32-34 Georges Bay Esplanade
St Helens Tasmania 7216
T: 03 6376 7900 | ABN 96 017 131 248

Break O'Day COUNCIL

Development Applications

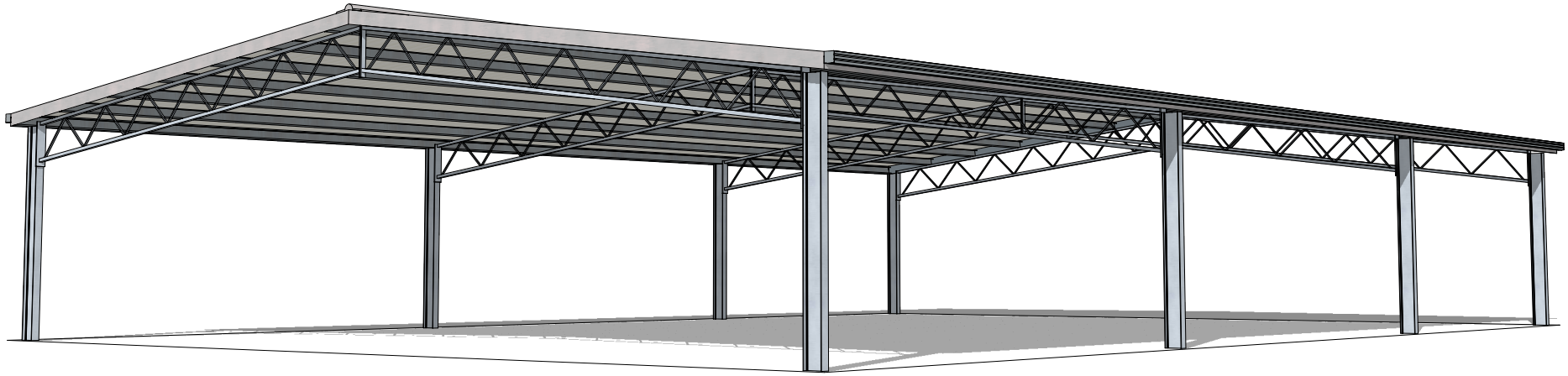
Notice is hereby given under Section 57(3) of the *Land Use Planning & Approvals Act 1993* that an application has been made to the Break O' Day Council for a permit for the use or development of land as follows:

DA Number	DA 2025 / 00037
Applicant	Bison Constructions
Proposal	Resource Development - Extension to Existing Processing Shed
Location	25 Aquaculture Drive, St Helens

Plans and documents can be inspected at the Council Office by appointment, 32 – 34 Georges Bay Esplanade, St Helens during normal office hours or online at www.bodc.tas.gov.au.

Representations must be submitted in writing to the General Manager, Break O'Day Council, 32 -34 Georges Bay Esplanade, St Helens 7216 or emailed to admin@bodc.tas.gov.au, and referenced with the Application Number in accordance with section 57(5) of the abovementioned Act during the fourteen (14) day advertised period commencing on Saturday 14th June, 2025 **until 5pm Friday 27th June, 2025.**

John Brown
GENERAL MANAGER



1. 3D Elevation - Front

DO NOT USE FOR CONSTRUCTION

0 1 2

15m W x 22.2m L x 3.2m H - Industrial Building Extension

BISON CONSTRUCTIONS

CLIENT:
Dan Roden
Tasmanian Clean Water Oysters

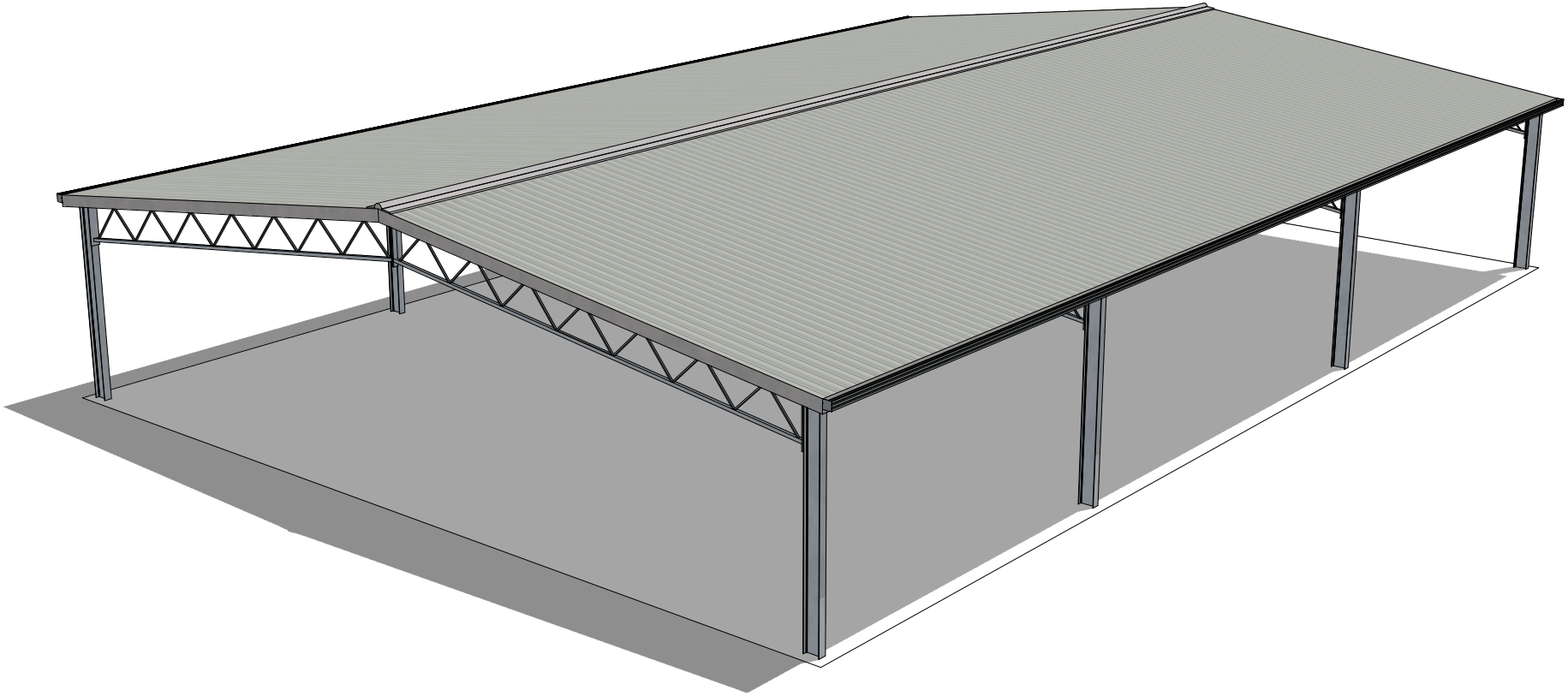
PROJECT ADDRESS:
25 Aquaculture Drive,
St Helens, Tas, 7216

PROJECT NAME:
6196 - RURAL BUILDING

DRAFTER	ISSUED	REVISION	SHEET
BMH	0403	1.0	A3

A01

MAIN OFFICE: 34835 Tasman Highway, Scottsdale, Tas 7260



2. 3D Elevation - Back

DO NOT USE FOR CONSTRUCTION

0 1 2

15m W x 22.2m L x 3.2m H - Industrial Building Extension

BISON CONSTRUCTIONS

CLIENT:
Dan Roden
Tasmanian Clean Water Oysters

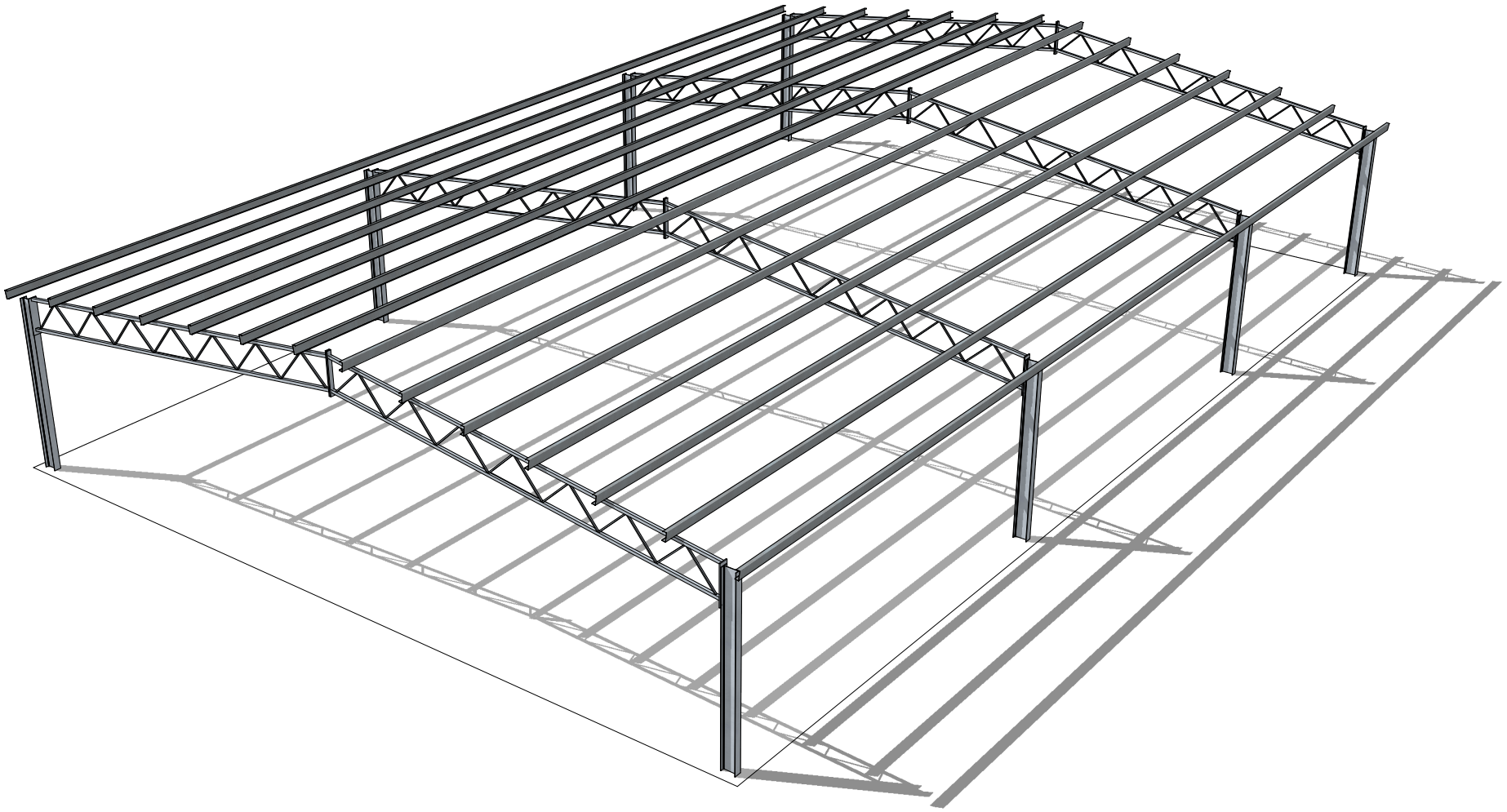
PROJECT ADDRESS:
25 Aquaculture Drive,
St Helens, Tas, 7216

