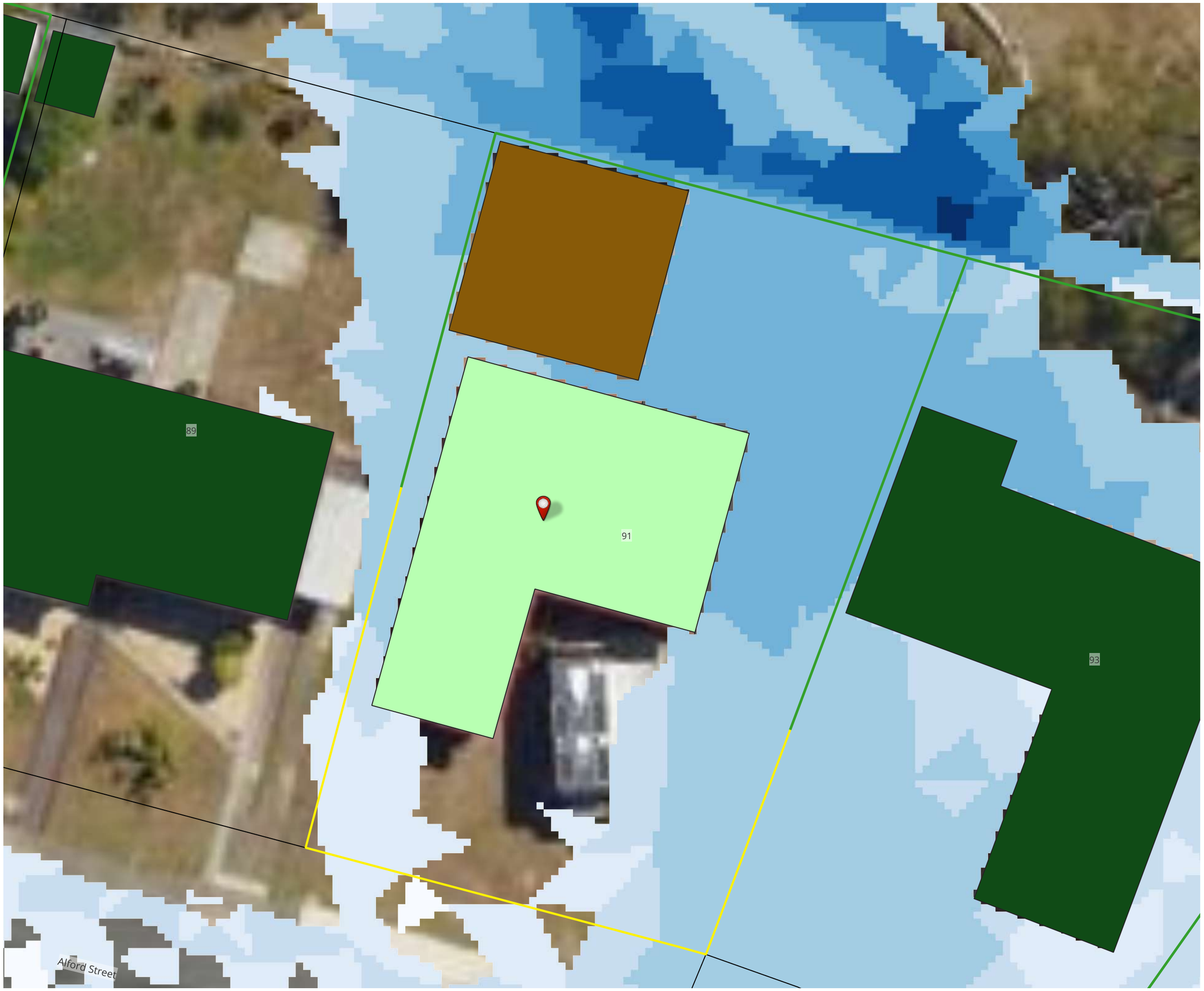


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(03) 6288 7704
www.flussig.com.au
116 Bathurst St, Level 4
Hobart, 7000, Tasmania

POST 1% AEP + CC @ 2100



LEGEND

91 Alford Street

- Boundary Lines
- Existing Fences
- Site Area
- Building Areas
- Retained Building Areas
- Retained Driveway
- Proposed Shed
- Proposed Driveway Extension

