DEVELOPMENT APPLICATION

PDPLANPMTD-2024/046139

PROPOSAL: Awning Addition (School)

LOCATION: 33 Salacia Avenue, Howrah (with access over 7 Howrah Road, Howrah)

RELEVANT PLANNING SCHEME: Tasmanian Planning Scheme - Clarence

ADVERTISING EXPIRY DATE: 04 November 2025

The relevant plans and documents can be inspected at the Council offices, 38 Bligh Street, Rosny Park, during normal office hours until 04 November 2025. 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 04 November 2025.

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.

Clarence City Council

Clarence... a brighter place

APPLICATION FOR DEVELOPMENT / USE OR SUBDIVISION

*The personal information on this form is required by Council for the development of land under the Land Use Planning and Approvals Act 1993. We will only use your personal information for this and other related purposes. If this information is not provided, we may not be able to deal with this matter. You may access and/or amend your personal information at any time. How we use this information is explained in our **Privacy Policy**, which is available at www.ccc.tas.gov.au or at Council offices.*

Proposal: NEW ROOF COVER OVER EXISTING DECK

Location:
Address 33 SALACIA AVENUE,
Suburb/Town HOWRAH Postcode 7018

Current Owners/s:

Applicant:

Personal Information Removed

Tax Invoice for application fees to be in the name of:
(if different from applicant)

Estimated cost of development $ 21,000 —

Is the property on the Tasmanian Heritage Register? Yes ☐ No ☑

(if yes, we recommend you discuss your proposal with Heritage Tasmania prior to lodgement as exemptions may apply which may save you time on your proposal)

If you had pre-application discussions with a Council Officer, please give their name: PDPLIMPLN - 2024/043703

Current Use of Site: Southern Support School

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. Where the application is submitted under Section 43A, the owner's 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.*

Applicant's Signature: **Personal Information Removed**

Date 30/7/2024

PLEASE REFER TO THE DEVELOPMENT/USE AND SUBDIVISION CHECKLIST ON THE FOLLOWING PAGES TO DETERMINE WHAT DOCUMENTATION MUST BE SUBMITTED WITH YOUR APPLICATION.

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
153166	1
EDITION	DATE OF ISSUE
8	27-Aug-2008

SEARCH DATE : 28-Mar-2024
SEARCH TIME : 12.38 PM

DESCRIPTION OF LAND

City of CLARENCE
Lot 1 on Plan 153166 (C849443 Section 27A of the Land Titles Act.)
Derivation : Whole of Lot 1 (4.919ha) The Crown (INC. Part of 192-1-0 Gtd to W.G.G. Sams & Whole of Lot 34712 & 0-0-13 Gtd to A.C. Peacock & Ors)
Prior C/T 131815/1 232762/1 225675/1

SCHEDULE 1

C782766 TRANSFER to CLARENCE CITY COUNCIL Registered 16-Jun-2008 at 12.01 PM

SCHEDULE 2

C849443 Land is limited in depth to 15 metres, excludes minerals and is subject to reservations relating to drains sewers and waterways in favour of the Crown
BURDENING EASEMENT: Right of Drainage [appurtenant to Lots 28 to 37 on Plan No. 55912) over the Drainage Easement marked A.B. on Plan No. 131815
C782766 REVERSIONARY CONDITIONS set forth in Transfer

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER THE CROWN

FOLIO REFERENCE SEC 27A (C849443)
F/R131815-1, F/R225675-1, F/R232762-1
GRANTEE WHOLE OF LOT 1 (4·919ha) THE CROWN.
(INC. PART OF 192-1-0 GTD. TO W.G.G. SAMS & WHOLE OF LOT 34712 0-0-13 GTD. TO A.C. PEACOCK & ORS.)

PLAN OF SURVEY

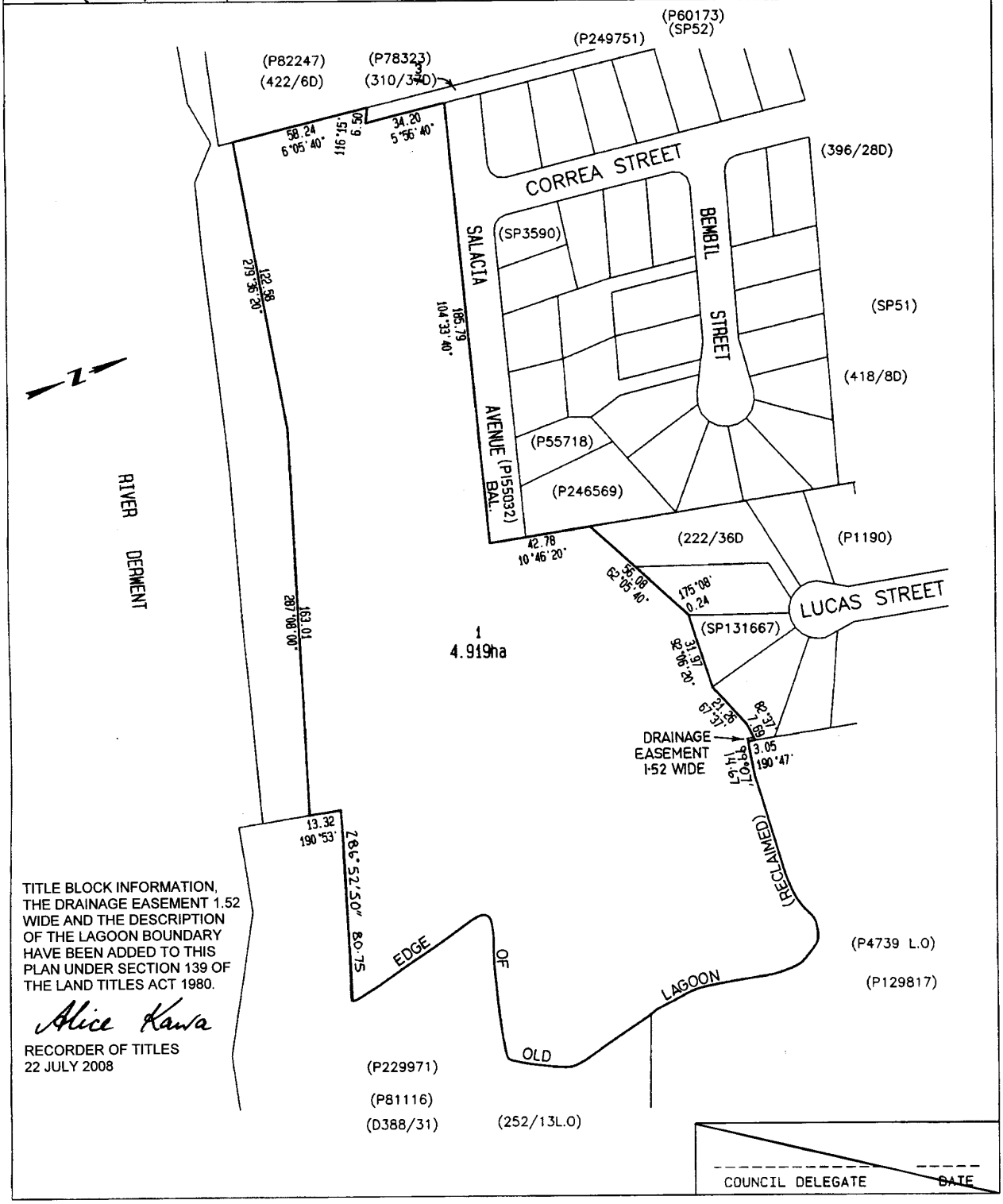
BY SURVEYOR A.J PHILLIPS
LOCATION
~~LAND DISTRICT OF BUCKINGHAM~~
~~PARISH OF KINGBOROUGH~~
CITY OF CLARENCE

SCALE 1: 1500 LENGTHS IN METRES

REGISTERED NUMBER
P153166

APPROVED
~~EFFECTIVE FROM~~ 12 JUNE 2008
Alice Kawa
Recorder of Titles

MAPSHEET MUNICIPAL CODE No. (5225-44)107
LAST UPI No HRV 70
LAST PLAN P1081 L.O. No. P4739 L.O.
ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



TITLE BLOCK INFORMATION, THE DRAINAGE EASEMENT 1.52 WIDE AND THE DESCRIPTION OF THE LAGOON BOUNDARY HAVE BEEN ADDED TO THIS PLAN UNDER SECTION 139 OF THE LAND TITLES ACT 1980.

Alice Kawa
RECORDER OF TITLES
22 JULY 2008

RESULT OF SEARCH

ASSISTANT RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
167812	1
EDITION	DATE OF ISSUE
1	08-Jul-2014

SEARCH DATE : 15-Oct-2025
SEARCH TIME : 03.00 PM

DESCRIPTION OF LAND

City of CLARENCE
Lot 1 on Plan 167812
Derivation : Lot 34826 originally granted to HOWRAH PRE-SCHOOL ASSOCIATION INCORPORATED and duly surrendered by TRANSFER NO. A316008 and Part of 5a-2r-12p granted to William Buck. and Part of Lot 30112 Gtd. to Tasman Nation and duly acquired by Notification A222621 and Notification A106838
Prior CTs 211412/1, 147008/1 and 165588/1

SCHEDULE 1

A316008 A106838 & A222621 APPLICATION: THE CROWN

SCHEDULE 2

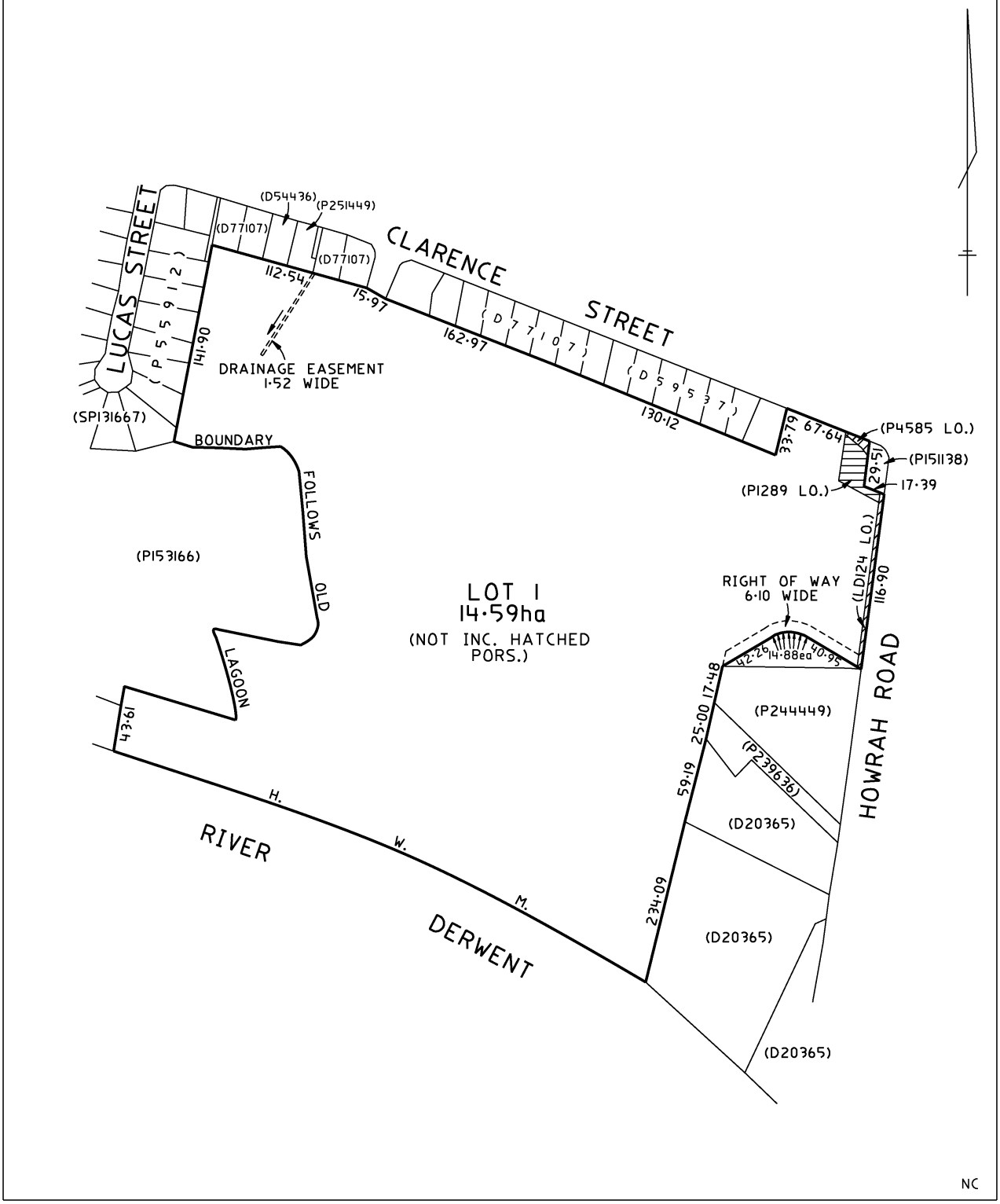
Reservations and conditions in the Crown Grant if any
BURDENING EASEMENT: a Right of Drainage (appurtenant to Lots 1 to 14 on Diagram 77107) over the land marked Drainage Easement 1.52 Wide on Plan 167812
D27089 ADHESION ORDER under Section 110 of the Local Government (Building and Miscellaneous Provisions) Act 1993 Registered 16-May-2013 at noon
D17364 ADHESION ORDER under Section 110 of the Local Government (Building and Miscellaneous Provisions) Act 1993 Registered 08-Jul-2014 at noon