PROJECT NAME:
6196 - RURAL BUILDING

DRAFTER	ISSUED	REVISION	SHEET
BMH	0403	1.0	A3

A02

MAIN OFFICE: 34835 Tasman Highway, Scottsdale, Tas 7260



3. Steel Detail

DO NOT USE FOR CONSTRUCTION

0 1 2

15m W x 22.2m L x 3.2m H - Industrial Building Extension

BISON CONSTRUCTIONS

CLIENT:
Dan Roden
Tasmanian Clean Water Oysters

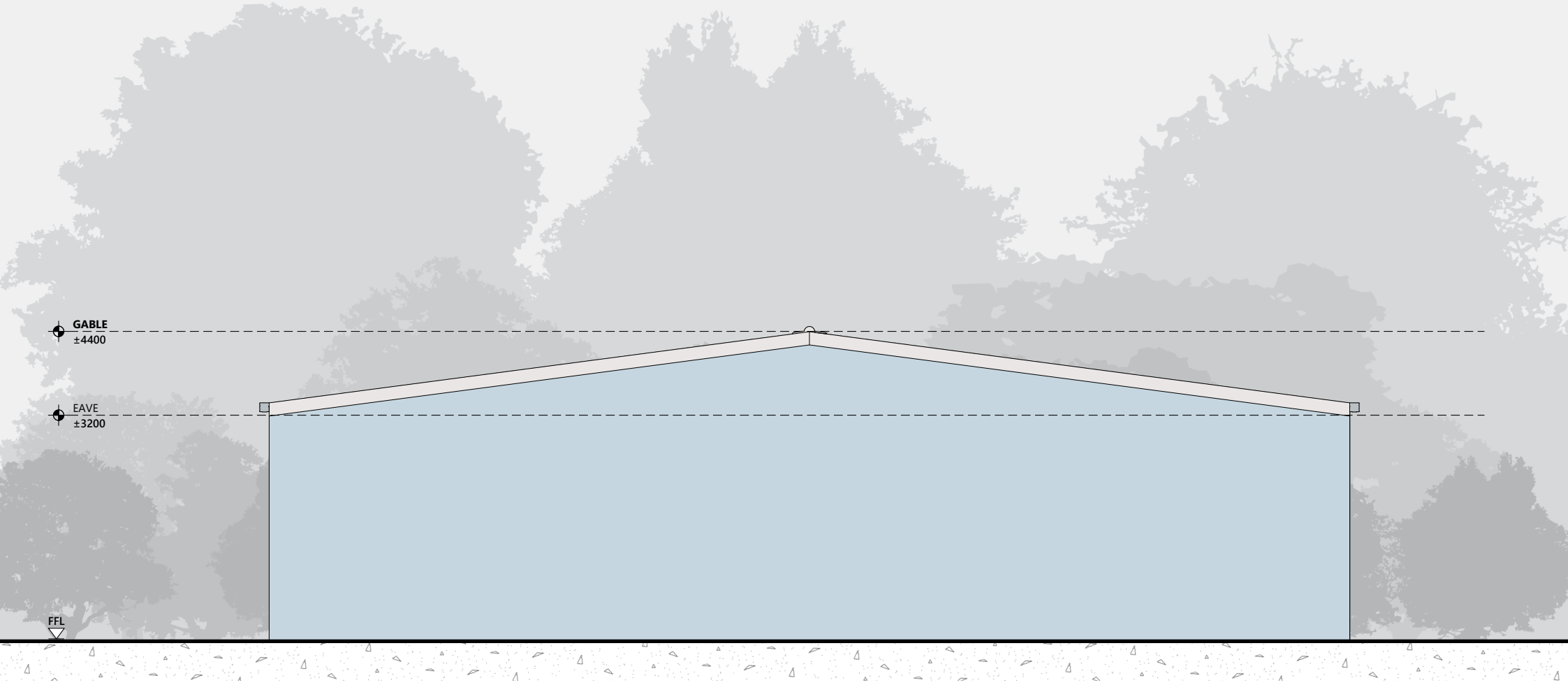
PROJECT ADDRESS:
25 Aquaculture Drive,
St Helens, Tas, 7216

PROJECT NAME:
6196 - RURAL BUILDING

DRAFTER	ISSUED	REVISION	SHEET
BMH	0403	1.0	A3

A03

MAIN OFFICE: 34835 Tasman Highway, Scottsdale, Tas 7260



4. Front Elevation

SCALE 1:150 **DO NOT USE FOR CONSTRUCTION**

0 1 2

15m W x 22.2m L x 3.2m H - Industrial Building Extension

BISON CONSTRUCTIONS

CLIENT:
Dan Roden
Tasmanian Clean Water Oysters

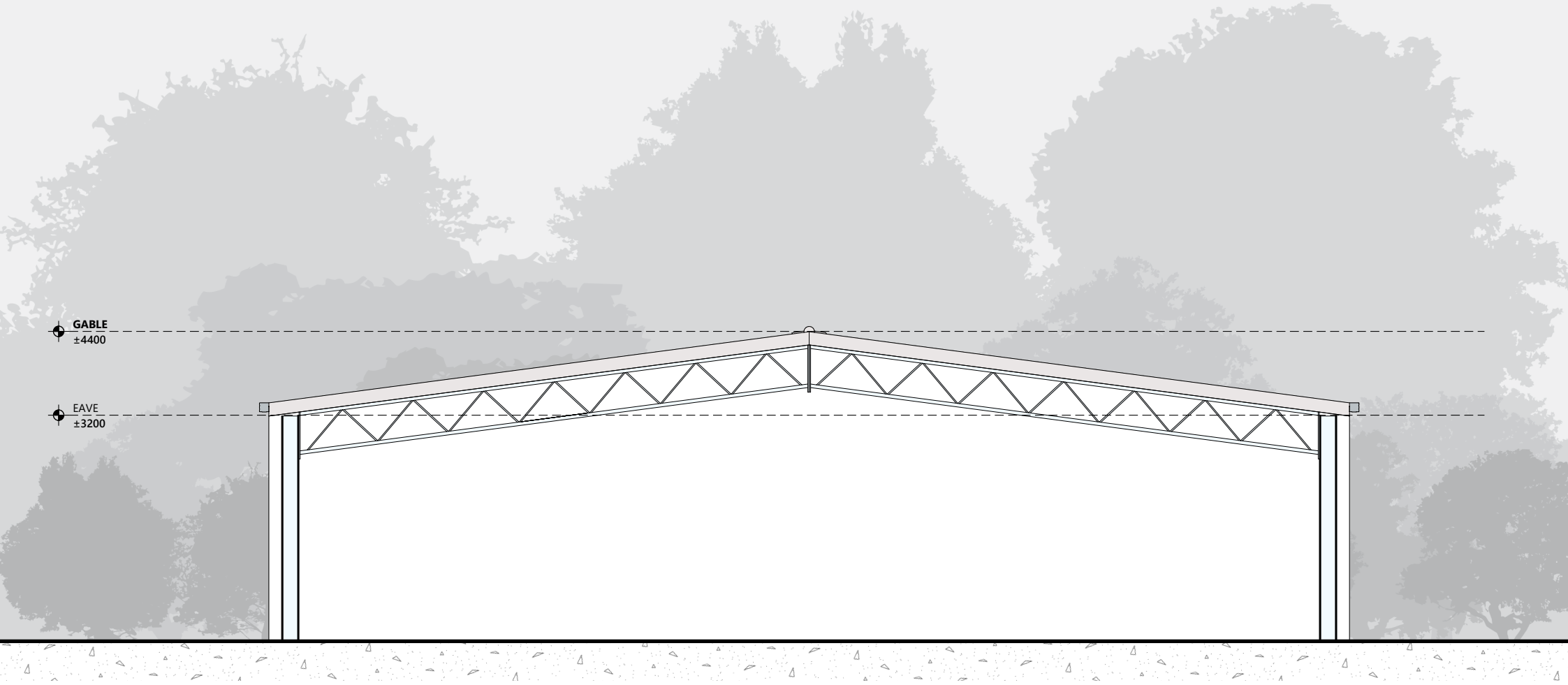
PROJECT ADDRESS:
25 Aquaculture Drive,
St Helens, Tas, 7216

PROJECT NAME:
6196 - RURAL BUILDING

DRAFTER	ISSUED	REVISION	SHEET
BMH	0403	1.0	A3

A04

MAIN OFFICE: 34835 Tasman Highway, Scottsdale, Tas 7260



5. Back Elevation

SCALE 1:150 **DO NOT USE FOR CONSTRUCTION**

0 1 2

15m W x 22.2m L x 3.2m H - Industrial Building Extension

BISON CONSTRUCTIONS

CLIENT:
Dan Roden
Tasmanian Clean Water Oysters

PROJECT ADDRESS:
25 Aquaculture Drive,
St Helens, Tas, 7216

PROJECT NAME:
6196 - RURAL BUILDING

DRAFTER	ISSUED	REVISION	SHEET
BMH	0403	1.0	A3

A05

MAIN OFFICE: 34835 Tasman Highway, Scottsdale, Tas 7260

6. Left Elevation

SCALE 1:150 **DO NOT USE FOR CONSTRUCTION**

0 1 2

15m W x 22.2m L x 3.2m H - Industrial Building Extension

BISON CONSTRUCTIONS

CLIENT:
Dan Roden
Tasmanian Clean Water Oysters

PROJECT ADDRESS:
25 Aquaculture Drive,
St Helens, Tas, 7216

PROJECT NAME:
6196 - RURAL BUILDING

DRAFTER	ISSUED	REVISION	SHEET
BMH	0403	1.0	A3

A06

MAIN OFFICE: 34835 Tasman Highway, Scottsdale, Tas 7260

7. Right Elevation

SCALE 1:150 **DO NOT USE FOR CONSTRUCTION**

0 1 2

15m W x 22.2m L x 3.2m H - Industrial Building Extension

BISON CONSTRUCTIONS

CLIENT:
Dan Roden
Tasmanian Clean Water Oysters

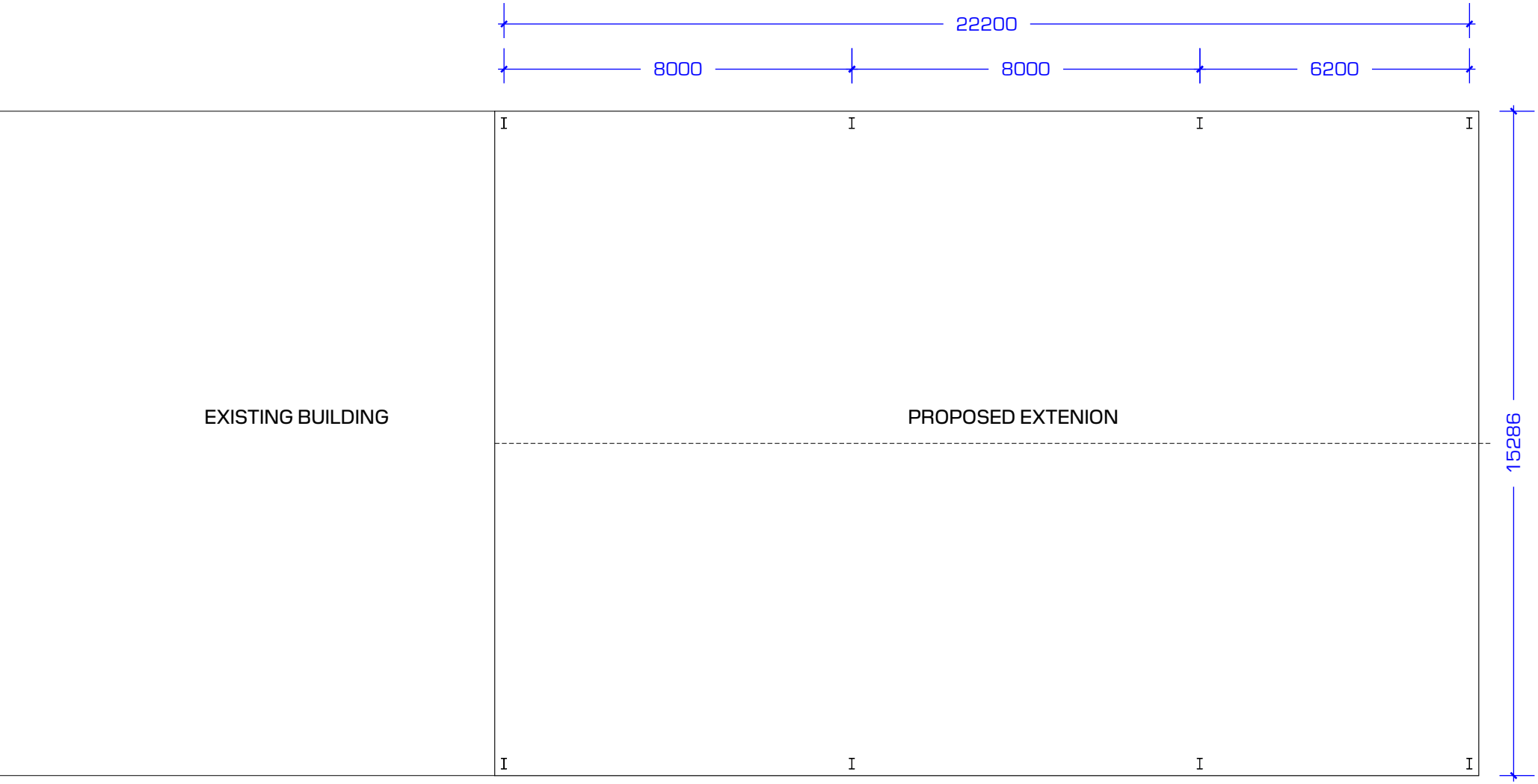
PROJECT ADDRESS:
25 Aquaculture Drive,
St Helens, Tas, 7216

PROJECT NAME:
6196 - RURAL BUILDING

DRAFTER	ISSUED	REVISION	SHEET
BMH	0403	1.0	A3

A07

MAIN OFFICE: 34835 Tasman Highway, Scottsdale, Tas 7260



8. 2D Floor Plan

SCALE 1:150 **DO NOT USE FOR CONSTRUCTION**

0 1 2

15m W x 22.2m L x 3.2m H - Industrial Building Extension

BISON CONSTRUCTIONS

CLIENT:
Dan Roden
Tasmanian Clean Water Oysters

PROJECT ADDRESS:
25 Aquaculture Drive,
St Helens, Tas, 7216

PROJECT NAME:
6196 - RURAL BUILDING

DRAFTER	ISSUED	REVISION	SHEET
BMH	0403	1.0	A3

A08

MAIN OFFICE: 34835 Tasman Highway, Scottsdale, Tas 7260

Dan Roden - Tasmanian Clean Water Oysters
25 Aquaculture Drive, St Helens, Tas, 7216
PID: 2125923 | VID: 136550/6