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



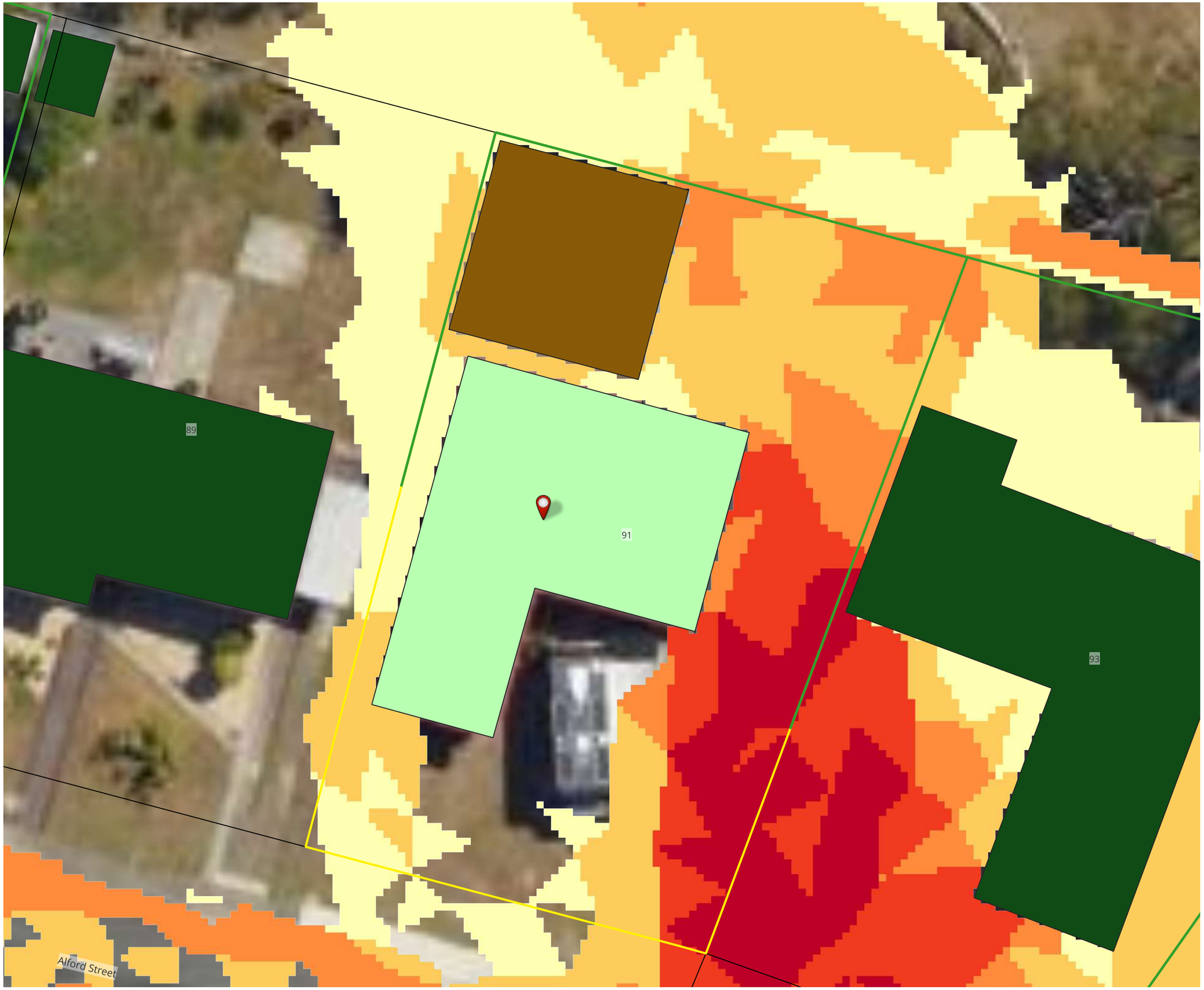
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LEGEND

91 Alford Street

- Boundary Lines
- Existing Fences
- Site Area
- Building Areas
- Retained Building Areas
- Retained Driveway
- Proposed Shed
- Proposed Driveway Extension

POST 1% AEP + CC @2100

Velocity (m/s)

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



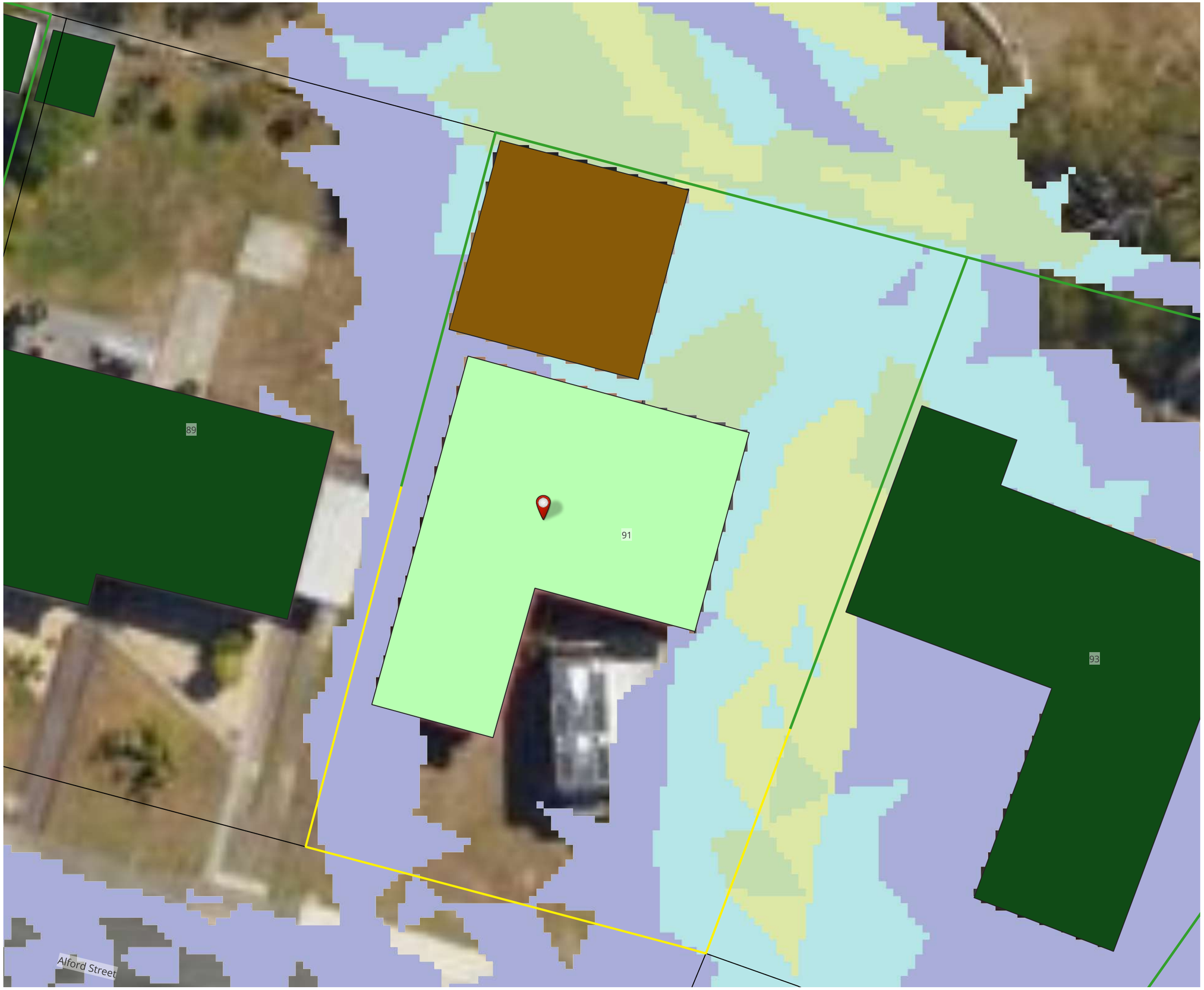
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POST 1% AEP + CC @ 2100