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER FOLIO REFERENCE CT.211412/1 CT.147008/1 CT.165588/1 GRANTEE PART OF LOT 30112 GTD. TO TASMAN NATION & DULY ACQUIRED BY NOTIFICATION A106838 & A222621. WHOLE OF LOT 34826 ORIGINALLY GTD TO HOWRAH PRE-SCHOOL ASSOCIATION INCORPORATED AND DULY SURRENDERED BY TRANSFER A316008. PART OF 5A-2R-12P GTD TO WILLIAM BUCK.	PLAN OF TITLE LOCATION CITY OF CLARENCE FIRST SURVEY PLAN No. 41/16 LO, 282/13 LO, 296/34 LO, P1289 LO COMPILED BY LTO SCALE 1: 2500 LENGTHS IN METRES	Registered Number P.167812 APPROVED 3 JUL 2014 Alice Kawa Recorder of Titles

MAPSHEET MUNICIPAL CODE No. 107 (5225-44)	LAST UPI No	LAST PLAN No. P211412, P147008, P165588	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



This map has been produced by Clarence City Council using data from a range of agencies. The City bears no responsibility for the accuracy of this information and accepts no liability for its use by other

16/12/2024

NEW ROOF COVER OVER EXISTING DECK
33 SALACIA AVENUE, HOWRAH, 7018
FOR SOUTHERN SUPPORT SCHOOL (CLARENCE CITY COUNCIL)

CERTIFICATE OF TITLE: VOLUME - 153166 FOLIO - 1
PID: 2066337
LAND AREA: 4.919ha

PLANNING SCHEME: TASMANIAN PLANNING SCHEME
CLARENCE LOCAL PROVISIONS SCHEDULE
ZONE: 29. OPEN SPACE
OVERLAYS: LOW COSTAL INUNDATION HAZARD BAND
AIRPORT OBSTACLE LIMITATION AREA
FUTURE COASTAL REFUGIA AREA
FLOOD PRONE AREAS
MEDIUM COASTAL EROSION HAZARD BAND
WATERWAY AND COSTAL PROTECTION AREA
PRIORITY VEGETATION AREA
LOW COSTAL EROSION HAZARD BAND
MEDIUM COSTAL INUNDATION HAZARD BAND

SOIL CLASSIFICATION: ASSUMED M
WIND REGION: A
TERRAIN CATEGORY: TC 2
IMPORTANCE LEVEL: 2 (DOMESTIC)
SHIELDING: 1
TOPOGRAPHY: 1
BAL: NOT REQUIRED (CLASS 10A STRUCTURE NOT WITHIN AN AREA IDENTIFIED BY COUNCIL BUSHFIRE MAPPING AS BEING BUSHFIRE PRONE)

INDEX OF DRAWINGS - BY ADRIAN BROWN CC6003R

ADDITIONAL DRAWINGS / ENGINEERING
BY NORTHERN CONSULTING ENGINEERS

JOB NO - 72158

P&J SHEDS PTY LTD. 38 McIntyre Street, Mornington, TAS, 7018. **P:** (03) 62 44 4300 **F:** (03) 6244 4355 **E:** admin@fairdinkumhobart.com.au **ABN: 45109681263**

LOT AREA: 4.919ha

EXISTING BUILDING AREA: 87.4m²
EXISTING DECK AREA (INCLUDING RAMP ACCESS): 57.15m²

PROPOSED ROOF COVER AREA: 33.61m²

VOL : 153166
FOLIO: 1
4.919ha

SITE PLAN PREPARED FROM CERTIFICATE OF TITLE INFORMATION AND MEASUREMENTS TAKEN ON SITE. CONFIRMATION OF BOUNDARY LOCATION BY REGISTERED SURVEYOR IS ALWAYS RECOMMENDED PRIOR TO CONSTRUCTION AND IS THE RESPONSIBILITY OF THE PROPERTY OWNER.

SITE PLAN 1:1000

PROPOSAL : NEW ROOF COVER OVER EXISTING DECK
OWNER : SOUTHERN SUPPORT SCHOOL (CLARENCE CITY COUNCIL)
ADDRESS: 33 SALACIA AVENUE, HOWRAH, 7018
SCALE: 1:1000
DATE: 19th AUGUST 2025
AMENDED:
DRAWN BY: A. BROWN CC6003R
PAGE: 01/06
JOB NO : 72158

P&J SHEDS PTY LTD. 38 McIntyre Street, Mornington, TAS, 7018. P: (03) 62 44 4300 F: (03) 6244 4355 E: admin@fairdinkumhobart.com.au ABN: 45109681263

LOT AREA: 4.919ha

EXISTING BUILDING AREA: 87.4m²
EXISTING DECK AREA (INCLUDING RAMP ACCESS): 57.15m²

PROPOSED ROOF COVER AREA: 33.61m²

EXISTING RAMP ACCESS

EXISTING BUILDING

PROPOSED ROOF COVER
OVER EXISTING DECK AREA

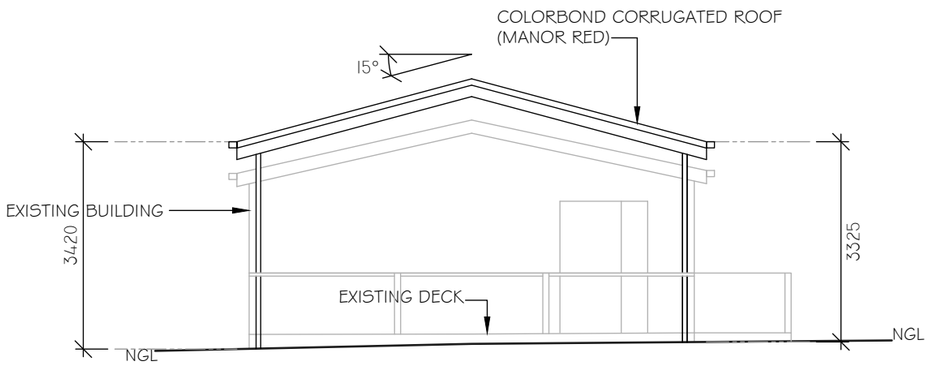
VOL : 153166
FOLIO: 1
4.919ha

SITE PLAN PREPARED FROM CERTIFICATE OF TITLE INFORMATION AND MEASUREMENTS TAKEN ON SITE. CONFIRMATION OF BOUNDARY LOCATION BY REGISTERED SURVEYOR IS ALWAYS RECOMMENDED PRIOR TO CONSTRUCTION AND IS THE RESPONSIBILITY OF THE PROPERTY OWNER.

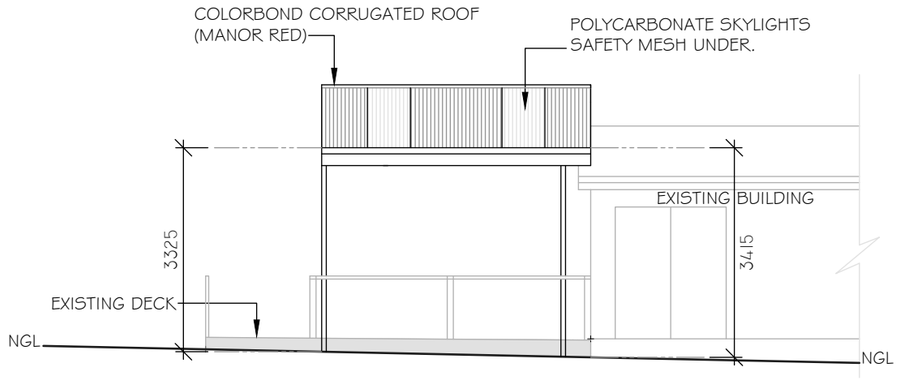
LOCATION PLAN 1:200

PROPOSAL : NEW ROOF COVER OVER EXISTING DECK
OWNER : SOUTHERN SUPPORT SCHOOL (CLARENCE CITY COUNCIL)
ADDRESS: 33 SALACIA AVENUE, HOWRAH, 7018
SCALE: 1:200
DATE: 19th AUGUST 2025
AMENDED:
DRAWN BY: A. BROWN CC6003R
PAGE: 02/06
JOB NO : 72158

P&J SHEDS PTY LTD. 38 McIntyre Street, Mornington, TAS, 7018. P: (03) 62 44 4300 F: (03) 6244 4355 E: admin@fairdinkumhobart.com.au ABN: 45109681263

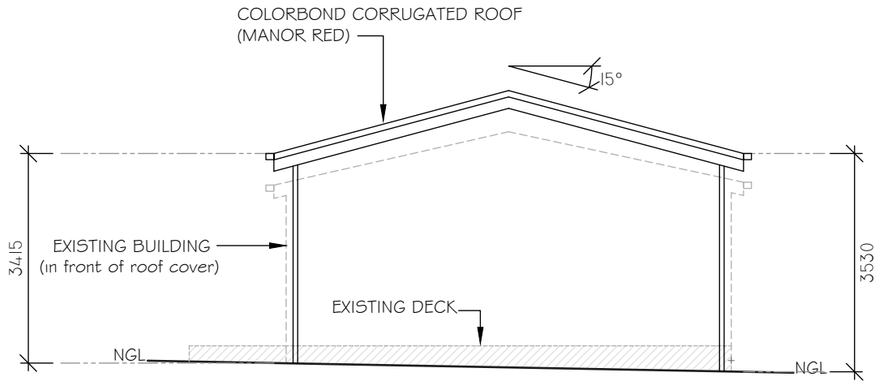


EAST ELEVATION

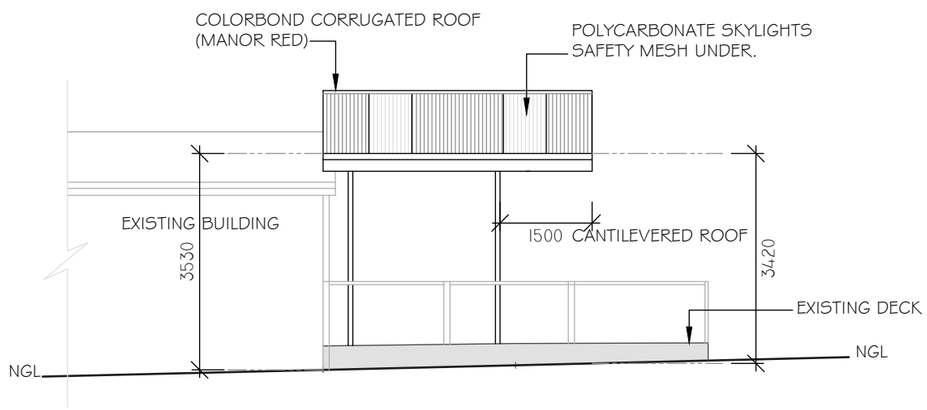


NORTH ELEVATION

COLOUR'S (COLORBOND®):
ROOF - MANOR RED
GUTTER - MANOR RED
BARGE FLASHING - MANOR RED



WEST ELEVATION



WEST ELEVATION

REFER TO DRAWINGS BY NORTHERN CONSULTING ENGINEERS FOR ALL MEMBER AND MATERIAL DETAILS AS WELL AS FOOTING DESIGN AND SPECIFICATIONS.

ELEVATIONS 1:100

PROPOSAL : NEW ROOF COVER OVER EXISTING DECK
OWNER : SOUTHERN SUPPORT SCHOOL (CLARENCE CITY COUNCIL)
ADDRESS: 33 SALACIA AVENUE, HOWRAH, 7018
SCALE: 1:100
DATE: 19th AUGUST 2025
AMENDED:
DRAWN BY: A. BROWN CC6003R
PAGE: 03/06
JOB NO : 72158