9. Site Map

SCALE 1:150 **DO NOT USE FOR CONSTRUCTION**

0 1 2

15m W x 22.2m L x 3.2m H - Industrial Building Extension

BISON CONSTRUCTIONS

CLIENT:
Dan Roden
Tasmanian Clean Water Oysters

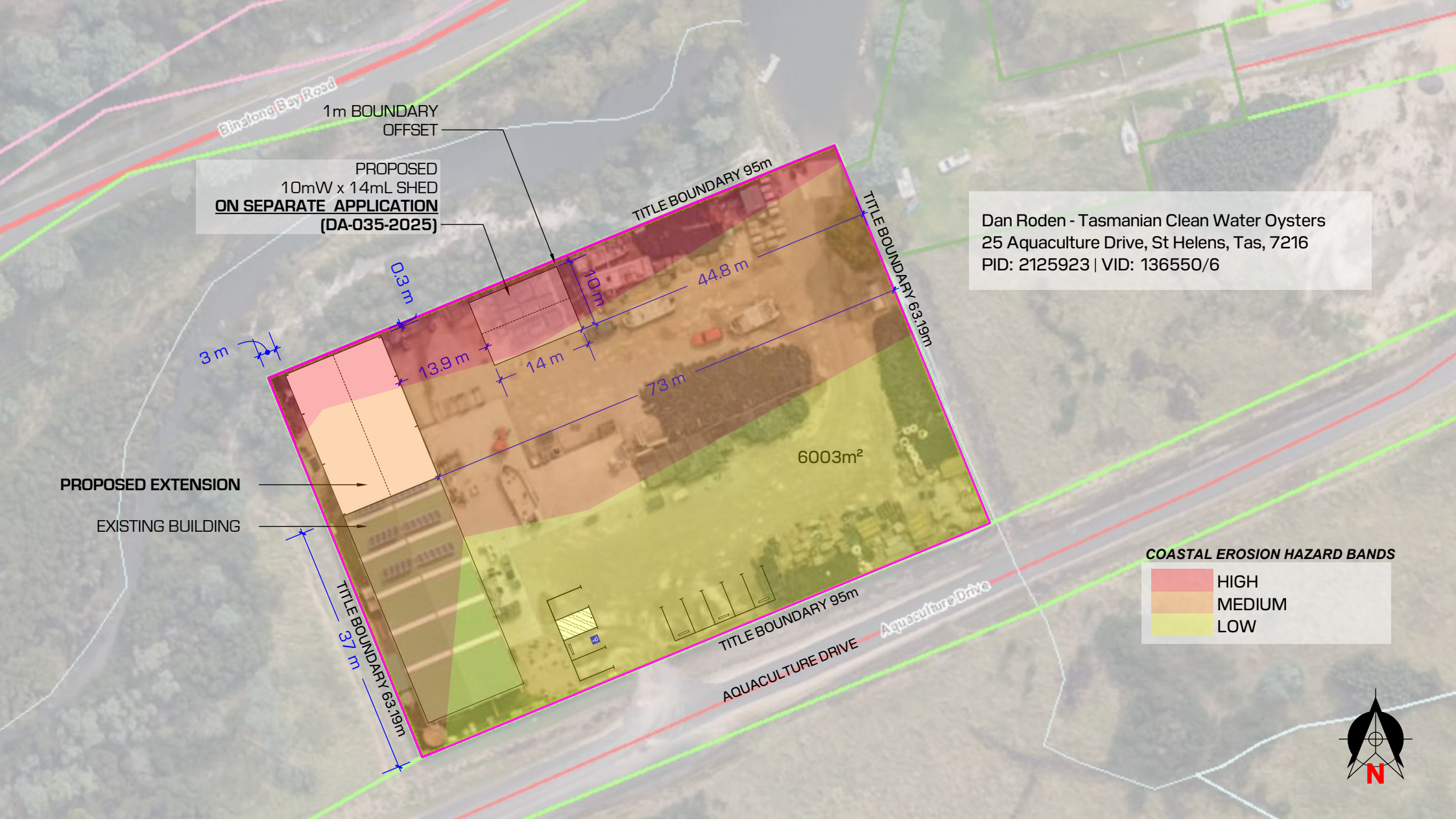
PROJECT ADDRESS:
25 Aquaculture Drive,
St Helens, Tas, 7216

PROJECT NAME:
6196 - RURAL BUILDING

DRAFTER	ISSUED	REVISION	SHEET
BMH	0403	1.0	A3

A09

MAIN OFFICE: 34835 Tasman Highway, Scottsdale, Tas 7260



9. Site Map

SCALE 1:150 **DO NOT USE FOR CONSTRUCTION**

0 1 2

15m W x 22.2m L x 3.2m H - Industrial Building Extension

BISON CONSTRUCTIONS

CLIENT:
Dan Roden
Tasmanian Clean Water Oysters

PROJECT ADDRESS:
25 Aquaculture Drive,
St Helens, Tas, 7216

PROJECT NAME:
6196 - RURAL BUILDING

DRAFTER	ISSUED	REVISION	SHEET
BMH	0529	1.0	A3

A09

MAIN OFFICE: 34835 Tasman Highway, Scottsdale, Tas 7260

Report to Support a Planning Application (Response to RFI)

25 Aquaculture Drive, St Helens

For

Tasmanian Clean Water Oysters

April 2025

Purpose of this Report

The purpose of this report is to support an application for a planning permit for an open sided shed.

Subject Site

The site is 25 Aquaculture Drive, St Helens and is graphically shown below:

Source – TheList

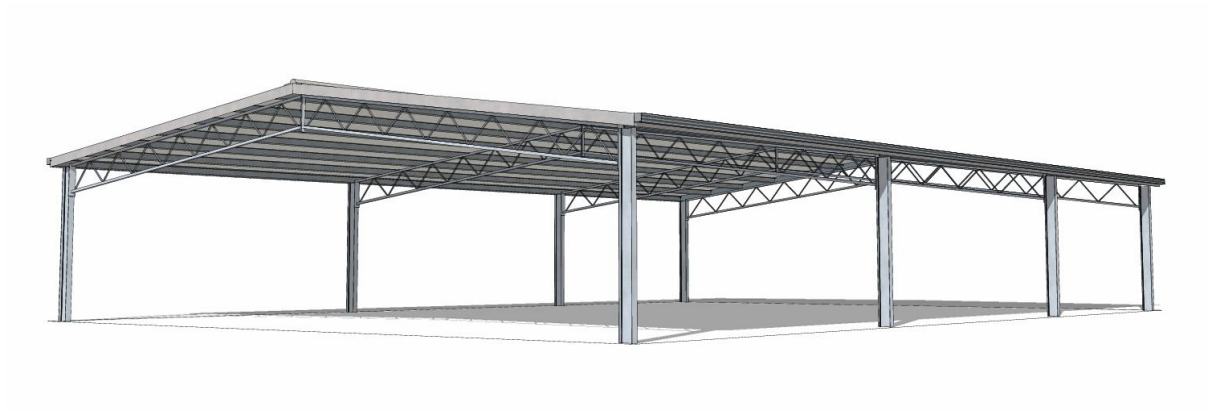
Source - TheList

Property Address	25 AQUACULTURE DR ST HELENS TAS 7216
Property ID	2125923
Title Reference	136550/6

The site is currently highly developed as an industrial site processing shellfish farmed in beds in Georges Bay.

Proposal (inc Operational matters)

It is proposed to erect an extension to an existing shed. The extension will be 15x22.2x3.2m and will be open on all sides.



The working hours are 6.00am to 6.00pm Monday to Saturday. On Sunday there is no processing/packing – there is some occasional cleaning and maintenance on these days. There is no changed to working hours.

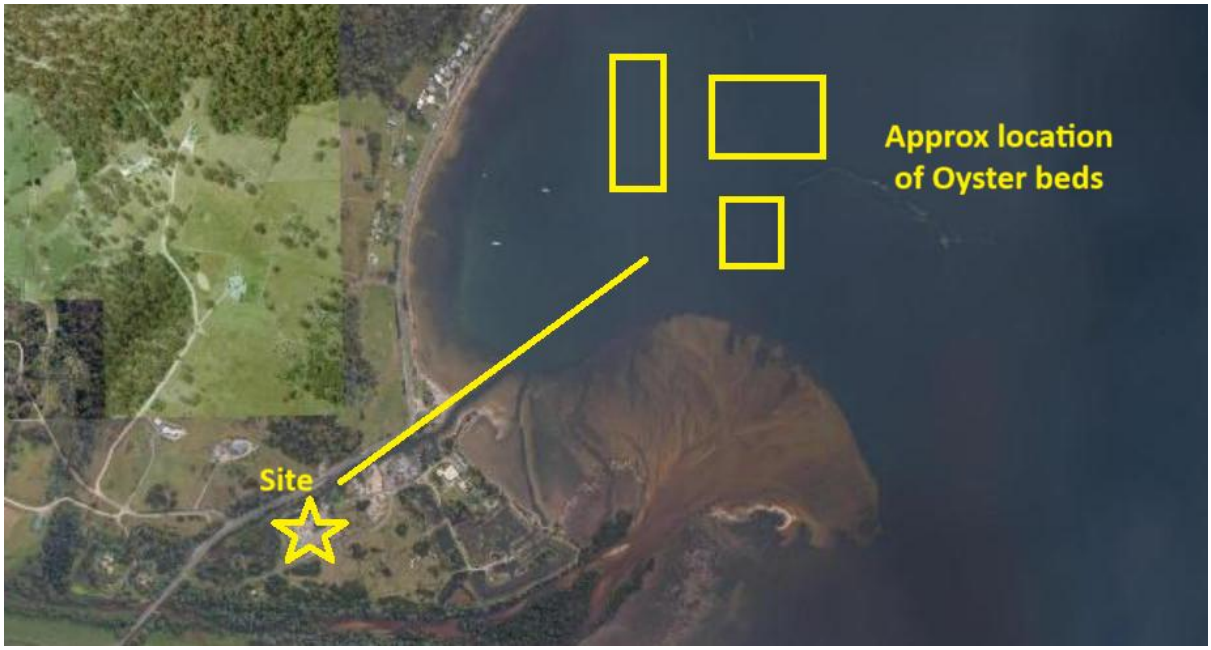
The use employs a total of 8 persons. The new shed will not add to the number of persons employed on site.

Private vehicle movements per day represent 10-15 movements (a movement is in and out of the site). Product leaves the site via small refrigerated trucks or vans – one truck in and out every day.

Location relates to function. In this case, location is of prime importance to ensuring the final product is of the highest standard. How does the site work?

Oysters are grown in beds located in Georges Bay. Raft type craft are launched form the site in the early morning and mid evening. They harvest the oysters form the beds and then make their way back to the site via the waterway to the north of the site.

This part of the process is shown below:



Source – theList

Once the rafts are back in the waterway trailers are pushed into the water and the rafts float on to the trailers where they then retrieved using an existing boat ramp.

Source – theList

To meet customer expectations it is critical that oyster processing plants are as close to the point of harvesting as possible. With this current set up Georges Bay oysters have a reputation of high quality products.

To keep relevant, continual process improvement has to be part of any businesses strategic plan. To this end the operators have invested heavily in a new machine which will assist in the process of recovering the rafts and moving product to the processing shed.

This new machine needs to be protected from the elements – hence the need for this new shed.

The shed extension will be erected on an existing concrete slab which was designed for a possible extension to the processing shed.

THERE IS ALSO AN APPLICATION LODGED FOR A SHED ON SITE – NOTE THIS IS **NOT** PART OF THIS APPLICATION AND IS MANGED BY OTHERS.

Planning Scheme

As the site is located in the Break O'Day municipal area the relevant planning scheme is the State Planning Provisions alongside the Brek O'Day Local Provisions.

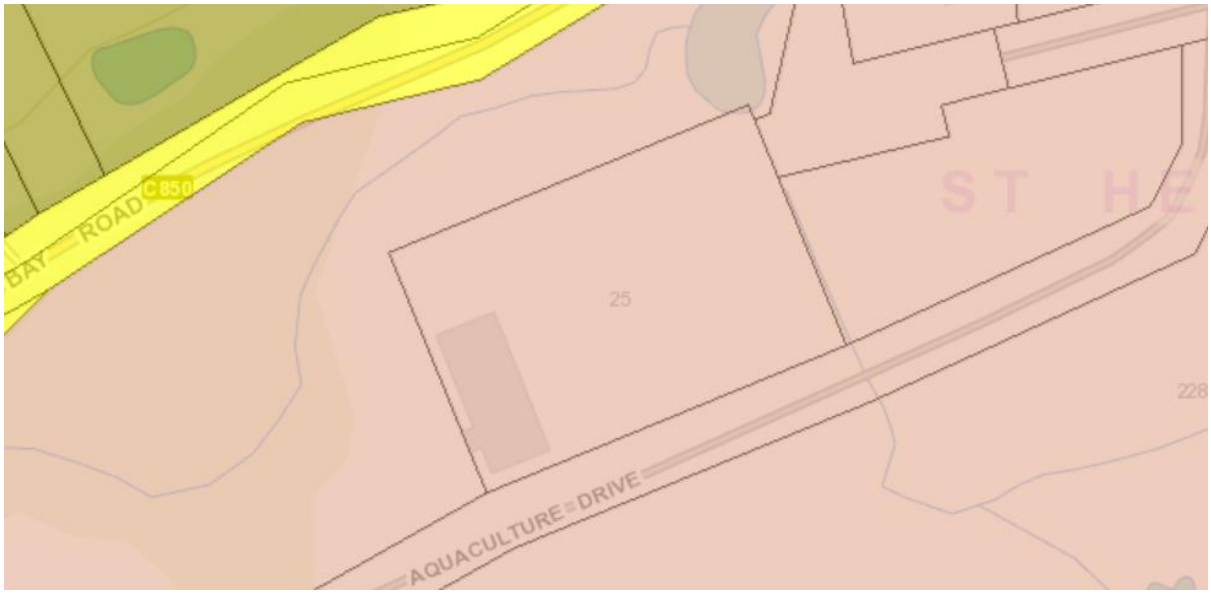
Definitions

Within the Planning Scheme are a series of definitions into with use and development must fit (or at least be the best fit). In this instance the relevant definition is Resource Processing.