LEGEND

91 Alford Street

- Boundary Lines
- Existing Fences
- Site Area
- Building Areas
- Retained Building Areas
- Retained Driveway
- Proposed Shed
- Proposed Driveway Extension

POST 1% AEP + CC @2100

Hazard

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



0 3 6 m

N

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Capability and Expertise

Flood, stormwater, coastal and water engineering specialists

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Coastal inundation
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Rebecca Green & Associates

Bushfire Hazard Assessment Report &

Bushfire Hazard Management Plan

91 Alford Street, Howrah



Prepared for (Client)

Michael Healy

91 Alford Street

HOWRAH TAS 7018

Assessed & Prepared by

Rebecca Green

Senior Planning Consultant & Accredited Bushfire Hazard Assessor

Rebecca Green & Associates

PO Box 2108 LAUNCESTON TAS 7250

Mobile: 0409 284 422

Version 1

26 June 2026

Job No: RGA-B3155

Executive Summary

The proposed development at 91 Alford Street, Howrah, is subject to bushfire threat. A bushfire attack under extreme fire weather conditions is likely to subject buildings at this site to considerable radiant heat, ember attack along with wind and smoke.

The site requires bushfire protection measures to protect the buildings and people that may be on site during a bushfire.

These measures include provision of hazard management areas in close proximity to the buildings, implementation of safe egress routes, establishment of a water supply and construction of buildings as described in AS 3959-2018 Construction of Buildings in Bushfire Prone Areas.

Primary responsibilities identified within this report:

Occupier	• Maintain Hazard Management Areas as described in this report. • Design and Construct New Shed to meet **BAL 29** (AS3959-2018).

Rebecca Green & Associates

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Schedule 1 – Bushfire Report

1.0 Introduction

The Bushfire Attack Level (BAL) Report and Bushfire Hazard Management Plan (BHMP) has been prepared for submission with a Building Permit Application under the *Building Act 2016 & Regulations 2016*.

The Bushfire Attack Level (BAL) is established taking into account the type and density of vegetation within 100 metres of the proposed building site and the slope of the land; using the simplified method in AS 3959-2018 Construction of Buildings in Bushfire Prone Areas; and includes:

- The type and density of vegetation on the site,
- Relationship of that vegetation to the slope and topography of the land,
- Orientation and predominant fire risk,
- Other features attributing to bushfire risk.

On completion of assessment, a Bushfire Attack Level (BAL) is established which has a direct reference to the construction methods and techniques to be undertaken on the buildings and for the preparation of a Bushfire Hazard Management Plan (BHMP).

1.1 Scope

This report was commissioned to identify the Bushfire Attack Level for the existing property. ALL comment, advice and fire suppression measures are in relation to compliance with the Building Code of Australia and Australian Standards, *AS 3959-2018, Construction of buildings in bushfire-prone areas*.

1.2 Limitations

The inspection has been undertaken and report provided on the understanding that:-

1. The report only deals with the potential bushfire risk, all other statutory assessments are outside the scope of this report.
2. The report only identifies the size, volume and status of vegetation at the time the site inspection was undertaken and cannot be relied upon for any future development.
3. Impacts of future development and vegetation growth have not been considered.

No action or reliance is to be placed on this report; other than for which it was commissioned.

1.3 Proposal

The proposal is for the construction of a new shed. At this stage the exact size of the shed is not confirmed however, the location, on the rear boundary is, and this assessment will not alter with any change to overall outbuilding size.