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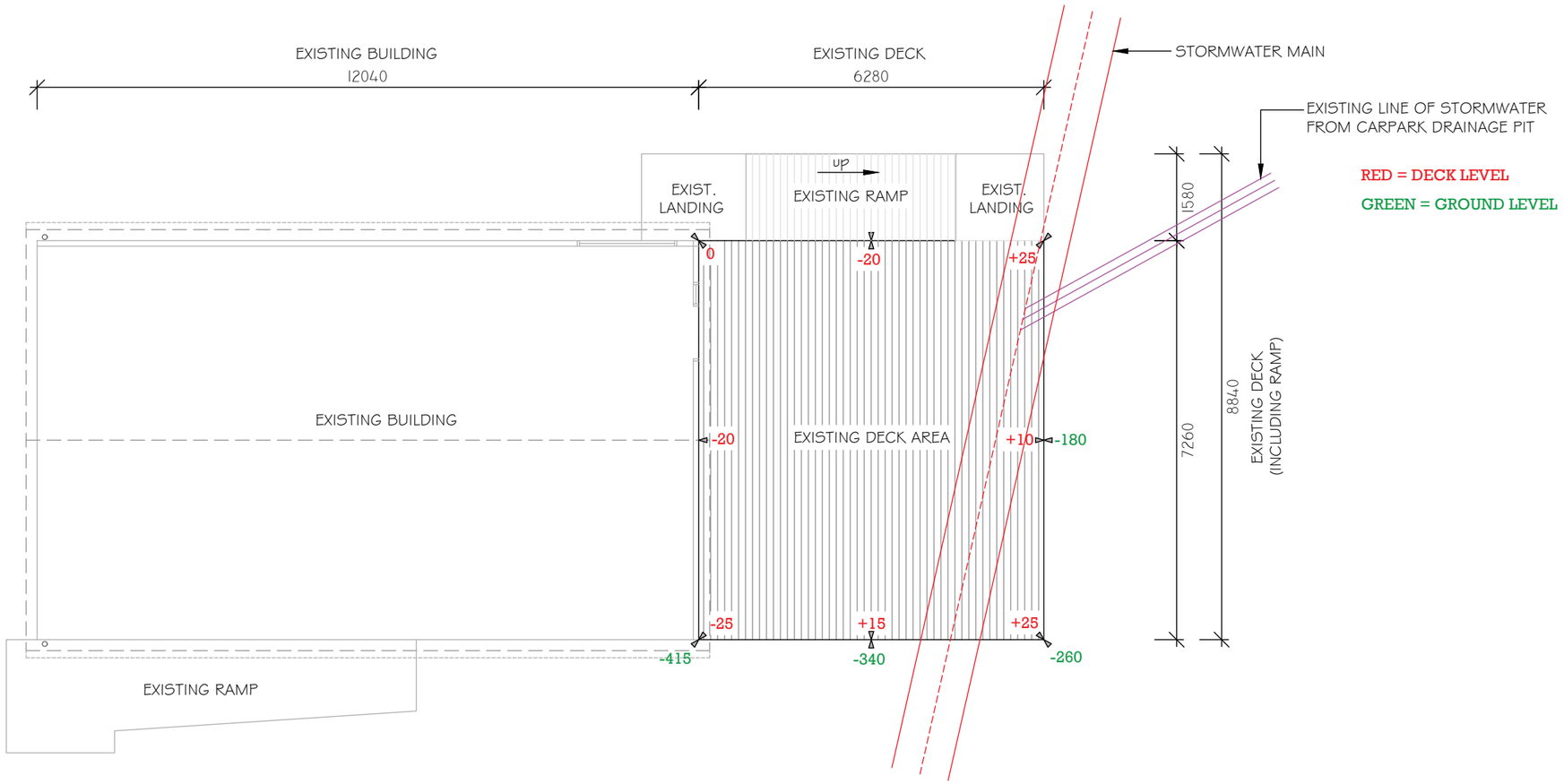
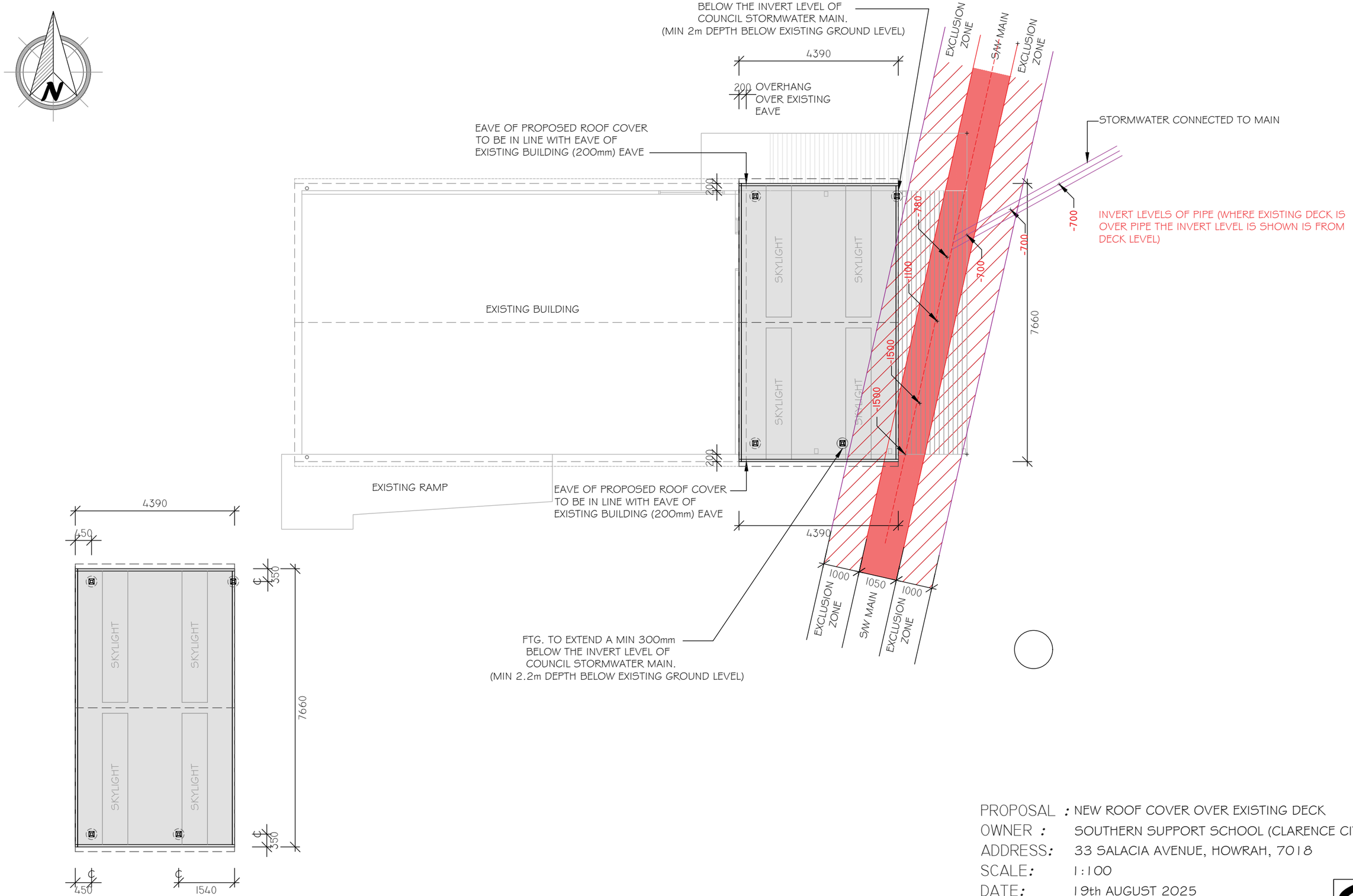


EXISTING FLOOR PLAN (deck / ground levels) 1:100

PROPOSAL : NEW ROOF COVER OVER EXISTING DECK
OWNER : SOUTHERN SUPPORT SCHOOL (CLARENCE CITY COUNCIL)
ADDRESS: 33 SALACIA AVENUE, HOWRAH, 7018
SCALE: 1:100
DATE: 19th AUGUST 2025
AMENDED:
DRAWN BY: A. BROWN CC6003R
PAGE: 04/06
JOB NO : 72158

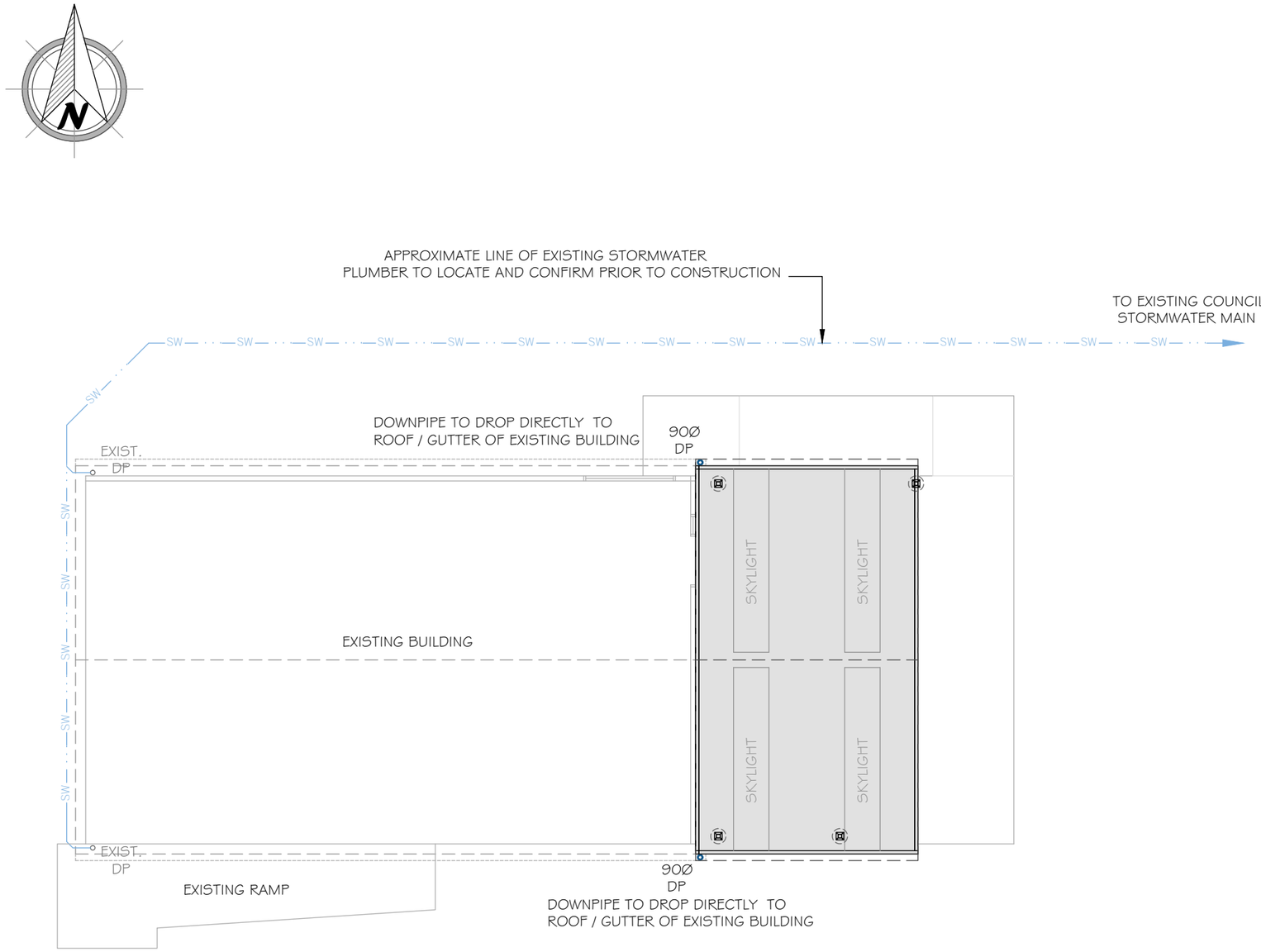
P&J SHEDS PTY LTD. 38 McIntyre Street, Mornington, TAS, 7018. **P:** (03) 62 44 4300 **F:** (03) 6244 4355 **E:** admin@fairdinkumhobart.com.au **ABN: 45109681263**



FLOOR PLAN (PROPOSED) 1:100

PROPOSAL :	NEW ROOF COVER OVER EXISTING DECK
OWNER :	SOUTHERN SUPPORT SCHOOL (CLARENCE CITY COUNCIL)
ADDRESS:	33 SALACIA AVENUE, HOWRAH, 7018
SCALE:	1:100
DATE:	19th AUGUST 2025
AMENDED:	
DRAWN BY:	A. BROWN CC6003R
PAGE:	05/06
JOB NO :	72158

P&J SHEDS PTY LTD. 38 McIntyre Street, Mornington, TAS, 7018. **P:** (03) 62 44 4300 **F:** (03) 6244 4355 **E:** admin@fairdinkumhobart.com.au **ABN: 45109681263**



CONSTRUCTION GENERALLY:
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CURRENT BUILDING REGULATIONS, BUILDING CODE OF AUSTRALIA (B.C.A.), RELEVANT AUSTRALIAN STANDARDS AND LOCAL AUTHORITY REQUIREMENTS.

SITE PREPARATION AND EXCAVATION TO COUNCIL AND B.C.A REQUIREMENTS.

CONCRETE FOOTINGS TO AS 2870.1 AND ENGINEER SPECIFICATIONS.
UNLESS OTHERWISE SPECIFIED, FOOTINGS 20MPA / SLAB 25MPA.

STRUCTURAL; DETAILS AND CERTIFICATION AS PER 'FAIR DINKUM SHEDS' DOCUMENTATION.

BUILDER TO VERIFY ALL DIMENSIONS AND DETAILS ON THIS SET OF PLANS PRIOR TO COMMENCEMENT OF WORK ON SITE.

USE WRITTEN DIMENSIONS IN PREFERENCE TO MEASURING OFF THE PLAN.

COUNCIL / CONTRACTOR TO CONTACT P&J SHEDS IF NECESSARY INFORMATION IS NOT PROVIDED ON THIS SET OF PLANS.

PLUMBING GENERALLY:
ALL PLUMBING TO BE IN ACCORDANCE WITH AS 3500.
TAS PLUMBING CODE AND LOCAL AUTHORITY REQUIREMENTS.

90dia UPVC DOWN PIPE TO DISPERSE DIRECTLY ONTO ROOF / GUTTER OF EXISTING BUILDING.
EXISTING STORM WATER TO EXISTING STORM WATER CONNECTION.
PLUMBER TO VERIFY CONNECTION LOCATION WITH OWNER.

FIRST INSPECTION OPENING TO BE RAISED TO FINISHED GROUND LEVEL.

PROPOSAL : NEW ROOF COVER OVER EXISTING DECK
OWNER : SOUTHERN SUPPORT SCHOOL (CLARENCE CITY COUNCIL)
ADDRESS: 33 SALACIA AVENUE, HOWRAH, 7018
SCALE: 1:100
DATE: 19th AUGUST 2025
AMENDED:
DRAWN BY: A. BROWN CC6003R
PAGE: 06/06
JOB NO : 72158

PLUMBING PLAN 1:100

P&J SHEDS PTY LTD. 38 McIntyre Street, Mornington, TAS, 7018. P: (03) 62 44 4300 F: (03) 6244 4355 E: admin@fairdinkumhobart.com.au ABN: 45109681263

COASTAL INUNDATION AND NATURAL VALUES ASSESSMENT

PROPOSED NEW ROOF COVER

33 SALACIA AVENUE – HOWRAH

Southern Support School Department for Education, Children and Young People

Refer to this Report As

Enviro-Tech Consultants Pty. Ltd. 2024. Coastal Inundation and Natural Values Assessment Report for a Proposed New roof cover, 33 Salacia Avenue - Howrah. Unpublished report for Southern Support School Department for Education, Children and Young People by Enviro-Tech Consultants Pty. Ltd., 30 July 2024.

Report Distribution

This report has been prepared by Enviro-Tech Consultants Pty. Ltd. for the use by parties involved in the proposed residential development of the property named above. It is to be used only to assist in managing any existing or potential inundation hazards relating to the Site and its development.

Permission is hereby given by Enviro-Tech Consultants Pty. Ltd., and the client, for this report to be copied and distributed to interested parties, but only if it is reproduced in colour, and only distributed in full. No responsibility is otherwise taken for the contents.

Reporting Declaration

This Hazard Assessment Report includes an inundation assessment which has been prepared in accordance with the Tasmanian Planning Scheme and the Director's Determination – Coastal Inundation Hazard Areas and supervised by an environmental and engineering geologist with more than 10 years of experience and competence in coastal inundation modelling (see Attachment 8 for signed declaration & verification).