Resource Processing *use of land for treating, processing or packing plant or animal resources. Examples include an abattoir, animal saleyard, cheese factory, fish processing, milk processing, winery, brewery, cidery, distillery, and sawmilling.*

Zoning

Under the Planning Scheme the site is zoned for Rural Use (pink in plan below).



Source : TheList

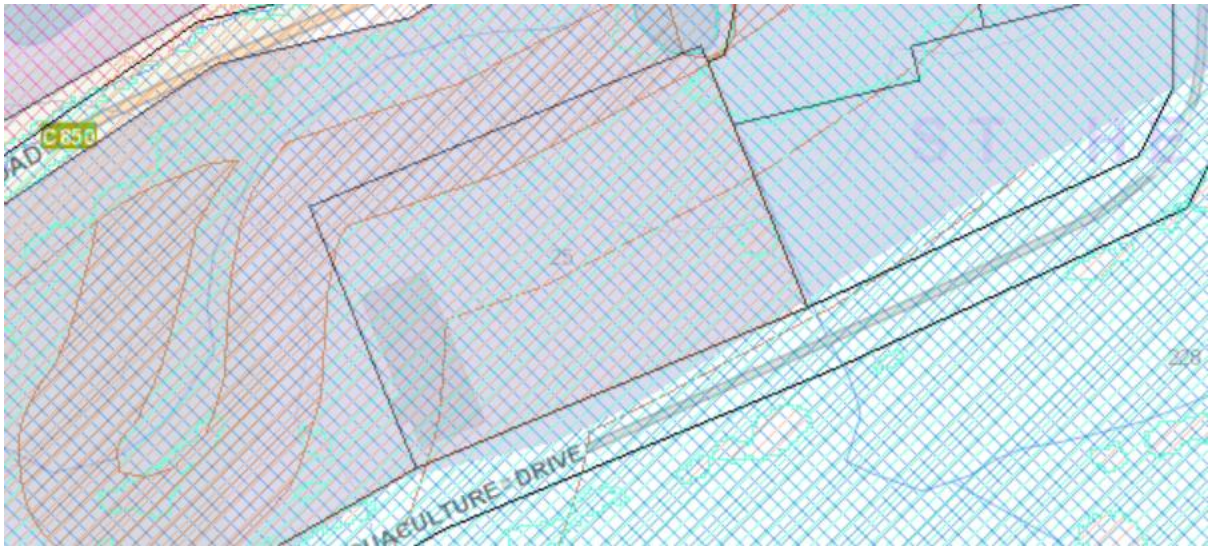
Overlays

Within the Planning Scheme are a series of Overlays. There are up to 8 Overlays covering all or parts of this site.

These are:

- Safeguarding of Airports Code
- Scenic Protection Code

- Coastal Erosion Hazard Code
- Flood-prone Hazard Areas Code
- Natural Assets Code
- Coastal Inundation Hazard Code
- Bushfire-prone Areas Code



Source: TheList

Use within the Zone

Within the zone Resource Processing is a Permitted Use

Use Standards

As a Permitted Use the Use Standards do not apply in this instance.

Development Standards

The Development Standards listed in the zone need to be considered.

20.4.1 Building height

Objective - To provide for a building height that: (a) is necessary for the operation of the use; and (b) minimises adverse impacts on adjoining properties.	
Acceptable Solution	**Performance Criteria**
A1 Building height must be not more than 12m.	P1 Building height must be necessary for the operation of the use and not cause an unreasonable impact on adjoining properties, having regard to: (a) the proposed height of the building; (b) the bulk and form of the building; (c) the separation from existing uses on adjoining properties; and (d) any buffers created by natural or other features.
COMMENT – At 3.2m in height the proposal complies with A1	

20.4.2 Setbacks

Objective - That the siting of buildings minimises potential conflict with use on adjoining sites.	
Acceptable Solution	**Performance Criteria**
A1 Buildings must have a setback from all boundaries of: (a) not less than 5m; or (b) if the setback of an existing building is within 5m, not less than the existing building.	P1 Buildings must be sited to provide adequate vehicle access and not cause an unreasonable impact on existing use on adjoining properties, having regard to: (a) the bulk and form of the building; (b) the nature of existing use on the adjoining properties; (c) separation from existing use on the adjoining properties; and (d) any buffers created by natural or other features.
COMMENT – Complies with A1 – the setback to the west is 3m which aligns with the current shed being extended. The northern setback is 0.3m which aligns with existing buildings to the east of the site on the northern boundary.	
A2 Buildings for a sensitive use must be separated from an Agriculture Zone a distance of: (a) not less than 200m; or (b) if an existing building for a sensitive use on the site is within 200m of that boundary, not less than the existing building.	P2 Buildings for a sensitive use must be sited so as not to conflict or interfere with an agricultural use within the Agriculture Zone, having regard to: (a) the size, shape and topography of the site; (b) the prevailing setbacks of any existing buildings for sensitive uses on adjoining properties; (c) the location of existing buildings on the site; (d) the existing and potential use of adjoining properties; (e) any proposed attenuation measures; and (f) any buffers created by natural or other features.
COMMENT – Not relevant in this instance	

20.4.3 Access for new dwellings – NOT RELEVANT IN THIS INSTANCE

Codes

Within the Planning Scheme are a series of Codes which need to be considered. Only those deemed relevant will be addressed.

Parking and Sustainable Transport Code

The purpose of the Parking and Sustainable Transport Code is:

C2.1.1 To ensure that an appropriate level of parking facilities is provided to service use and development.

C2.1.2 To ensure that cycling, walking and public transport are encouraged as a means of transport in urban areas.

C2.1.3 To ensure that access for pedestrians, vehicles and cyclists is safe and adequate.

C2.1.4 To ensure that parking does not cause an unreasonable loss of amenity to the surrounding area.

C2.1.5 To ensure that parking spaces and accesses meet appropriate standards.

C2.1.6 To provide for parking precincts and pedestrian priority streets.

The Parking requirement for Resource Processing is 2 spaces per 3 employees and 1 bicycle space per 5 employees.

Eight parking spaces are shown on the site plan – one being a disabled space. These are replacements for the approved parking spaces which were located within the footprint of the open structure. There is no intention to provide bicycle parking spaces. Should an employee ever wish to cycle they can park their bike safely inside the buildings on site.

Source – Bison Sheds

Safeguarding of Airports Code

At 3.2m in height – the same as the existing building the proposed development will have no greater or lesser impact on the operation of the St Helen's airport.

Scenic Protection Code

The purpose of the Scenic Protection Code is:
To recognise and protect landscapes that are identified as important for their scenic values.

This Code does not apply to Use so only Development Standards need to be considered

In this instance the proposal complies with A1 of C8.6.1 - Development within a scenic protection area, being –

Buildings or works, including destruction of vegetation, within a scenic protection area must:
(a) be on land not less than 50m in elevation below a skyline; and
(b) not total more than 500m² in extent.

C8.6.2 Development within a scenic road corridor has no application in this instance.

Coastal Erosion Hazard Code

The purpose of the Coastal Erosion Hazard Code is:

C10.1.1 To ensure that use or development subject to risk from coastal erosion is appropriately located and managed, so that:

(a) people, property and infrastructure are not exposed to an unacceptable level of risk;

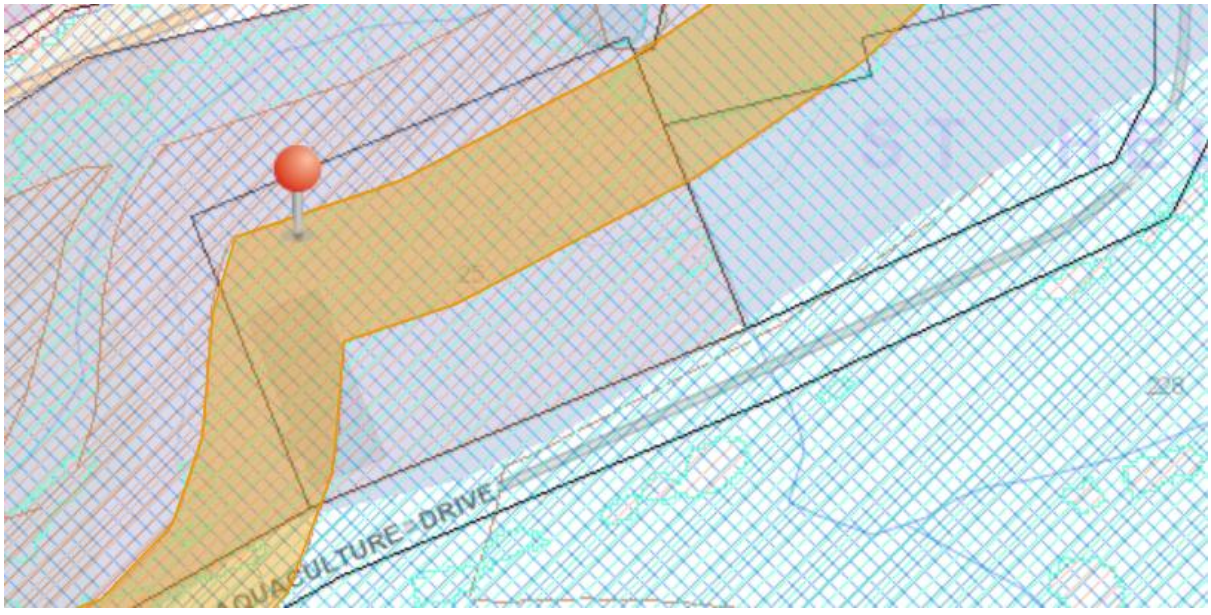
(b) future costs associated with options for adaptation, protection, retreat or abandonment of property and infrastructure are minimised;

(c) it does not increase the risk from coastal erosion to other land or public infrastructure; and

(d) works to protect land from coastal erosion are undertaken in a way that provides appropriate protection without increasing risks to other land.

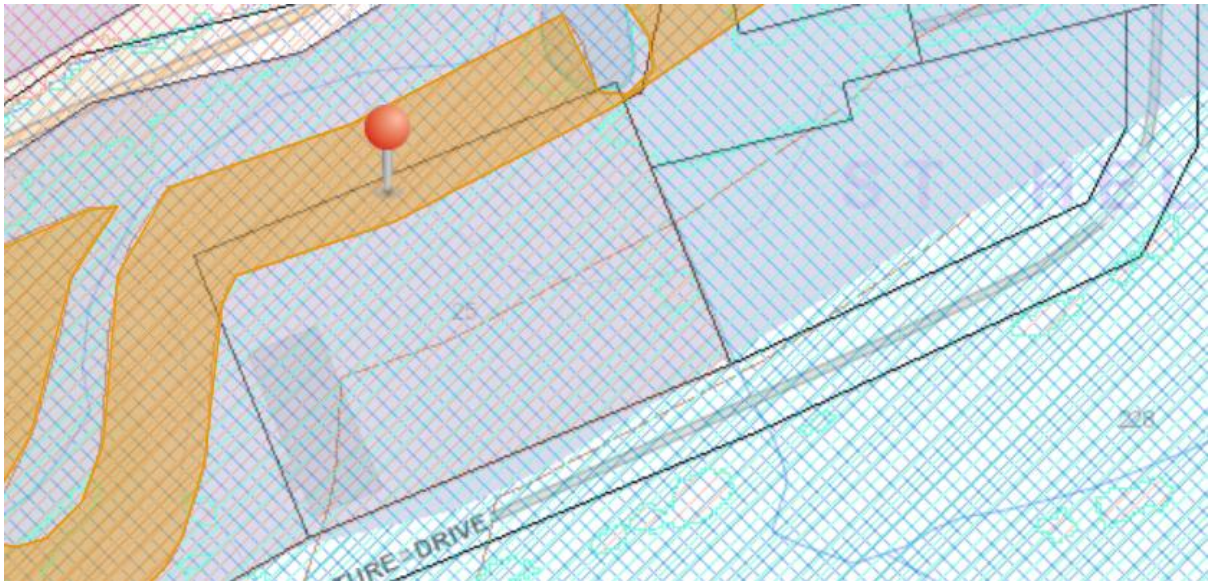
C10.1.2 To provide for appropriate use or development that relies upon a coastal location to fulfil its purpose.