2.0 Site Description for Proposal (Bushfire Context)

2.1 Locality Plan



Figure 1: Location Plan of 91 Alford Street, Howrah

2.2 Site Details

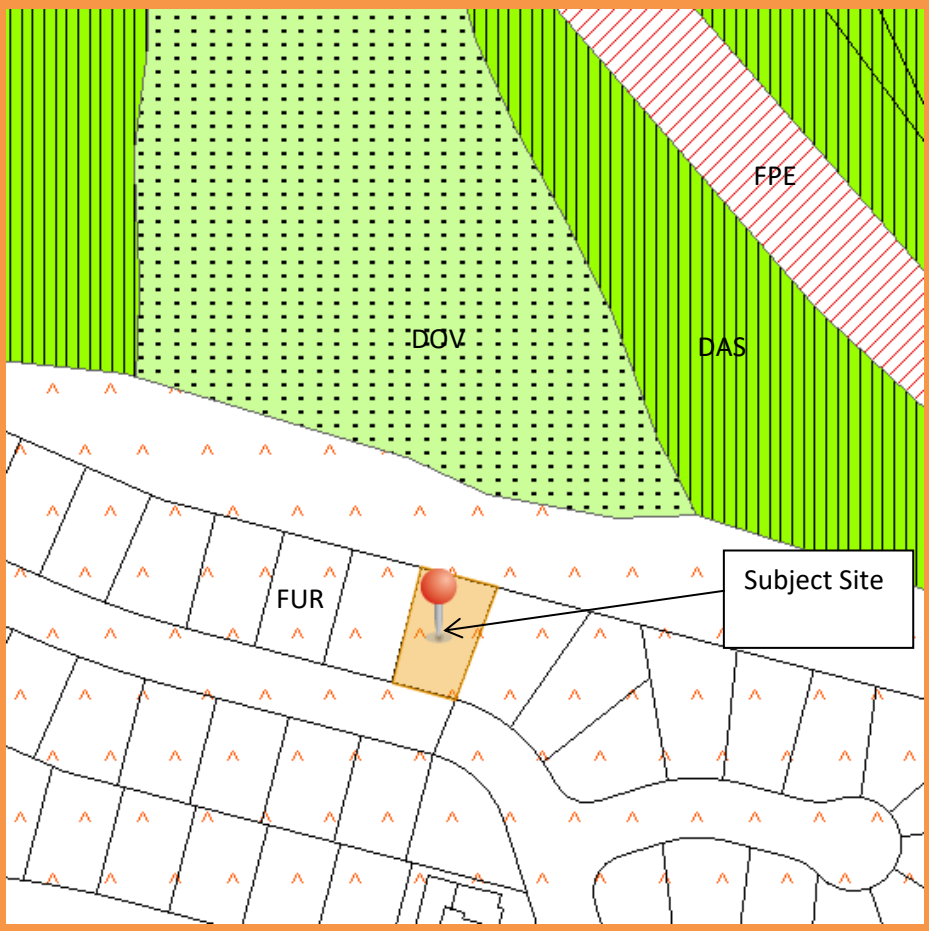
Property Address	91 Alford Street, Howrah
Certificate of Title	Volume 60706 Folio 155
Owner	Michael Robert Healy
Existing Use	Residential
Type of Proposed Building Work	Construction of Shed
BCA Classification	Outbuilding – Class 10a
Water Supply	TasWater reticulated supply
Road Access	Street Frontage – Alford Street

3.0 Bushfire Site Assessment

3.1 Vegetation Analysis

3.1.1 TasVeg Classification

Reference to Tasmanian Vegetation Monitoring & Mapping Program (TASVEG) indicates the land in and around the property is generally comprising of varying vegetation types including:



Code	Species	Vegetation Group
FUR	• Urban areas	Modified land
FPE	• Permanent easements	Modified land
DOV	• Eucalyptus ovata forest and woodland	Dry eucalypt forest and woodland
DAS	• Eucalyptus amygdalina forest and woodland on sandstone	Dry eucalypt forest and woodland

3.1.2 Site & Vegetation Photos



View looking north



View looking north



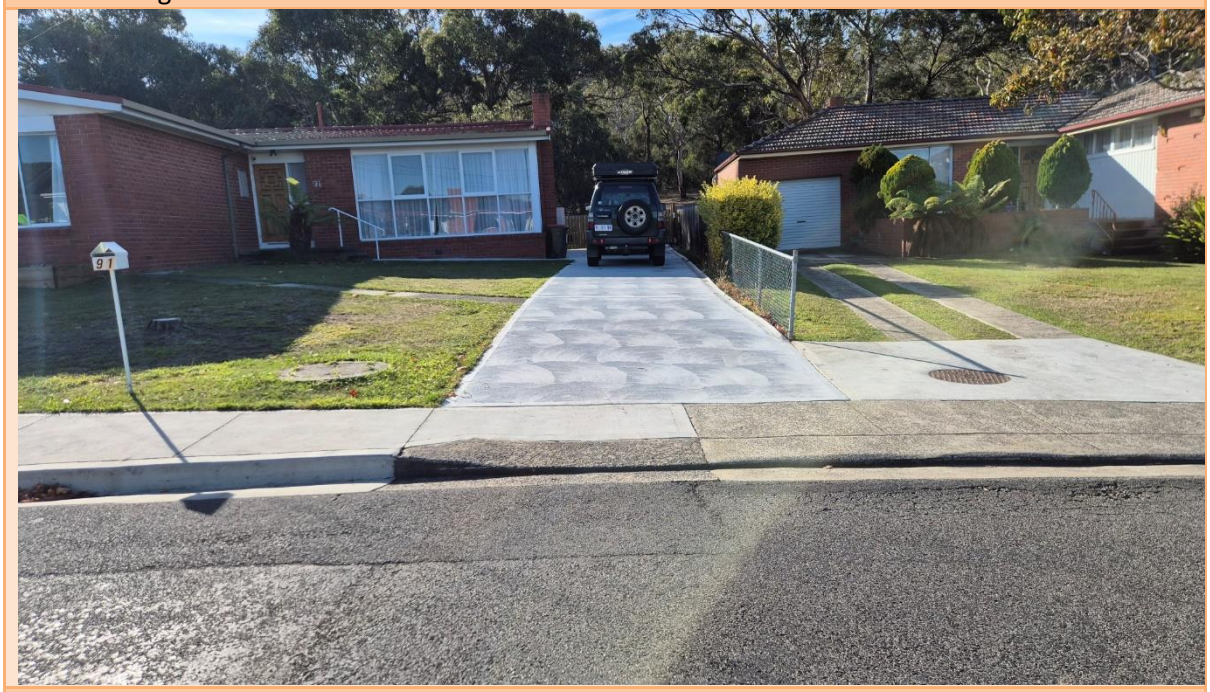
View looking west along northern boundary