Limitations

No responsibility is accepted for subsequent activities onsite by owners including but not limited to placement of fill, uncontrolled earthworks or altered drainage conditions.

This report has been prepared based on provided plans detailed herein. Should there be any significant changes to these plans, then this report should not be used without further consultation. This report should not be applied to any project other than indicated herein.

Executive Summary

Enviro-Tech Consultants Pty. Ltd. (Envirotech) were contracted by Southern Support School Department for Education, Children and Young People on behalf of P & J Sheds to prepare a Coastal Inundation and Natural Values Assessment for a proposed roofed structure over an existing deck at 33 Salacia Avenue, Howrah which is herein defined as the Site.

The existing deck is nominally raised above ground level, is not enclosed and is considered non habitable use.

The proposed development is not exempt from planning given the vulnerable use (childcare centre) and therefore requires a risk assessment to address Tasmanian Planning Scheme coastal inundation and future coastal refugia area codes.

Envirotech have prepared inundation modelling to assess 1% AEP inundation levels based on 2100 sea levels, storm tides, wind setup as well as wind and swell wave conditions. The resulting wave runup is modelled at 2.6 m AHD which is at the same elevation of the ground surface near the proposed building footprint. The 2.6 m wave runup elevation is considered conservative as it does not factor in attenuation over the roughened approach surface.

Ultimately, inundation risks from the 1% AEP wave runup conditions for 2100 are considered tolerable with no specific management measures required.

Risks to future coastal refugia are considered low given the proposed development footprint already exists and is located on the very margins of the mapped future coastal refugia migration areas.

1 Introduction

1.1 *Background*

Enviro-Tech Consultants Pty. Ltd. (Envirotech) were contracted by Southern Support School Department for Education, Children and Young People on behalf of P & J Sheds to prepare a Coastal Inundation and Natural Values Assessment for a proposed a proposed roofed structure over an existing deck at 33 Salacia Avenue, Howrah which is herein defined as the Site (Map 1).

Envirotech have assessed risks based on the supplied Site plans for the proposed development, modelling constraints stipulated within the Directors Determination, the Tasmanian Planning Scheme, and the 2016 Tasmanian Building Regulations (TPS)

1.2 *Scope*

The scope of the Site investigation is to:

- Identify which overlay codes apply to the Site to determine development constraints including planning scheme exemptions, acceptable solutions, performance criteria as well as directors' determinations and building regulations specific to the identified hazards.
- Prepare a report with hazard modelling to assess development risks, directors' determination throughout the building design life and where applicable modelling to 2100 to address planning code performance criteria.
- Prepare a desktop review of hydrological information relevant to the Project Area and proposed development.
- Using available geographic information system (GIS) data, construct a hydrodynamic, and coastal process model for the Project Area to interpret present and future Site conditions and how the proposed development may influence and be influenced by future Site processes.
- Prepare a risk assessment for the proposed development in terms of coastal natural values and inundation hazards ensuring relevant building regulations, directors determination, and where applicable performance criteria are addressed; and
- Where applicable, provide recommendations on methods and design approach to adapt to Site hazards.

1.3 *Cadastral Title*

The land studied in this report is defined by the title 153166/1

1.4 *Project Area Setting*

The Site location plans are presented in Map 2, Attachment 1. The Project Area is located on a coastal plain which was historically part of a lagoon system. The Site is set back approximately 200 m from the river and in the future may be subject to coastal processes acting within the Derwent River.

2 Assessment

2.1 *Proposed Development*

Table 1 summarises the provided design documents from which this assessment is based with plans presented in Attachment 2 with the Site outlay presented in Map 3.

Table 1 Project Design Drawings

Drafted By	Project ID	Date Generated	Pages
P & J Sheds	JOB NO - 72158	2nd APRIL 2024	06

The proposal involves the development of proposed roofed cover over an existing deck. The existing deck is nominally raised above ground level, is not enclosed and is considered non habitable use.

2.2 *Planning*

Planning code overlay mapping is presented in Attachment 1.

Planning code overlay descriptions, objectives, acceptable solutions and performance criteria are addressed in Attachment 3.

2.2.1 Natural Assets Assessment

Natural Assets Code C7.0 Development Standards for Building and Works E7.6 is addressed within this report. Parts of the Site fall within the future refugia overlay (Map 5). Future refugia overlay acceptable solutions are summarised Attachment 3 with the following codes addressed:

- **C7.6.1 A2** The proposed development does not meet C7.6.1 A2 given that the development is not within a building area on a sealed plan approved under this planning scheme. C7.6.1 P2.1 & P2.2 performance solutions therefore needs to be addressed.
    - **C7.6.1 P2.1** Is addressed through a risk assessment
    - **C7.6.1 P2.2** As the existing and proposed boat shed has a use that relies upon its coastal location to fulfil its purpose given the need to access infrastructure (the existing deck) within the coastal location

2.2.2 Coastal Inundation Hazard Code

Coastal inundation hazard overlay mapping is presented in Map 6 and coastal inundation planning codes are addressed in more detail in Attachment 3 with the following codes addressed:

- **C11.5.2 A1** There are no acceptable solutions to uses located within a non-urban zone and within a medium coastal inundation hazard band:
    - **C10.5.2 P1.1** To address erosion hazards and tolerable risks from a coastal erosion event in 2100 and the potential need for hazard reduction or protection measures.
    - **C10.5.2 P1.2** modelling is conducted to ensure the use can achieve and maintain a tolerable risk[1] from a 1% annual exceedance probability coastal inundation event in 2100 for the intended life of the use without requiring any specific hazard reduction or protection measures.
- **C11.5.3 A1** There are no acceptable solutions to uses located within a non-urban zone and within a low coastal inundation hazard band:
    - **C11.5.3 A1** Is addressed through a risk assessment
- **C11.5.4 A1.1** is addressed given the proposed development is considered a vulnerable use within a non-urban zone.
- **C11.5.4 A1.2** is addressed given the proposed development is considered a vulnerable use
- **C11.5.4 A4** is addressed given the proposed development is an existing and proposed childcare centre.
- **C11.6.1 A1** As there are no acceptable solutions to C11.6.1 A1, and therefore the proposed development is to be assessed against performance criteria.

[1] Tolerable risk means the lowest level of likely risk from coastal inundation from a defined flood event to secure the benefits of a use or development in a coastal inundation hazard area, and which can be managed through routine regulatory measures or by specific hazard management measures for the intended life of each use or development.

2.2.3 Flood Prone Areas Hazard Code

Coastal inundation hazard overlay mapping is presented in Map 7.

The Flood Prone Areas Hazard Code does not need to be addressed on the basis that the building and works is within the coastal inundation hazard overlay (is exempt from planning).

2.3 *Building*

2.3.1 Coastal Inundation Risk Assessment (outbuilding or class 10 structure) tolerable risks

This coastal inundation assessment goes above and beyond the building design life (2074) scenario and extends the inundation model criteria out to include 2100 sea levels. Therefore, the tolerable risks assessed herein as part of the Directors Determination are covered in the Tasmanian Planning Scheme Assessment.

2.3.2 Flood Prone Areas (Riverine) Hazard Overlay

Given habitable rooms are not proposed with the new development, finished floor levels are not of concern. As a fluvial risk assessment is not required, a fluvial assessment has not been conducted.

3 Inundation Assessment

3.1 *Assessment Methods*

Inundation levels are modelled by Envirotech based on Site-specific hydrodynamic and topographic/bathymetric conditions within the Project Area. The Site specified inundation levels and wave dynamics have critical implications for Site building works and in determining the need for coastal protection works.

To comply with the Tasmanian Planning Scheme, an assessment has been made based on a 1% AEP coastal inundation event by 2100. The coastal hydrodynamic assessment is presented in Attachment 4 with an assessment based on:

- Projected 2100 sea levels
- 1% AEP barometric low conditions combined with astronomical tides.
- 1% AEP wind setup scenario
- 1% AEP swell wave conditions based on significant wave heights at stillwater levels
- Radials used in the assessment (Map 10) to determine local wind wave propagation
- Wave setup and wave runup probabilities

3.2 *Findings*

As presented in Table 2, making allowance for 2100 sea levels, wind setup, wave setup and wave runup as well as barometric low pressures and astronomical tides:

The 2100 inundation level for the Site is calculated at 2.6 m AHD based on a wave runup scenario.

Table 2 Site specific inundation level modelling

1% AEP Parameter	Units	2100
Storm Tide Levels	m AHD	2.29
Wave setup (south-westerly wind fetch)	m AHD	2.5
Wave runup (south-westerly wind)	m AHD	2.6

With the ground level at 2.6 m AHD, wave runup is not projected to reach the building footprint, allowing for wave attenuation.

4 Natural Values Assessment

A detailed natural values assessment has not been prepared for the Site on the basis that the proposed development footprint is on the periphery of the future coastal refugia overlay. Future refugia migration is insignificant within the building footprint.

5 Risk Assessment

Qualitative risk evaluation criteria have been created to determine fundamental risks that may occur due to development in areas that are vulnerable to erosion or inundation hazards.

This qualitative risk assessment technique is based on AS/NZS ISO 31000:2009 and relies on descriptive or comparative characterisation of consequence, likelihood, and the level of risk comparative (rather than using absolute numerical measures).

A risk consequence/likelihood matrix has been selected which is consistent with AS/NZS ISO 31000:2009 guidelines.

Consequence/likelihood criteria have assisted in determining if any risk management measures are required at the Site to mitigate any potential hazards. Adopted consequence/likelihood criteria are presented in Attachment 5.

5.1 *Planning*

5.1.1 Natural Assets Assessment

Overall risk to future coastal refugia is considered low given the marginal location of the proposed development with respect to the mapped overlay. Risks are addressed based on performance criteria presented in Attachment 6.

5.1.2 Inundation Assessment

Given the 1% AEP inundation modelling for 2100, wave runup is at the limit near the proposed building footprint at 2.6m AHD. Factoring in attenuation from the roughened surfaces, this estimate is considered conservative, and coastal inundation is not projected within the building footprint within the building design life and by 2100.

Risks associated with performance criteria are presented in Attachment 7.

5.2 *Building*

Aspects of the building code relating to coastal inundation and flood prone areas are not relevant for the proposed development given the planning exemptions and proposed non habitable use.

6 Recommendations

It is generally recommended that the following guidelines are followed:

- best practice guidelines in the Wetlands and Waterways Works Manual
- the guidelines in the Tasmanian Coastal Works Manual.

7 Concluding Statement

It is concluded that:

- Overall risks to future coastal refugia is considered low
- Risks associated with wave runup inundation is tolerable
- No specific management is required to address inundation hazards at the Site.

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Director

Enviro-Tech Consultants Pty. Ltd.

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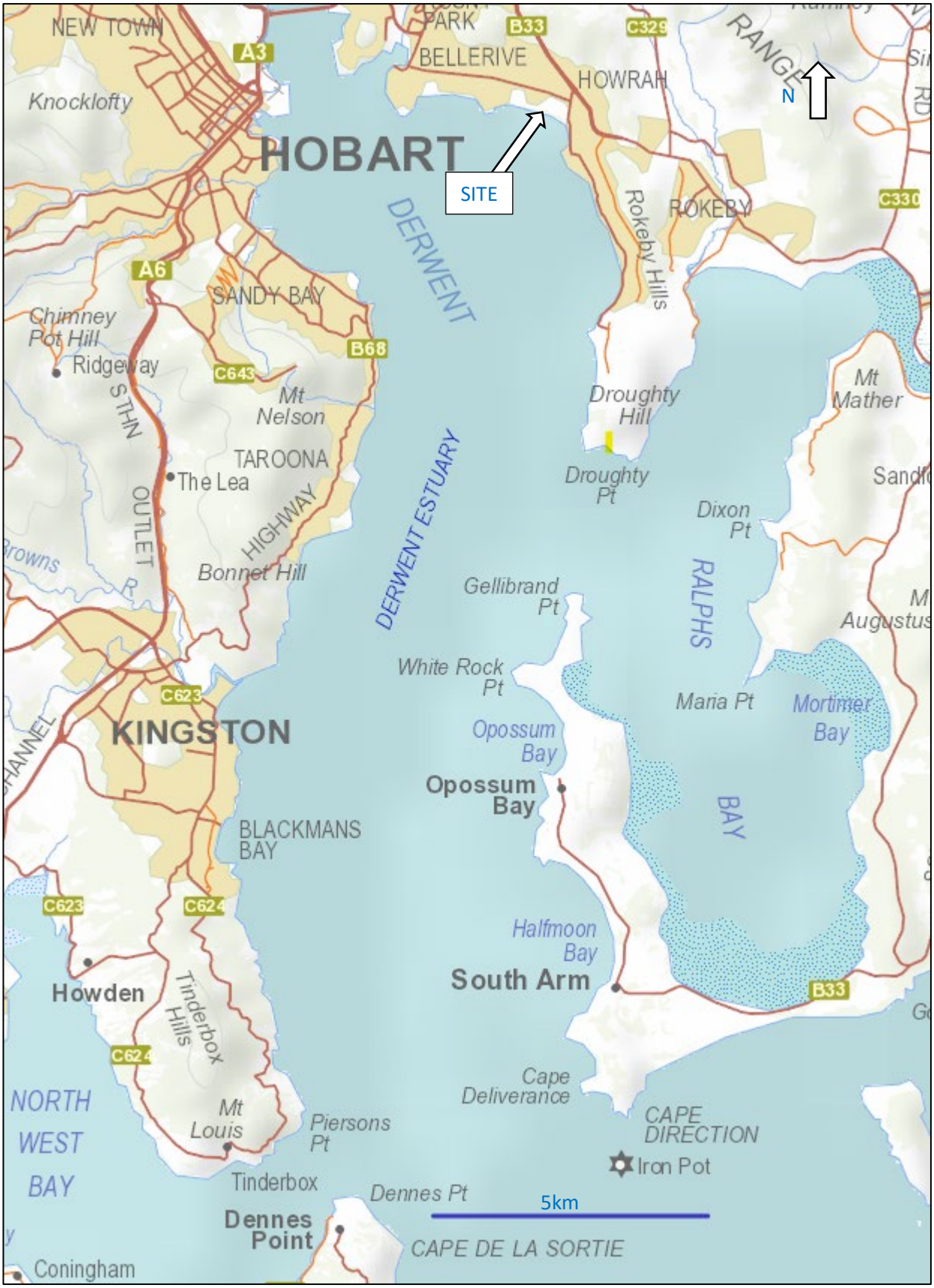
Attachment 1 Maps