There are two hazard bands covering the part of the site which is subject to this proposal – Medium Hazard Band



Source – TheList

And High Hazard Band



Source – The List

The following Development Standards need consideration

C10.6.1 Buildings and works, excluding coastal protection works, within a coastal erosion hazard area

Objective - That: (a) building and works, excluding coastal protection works, within a coastal erosion hazard area, can achieve and maintain a tolerable risk from coastal erosion; and (b) buildings and works do not increase the risk from coastal erosion to adjacent land and public infrastructure.	
Acceptable Solution	**Performance Criteria**
No Acceptable Solution	P1.1 Buildings and works, excluding coastal protection works, within a coastal erosion hazard area must have a tolerable risk, having regard to: (a) whether any increase in the level of risk from coastal erosion requires any specific hazard reduction or protection measures; (b) any advice from a State authority, regulated entity or a council; and (c) the advice contained in a coastal erosion hazard report. P1.2 A coastal erosion hazard report demonstrates that: (a) the building and works: (i) do not cause or contribute to any coastal erosion on the site, on adjacent land or public infrastructure; and (ii) can achieve and maintain a tolerable risk from a coastal erosion event in 2100 for the intended life of the use without requiring any specific coastal erosion protection works;

	(b) buildings and works are not located on actively mobile landforms, unless for engineering or remediation works to protect land, property and human life.
COMMENT – This is a highly developed site within an established industrial area. This is also an open structure located on an existing concrete slab which was established many years ago as a site for an extension to the existing shed. The site is fully fenced with a solid colourbond fence. The use is also dependant on a coastal location. With all that in mind there will be no change in tolerable flood risk as a result of this proposal. The development will not add to the risk of coastal erosion and as a result no specific measures will be required to manage coastal erosion risk.[1]	

Flood-prone Hazard Areas Code

The purpose of the Flood-Prone Areas Hazard Code is:

C12.1.1 To ensure that use or development subject to risk from flood is appropriately located and managed, so that:

(a) people, property and infrastructure are not exposed to an unacceptable level of risk;

(b) future costs associated with options for adaptation, protection, retreat or abandonment of property and infrastructure are minimised; and

(c) it does not increase the risk from flood to other land or public infrastructure.

C12.1.2 To preclude development on land that will unreasonably affect flood flow or be affected by permanent or periodic flood.

This Code covers the whole site. The issue is – does the proposed open shed adversely impact on the flood risk to a site which is already severely impacted by flood risk?

In this instance it will be argued that Use Standards need no further consideration – the use is not critical, hazardous or vulnerable. Neither does it contain a habitable building.

In terms of Development Standards the following needs consideration:

C12.6.1 Buildings and works within a flood-prone hazard area

Objective -	
Acceptable Solution	Performance Criteria
A1 No Acceptable Solution.	P1.1 Buildings and works within a flood-prone hazard area must achieve and maintain a tolerable risk from a flood, having regard to: (a) the type, form, scale and intended duration of the development; (b) whether any increase in the level of risk from flood requires any specific hazard reduction or protection measures; (c) any advice from a State authority, regulated entity or a council; and

[1] The section was written with the guidance of Ian Abernethy Bsc (Hon) Town and Regional Planning who has 40 years practical planning and environmental management skills in both the public and private sectors.

	(d) the advice contained in a flood hazard report. P1.2 A flood hazard report also demonstrates that the building and works: (a) do not cause or contribute to flood on the site, on adjacent land or public infrastructure; and (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.
COMMENT - This is a highly developed site within an established industrial area. This is also an open structure located on an existing concrete slab which was established many years ago as a site for an extension to the existing shed. The site is fully fenced with a solid colourbond fence. The use is also dependant on a coastal location. Given the open nature of the proposed structure the risk to flooding will not change. The structure will be in place as long as the use on site continues. As there will be no increase in the level of risk from flood no specific hazard reduction or protection measures are required.[2]	

Natural Assets Code

The purpose of the Natural Assets Code is:

C7.1.1 To minimise impacts on water quality, natural assets including native riparian vegetation, river condition and the natural ecological function of watercourses, wetlands and lakes.

C7.1.2 To minimise impacts on coastal and foreshore assets, native littoral vegetation, natural coastal processes and the natural ecological function of the coast.

C7.1.3 To protect vulnerable coastal areas to enable natural processes to continue to occur, including the landward transgression of sand dunes, wetlands, saltmarshes and other sensitive coastal habitats due to sea-level rise.

C7.1.4 To minimise impacts on identified priority vegetation.

C7.1.5 To manage impacts on threatened fauna species by minimising clearance of significant habitat.

There are no Use Standards to consider.

Development Standards to consider:

Objective -	
Acceptable Solution	**Performance Criteria**
A1 Buildings and works within a waterway and coastal protection area must: (a) be within a building area on a sealed plan approved under this planning scheme;	P1.1 Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to:

[2] The section was written with the guidance of Ian Abernethy Bsc (Hon) Town and Regional Planning who has 40 years practical planning and environmental management skills in both the public and private sectors.

(b) in relation to a Class 4 watercourse, be for a crossing or bridge not more than 5m in width; or (c) if within the spatial extent of tidal waters, be an extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway that is not more than 20% of the area of the facility existing at the effective date.	(a) impacts caused by erosion, siltation, sedimentation and runoff; (b) impacts on riparian or littoral vegetation; (c) maintaining natural streambank and streambed condition, where it exists; (d) impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation; (e) the need to avoid significantly impeding natural flow and drainage; (f) the need to maintain fish passage, where known to exist; (g) the need to avoid land filling of wetlands; (h) the need to group new facilities with existing facilities, where reasonably practical; (i) minimising cut and fill; (j) building design that responds to the particular size, shape, contours or slope of the land; (k) minimising impacts on coastal processes, including sand movement and wave action; (l) minimising the need for future works for the protection of natural assets, infrastructure and property; (m) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and (n) the guidelines in the Tasmanian Coastal Works Manual P1.2 Buildings and works within the spatial extent of tidal waters 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; or (f) provisions of open space or for marine-related educational, research, or recreational facilities.
COMMENT – The site is not in a waterway and coastal protection area so this clause needs no further consideration.	
A2	P2.1

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.	Buildings and works within a future coastal refugia area must allow for natural coastal processes to continue to occur and avoid or minimise adverse impacts on natural assets, having regard to: (a) allowing for the landward transgression of sand dunes and the landward colonisation of wetlands, saltmarshes and other coastal habitats from adjacent areas; (b) avoiding the creation of barriers or drainage networks that would prevent future tidal inundation; (c) allowing the coastal processes of sand deposition or erosion to continue to occur; (d) the need to group new facilities with existing facilities, where reasonably practical; (e) the impacts on native vegetation; (f) minimising cut and fill; (g) building design that responds to the particular size, shape, contours or slope of the land; (h) the impacts of sea-level rise on natural coastal processes and coastal habitat; (i) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and (j) the guidelines in the Tasmanian Coastal Works Manual. P2.2 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.
COMMENT – The site is in a future coastal refugia area so consideration must be given to this clause. Compliance will rely on P2.1 and P2.2. In discussing this clause, it must be remembered that this is an extension to an existing shed on a site which has been highly modified. It must also be remembered that the use of the site depends on a coastal location. As an open structure, the proposed building will have minimal impact on future coastal processes. There is	

no cut and fill proposed and there is no loss of vegetation as the site is currently devoid of any vegetation in the location of the extension. **In examining the Wetlands and Waterways Works Manual it must be recognised that this is a site that is fully fenced and thus there is no opportunity to preserve large woody debris which might be washed in on tidal movement. There will be no major excavation proposed on this site nor is there any proposal to alter drainage line on this site (given the previous formation of hardstanding on site any natural drainage lines have long been extinguished.**	
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.	P3 Development within a waterway and coastal protection area or a future coastal refugia area involving a new stormwater point discharge into a watercourse, wetland or lake must avoid or minimise adverse impacts on natural assets, having regard to: (a) the need to minimise impacts on water quality; and (b) the need to mitigate and manage any impacts likely to arise from erosion, sedimentation or runoff.
COMMENT – Complies with A1 – no new stormwater discharge point is proposed.	
A4 Dredging or reclamation must not occur within a waterway and coastal protection area or a future coastal refugia area	P4.1 Dredging or reclamation within a waterway and coastal protection area or a future coastal refugia area must minimise adverse impacts on natural coastal processes and natural assets, having regard to: (a) impacts caused by erosion, siltation, sedimentation and runoff; (b) impacts on riparian or littoral vegetation; (c) the need to avoid land filling of wetlands; (d) impacts on sand movement and wave action; and (e) the potential for increased risk to inundation of adjacent land. P4.2 Dredging or reclamation within a waterway and coastal protection area or a future coastal refugia area must be necessary: (a) to continue an existing use or development on adjacent land; or (b) for a use which relies upon a coastal location to fulfil its purpose, having regard to: (i) the need to access a specific resource in a coastal location; (ii) the need to operate a marine farming shore facility; (iii) the need to access infrastructure available in a coastal location; (iv) the need to service a marine or coastal related activity; (v) provision of essential utility or marine

	infrastructure; and (vi) provision of open space or for marine related educational, research, or recreational facilities.
COMMENT – Not relevant in this instance	
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.	P5 Coastal protection works or watercourse erosion or inundation protection works within a waterway and coastal protection area or a future coastal refugia area must be designed by a suitably qualified person and minimise adverse impacts on natural coastal processes, having regard to: (a) impacts on sand movement and wave action; and (b) the potential for increased risk of inundation to adjacent land.
COMMENT – Not relevant in this instance	

Coastal Inundation Hazard Code

The purpose of the Coastal Inundation Hazard Code is:

C11.1.1 To ensure that use or development subject to risk from coastal inundation is appropriately located and managed so that:

(a) people, property and infrastructure are not exposed to an unacceptable level of risk;

(b) future costs associated with options for adaptation, protection, retreat or abandonment of property and infrastructure are minimised;

(c) it does not increase the risk from coastal inundation to other land or public infrastructure; and

(d) works to protect land from coastal inundation are undertaken in a way that provides appropriate protection without increasing risks to other land.

C11.1.2 To provide for appropriate use or development that relies upon a coastal location to fulfil its purpose.

The following Use Standards need consideration (even although the Use is a No Permit Required use):

C11.5.1 Uses within a high coastal inundation hazard band

Objective -	
Acceptable Solution	**Performance Criteria**
A1 No Acceptable Solution.	P1.1 A use within a high coastal inundation hazard band must be for a use which 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 an essential utility or marine infrastructure; (f) provision of open space or for marine-related educational, research, or recreational facilities; (g) any advice from a State authority, regulated entity or a council; and (h) the advice obtained in a coastal inundation hazard report. P1.2 A coastal inundation hazard report also demonstrates that: (a) any increase in the level of risk from coastal inundation does not require any specific hazard reduction or protection measures; or (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.
COMMENT – the development is required to operate a marine farming shore facility; to access infrastructure available in a coastal location; to service a marine or coastal related activity. Being an open structure within a highly developed site the development there will be no increase in the level of risk from coastal inundation nor will there be any requirement for specific hazard reduction or protection measures.[3]	

C11.5.2 Uses located within a non-urban zone and within a medium coastal inundation hazard band

Objective -	
Acceptable Solution	**Performance Criteria**
A1 No Acceptable Solution.	P1.1 A use within a non-urban zone and within a medium coastal inundation hazard band must be for a use which 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;

[3] The section was written with the guidance of Ian Abernethy Bsc (Hon) Town and Regional Planning who has 40 years practical planning and environmental management skills in both the public and private sectors.

	(e) provision of an essential utility or marine infrastructure; (f) provision of open space or for marine-related educational, research, or recreational facilities; (g) any advice from a State authority, regulated entity or a council; and (h) the advice obtained in a coastal inundation hazard report. P1.2 A coastal inundation hazard report also demonstrates that: (a) any increase in the level of risk from coastal inundation does not require any specific hazard reduction or protection measures; or (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.
COMMENT - the development is required to operate a marine farming shore facility; to access infrastructure available in a coastal location; to service a marine or coastal related activity. Being an open structure within a highly developed site the development there will be no increase in the level of risk from coastal inundation nor will there be any requirement for specific hazard reduction or protection measures.[4]	

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

COMMENT – Not relevant in this instance

C11.5.4 Critical use, hazardous use or vulnerable use

COMMENT – Not relevant in this instance

The following Development Standards need to be considered:

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

Objective -	
Acceptable Solution	**Performance Criteria**
A1 No Acceptable Solution.	P1.1 Buildings and works, excluding coastal protection works, within a coastal inundation hazard area must have a tolerable risk, having regard to: (a) whether any increase in the level of risk from coastal inundation requires any specific hazard reduction or protection measures; (b) any advice from a State authority, regulated

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	entity or a council; and (c) the advice contained in a coastal inundation hazard report. P1.2 A coastal inundation hazard report also demonstrates that the building or works: (a) do not cause or contribute to coastal inundation on the site, on adjacent land or public infrastructure; and (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 specific coastal inundation protection works.
COMMENT - The section was written with the guidance of Ian Abernethy Bsc (Hon) Town and Regional Planning who has 40 years practical planning and environmental management skills in both the public and private sectors.	

C11.6.2 Coastal protection works within a coastal inundation hazard area

COMMENT – Not relevant in this instance

Bushfire Prone Area Code

This code applies to:
(a) subdivision of land that is located within, or partially within, a bushfire-prone area; and
(b) a use, on land that is located within, or partially within, a bushfire-prone area, that is a vulnerable use or hazardous use.
As the application does no relate to either of these issues this Code requires no further consideration.

Matters Raised in the RFI

The Request for Further Information asked for the following matters to be considered:

1. Please provide an amended Development Application form that correctly lists the land owner. It is Council's understanding that the property is owned by a company. Additionally, please provide advice on the number of Directors associated with the Company (landowner) and provide declaration that all Directors have been notified of the development application being lodged.