View looking east along northern boundary



View looking south



Existing access

3.2 BAL Assessment – Outbuilding

Vegetation classification AS3959	North ☒ North-East ☐	South ☒ South-West ☐	East ☒ South-East ☐	West ☒ North-West ☐
Group A	☐ Forest	☐ Forest	☒ Forest	☐ Forest
Group B	☒ Woodland	☐ Woodland	☐ Woodland	☐ Woodland
Group C	☐ Shrub-land	☐ Shrub-land	☐ Shrub-land	☐ Shrub-land
Group D	☐ Scrub	☐ Scrub	☐ Scrub	☐ Scrub
Group E	☐ Mallee-Mulga	☐ Mallee-Mulga	☐ Mallee-Mulga	☐ Mallee-Mulga
Group F	☐ Rainforest	☐ Rainforest	☐ Rainforest	☐ Rainforest
Group G	☐ Grassland	☐ Grassland	☐ Grassland	☐ Grassland
	☒ Managed Land	☒ Managed Land	☒ Managed Land	☒ Managed Land
Effective slope (degrees)	☒ Up/0^0	☒ Up/0^0	☒ Up/0^0	☒ Up/0^0
	☐ >0-5^0	☐ >0-5^0	☐ >0-5^0	☐ >0-5^0
	☐ >5-10^0	☐ >5-10^0	☐ >5-10^0	☐ >5-10^0
	☐ >10-15^0	☐ >10-15^0	☐ >10-15^0	☐ >10-15^0
	☐ >15-20^0	☐ >15-20^0	☐ >15-20^0	☐ >15-20^0
Distance to classified vegetation	Metres 0-<15m managed/low threat # 15m to woodland	Metres >100m Low Threat Vegetation/managed	Metres >100m Low Threat Vegetation/managed	Metres >100m Low Threat Vegetation/managed
Likely direction of bushfire attack	☒	☐	☐	☐
Prevailing winds	☐	☐	☐	☒
Exclusions	a b c d e **f**	a b c d **e** **f**	a b c d **e** **f**	a b c d **e** **f**
BAL Value (FDI 50)	**BAL – 29**	**BAL – LOW**	**BAL – LOW**	**BAL – LOW**

 # The City of Clarence, Waverly Flor Park Bushfire Mitigation Plan 2023-2028, part 4.1.3 obligates the Council to maintain the size of a hazard management area for the prescribed width of a hazard management area on Council land for no less than that required for BAL-29 rated development to be achieved on the lot once the owner of the lot has undertaken their best efforts.



Figure 7: Vegetation Management Units

The Bushfire Attack Level shall be classified BAL-LOW where the vegetation is one or a combination of any of the following:

(a) Vegetation of any type that is more than 100 metres from the site.
(b) Single areas of vegetation less than 1 hectare in area and not within 100m of other areas of vegetation being classified.
(c) Multiple areas of vegetation less than 0.25 hectare in area and not within 20 metres of the site, or each other.
(d) Strips of vegetation less than 20 metres in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 metres of the site or each other, or other areas of vegetation being classified.
(e) Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.
(f) Low threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks.

NOTE: Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognisable as short-cropped grass for example, to a nominal height of 100mm).

3.2 Specified Hazard Management Areas

Hazard management areas are to be established and maintained between the bushfire prone vegetation and the building at a distance equal to, or greater than the separation distance specified for the Bushfire Attack Levels (BAL) in table 2.6 of *Australian Standard 3959-2018 Construction of Buildings in Bushfire Prone Areas.*

Where the Hazard Management Areas can be increased around the building and the classified vegetation in accordance with table 2.6 of Australian Standard 3959, the risk from bushfire attack can reduce.

Outbuilding

Distance from Predominant vegetation for BAL 29	**North/** North-East	**South/** South-West	**East/** South-East	**West/** North-West
	To title boundary	To title boundary	To title boundary	To title boundary
	Metres	Metres	Metres	Metres

The separation distance for the SPECIFIED Hazard Management Area is to be shown on the attached Bushfire Hazard Management Plan measured from the external walls (Façade) of the building in metres along the ground to the bushfire hazard vegetation (if applicable).

3.3 Outbuildings

Applicable. Shed is within 6.0m of a habitable building on the subject site. BAL 29 applies.

3.4 Road Access

Roads are to be constructed to provide vehicle access to the site to assist firefighting and emergency personnel to defend the building or evacuate occupants; and provide access at all times to the water supply for firefighting purposes on the building site.

Private access roads are to be constructed from the entrance to the property cross over with the public road through to the dwelling sand water storage area on the site.

Existing Road Access and Driveways	Private access driveway / roads are to be maintained from the entrance of the property cross over at the public road (Alford Street) through to the buildings to a standard not less than specified in Table 2 A.

Table 2A: Requirements for Property Access

Property access length is less than 30 metres, or access is not required for a fire appliance to access a firefighting water point: There is no specified design and construction requirements.

3.5 Water Supply

A building that is constructed in a designated bushfire prone area must provide access at all times to a sufficient supply of water for firefighting purposes on the building site.

The exterior elements of a Class 1 building in a designated Bushfire prone area must be within reach of a 120m long hose (lay) connected to –

(i) A fire hydrant system designed and constructed in accordance with TasWater Supplement to Water Supply Code of Australia WSA 03-2011-3.1 MRWA Edition 2.0; or

(ii) A stored water supply in a water tank, swimming pool, dam or lake available for fire fighting at all times which has the capacity of at least 10,000L for each separate building.

Existing Reticulated Water Supply	Fire hydrants are provided within the road reserve and within 120m hose lay of the dwelling from Alford Street. On site water supply is not required. 

4.0 Layout Options

Not relevant to this proposal.

5.0 Other Planning Provisions

Not relevant to this proposal.

6.0 Conclusions and Recommendations

Mitigation from bushfire is dependent on the careful management of the site by maintaining reduced fuel loads within the hazard management areas and within the site.

The site has been assessed as requiring buildings (Shed) to conform to or exceed BAL 29 requirements based on AS 3959 – 2018 Construction of Buildings in Bushfire Prone Areas.

Access

The driveway is to be maintained to meet Table 2A. Requirements for Property Access, Director's Determination – Bushfire Hazard Areas, Version 1.2.