Map 1



Map 1 Site regional setting (The LIST)

Map 2

Map 2 Site and Project Area local setting

Map 3

Map 3 Proposed Site Development Plan

Map 4

Map 4 Waterways and Coastal Protection Overlay

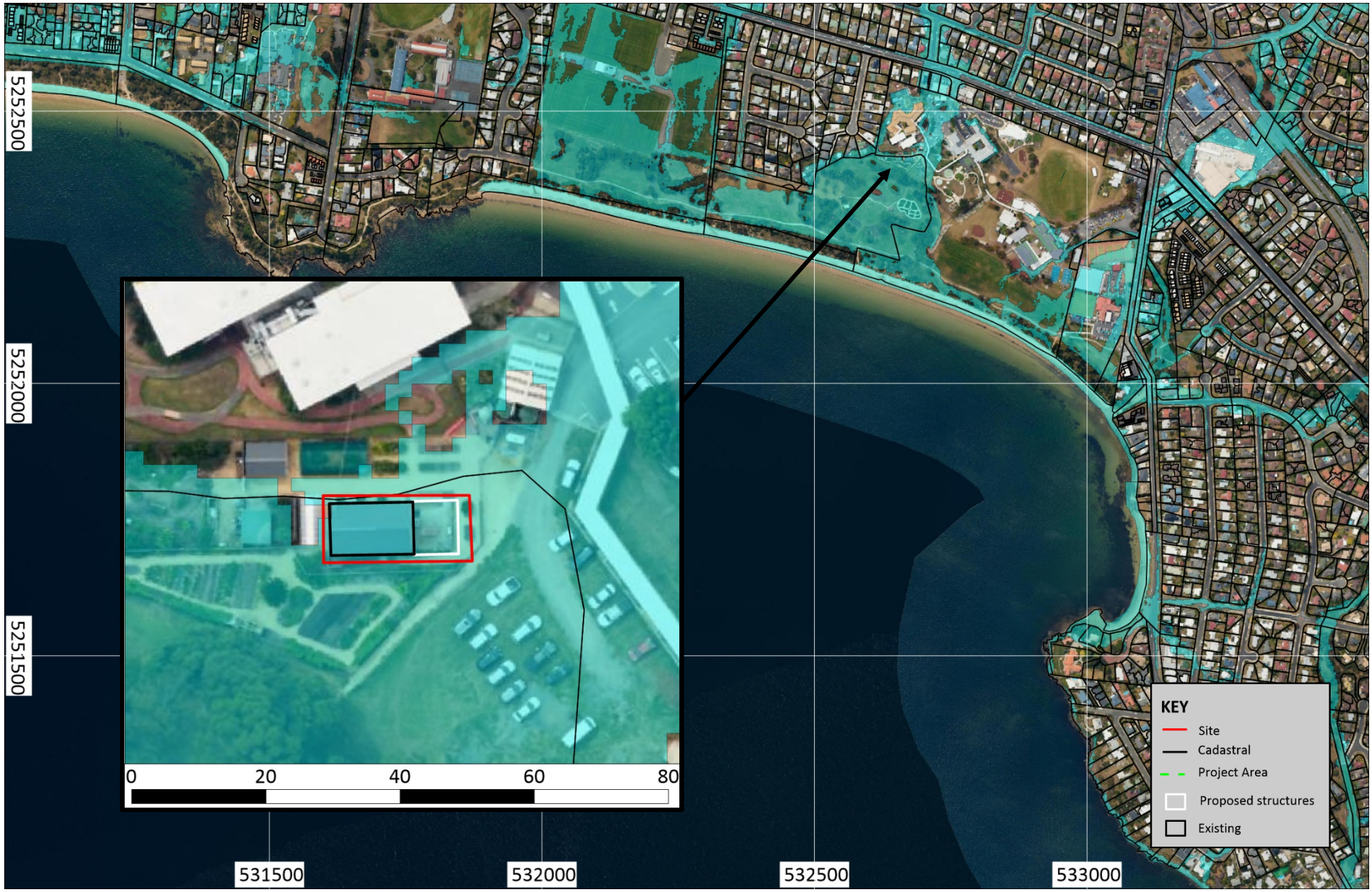
Map 5

Map 5 Future Coastal Refugia

Map 6

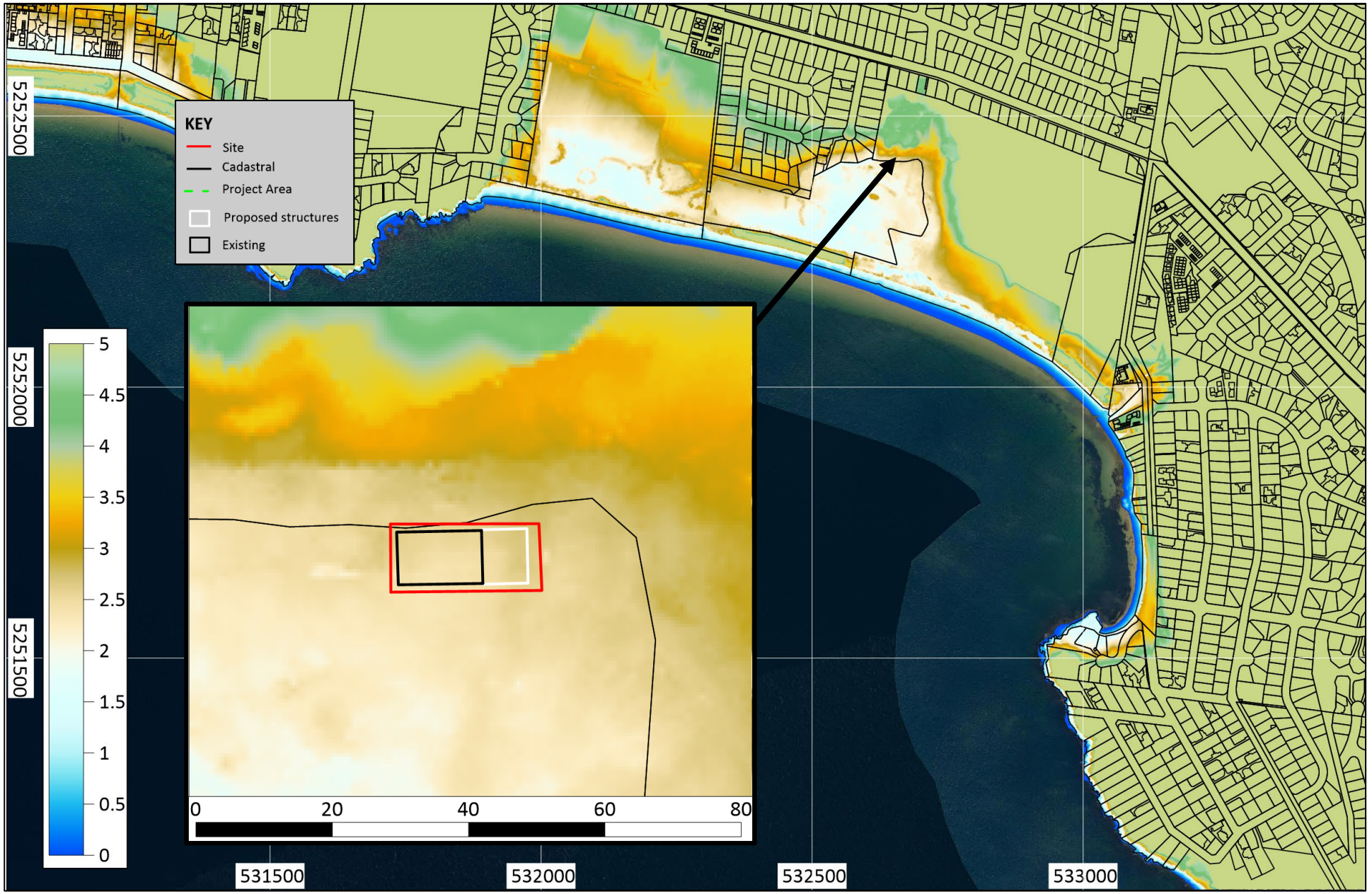
Map 6 Coastal inundation overlay

Map 7



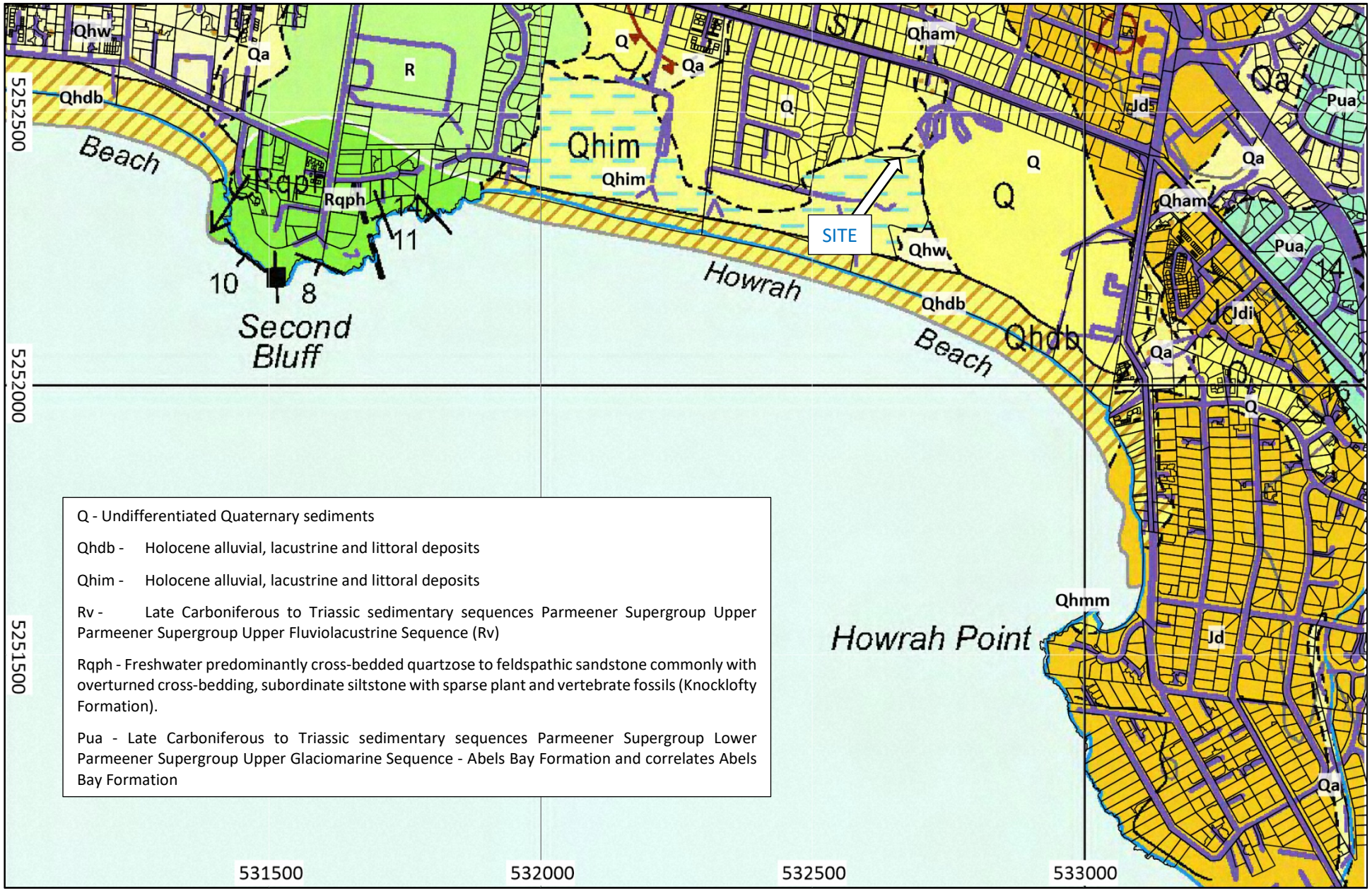
Map 7 Flood prone areas overlay – 1% AEP inundation mapping