COMMENT – To be lodged alongside this report

2. Please provide an amended site plan that demonstrates how the proposed development and the development site is affected by planning scheme overlays:

a. Flood prone areas;

b. Coastal Inundation Hazards,

c. Coastal Erosion Hazards,

d. Future Coastal Refugia Area

e. Waterway and coastal protection area

COMMENT – To be lodged alongside this report

2. Please provide an amended site plan that demonstrates the location of required car parking and access way. It should be noted that the existing approval for car parking (DA095-2000) is located as follows. It should be further noted that Council is also in receipt of a further development application that proposes an additional shed in the position of approved carparking (see below). The required car parking is 2 spaces per 3 employees.

COMMENT – To be lodged alongside this report

5. Please provide a response to the following within the Tasmanian Planning Scheme – Break O'Day:

a. 20.0 Rural Zone
b. C7.0 Natural Assets Code
i. Future Coastal Refugia Area
c. C8.0 Scenic Protection Code
d. C10.0 Coastal Erosion Hazard Code
i. Coastal Erosion Hazard Report in accordance with
C10.3.1 Definition of Terms required;
e. C12.0 Flood Prone Areas Code
i. Flood Hazard Report in accordance with C12.3.1 Definition of Terms required;

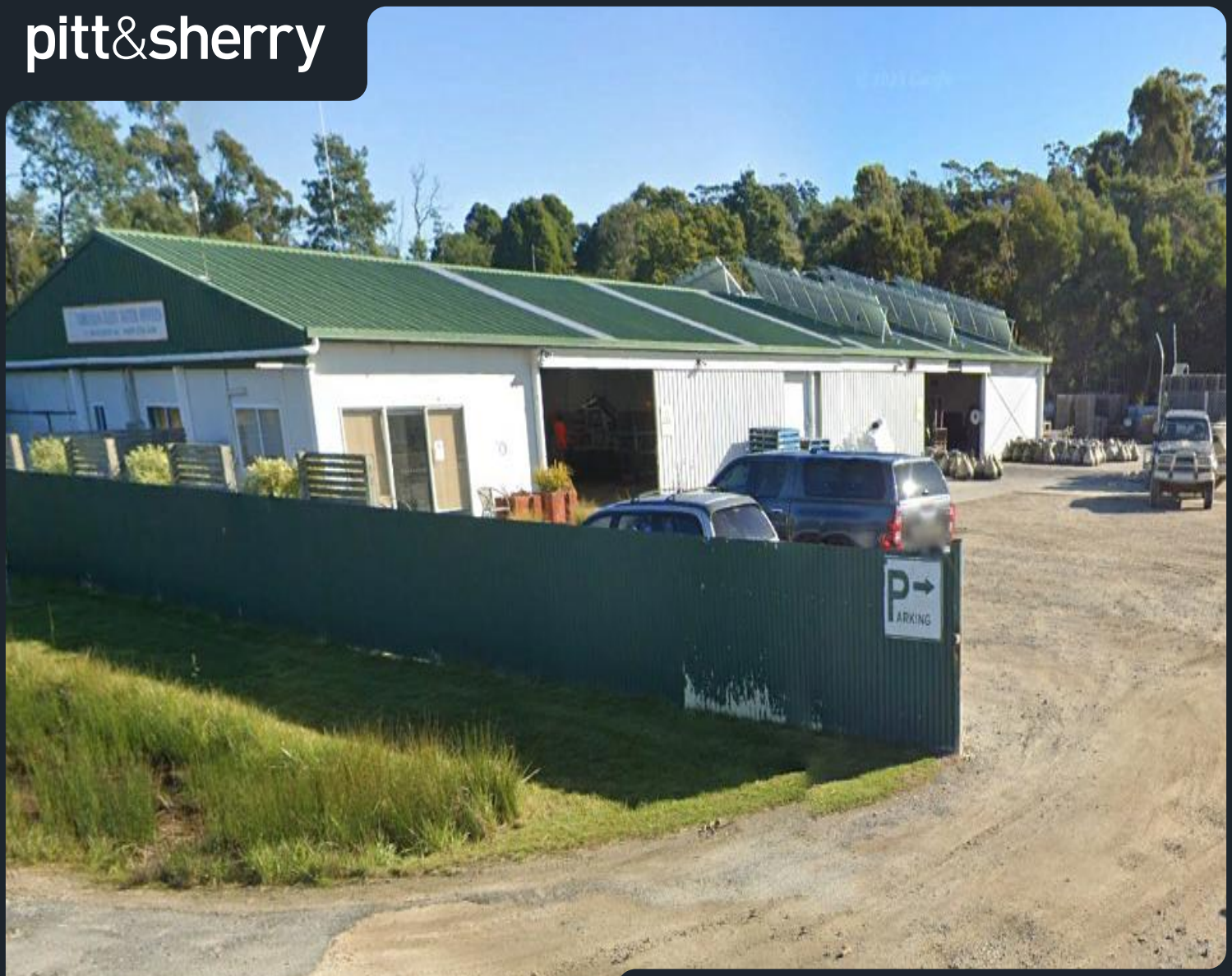
COMMENT – The attached report covers these aspects

Conclusions

This is a very simple application to erect an open shed extension in order to protect machinery which will improve processes on site which is made complex by a series of Code Overlays. The development of this site is a classic example of location follows product location. The closer the processing plant is to the growing beds the better the oysters quality.

There are no good planning reasons not to support this proposal.

pitt&sherry



25 Aquaculture Drive, St Helens

Coastal Erosion Hazard Report

Prepared for
Bison Constructions

Client representative
Kelsie Mitchell

Date
28 May 2025

Rev00

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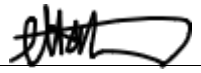
Prepared by — Caelan Hearne		**Date —** 28 May 2025
Reviewed by — Emma Lofthouse		**Date —** 28 May 2025
Authorised by — Sven Rand		**Date —** 28 May 2025

Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
A	Draft Report	CH	EL	SR	28/05/2025

1. Introduction

pitt&sherry has been engaged by Bison Constructions to provide a Coastal Erosion Hazard Report to support the development application for a proposed extension to the existing building at 25 Aquaculture Drive, St Helens, Tasmania. On the site is an established oyster processing and packing business, and the proposed extension is a large open shed to house a machine which will help with the landing of the rafts which harvest the oysters. pitt&sherry have been provided a copy of a letter from Break O'Day council advising Bison of an invalid application and advising additional information that is required. The council have requested several responses, including but not limited to a Coastal Erosion Hazard Report in accordance with C10.3.1. This document evaluates the potential impact of coastal erosion with regards to planning scheme requirements and potential management strategies that may be adopted to meet acceptance criteria.

This report represents a Coastal Erosion Hazard Report, prepared by a geotechnical practitioner, which has been prepared to fulfil Planning Scheme requirements and Councils request and is intended to support a formal development application. evaluates the potential impact of coastal erosion with regards to planning scheme requirements and potential management strategies that may be adopted to meet acceptance criteria.

1.1 Project / Site Details

Bison Constructions has been commissioned to construct a proposed extension to an existing building located at 25 Aquaculture Drive, St Helens, Tasmania. Site plans provided by Bison Constructions also indicate the presence of an additional shed elsewhere on the property. While the findings and recommendations may be broadly applicable across the site, this assessment by pitt&sherry has been undertaken specifically in relation to the proposed extension only, as defined in the scope of engagement. Given the coastal location of the site and its presence within mapped hazard bands, the project requires an assessment and report on Coastal Erosion as per the *Tasmanian Planning Scheme*, specifically section C10.0.

Under the *Tasmanian Planning Scheme – Break O'Day Local Provisions Schedule,* the site is zoned as Rural and currently contains a combined office and large shed. The site is adjacent to Aquaculture Drive to the south and an artificial watercourse to the north and east. This watercourse then flows into the Georges Bay approximately 300m to the northeast of the site. The proposed extension at the site is presented in Figure 1 with an overview of the general location shown in Figure 2.

Figure 1: Aerial Image showing a proposed extension at 25 Aquaculture Dr, St Helens.

Figure 2: Overview of site location (pink outline).

The site is shown with elevation contours derived from the 2021 Tasmania Statewide 2m digital elevation model in Figure 3. Ground surface elevations across the site range approximately from 0.3m AHD to 1.4m AHD.

Figure 3: Site elevations (m AHD).

1.2 Scope of Work

The scope of work described in this report is the following:

Coastal Erosion Hazard Report

- Assess coastal erosion hazards and erosion vulnerability of the project area based on published and other available information; and
- Desktop review of available spatial datasets and reference information, to specifically address the requirements of the *Tasmanian Planning Scheme – Break O'Day Council* (the Planning Scheme) Code C10.0 Coastal Erosion Hazard Code.

2. Limitations Assumptions and Exclusions

This report has been compiled from desktop datasets available at the time of writing. Conditions and model analysis may change and provide alternative perspectives or outcomes after this report compilation and consequently should be considered by any subsequent reader.

In some circumstances the scope of services may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints. The Report may only be used and relied on by the Client for the purpose set out in the Report. Any use which a third party makes of this document, or any reliance on or decisions to be made based on it, is the responsibility of the Client or such third parties.

The services undertaken by pitt&sherry in connection with preparing the Report were limited to those specifically detailed in the report and are subject to the restrictions, limitations and exclusions set out in the Report. The Report's accuracy is limited to the time period and circumstances existing at the time the Report was prepared. The opinions, conclusions

and any recommendations in the Report are based on conditions encountered and information reviewed at the date of preparation of the Report.

pitt&sherry has no responsibility or obligation to update the Report to account for events or changes occurring after the date that the report was prepared. If such events or changes occurred after the date that the report was prepared render the Report inaccurate, in whole or in part, pitt&sherry accepts no responsibility, and disclaims any liability whatsoever for any injury, loss or damage suffered by anyone arising from or in connection with their use of, reliance upon, or decisions or actions based on the Report, in whole or in part, for whatever purpose.

In preparing the Report, pitt&sherry has relied upon data, surveys, analyses, designs, plans and other information provided by or on behalf of the Client and other individuals and organisations, most of which are referred to in the Report ("the Data"). Except as otherwise stated in the Report, pitt&sherry has not verified the accuracy, completeness, usefulness or relevance of the Data.

To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the Report ("Conclusions") are based in whole or part on the Data, those Conclusions are contingent upon the accuracy, completeness, usefulness or relevance of the Data. pitt&sherry does not warrant the accuracy and will not be liable in relation to Conclusions should any of the Data, be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to pitt&sherry.

Exclusions from the scope of this report include, but are not limited to:

- Site geotechnical investigation other than desktop considerations
- Site visit and sampling
- Penetrative or subsurface sampling or testing
- Numerical or physical modelling
- Any site measurements and surveys; and
- Subsurface investigation or sample analysis.

3. Coastal Hazard Risk Assessment Information

> *"Coastal hazards, including erosion and inundation, are the result of natural processes that have the potential to cause considerable damage to communities, industries and infrastructure.*
>
> *These hazards are expected to be magnified by climate change and sea level rise, presenting significant risk to Tasmanian communities and the economy if they are not appropriately managed. In response to the risks presented by coastal inundation and erosion, the Department of Premier and Cabinet (DPAC) established the Mitigating Natural Hazards through Land Use Planning (MNHLUP) project in 2011" (DPAC, 2016)*

Published in 2016, in conjunction with spatial information on identified hazard zones made available on LISTmap, the MNHLUP project identifies coastal areas vulnerable to inundation and erosion.

pitt&sherry have been involved in a broad range of coastal hazard, vulnerability and risk management assessments for developments in coastal locations around Tasmania that are directly similar and applicable to potential development and use of land at this site.

Based on participation in and expertise derived from coastal assessments including previous assessments in this area it is considered that the state MNHLUP project has adopted appropriate principles and processes for hazard analysis, including extreme tide levels, storm surge events and additional freeboard allowances to accommodate potential wave contributions over and above still water surfaces. With the MNHLUP projects' inclusion of projected climate change effects on sea level rise to the end of the century, the published information and risk bands are considered consistent with previous detailed studies of development in the area and, in many circumstances, represent slightly more conservative levels than earlier studies.

The information available, specifically erosion bands, which are described in the published technical report and made available spatially on the LISTmap, is adopted for use in assessing the vulnerability of this development to erosion.