Water Supplies

The property has access to a reticulated water supply and is within 120 metres of the existing fire plug, meeting the requirements for Reticulated Water Supply for Fire Fighting, Table 3A, Director's Determination – Bushfire Hazard Areas, Version 1.2.

Fuel Managed Areas

Hazard Management Areas as detailed within the plan shall be constructed and maintained as detailed in Section 2 of Schedule 2 (where applicable).

Schedule 2 – Bushfire Hazard Management Plan

1.0 Introduction

The Bushfire Hazard Management Plan (BHMP) is developed from the results of a Bushfire Attack Level (BAL) Assessment Report prepared for the site in accordance with Australian Standard 3959. The BHMP provides reference and information to existing and subsequent owners on their responsibilities for the establishment, maintenance and future management of their property to reduce the risk of bushfire attack and includes: -

- Establishment of a Hazard Management Area in and around the existing and/or proposed buildings,
- Specifications of Private access road construction,
- Provision on firefighting water supply,
- Construction requirements in relation to the Building Code of Australia, dependent on the Bushfire Attack Level and requirements of Australian Standard 3959.
- Reduction and removal of vegetation and fuel loads in and around the property, buildings and Hazard Management Areas,
- Ongoing maintenance responsibilities by successive owners for perpetuity.

A copy of the plan MUST also be provided to ALL current and successive owners to make them aware of their continuing obligations to maintain the plan and protection measures attributed to their property in to the future.

2.0 Hazard Management Areas

The Hazard Management Area (defendable space) is provided between the vegetation and the buildings subject to bushfire risk. The space provides for management of vegetation and reduction in fuel loads in an attempt to:

- Prevent flame impingement on the dwelling;
- Provide a defendable space for property protection;
- Reduce fire spread;
- Deflect and filter embers;
- Provide shelter from radiant heat; and
- Reduce wind speed.

The *Building Act 2016*, requires a hazard management area to be established and maintained between the bushfire prone vegetation and the building at a distance equal to, or greater than the separation distance specified for the Bushfire Attack Levels (BAL) in *AS 3959-2018 Construction of Buildings in Bushfire Prone Areas*.

Refer to the attached BHMP Site Plan in Section 6 of this management plan for specific details on the Hazard Management Area.

2.1 Vegetation (Fuel) Management

Managing an area in a minimum fuel condition generally means a reduction in the amount and altering the arrangement of fuels. Most fine fuels are at or close to the ground, often as part of a grass, litter or shrub layer. If there is enough fuel, when a fire comes these fuels will ignite the trees above or set the bark alight which will burn up into the tree canopy causing the most dangerous of bushfire situation; a crown fire.

To prevent crown fires occurring it is necessary to remove the "ladder of fuel" between the ground and the tree crowns and to make sure the amount of ground fuel is not sufficient to set the crowns alight. Without fire burning below, a crown fire should not be sustained. Further removing continuity and separation of the vegetation canopies both horizontally and vertically will assist.

All vegetation will burn under the influence of bushfire; shrub layers need to be modified to remove tall continuous walls of vegetation and establish clear separation between the ground and the bottom of the tree canopy. Further minimisation of flammable ground litter such as leafs, twigs, bark, ferns and debris will further reduce fuel load with potential to burn or contribute to the growth of a bushfire.

Fuels do not need to be totally removed however fuels close to the building and inside the Hazard Management Area are to be kept to a minimum. As a general practice 5 tonnes per hectare is accepted as being controllable with normal firefighting resources. This can be visualised as grass cut to about 10 centimetres in height or ground litter about 2 centimetres thick. This is considered to be a low fuel level.

2.2 Other Risk Management Actions

Other actions that can be implemented to reduce the bushfire risk in the Hazard Management Areas include:

1. Establishing non-combustible paths and driveways around buildings.
2. Establish plantings of low flammability shrub species.
3. Ensure garden beds and shrubs are established well away from buildings.
4. Tree planting to be located at the outer edge of the Hazard Management Area and spaced well apart to ensure canopy separation.
5. Cut lawns short and maintain.
6. Remove fallen limbs, leaf and bark litter.
7. Avoid using pine bark and other flammable mulch in gardens.
8. Prune trees to ensure canopy separation horizontally and vertically, remove low hanging branches to ensure separation from ground litter.
9. Where the amount of land permits extend the vegetation management in to a secondary hazard management zone.

3.0 On-going Site Management and Maintenance

On-going maintenance is required to the buildings and landscaping within the hazard management area to ensure the continued performance of the bushfire mitigation measures which have been designed into the development for occupant and community protection.

Specified Hazard Management Areas are only a minimum distance required; owners are encouraged to establish a greater management area where land area and opportunity permits. An additional fuel modified buffer zone between the Hazard Management Area and the bushfire vegetation will only improve the protection level and reduce the risk to the property during a bushfire event.

Preparedness comes down to diligent annual maintenance in and around the buildings and Hazard Management Areas particularly during the period of greatest risk; August to February of each year.

Recommendation:

1. Locate wood piles or other flammable storage well away from the dwelling.
2. Solid non-combustible fencing such as steel provides a fire and heat radiation shield to the dwelling.
3. Metal flywire screens prevent sparks and embers from entering the building.
4. Seal gaps under floor spaces, roof space, under eaves, external vents, skylights, chimneys and wall cladding.
5. Remove ladder fuels from the under storey of larger trees. Prune canopies to provide separation.
6. Rake up leaf litter and vegetation debris. Cut grass and maintain to less than 10cm.
7. Keep garden beds well away from the dwelling and use non-combustible garden mulches including rock or stones.
8. Establish plantings of low flammability shrub species.
9. Seal all gaps in external claddings.
10. Keep roof gutters clear of leaf litter, bark and similar debris, remove and maintain. Install gutter guards to assist.
11. Flammable fuels such as gas bottles should be located on the opposite side of the house to the likely direction of a bushfire.
12. Seal gaps in roofing to prevent the entry of embers.
13. Surround the dwelling with non-combustible paths.
14. Outbuildings to be at least 6m from the main dwelling.
15. Ensure hoses provide coverage to the whole site. Use metal hose fittings.
16. Flammable fuels and the like to be stored in minimum volumes well away from the dwelling.