Map 8



Map 8 Regional digital elevation model based on 2013 LIDAR

Map 9



Q - Undifferentiated Quaternary sediments

Qhdb - Holocene alluvial, lacustrine and littoral deposits

Qhim - Holocene alluvial, lacustrine and littoral deposits

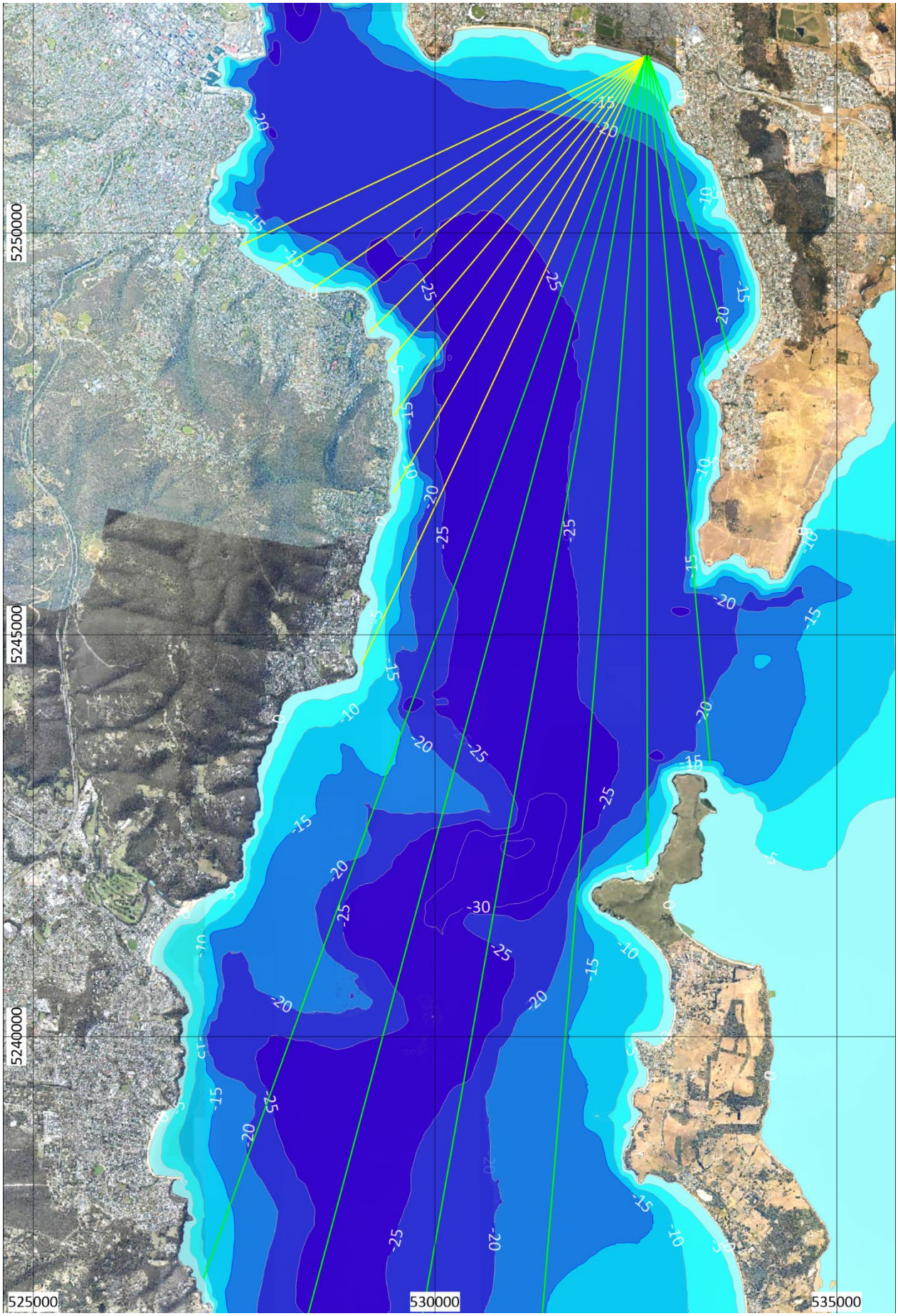
Rv - Late Carboniferous to Triassic sedimentary sequences Parmeener Supergroup Upper Parmeener Supergroup Upper Fluviolacustrine Sequence (Rv)

Rqph - Freshwater predominantly cross-bedded quartzose to feldspathic sandstone commonly with overturned cross-bedding, subordinate siltstone with sparse plant and vertebrate fossils (Knocklofty Formation).

Pua - Late Carboniferous to Triassic sedimentary sequences Parmeener Supergroup Lower Parmeener Supergroup Upper Glaciomarine Sequence - Abels Bay Formation and correlates Abels Bay Formation

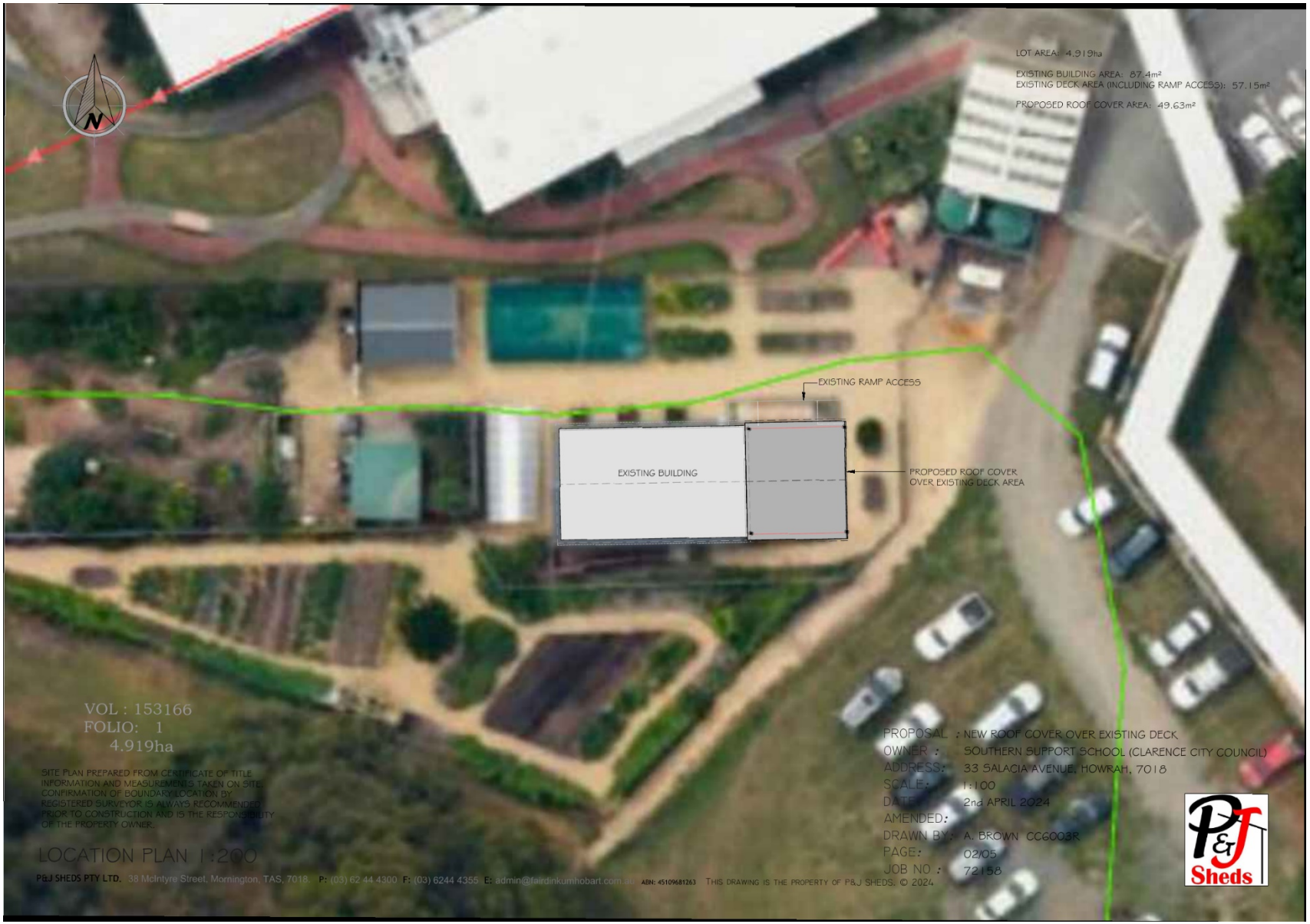
Map 9 1:25,000 Scale Mineral Resources Tasmania geology mapping

Map 10



Map 10 Radials used to generate the wind wave model for the Site.

Attachment 2 Preliminary Design Concept Plans



Attachment 3 Planning and Building Regulations

C7.0 Natural Assets Code

Code Overlay – The LIST Mapping

The proposed building and works fall within the following Natural Assets Code C7.6.1 overlays with acceptable solutions presented in Table 3:

- Future coastal refugia overlay (Map 5).

C7.6. Development Standards for Building and Works

C7.6.1 Objective

That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.

C7.6.1 Codes

The proposed development is to be assessed with respected to future coastal refugia area overlay code C7.6.1 acceptable solutions presented in Table 3.

Table 3 Natural Asset Code Development Standards for Building and Works Acceptable Solutions

Natural Asset Code	Acceptable Solution	Over-lay	Perform-ance Solution	Performance Solution to be Addressed	Justification
C7.6.1 A2	Buildings and works within a future coastal refugia area must be located within a building area on a sealed plan approved under this planning scheme.	FCR	C7.6.1 P2.1 C7.6.1 P2.2	Yes	**No located on a sealed plan.**
C7.6.1 A3	Development within a waterway and coastal protection area or a future coastal refugia area must not involve a new stormwater point discharge into a watercourse, wetland or lake.	FCR or WCPA	C7.6.1 P3	No	**A new stormwater discharge point is not required.**
C7.6.1 A4	Dredging or reclamation must not occur within a waterway and coastal protection area or a future coastal refugia area.	FCR or WCPA	C7.6.1 P4.1 C7.6.1 P4.1	No	**No applicable – No dredging or reclamation**
C7.6.1 A5	Coastal protection works or watercourse erosion or inundation protection works must not occur within a waterway and coastal protection area or a future coastal refugia area.	FCR or WCPA	C7.6.1 P5	No	**No applicable – No coastal protection works**

C7.6.1 A2 Acceptable Solutions (Future Coastal Refugia)

The proposed development does not meet C7.6.1 A2 given that the development is not within a building area on a sealed plan approved under this planning scheme. C7.6.1 P2.1 & P2.2 performance solutions therefore needs to be addressed.

Performance criteria C7.6.1 P2.1 is to be assessed with performance solutions in Attachment 6.

In addressing performance criteria C7.6.1 P2.2, there is a requirement that buildings and works within a future coastal refugia area must be for a use that relies upon a coastal location to fulfil its purpose, having regard to:

(a) the need to access a specific resource in a coastal location;

(b) the need to operate a marine farming shore facility;

(c) the need to access infrastructure available in a coastal location;

(d) the need to service a marine or coastal related activity;

(e) provision of essential utility or marine infrastructure; and

(f) provision of open space or for marine-related educational, research, or recreational facilities.

In this case, the existing deck is within a coastal location occupying the future coastal refugia area. Modifications to future coastal refugia area only includes pad foundations for building footings. The most relevant criterion in this case is:

(c) the need to access infrastructure (the existing deck) available in a coastal location;

C7.6.1 A3 - Development Involving a New Stormwater Discharge Point

Not applicable.

C7.6.1 A4.1 - Dredging or Reclamation

Not applicable.

C7.6.1 A4.2 - Dredging or reclamation

Not applicable.

C7.6.1 A5 - Coastal Protection Works or Watercourse Erosion or Inundation Protection Works

Not applicable.

C11.0 Coastal Inundation Hazard

The Site falls within The LIST Coastal Inundation Hazard Overlay (low hazard band) as presented in Map 6.

Code Overlay Reporting Requirements

The proposed development reporting requirements are summarised in Table 4 with the following to be addressed:

- State Planning Provisions (the Tasmanian Planning Scheme) C11 Coastal Inundation Hazard Code
- Part 5 (Work in Hazardous Areas) of the Building Regulations 2016; Division 5 – Coastal Inundation
- Directors Determination – Coastal Inundation Hazard Areas.

The proposed development is not exempt from C11 Coastal Inundation Hazard Code on the basis that the proposal will involve:

- vulnerable use (childcare)
- uses located within a non-urban zone and within a low coastal inundation hazard band.

Table 4 Coastal Inundation Hazard Reporting Requirements Framework

Council	Clarence
Planning Scheme	Tasmanian Planning Scheme
Critical use, hazardous use, or vulnerable use	Vulnerable use - educational and occasional care;
Low or medium coastal inundation hazard band	Low
Parts of the Site are located within a high coastal inundation hazard band	No
Located within a non-urban zone	Yes
Requires inundation protection works	No
Exemption from code	No, on the basis that the proposed development is is considered a vulnerable use - educational and occasional care;
Coastal inundation reporting requirements	Coastal Inundation Hazard Assessment in accordance with directors determination and C11.0 Codes
Coastal inundation code to be addressed	C11.5.3 Uses located within a non-urban zone and within a low coastal inundation hazard band C11.5.4 Critical use, hazardous use or vulnerable use (P1.1, P1.2, P4) C11.6.1 Buildings and works, excluding coastal protection works, within a coastal inundation hazard area
Defined inundation level	2.8m AHD. Based on 1% AEP for year 2100 - as per Tasmanian Planning Scheme Local Provisions Schedule Table C11.1 Howrah
Minimum habitable room finished floor level based on the defined inundation level plus 0.3m freeboard (Tasmanian Building Regulations 2016)	3.1m AHD
Risk assessment modelling criteria	1% annual exceedance probability coastal inundation event in 2100 for the intended life of the use factoring in sea levels, astronomical tides, barometric low, wave setup, wave runup and wind setup
In a coastal inundation investigation area	No
Coastal inundation investigation area report required	No
Located within a flood-prone area hazard code overlay	Yes
Flood-prone area hazard code overlay to be addressed	Not in areas where the proposed building and works are located within the coastal inundation hazard overlay, but the Directors Determination still needs to be addressed.

Directors Determination

Residential structures and outdoor structures

According to the director's determination, a coastal inundation hazard report must be prepared for outdoor structures (Class 10).

Certificate of Likely Compliance

In determining an application for a Certificate of Likely Compliance (2 (6), the building surveyor must:

(a) take into account the coastal inundation hazard report and any relevant coastal inundation management plan; and

(b) be satisfied that the proposed work will not cause or contribute to coastal inundation on the Site, on adjacent land or of public infrastructure; and

(c) be satisfied that the proposed work can achieve and maintain a tolerable risk for the intended life of the building without requiring any specific coastal inundation protection measures.

Buildings including outdoor structures (Class 10) within a coastal inundation hazard area must have finished floor level of habitable rooms[2] at least 300 millimetres above the *defined flood level* for the land. Given Class 10 structures do not have habitable rooms and are not classified as a dwelling, Class 10 structures are to be assessed in terms of *tolerable risks* only.

Coastal Inundation Risk Modelling

For the purposes of the Directors Determination – Coastal Inundation Hazard Areas, coastal inundation risk is assessed based on whether the "proposed use or development can achieve and maintain a tolerable risk for the intended life of the building without requiring any specific coastal inundation protection measures."