4. Terminology

Throughout this report, unless stated otherwise, the following definitions and terminology described in the Tasmanian Planning Scheme – State Planning Provisions been adopted:

Table 1: Coastal assessment terminology

Terms	Definition
Coastal erosion	Means: (a) Erosion of the coastline by water, wind and general weather conditions; or (b) Coastal recession, which is the long-term movement of the coastline due to sea level rise.
Coastal erosion hazard area	Means land: (a) Shown on an overlay map in the relevant local provisions schedule, as within a coastal erosion hazard area, which is classified into one of three coastal erosion hazard bands; (b) Shown on an overlay map in the relevant local provisions schedule as within a coastal erosion investigation area; or (c) Identified in a report for the purposes of c10.2.1(b).
Coastal erosion hazard bands	Means the classification of land within a coastal erosion hazard area into one of the following coastal erosion hazard bands: (a) Low; (b) Medium; or (c) High.
Coastal erosion investigation area	Means land shown on an overlay map in the relevant Local Provisions Schedule as within a coastal erosion investigation area.
Coastal erosion hazard report	Means a report prepared by geotechnical practitioner and must include: (a) Details of, and be signed by, the person who prepared or verified the report; (b) Confirmation that the person has the appropriate qualifications and expertise; (c) Confirmation that the report has been prepared in accordance with any methodology specified by a state authority; (d) A report of a geotechnical site investigation undertaken consistent with *australian standard as 1726-2017 geotechnical site investigations*; and (e) Conclusions based on consideration of the proposed use and development: (i) As to whether the use or development is likely to cause or contribute to the occurrence of coastal erosion on the site or on adjacent land; (ii) As to whether the use or development can achieve and maintain a tolerable risk for the intended life of the use or development, having regard to: A. The nature, intensity and duration of the use; B. The type, form and duration of any development; C. The likely change in the risk across the intended life of the use or development;

Terms	Definition
	D. The ability to adapt to a change in the level of risk; E. The ability to maintain access to utilities and services; F. The need for specific coastal erosion reduction or protection measures on the site; G. The need for coastal erosion reduction or protection measures beyond the boundary of the site; and H. Any coastal erosion management plan in place for the site or adjacent land; (iii) Any advice relating to the ongoing management of the use or development; (iv) As to whether the use or development is located on an actively mobile landform within the coastal zone; and (v) Relating to any matter specifically required by performance criteria in this code.
Critical use	Means a use that is within one of the following use classes: (a) Emergency services; or (b) Hospital services.
Hazardous use	Means a use that is within one of the following use classes: (a) Crematoria and cemeteries; (b) Extractive industry, if the use involves the storage of a hazardous chemical of a manifest quantity; (c) Hospital services, if the use involves the storage of a hazardous chemical of a manifest quantity; (d) Manufacturing and processing, if the use involves the storage of a hazardous chemical of a manifest quantity; (e) Recycling and waste disposal; (f) Research and development, if the use involves the storage of a hazardous chemical of a manifest quantity; (g) Storage, if the use involves the storage of a hazardous chemical of a manifest quantity; (h) Transport depot and distribution, if the use involves the storage of a hazardous chemical of a manifest quantity; (i) Utilities, if the use involves the storage of a hazardous chemical of a manifest quantity; or (j) Vehicle fuel sales and service.
Non-urban zone	Means land shown on a zone map in the relevant local provisions schedule, as within the following zones: (a) Rural living zone (b) Rural zone (c) Agriculture zone (d) Landscape conservation zone (e) Environmental management zone (f) Utilities zone (g) Open space zone; and (h) Future urban zone.

Terms	Definition
Urban zone	Means land shown on a zone map in the relevant local provisions schedule, as within the following zones: a) General residential zone b) Inner residential zone c) Low density residential zone d) Village zone e) Urban mixed use zone f) Local business zone g) General business zone h) Central business zone i) Commercial zone j) Light industrial zone k) General industrial zone l) Major tourism zone m) Port and marine zone n) Community purpose zone o) Recreation zone; and p) Any particular purpose zone.
Vulnerable use	Means a use that is within one of the following use classes: (a) Custodial facility; (b) Educational and occasional care; (c) Residential, if for a respite centre, residential care facility, retirement village or assisted housing; or (d) Visitor accommodation, if the use accommodates more than 12 guests.

5. Coastal Erosion Hazard Assessment

Coastal erosion poses significant risks, particularly during extreme weather events such as coastal storms and storm surges. In recent decades, the effects of climate change, including rising sea levels, have further intensified coastal erosion. This erosion can cause substantial damage to coastal infrastructure by undermining foundations.

5.1 Investigation and Analysis Methodology

The methodology undertaken in preparing this coastal erosion assessment is as follows:

- Desktop assessment of site
- Assess geology of the project area
  - Review geological mapping (ListMap and/or Mineral Resources Tasmania - MRT)
- Review geomorphological mapping (Sharples, 2006, Smartline and DPAC LISTmap hazard band mapping)
- Assess potential coastal erosion hazards with available literature and published Council information:
  - Recommend appropriate design protection to reduce vulnerability of the development and/or surrounds as necessary for consistency with the required outcomes of the Planning Scheme; and
- Review Council Planning Scheme and report on the proposed development concept with respect to Code requirements.

The Coastal erosion hazard assessment was developed with reference to the following resources:

- The Council Planning Scheme
- The Council planning zone overlays

- Coastal erosion susceptibility zone mapping for hazard band definition in Tasmania (2013 report by Sharples, Walford and Roberts for Department of Premier and Cabinet [DPaC]) and associated spatial layers from LISTmap
- Coastal Inundation Mapping for Tasmania – Stage 4 (2016 Lacey for DPaC) and associated spatial layers from LISTmap
- www.thelist.tas.gov.au Cadastral and geological maps accessed May 2025; and
- Mitigating Natural Hazards through Land Use Planning and Building Control - Coastal Hazards Technical Report (December 2016) – Department of Premier and Cabinet.

5.2 Limitations

The following limitations apply to this report:

- The project has been prepared in accordance with the scope and exclusions listed in section 1.2
- The basis of the considerations in this report are datasets available publicly, provided by the client and those available to pitt&sherry:
    - Topography assessment using published LiDAR datasets was appropriate for this scope of work rather than high resolution survey information available; and
    - Photogrammetric modelling of historic coastal recession and/or estimating progradation for the site was beyond the scope of the project and was not undertaken.

In addition to the considerations described above, the report must be read in conjunction with limitations described at the rear of the report.

5.3 Shoreline Vulnerability and Geology Assessment

5.3.1 Local Geology

Based on published mapping, the project location contains two distinct geological units (Figure 4).

- The northwestern portion of the title area, where the majority of the proposed extension is located, is indicated to be
    - **Dgrc - Coarse-grained, sparsely porphyritic biotite-hornblende granodiorite**
    - Devonian - Carboniferous granitoids and related rocks>Undifferentiated granitic rocks>Dominantly granodiorite (I-type)>George River Granodiorite
    - **The presence of granodiorite rock may contribute to resilience from erosion, as this type of igneous bedrock is typically dense, durable, and resistant to weathering and mechanical breakdown**
- The southern portion of the project area is indicated to be
    - **Qha - Stream alluvium, swamp and marsh deposits; and**
    - Undifferentiated Cenozoic sequences>Undifferentiated Quaternary sediments>Holocene alluvial, lacustrine and littoral deposits.

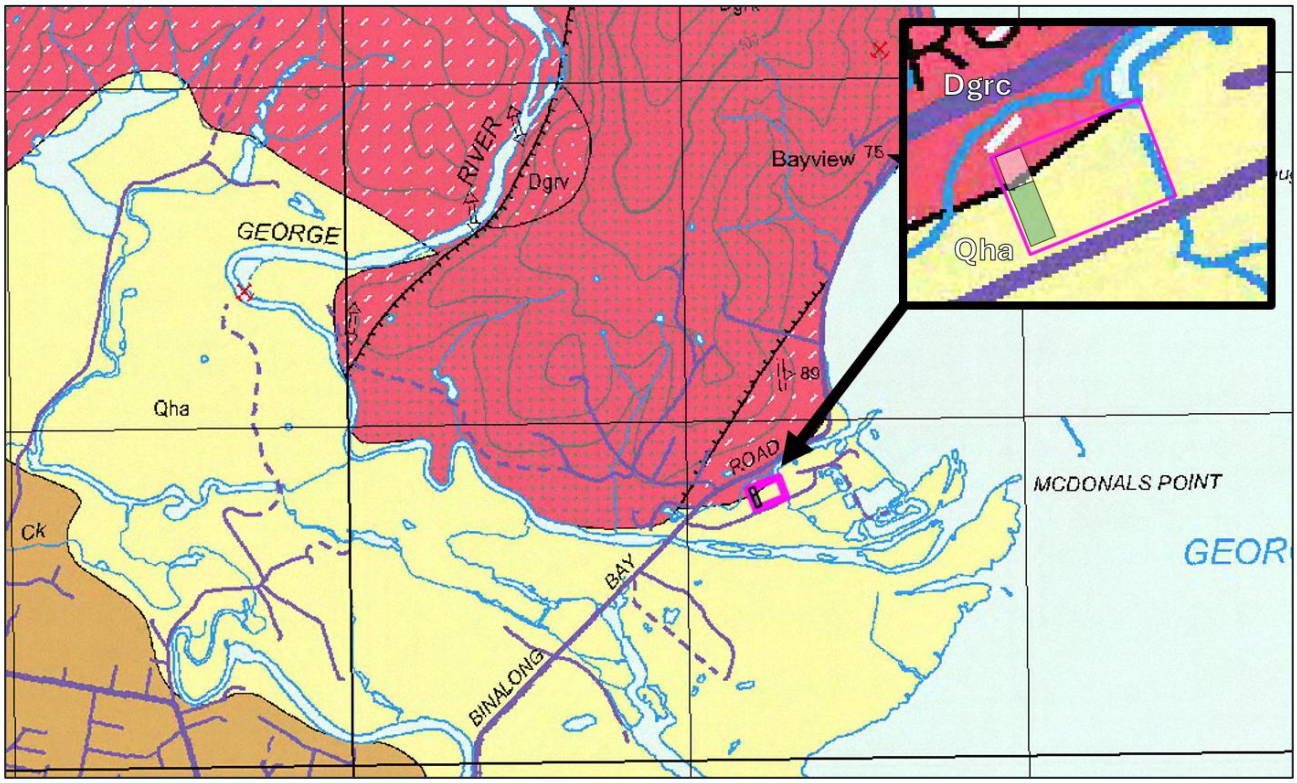


Figure 4: Mapped geology of the project site. Data source: The LISTmap.

5.3.2 Geomorphological assessment of vulnerability

Statewide mapping of potential vulnerability of foreshores and material backing the shoreline was undertaken and published by the Tasmanian Government (Sharples, 2006). The investigation resulted in geomorphic descriptions of the shoreline type around Tasmania's coast, together with an indicative ('first pass') assessment of the vulnerability of each coastal segment to erosion and recession due to sea level rise.

The shoreline of the Georges Bay and the artificial watercourse closest to the site is presented in Figure 5and is identified as:

- 'Re-entrant sandy shore backed by soft sediment plain – potential erosion and shoreline recession vulnerability' at the site; and
- 'Re-entrant sandy shore backed by bedrock – potential beach erosion, lesser recession vulnerability' to the north.

Figure 5: Shoreline vulnerability of the coastline near the site. Data source: The LISTmap (after Sharpes 2006).

The assigned shoreline categories are consistent with the mapped geology of Quaternary sediments with stream alluvium, swamp and marsh deposits, across the south of the site, and undifferentiated granitic rocks with coarse-grained, sparsely porphyritic biotite-hornblende granodiorite across the majority of the proposed extension and to the north.

Further and more detailed site investigation including intrusive investigations may identify variations in the subsurface material and deviation from the published mapping of geology units. If harder and more resistant material is identified in detailed site investigation, then the following analysis may be considered conservative.

Combining the indicated geology and the subsequently categorised shoreline type enables assessment of potential current and future erosion vulnerability and hazard assessment. This process has been undertaken statewide to generate erosion hazard bands for use in assessing potential development risks and to inform planning designs (Sharples, Walford and Roberts, 2013).

The following sections describe published hazard mapping and potential associated risks, the requirements of the planning scheme and potential responses or design considerations that may be considered for adoption to meet scheme criteria.

5.4 Erosion Hazard Mapping

The state coastal hazard assessment investigated potential erosion that may be experienced at Tasmanian coastal sites (described as coastal recession) through the impact of natural coastal erosion processes including potential storm ‘bite’. Climate change induced sea level rise is identified to contribute to the effects of erosion/recession and is incorporated in the state planning considerations.

Coastal erosion hazard bands applied to the Tasmanian coast are as follows.

- **Acceptable**: Based on current understanding of the hazard, coastal erosion is a rare event in this area, but it may occur in some exceptional circumstances

- **Low:** This area has been identified as vulnerable to a coastal recession by 2100 based on the elevation, soil, or rock type of the area and current SLR models. Or
  - This area is protected by coastal defences for erosion
- **Medium:** This area is vulnerable to coastal recession to 2050 based on the elevation, soil, or rock type of the area and current SLR models
- **High:** This area is vulnerable to storm-based erosion from two back-to-back one percent AEP storm events, this area is potentially an active mobile landform; and
- **Investigation area**: an area adjacent to the coastline for which there is insufficient information to classify it into Acceptable, Low, Medium, or High hazard bands. The width of the area is the cumulative width of the Low, Medium, and High hazard bands. In this area a site-specific investigation is required to classify the land into one of the hazard bands.

The reported erosion hazard levels (bands) for the project site are indicated in Figure 6Figure 6. The site of the proposed extension is covered by the 'medium' and 'high' hazard bands.

Figure 6: Aerial Image of coastal erosion hazard bands at the site. Data source: The LISTmap.

5.5 Planning Scheme - Coastal Erosion Hazard Code requirements

Pertinent sections of the C10.0 Coastal Erosion Hazard Code are discussed in the following sections.