4.0 Vehicular Access

Roads are to be constructed to provide vehicle access to the site to assist firefighting and emergency personnel to defend the building or evacuate occupants; and provide access at all times to the water supply for firefighting purposes on the building site.

Private access roads are to be constructed from the entrance to the property cross over with the public road through to the dwelling and water storage area on the site (if applicable). Private access roads are to be designed, constructed and maintained to a standard as recommended below:

Recommendations:

Private access is not required for a fire appliance to access a fire fighting water point – no specified requirements.

5.0 Water Supply

A building that is constructed in a designated bushfire prone area must provide access at all times to a sufficient supply of water for firefighting purposes on the building site.

Recommendations:

The exterior elements of a Class 1 building in a designated Bushfire prone area must be within reach of a 120m long hose (lay) connected to –

(iii) A fire hydrant system designed and constructed in accordance with TasWater Supplement to Water Supply Code of Australia WSA 03-2011-3.1 MRWA Edition 2.0; or

(iv) A stored water supply in a water tank, swimming pool, dam or lake available for fire fighting at all times which has the capacity of at least 10,000L for each separate building.

5.1 Reticulated Water Supply

A fire hydrant system designed and constructed in accordance with TasWater Supplement to Water Supply Code of Australia WSA 03-2011-3.1 MRWA Edition 2.0 is available within 120m to the building area to be protected.

5.2 On-Site Dedicated Fire Fighting Water Supply

Not applicable to this proposal.

Bushfire Hazard Management Site Plan



SHED MUST BE DESIGNED AND CONSTRUCTED TO BAL - 29 MINIMUM STANDARD UNDER AS3959-2018

HAZARD MANAGEMENT AREA TO BE MAINTAINED IN A MINIMUM FUEL CONDITION - REFER TO SECTION 3.3 (SCHEDULE 1) & SECTION 2.0 (SCHEDULE 2) OF BUSHFIRE HAZARD ASSESSMENT REPORT

PROPERTY ACCESS REQUIREMENTS - REFER TO SECTION 3.5 (SCHEDULE 1) OF BUSHFIRE HAZARD ASSESSMENT REPORT

FIREFIGHTING WATER SUPPLY - REFER TO SECTION 3.6 (SCHEDULE 1) OF BUSHFIRE HAZARD ASSESSMENT REPORT

* THIS BHMP MUST BE READ IN CONJUNCTION WITH BUSHFIRE HAZARD ASSESSMENT REPORT REF: RGA-B3155, R. GREEN, 26 JUNE 2026

* THIS BHMP HAS BEEN PREPARED TO SATISFY THE REQUIREMENTS OF THE *DIRECTORS DETERMINATION - BUSHFIRE HAZARD AREAS (V1.2)*

N

BUSHFIRE HAZARD MANAGEMENT PLAN
BUSHFIRE ATTACK LEVEL (BAL) - 29
NEW SHED

91 ALFORD STREET, HOWRAH
VOLUME 60706 FOLIO 155
PROPERTY ID 5067431

DATE: 26 JUNE 2026
VERSION: 1
DRAWN: REBECCA GREEN
PHONE: 0409 284 422
EMAIL: ADMIN@RGASSOCIATES.COM.AU
BFP - 116, SCOPE - 1, 2, 3A, 3B, 3C

Rebecca Green & Associates

Form 55

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Michael Healy *Owner /Agent*

91 Alford Street *Address*

HOWRAH TAS 7018 *Suburb/postcode*

Qualified person details:

Qualified person: Rebecca Green

Address: PO Box 2108 Phone No: 0409 284 422

Launceston 7250 Fax No:

Licence No: BFP-116 Email address: admin@rgassociates.com.au

Qualifications and Insurance details: Accredited to report on bushfire hazards under Part IVA of the *Fire Services Act 1979*

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

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

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

Details of work:

Address: 91 Alford Street Lot No: 155

HOWRAH 7018 Certificate of title No: 60706

The assessable item related to this certificate: New Shed

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

Certificate details:

Certificate type: Bushfire Hazard

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

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

building work, plumbing work or plumbing installation or demolition work: ✓

or

a building, temporary structure or plumbing installation: ☐

In issuing this certificate the following matters are relevant –

Documents:	Bushfire Hazard Assessment Report & Bushfire Hazard Management Plan (Rebecca Green & Associates, 26 June 2026, Job No. RGA-B3155)
Relevant	N/A
References:	*Australian Standard 3959-2018*

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

1. Assessment of the site Bushfire Attack Level (BAL-29 for New Shed) to Australian Standard 3959-2018

2. Bushfire Hazard Management Plan showing BAL-29 solutions.

Scope and/or Limitations

Scope

This report and certification was commissioned to identify the Bushfire Attack Level for the existing property. All comment, advice and fire suppression measures are in relation to compliance with the *Building Act 2016* & *Regulations 2016*, *National Construction Code* and *Australian Standard 3959-2018, Construction of buildings in bushfire-prone areas*.

Limitations

The assessment has been undertaken and report provided on the understanding that:-

1. The report only deals with the potential bushfire risk all other statutory assessments are outside the scope of this certificate.
2. The report only identifies the size, volume and status of vegetation at the time the inspection was undertaken and cannot be relied upon for any future development.
3. Impacts of future development and vegetation growth have not been considered.
4. No assurance is given or inferred for the health, safety or amenity of the general public, individuals or occupants in the event of a Bushfire.
5. No warranty is offered or inferred for any buildings constructed on the property in the event of a Bushfire.