This report therefore includes an assessment of risks associated with a 1% AEP storm tide flooding event in the year 2074. Storm tide processes modelled within this report include Site specific combined 1% AEP barometric low pressures and astronomical tides, wind setup, wave runup and wave setup based on 2074 sea levels for the local area.

Risk Assessment

To comply with the determination and C11 performance codes, this report assesses whether the proposed use or development can achieve and maintain a ***tolerable risk***[3] from a ***1% annual exceedance probability coastal inundation event in 2100*** for the intended life of the use or development without requiring any specific coastal inundation protection measures. This report therefore includes an assessment of risks associated with a 1% AEP *storm tide* flooding event in the year 2100. Storm tide processes modelled within this report include Site specific combined 1% AEP barometric low pressures and astronomical tides, wind setup, wave runup and wave setup based on 2100 sea levels for the local area.

This risk assessment conforms with the Directors Determination requirements.

[2] habitable rooms "means any room of a dwelling other than a bathroom, laundry, toilet, pantry, walk-in wardrobe, corridor, stair, hallway, lobby, clothes drying room and other space of a specialised nature occupied neither frequently nor for extended periods."

3 Tolerable risk means the lowest level of likely risk from coastal inundation from a defined flood event to secure the benefits of a use or development in a coastal inundation hazard area, and which can be managed through routine regulatory measures or by specific hazard management measures for the intended life of each use or development

Tasmanian Planning Scheme

C11.5 Use Standards

C11.5.3 Uses located within a non-urban zone and within a low coastal inundation hazard band

Objective:

That a use located within a non-urban zone and within a low coastal inundation hazard band can achieve and maintain a tolerable risk from coastal inundation.

C11.5.3 Acceptable Solutions

As there are no acceptable solutions to C11.5.3 A1, the proposed development is to be assessed against performance criteria C11.5.3 P1.

C11.5.3 P1 Performance Criteria

A tolerable risk for a use located within a non-urban zone and within a low coastal inundation hazard band is assessed through a risk assessment with performance criteria presented in Attachment 7.

C11.5.4 Critical use, hazardous use or vulnerable use

C11.5.4 Objective:

That critical, hazardous and vulnerable uses located within a coastal inundation hazard area can achieve and maintain a tolerable risk from coastal inundation.

C11.5.4 Acceptable Solutions

Acceptable solution triggers relating to use criteria are presented in Table 5.

Table 5 Acceptable solutions criteria for critical, hazardous and vulnerable use within a coastal inundation hazard band

Acceptable Solution Code	Use Criteria (no acceptable solutions)	Performance Code	Performance Solution to be Addressed	Justification	Modelling Requirement[4]
C11.5.4 A1.1	Located within a non-urban zone or a high coastal inundation hazard band, the use must be for a use which relies upon a coastal location to fulfil its purpose.	P1.1	Yes	Vulnerable use* within a non-urban zone	1% AEP in 2100
C11.5.4 A1.2	Coastal erosion reporting	P1.2	Yes	Vulnerable use*	1% AEP in 2100
C11.5.4 A2	Critical use within a coastal inundation hazard area.	P2	No	Not a critical use	1% AEP in 2100
C11.5.4 A3	Impact of coastal inundation on a hazardous use.	P3	No	Not a hazardous use	1% AEP in 2100
C11.5.4 A4	Vulnerable use within a coastal inundation hazard area.	P4	Yes	A vulnerable use*	1% AEP in 2100

* Childcare centre

[4] Where building and works are proposed on a critical, hazardous, or vulnerable use Site, the coastal inundation modelling is based on a 1% annual exceedance probability coastal inundation event in 2100.

C11.5.4 Performance Criteria

A risk assessment is prepared addressing these performance criteria (Attachment 7) based on costal inundation modelling for assessing tolerable risks.

C11.6 Development Standards for Buildings and Works

C11.6.1 Buildings and works, excluding coastal protection works, within a coastal inundation hazard area

C11.6.1 Objective

That:

(a) building and works, excluding coastal protection works, within a coastal inundation hazard area, can achieve and maintain a tolerable risk from coastal inundation; and

(b) buildings and works do not increase the risk from coastal inundation to adjacent land and public infrastructure.

C11.6.1 A1 Acceptable Solutions

As there are no acceptable solutions to C11.6.1 A1, and therefore the proposed development is to be assessed against performance criteria.

C11.6.1 P1 Performance Criteria

Modelling is conducted to ensure the use can achieve and maintain a tolerable risk from a 1% annual exceedance probability coastal inundation event in 2100 for the intended life of the use without requiring any specific hazard reduction or protection measures.

C11.6.1 P1.1 and C11.6.1 P1.1 performance criteria is addressed based on the hazard modelling and a risk assessment of performance criteria presented in Attachment 7.

C12.0 Flood-Prone Area Hazard Code

The site is located within the Clarence Council mapped 1% Annual Exceedance Probability (AEP) inland flooding hazard area (Map 7).

C12.2 Application of this Code

C12.2.5

The proposed development is exempt from C12.0 Flood-Prone Area Hazard Code planning on the basis that the code does not apply to land subject to the Coastal Inundation Hazard Code (C12.2.5).

Code Overlay Reporting Requirements

The following are to be addressed:

- Part 5 (Work in Hazardous Areas) of the Building Regulations 2016; Division 2 – Riverine Inundation
- Directors Determination – Riverine Inundation Hazard Areas

Building Regulations

Directors Determination - Riverine Inundation Hazard Areas

Although a coastal inundation hazard assessment report may not be required for planning purposes, according to the director's determination, a flood prone areas inundation hazard report must be prepared for building.

The directors determination does not specify any requirements for a risk assessment to be conducted for building and works proposed within a flood prone areas code. The determination, Tasmanian Building Act 2016 and Tasmanian Building Regulations 2016 stipulate finished floor levels for habitable rooms only which is not applicable in this case.

Attachment 4 Coastal Hydrodynamics

Stillwater Levels

Assessment Method

Stillwater levels influencing coastal processes within the Project Area are calculated from the combination of the following factors:

- **Storm Tide** - Present day astronomical tides combined with barometric low-pressure influence (coined storm tide). Storm tide inundation levels are adopted from 1% annual exceedance probability (AEP) modelling (McInnes O'Grady 2016).
- **Sea Levels** - are projected based on IPCC RCP8.5 scenarios which have been locally modelled for local government area (DPAC 2016) based on McInnes et. al. (2016). An allowance has been made for present sea level heights relative to Australian Height Datum (AHD). Projections are based on 2050 and 2100 scenarios which are all compiled from a 2010 baseline
- **Wind Setup** – are calculated based on procedures outlined in Kamphuis (2000) with 100-year ARI wind data adapted from AS1170 based on a 0.2 s wind gust of 41 m/s with 0.85 to 1.00 directional multipliers.

Findings

Project Area stillwater levels are presented in Table 6. The following is concluded:

- **1% AEP stillwater inundation level of 2.3 m AHD for 2100**

Table 6 Project Area 1% AEP Stillwater Levels

Parameter	Units	Scenario		
		2023	2050	2100
Sea Levels	m AHD	0.12	0.20	0.88
Local 1% AEP Storm Tide	m	1.37	1.37	1.37
Wind Setup	m	0.04	0.04	0.04
Total	m AHD	1.53	1.61	2.3

Wave Forecast Modelling

Assessment Method

Wave processes within the Project Area are used to calculate both coastal inundation levels (in addition to stillwater levels) and coastline recession rates based on the following:

- **Offshore Swell Waves** – 31 years of data from Wavewatch III models are applied to determine 1% AEP significant wave height and period for the relevant wave direction influencing the Project Area.
- **Localised 'Wind' Waves –** Are modelled for the Project Area based on methods outlined in the Coastal Engineering Manual (2002). TAFI (<40 m depth) and Geoscience Australia deep-water bathymetry contours (>40 m depth), and coastal LIDAR are used to develop an accurate 3D bathymetry model. Wind speeds were calculated using the methods of the Shore Protection Manual (CERC, 1984) are used in wave propagation model for primary wave direction as illustrated in the radial map (Attachment 1- Map 10.
- **Nearshore Waves** – A combination of SWAN and CEM (2002) attenuation models are adopted in determining nearshore wave heights.

Breaker Zone Modelling

Assessment Method

Wave processes within the breaker zone are used to calculate coastal inundation levels which are specific to the Project Area (Figure 1) based on the following:

- **Wave Setup** – Wave setup is the increase of water level within the surf zone during wave-breaking. It is calculated from significant wave height, period, water depth and bathymetry gradient at the breaking point.
- **Wave Runup -** is the maximum onshore elevation reached by waves, relative to the shoreline position in the absence of waves. In this case, the wave runup is calculated from:
    - Mase (1989) for smooth beach profiles (no wave runup attenuation applied)
    - Wave runup is calculated based on the 2074 coastal erosion profile where applicable

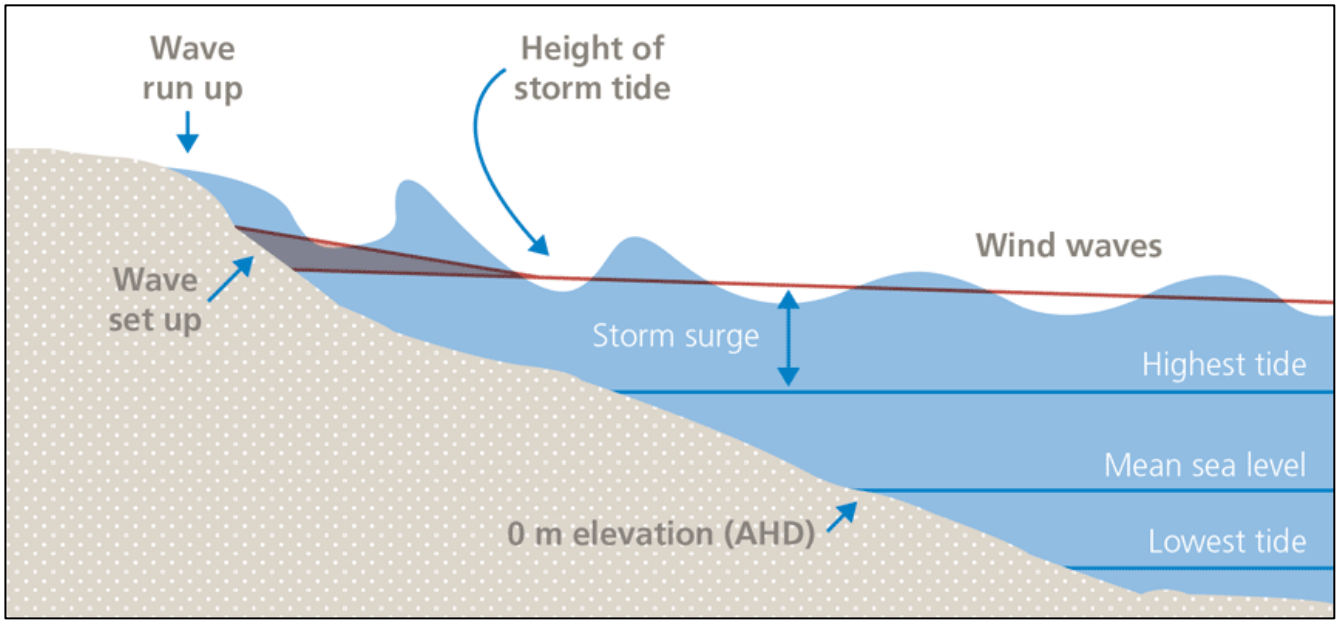


Figure 1 Schematic of coastal processes

Findings

Modelled wave runup and wave setup inundation levels are presented in Table 7 with the following findings:

- A coastal inundation level of 2.6 m AHD is calculated for 2100
- This level is approximately 200 mm less than the defined flood level stipulated in the local provisions schedule
- Finished ground levels within the building footprint are at 2.6 m AHD meaning that the deck is raised above the modelled inundation level.
- As the proposed deck is not considered habitable, there is no requirements for the finished floor levels
- Attenuation factors have not been applied and therefore risks are assessed based on wave runup extent outside of the building envelope.
- No further assessment is required to determine vulnerable use risk.

Table 7 Summary of inundation levels within the Project Area based on modelled criteria [5]

1% AEP Parameter	Units	2100
Storm Tide Levels	m AHD	2.29
Wave setup (south-westerly wind fetch)	m AHD	2.5
Wave runup (south-westerly wind)	m AHD	2.6
Wave runup distance from Site boundary	m	0

[5] These levels modelled by Envirotech are for Site risk assessment purposes only and are not defined flood levels for determining habitable room finished floor levels.

Attachment 5 Risk Assessment Qualitative Terminology

DESCRIPTOR	QUALITATIVE MEASURES OF LIKELIHOOD
ALMOST CERTAIN	The event is expected to occur over the design life
LIKELY	The event will probably occur under adverse conditions over the design life
POSSIBLE	The event could occur under adverse conditions over the design life
UNLIKELY	The event might occur under very adverse circumstances over the design life.
RARE	The event is conceivable but only under exceptional circumstances over the design life.
BARELY CREDIBLE	The event is inconceivable or fanciful over the design life.

DESCRIPTOR	QUALITATIVE MEASURES OF CONSEQUENCES TO PROPERTY
CATASTROPHIC	Structure(s) completely destroyed and/or large-scale damage requiring major engineering works for stabilisation. Could cause at least one adjacent property major consequence damage.
MAJOR	Extensive damage to most of structure, and/or extending beyond site boundaries requiring significant stabilisation works. Could cause at least one adjacent property medium consequence damage.
MEDIUM	Moderate damage to some of structure, and/or significant part of site requiring large stabilisation works. Could cause at least one adjacent property minor consequence damage.
MINOR	Limited damage to part of structure, and/or part of site requiring some reinstatement stabilisation works.
INSIGNIFICANT	Little damage. (Note for high probability event (Almost Certain), this category may be subdivided at a notional boundary of 0.1%. See Risk Matrix.)