No action or reliance is to be placed on this certificate or report; other than for which it was commissioned.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		RG-113/2026	26 June 2026

Attachment 1 – AS3959-2018 Construction Requirements

Rebecca Green & Associates

BAL Assessments

Revised for 2018 edition

	BAL—LOW	BAL-12.5	BAL-19	BAL-29	BAL-40	BAL –FZ (FLAMEZONE)
SUBFLOOR SUPPORTS	No special construction requirements	No special construction requirements	Enclosure by external wall or by steel, bronze or aluminium mesh	Enclosure by external wall or by steel, bronze of aluminium mesh. Non-combustible or naturally fire resistant timber supports where the subfloor is unenclosed	If enclosed by external wall refer below "External Walls" section in table or non-combustible sub-floor supports, or tested for bushfire resistance to AS1530.8.1	Enclosure by external wall or non-combustible with an FRL of 30/-/- or to be tested for bushfire resistance to AS1530.8.2
FLOORS	No special construction requirements	No special construction requirements	Concrete slab on ground or enclosure by external wall, metal mesh as above or flooring less than 400mm above ground level to be non-combustible, naturally fire resistant timber or protected on the underside with sarking or mineral wool insulation	Concrete slab on ground or enclosure by external wall, metal mesh as above or flooring less than 400mm above ground level to be non-combustible, naturally fire resistant timber or protected on the underside with sarking or mineral wool insulation	Concrete slab on ground or enclosure by external wall or protection of underside with a non-combustible material such as fibre cement sheet or be non-combustible or to be tested for bushfire resistance to AS1530.8.1	Concrete slab on ground or enclosure by external wall or an FRL of 30/30/30 or protection of under-side 30 minute incipient spread of fire system or to be tested for bushfire resistance to AS1530.8.2
EXTERNAL WALLS	No special construction requirements	As for BAL-19	Parts less than 400mm above ground or decks etc to be of non-combustible material, 6mm fibre cement clad or bushfire resistant/ naturally fire resistant timber	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) or timber framed, or steel framed walls sarked on the outside and clad with 6mm fibre cement sheeting or steel sheeting or bushfire resistant timber	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) or timber framed, or steel framed walls sarked on the outside and clad with 9mm fibre cement sheeting or steel or to be tested for bushfire resistance to AS1530.8.1	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) with a minimum thickness of 90mm or a FRL of -/30/30 when tested from outside or to be tested for bushfire resistance to AS1530.8.2
EXTERNAL WINDOWS	No special construction requirements	4mm grade A Safety Glass of glass blocks within 400m of ground, deck etc with Openable portion metal screened with frame of metal or metal reinforced PVC-U or bushfire resisting timber	5mm toughened glass or glass bricks within 400mm of the ground, deck etc with openable portion metal screened with frame of metal or metal reinforced PVC-U or bushfire resisting timber. Above 400mm annealed glass can be used with all glass screened	5mm toughened glass with openable portion screened and frame of metal or metal reinforced PVC-U, or bushfire resistant timber and portion within 400mm of ground, deck, screen etc screened	6mm toughened glass. Fixed and openable portion screened with steel or bronze mesh	Protected by bushfire shutter or FRL of -/30/- and openable portion screened with steel or bronze mesh or be tested for bushfire resistance to AS1530.8.2
EXTERNAL DOORS	No special construction requirements	As for BAL-19 except that door framing can be naturally fire resistant (high density) timber	Screened with steel, bronze or aluminium mesh or glazed with 5mm toughened glass, non-combustible or 35mm solid timber for 400mm above threshold, metal or bushfire resistant timber framed for 400mm above ground, decking etc. tight-fitting with weather strips at base	Screened with steel, bronze or aluminium mesh or non-combustible, or 35mm solid timber for 400mm above threshold. Metal or bushfire resistant timber framed tight-fitting with weather strips at base	Non-combustible or 35mm solid timber, screened with steel or bronze mesh, metal framed, tight-fitting with weather strips at base	Protected by bushfire shutter or tight-fitting with weather strips at base and a FRL of -/30/-
ROOFS	No special construction requirements	As for BAL-19 (including roof to be fully sarked)	Non-combustible covering, roof/wall junctions sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked.	Non-combustible covering. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked	Non-combustible covering. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked and no roof mounted evaporative coolers	Roof with FRL of 30/30/30 or tested for bushfire resistance to AS1530.8.2. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. No roof mounted evaporative coolers
VERANDAS DECKS ETC.	No special construction requirements	As for BAL-19	Enclosed sub floor space—no special requirements for materials except within 400mm of ground. No special requirements for supports or framing. Decking to be non-combustible or bushfire resistant within 300mm horizontally and 400mm vertically from a glazed element	Enclosed sub floor space or non-combustible or bushfire resistant timber supports. Decking to be non-combustible or bushfire resistant timbers	Enclosed sub-floor space or non-combustible supports. Decking to be non-combustible	Enclosed sub floor space or non-combustible supports. Decking to have no gaps and be non-combustible

Please note: The information in the table is a summary of the construction require-ments in the AS3959-2018 standard and is not intended as a design or construction guide. You should consult the standard for the full technical details.

Attachment 2 – Proposal Plans



Client Name | Client Email | Client Phone

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Scale
1:200
0m 2.5m 5m

Date: 01/05/2026

References

(a) Australian Standards, AS 3959-2018, *Construction of buildings in bushfire-prone areas*, Standards Australia, Sydney NSW.

(b) Conservation Division of the Department of Natural Resources and Environment Tasmania November 2025, TASVEG 5.0, *Tasmanian Vegetation Map*, Tasmania.

(c) Tasmanian Government, Land Information System Tasmania, www.thelist.tas.gov.au