LIKELIHOOD	CONSEQUENCES TO PROPERTY				
	CATASTROPHIC	MAJOR	MEDIUM	MINOR	INSIGNIFICANT
ALMOST CERTAIN	VH	VH	VH	H	L
LIKELY	VH	VH	H	M	L
POSSIBLE	VH	H	M	M	VL
UNLIKELY	H	M	L	L	VL
RARE	M	L	L	VL	VL
BARELY CREDIBLE	L	VL	VL	VL	VL

RISK LEVEL		EXAMPLE IMPLICATIONS
VH	VERY HIGH RISK	Unacceptable without treatment. Extensive detailed investigation and research, planning and implementation of treatment options essential to reduce risk to Low; may be too expensive and not practical. Work likely to cost more than value of the property.
H	HIGH RISK	Unacceptable without treatment. Detailed investigation, planning and implementation of treatment options required to reduce risk to Low.
M	MODERATE RISK	May be tolerated in certain circumstances (subject to regulator's approval) but requires investigation, planning and implementation of treatment options to reduce the risk to Low. Treatment options to reduce to Low risk should be implemented as soon as practicable.
L	LOW RISK	Usually acceptable to regulators. Where treatment has been required to reduce the risk to this level, ongoing management is required.
VL	VERY LOW RISK	Acceptable. Manage by management procedures.

Attachment 6 Performance Criteria – Natural Assets Code

Tasmanian Planning Scheme

C7.6.1 P2.1 - Buildings and works – refugia area

Performance Criteria C7.6.1 P2.1 **Buildings and works within a *future coastal refugia*[6] area must allow for natural coastal processes to continue to occur and avoid or minimise adverse impacts on natural assets, having regard to:**	**Relevance**	**Management Options**
(a) allowing for the landward transgression of sand dunes and the landward colonisation of wetlands, saltmarshes and other coastal habitats from adjacent areas;	The proposed development Site is on the fringe of the future coastal refugia area. The extent of landward colonisation based on the mapped future coastal refugia extent is no greater than the proposed building footprint alone.	NA
(b) avoiding the creation of barriers or drainage networks that would prevent future tidal inundation;	Based on the inundation modelling for 2100, the proposed structures will have negligible affect on tidal movement.	NA
(c) allowing the coastal processes of sand deposition or erosion to continue to occur;	No apparent natural sand accretion or erosion within the building footprint.	NA
(d) the need to group new facilities with existing facilities, where reasonably practical;	Not applicable	NA
(e) the impacts on native vegetation;	Not significant given the minor footing footprint for the structure.	NA
(f) minimising cut and fill;	No cut or fill which would affect future coastal refugia	NA
(g) building design that responds to the particular size, shape, contours or slope of the land;	Not applicable	NA
(h) the impacts of sea-level rise on natural coastal processes and coastal habitat;	See C7.6.1 P2.1 b) and c)	NA
(i) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and	Some recommendations herein.	Recommended that contractors and designers follow these guidelines.
(j) the guidelines in the Tasmanian Coastal Works Manual.	Some recommendations herein.	Recommended that contractors and designers follow these guidelines.

[6] means land where coastal processes are likely to occur naturally and can continue to occur, including the landward transgression of sand dunes, wetlands, saltmarshes, and other sensitive coastal habitats due to sea-level rise.

C7.6.1 P2.2 - Buildings and works – refugia area

Performance Criteria C7.6.1 P2.2 **Buildings and works within a *future coastal refugia*[6] area must be for a use that relies upon a coastal location to fulfil its purpose, having regard to:**	**Relevance**	**Management Options**
(a) the need to access a specific resource in a coastal location;	NA	
(b) the need to operate a marine farming shore facility;	NA	
(c) the need to access infrastructure available in a coastal location;	Infrastructure already exists and will continue to be accessed with negligible impact on future coastal refugia.	NA
(d) the need to service a marine or coastal related activity;	NA	
(e) provision of essential utility or marine infrastructure; or	NA	
(f) provisions of open space or for marine-related educational, research, or recreational facilities.	NA	

Attachment 7 Performance Criteria - Inundation Hazards

Tasmanian Planning Scheme – Coastal Inundation – Use Standards

C11.5.4 Critical use, hazardous use or vulnerable use

Objective:

That critical, hazardous and vulnerable uses located within a coastal inundation hazard area can achieve and maintain a tolerable risk from coastal inundation.

C11.5.4 P1.1

Performance Criteria C11.5.4 P1.1 If located within a non-urban zone or a high coastal inundation hazard band, the use must be for a use which relies upon a coastal location to fulfil its purpose, having regard to:	**Relevance**	**Management Options**
(a) the need to access a specific resource in a coastal location;	NA	
(b) the need to access infrastructure available in a coastal location;	Infrastructure already exists and will continue to be accessed with negligible impact on coastal inundation processes.	NA
(c) the need to operate a marine farming shore facility;	NA	
(d) the need to service a marine or coastal related activity;	NA	
(e) provision of an essential utility or marine infrastructure; and	NA	
(f) provision of open space or for marine-related educational, research, or recreational facilities;	NA	
(g) the advice contained in a coastal inundation hazard report.	NA	

C11.5.4 P1.2

Performance Criteria C11.5.4 P1.2 A coastal inundation hazard report also demonstrates that:	**Relevance**	**Management Options**
(a) an increase in the level of risk from a coastal inundation does not require any specific hazard reduction or protection measures; or	No increase in risk from coastal inundation	NA
(b) the use can achieve and maintain a tolerable risk from a 1% annual exceedance probability coastal inundation event in 2100 for the intended life of the use without requiring any specific hazard reduction or protection measures.	Modelling has demonstrated that a tolerable risk from a 1% annual exceedance probability coastal inundation event in 2100 for the intended life of the use without requiring any specific hazard reduction or protection measures	NA

C11.5.4 P4

Performance Criteria C11.5.4 P4 In addition to the requirements in clause C11.5.4 P1.2, a vulnerable use in a coastal inundation hazard area must be protected from coastal inundation in a 1% annual exceedance probability coastal inundation event in 2100, having regard to:	**Relevance**	**Management Options**
(a) any protection measures, existing or proposed;	No specific hazard reduction or protection measures are recommended.	
(b) the ability and capability of people in a coastal inundation event who may live, work or visit the site, to:	Coastal inundation event in 2100 is considered RARE with INSIGNIFICANT consequences to the development Site resulting in a VERY LOW risk.	No management required for people who may who may live, work or visit the site.
(i) protect themselves;		
(ii) evacuate in an emergency; and		
(iii) understand and respond to instructions in the event of an emergency;		
(c) any emergency evacuation plan;	See C11.5.4 P4 (b)	No emergency evacuation plan required
(d) the level of risk for emergency personnel involved in evacuation and rescue tasks;	See C11.5.4 P4 (b)	No increased risk to emergency personnel
(e) the advice contained in a coastal inundation hazard report; and		
(f) any advice from a State authority, regulated entity or a council.		

Tasmanian Planning Scheme – Coastal Inundation – Building and Works

C11.6.1 Buildings and works, excluding coastal protection works, within a coastal inundation hazard area

Objective:
To ensure that
(a) building and works, excluding coastal protection works, within a coastal inundation hazard area, can achieve and maintain a tolerable risk from coastal inundation; and
(b) buildings and works do not increase the risk from coastal inundation to adjacent land and public infrastructure.

C11.6.1 P1.1

Performance Criteria C11.6.1 P1.1 Buildings and works, excluding coastal protection work, within a coastal inundation hazard area must have a tolerable risk, having regard to:	**Relevance**	**Management Options**
(a) whether any increase in the level of risk from coastal inundation requires any specific hazard reduction or protection measures;	Risks are tolerable	No specific hazard reduction or protection measures required.
(b) any advice from a State authority, regulated entity or a council; and		
(c) the advice contained in a coastal inundation hazard report.		

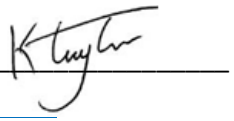
C11.6.1 P1.2

Performance Criteria C11.6.1 P1.2 A coastal inundation hazard report also demonstrates that the building or works:	**Relevance**	**Management Options**
(a) do not cause or contribute to coastal inundation on the site, on adjacent land or public infrastructure; and	The proposed development will not cause or contribute to coastal inundation on the site, on adjacent land or public infrastructure Inundation given a 1% annual exceedance probability coastal inundation event in 2100	
(b) can achieve and maintain a tolerable risk* from a 1% annual exceedance probability coastal inundation event in 2100 for the intended life of the use without requiring any	Risks are tolerable considering a 1% annual exceedance probability coastal inundation event in 2100 for the intended life of the use	No specific coastal inundation protection works.

***Tolerable risk** means the lowest level of likely risk from coastal inundation from a defined flood event to secure the benefits of a use or development in a coastal inundation hazard area, and which can be managed through routine regulatory measures or by specific hazard management measures for the intended life of each use or development.

Attachment 8 Director's Determination Declaration – Coastal Inundation

Coastal Inundation Hazard Reporting	Application
whether the development is likely to cause or contribute to coastal inundation on the Site or on adjacent land.	There is a low likelihood that the proposed building and works will contribute to coastal inundation on the site or adjacent land.
whether the proposed work can achieve and maintain a *tolerable risk*[7] for the intended life of the building having regard to:	**Application/Management**
nature, intensity and duration of the use	Risk modelling is based on fully occupied dwelling use. Risks are considered tolerable considering the nature, intensity and duration of the use based on 2074 and 2100 storm tide inundation levels within a 50-year building design life (1% AEP modelling).
type, form and duration of the development	Based on the recommendations presented herein, risks are considered tolerable considering the type, form, and duration of the development
change in risk across the intended life of the building	This risk assessment is based on storm tide modelling given 2074 and 2100 sea level for the Project Area. Based on the recommendations presented herein, tolerable risk can be maintained throughout the duration of the building design life until 2100
adaptation to any potential changes in risk	Given forecasting and graduated sea level rise processes, there is ample opportunity to adapt to changing risk
ability to maintain access to utilities and services	It is probable that services can be maintained throughout the life of the proposed development with occasional disruption caused by floodwater events.
the need for specific coastal inundation hazard reduction or protection measures on the Site;	With the proposed building design there is no need for specific coastal inundation hazard reduction or protection measures are recommended for the Site
the need for coastal inundation hazard reduction or protection measures beyond the boundary of the Site; and	With the proposed building design there is no need for coastal inundation hazard reduction or protection measures beyond the boundary of the Site
any coastal inundation management plan in place for the Site and/or adjacent land.	No coastal inundation management plan is in place for the Site or the adjacent land.
hazardous chemical used, handled, generated, or stored on the Site,	General household chemicals being stored are typically in low volumes and in sealed containers.
Details of the person who prepared or verified this report:	This coastal inundation hazard report has been prepared in accordance with a methodology specified in the Director's Determination - Coastal Inundation Hazard Area by a suitably qualified practitioner with relevant qualifications, experience and competence in the preparation of coastal inundation hazard reports.
Qualifications	Bachelor of Science with first class honours in geology
Expertise	Kris Taylor has over 10 years of experience in coastal inundation modelling with several reports externally reviewed by parties including the University of New South Wales Water Research Lab. Reports written include Crown Land pilot studies several reports for councils, and over 200 costal inundation assessments for planning and building
Level of current indemnity insurance	Current indemnity insurance of $2,000,000 ($4,000,000) Underwriters at Lloyd's covers **coastal geomorphology, natural hazard, hydrology and environmental coastal inundation hazard assessments.**

Kris Taylor Signed 

[7] Tolerable risk means the lowest level of likely risk from coastal inundation to secure the benefits of a use or development in a coastal inundation hazard area, and which can be managed through routine regulatory measures or by specific hazard management measures for the intended life of each use or development.

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Southern Support School Department for *Owner /Agent*

223 Clarence Street *Address*

Howrah 7018 *Suburb/postcode*

Qualified person details:

Qualified person: Kris Taylor

Address: 162 Macquarie Street Phone No: 036224 9197

Hobart 7000 Fax No:

Licence No: NA Email address: office@envirotechtas.com.au

Qualifications and Insurance details: Bachelor of Science with Honours in Geology with PI Insurance to $2,000,000 including hydrology and environmental coastal inundation hazard assessments

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

Speciality area of expertise: Engineering Geology

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

Details of work: Coastal Inundation Assessment

Address: 33 Salacia Avenue Lot No: 1

Howrah 7018 Certificate of title No: 153166/1

The assessable item related to this certificate: Coastal inundation hazard assessment prepared by a practitioner with experience and competence in the preparation of coastal inundation hazard reports

(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: Geological

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

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

- (•) building work, plumbing work or plumbing installation or demolition work

OR

- ( ) a building, temporary structure or plumbing installation

In issuing this certificate the following matters are relevant –

Documents:	Enviro-Tech Consultants Pty. Ltd. 2024. Coastal Inundation and Natural Values Assessment Report for a Proposed New roof cover, 33 Salacia Avenue - Howrah. Unpublished report for Southern Support School Department for Education, Children and Young People by Enviro-Tech Consultants Pty. Ltd., 30 July 2024.
Relevant calculations:	
References:	- Director's Determination - Coastal Inundation Hazard Areas - Tasmanian Planning Scheme - State Planning Provisions 2023 - Part 5 (Work in Hazardous Areas) of the Building Regulations 2016; Division 5 – Coastal Inundation

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

- An assessment of building or demolition work in coastal inundation hazard areas in accordance with the Directors Determination
- To ensure that use or development subject to risk from coastal inundation is appropriately located and managed (TPS)

Scope and/or Limitations

Where exempt from planning, includes an assessment of tolerable risks based on a defined flood event based on the level above 0 meters Australian Height Datum with a one per cent probability of being exceeded in a storm surge flooding event in the year 2100 without requiring any specific coastal inundation protection measures.
Where not exempt from planning, includes an assessment of tolerable risk from a 1% annual exceedance probability coastal inundation event in 2100 for the intended life of the building without requiring any specific coastal inundation protection measures.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:			0/01/1900