5.5.1 C10.1 Code Purpose

The planning scheme erosion hazard code overlays cover portions of the current title and potential subdivided lots. The purpose of C10 is to ensure that use or development which may be subject to risk of coastal erosion is appropriately located and managed.

5.5.2 C10.2 Code Application

In accordance with C10.2.1 this code applies to use and development of land within a coastal erosion hazard area and applies to the project land. It is considered that the land, unless considered over millennial geological timeframes, is not located in an actively mobile landform.

5.5.3 C10.3 Code definition of terms

For reference, the terminology applicable to the Code, and as used in this document, are indicated in Section 4.

5.5.4 C10.4 Use or Development Exempt from this Code

The proposed development of a shed extension is not included in uses or developments exempt from the code and the code applies.

5.5.5 C10.5 Use Standards

This portion of the code applies to the following:

- Use within a high coastal erosion hazard band
- Uses located within a non-urban zone and within a low or medium coastal erosion hazard band
- Critical use, hazardous use or vulnerable use; and
- Uses located in a coastal erosion investigation area.

The subject land and proposed extension are included within:

- Use within a high coastal erosion hazard band; and
- Uses located within a non-urban zone and within a low or medium coastal erosion hazard band.

These are addressed below in Sections 5.5.5.1 and 5.5.5.25.5.5.1

The remaining categories of this portion of the code are considered NOT APPLICABLE:

- Critical use, hazardous use or vulnerable use; and
- Uses located in a coastal erosion investigation area.

5.5.5.1 C10.5.1 Use within a high coastal erosion hazard band

C10.5.1 Use within a high coastal erosion hazard band	
Objective: That use within a high coastal erosion hazard band: (a) is reliant on a coastal location; and (b) can achieve and maintain a tolerable risk from coastal erosion.	
Acceptable Solutions	**Performance Criteria**
A1 No Acceptable Solution.	P1.1 A use within a high coastal erosion hazard band must be for a use which 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 an essential utility or marine infrastructure; (f) provision of open space or for marine-related educational, research or recreational facilities; (g) any advice from a State authority, regulated entity or a council; and (h) the advice obtained in a coastal erosion hazard report. P1.2 A coastal erosion hazard report also demonstrates that: (a) any increase in the level of risk from coastal erosion does not require any specific hazard reduction or protection measures; or (b) the use can achieve and maintain a tolerable risk from a coastal erosion event in 2100 for the intended life of the use without requiring any specific hazard reduction or protection measures.

Assessment

A northern section of the proposed extension is within the 'high' erosion hazard band. The 'high' hazard band is vulnerable to erosion from two back-to-back 1% AEP storm events.

Performance Criteria of P1.1 requires:

A use within a high coastal erosion hazard band must be for a use which 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 an essential utility or marine infrastructure;

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

(g) any advice from a State authority, regulated entity or a council; and

(h) the advice obtained in a coastal erosion hazard report.

The proposed extension is for a use that is in alignment with P.1.1(d) 'the need to service a marine or coastal related activity'. As the shed is designed to house a machine that will help with the landing of the rafts which harvest the oysters, it is for a use which relies upon a coastal location to fulfil its purpose.

P.1.1(g) any advice from State authority, regulated entity or a council.

- It is unknown what advice may be advised, and this element cannot be assessed.

P.1.1(h) the advice contained in a coastal erosion hazard report

The following advice is provided:

- The property owners may wish to consider development of a risk management plan including trigger action and response planning. It is important that persons using the site would be aware of this risk management plan, as well as actions to vacate the site if deemed necessary. Risk management planning may include

annual or routine monitoring of nearby shorelines and access waterways for early indicators of erosion. Observations of such changes in adjacent areas may provide advance warning of potential impacts to the project site. If actioned, this should be developed in conjunction with the design considerations for the proposed extension to address the potential need for future mitigations.

- Disturbance to soil and surface materials during site use should be minimised wherever practicable, in order to preserve soil structure and maintain vegetation cover, both of which contribute to reducing the site's vulnerability to erosion.
- The design of the proposed extension and its use may wish to consider the opportunity to ensure that access and egress for persons and equipment using the site minimises disturbance to surface cover and subsurface materials to the extent practicable.

Performance Criteria of P1.2 requires:

A coastal erosion hazard report also demonstrates that:

(a) any increase in the level of risk from coastal erosion does not require any specific hazard reduction or protection measures; or

(b) the use can achieve and maintain a tolerable risk from a coastal erosion event in 2100 for the intended life of the use without requiring any specific hazard reduction or protection measures.

P.1.2(a) The proposed extension and its use do NOT result in an increase in the level of risk from coastal erosion and does NOT require any specific hazard reduction or protection measures.

- The extension is a land-based structure that does not involve modification to coastal processes, shoreline features, or sediment transport dynamics. Any perceived increase in risk is more appropriately attributed to the existing hazard context; the risk is inherent to the site and is not being introduced or intensified by the proposed use.
- The proposed extension has been planned with a defined operational lifespan that extends only until such time as it can no longer maintain a tolerable level of coastal erosion risk. This approach allows for ongoing observation of site conditions and ensures that any changes in risk can be identified and addressed through appropriate management responses. On this basis, and given the nature and scale of the development, there will not be any requirement for specific hazard reduction or protection measures to support the proposed use.

P.1.2(b) It is determined that the use of the proposed extension CAN achieve and maintain a tolerable risk from a coastal erosion event in 2100 for the intended life of the use without requiring any specific hazard reduction or protection measures.

- Although a northern section of the proposed extension is situated within a zone identified as vulnerable to erosion from two consecutive 1% AEP storm events, the structure's intended use and design life are such that it remains within a tolerable risk threshold. It is expected that if the use of the extension is exposed to intolerable risk, such as through increased storm frequency or severity, resulting in the structure becoming vulnerable to erosion, a reassessment will be undertaken. In such a case, the property owners may wish to consider adaptive management responses, including potential cessation of the use or relocation of the structure and use.

Therefore, it is considered that the use of the proposed extension CAN achieve and maintain a tolerable risk, having regard to the components described above.

This assessment is made based upon the current erosion hazard mapping as of May 2025 and may be subject to change in future.

5.5.5.2 C10.5.2 Uses located within a non-urban zone and within a low or medium coastal erosion hazard band

C10.5.2 Uses located within a non-urban zone and within a low or medium coastal erosion hazard band

Objective:

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

Acceptable Solutions	**Performance Criteria**
A1 No Acceptable Solution.	P1 A tolerable risk for a use located within a non-urban zone and within a low or medium coastal erosion hazard band can be achieved and maintained, having regard to: (a) any increase in the risk from coastal erosion; (b) any requirement for specific hazard reduction or protection measures; (c) the need to minimise any: (i) increase in risk to public infrastructure; and (ii) reliance on coastal protection works; (d) any advice from a State authority, regulated entity or a council; and (e) the advice contained in a coastal erosion hazard report.

Assessment

The project site is zoned as Rural under the *Tasmanian Planning Scheme – Break O'Day Local Provisions Schedule*, which is listed as a part of the non-urban zone category. The southern half of the proposed extension is within the 'medium' erosion hazard band. The 'medium' hazard band is the area vulnerable to coastal recession by 2050.

Performance Criteria of P1 requires:

A tolerable risk for a use located within a non-urban zone and within a low or medium coastal erosion hazard band can be achieved and maintained, having regard to:

(a) any increase in the risk from coastal erosion;

(b) any requirement for specific hazard reduction or protection measures;

(c) the need to minimise any:

(i) increase in risk to public infrastructure; and

(ii) reliance on coastal protection works;

(d) any advice from a State authority, regulated entity or a council; and

(e) the advice contained in a coastal erosion hazard report.

P1(a) It is considered that the use of the proposed extension will NOT result in an increase in risk from coastal erosion within the 'medium' erosion hazard band.

- The extension is a land-based structure that does not involve modification to coastal processes, shoreline features, or sediment transport dynamics. Any perceived increase in risk is more appropriately attributed to the existing hazard context; the risk is inherent to the site and is not being introduced or intensified by the proposed use.
- Furthermore, depending on the final construction approach, if the extension is constructed on a concrete slab, the construction may contribute to reducing exposure and stabilising the underlying soil, enhancing the resilience of underlying material to erosion.

P1(b) It is considered that the use of the proposed extension will NOT require specific hazard reduction or protection measures.

- The proposed extension has been planned with a defined operational lifespan that extends only until such time as it can no longer maintain a tolerable level of coastal erosion risk or other operational considerations. This approach allows for ongoing observation of site conditions and ensures that any changes in risk can be

identified and addressed through appropriate management responses. On this basis, and given the nature and scale of the development, there will not be any requirement for specific hazard reduction or protection measures to support the proposed use.

P1(c) It is determined that the proposed extension will NOT increase the risk to any public infrastructure and does not require any coastal protection works on the site.

- The extension is a land-based structure (a shed) with a defined operational lifespan that extends only until such time as it can no longer maintain a tolerable level of coastal erosion risk. Given its location and nature, the extension does not pose any additional threat to nearby public infrastructure. Furthermore, the development does not trigger the need for new or upgraded coastal protection measures, as it is designed to operate within existing risk parameters without reliance on engineered coastal defences.

P1(d) Any advice from State authority, regulated entity or a council.

- It is unknown what advice may be advised, and this element cannot be assessed.

P1(e) The advice contained in a coastal erosion hazard report

The following advice is provided:

- Potentially additional subsurface excavation or investigation may be considered to provide additional information of the specific subsurface soil and rock strengths and provide more precise indications on material resilience to erosion, adjusting overlay boundaries.
- The property owners may wish to consider development of a risk management plan including trigger action and response planning. It is important that persons using the site would be aware of this risk management plan, as well as actions to vacate the site if deemed necessary. Risk management planning may include annual or routine monitoring of nearby shorelines and access waterways for early indicators of erosion. Observations of such changes in adjacent areas may provide advance warning of potential impacts to the project site. If actioned, this should be developed in conjunction with the design considerations for the proposed extension to address the potential need for future mitigations.
- Disturbance to soil and surface materials during site use should be minimised wherever practicable, in order to preserve soil structure and maintain vegetation cover, both of which contribute to reducing the site's vulnerability to erosion.
- The use of flexible, durable materials may wish to be considered which may mitigate or reduce any risk of damage that may occur in the event of significant erosion events.
- The design of the proposed extension and its use may wish to consider the opportunity to ensure that access and egress for persons and equipment using the site minimises disturbance to surface cover and subsurface materials to the extent practicable.

It is considered that the use of the proposed extension CAN achieve and maintain a tolerable risk, having regard to the components described above.

This assessment is made based upon the current erosion hazard mapping as of May 2025 and may be subject to change in future.

5.5.6 C10.6 Development Standards for Buildings and Works

For the purposes of applying this portion of the code, the planning scheme refers to the Land Use Planning and Approvals Act 1993 (the Act) which defines the following;

- ***building*** includes –

  (a) A structure and part of a building or structure; and

  (b) Fences, walls, out-buildings, service installations and other appurtenances of a building; and

(c) A boat or a pontoon which is permanently moored or fixed to land;

- ***Works*** includes any change to the natural or existing condition or topography of land including the removal, destruction or lopping of trees and the removal of vegetation or topsoil.

This section of the code is applicable to the proposed extension.

5.5.6.1 C10.6.1 Buildings and works, excluding coastal protection works, within a coastal erosion hazard area

C10.6.1 Buildings and works, excluding coastal protection works, within a coastal erosion hazard area	
Objective: That: (a) building and works, excluding coastal protection works, within a coastal erosion hazard area, can achieve and maintain a tolerable risk from coastal erosion; and (b) buildings and works do not increase the risk from coastal erosion to adjacent land and public infrastructure.	
Acceptable Solutions	**Performance Criteria**
A1 No Acceptable Solution.	P1.1 Buildings and works, excluding coastal protection works, within a coastal erosion hazard area must have a tolerable risk, having regard to: (a) whether any increase in the level of risk from coastal erosion requires any specific hazard reduction or protection measures; (b) any advice from a State authority, regulated entity or a council; and (c) the advice contained in a coastal erosion hazard report. P1.2 A coastal erosion hazard report demonstrates that: (a) the building and works: (i) do not cause or contribute to any coastal erosion on the site, on adjacent land or public infrastructure; and (ii) can achieve and maintain a tolerable risk from a coastal erosion event in 2100 for the intended life of the use without requiring any specific coastal erosion protection works; (b) buildings and works are not located on actively mobile landforms, unless for engineering or remediation works to protect land, property and human life.

Assessment

The entire area of the proposed extension is covered by the 'medium' and 'high' erosion hazard bands and require addressing the performance criteria. The 'high' hazard band is vulnerable to erosion from two back-to-back 1% AEP storm events and the 'medium' hazard band outlines areas vulnerable to coastal recession by 2050.

The proposed extension is located within a high coastal erosion hazard band, where the potential for significant material loss exists, particularly under extreme storm conditions such as two consecutive 1% AEP events. While the risk is acknowledged as high, the nature of erosion in this area is expected to be slow and progressive rather than sudden, allowing for observable changes over time.

Given this, any substantial erosion impacts are likely to be preceded by visible indicators (such as shoreline retreat or degradation of nearby landforms) which would typically manifest in adjacent areas closer to the shoreline before directly affecting the project site. This progression provides an opportunity for early detection and timely reassessment, enabling the implementation of mitigation or adaptation measures well in advance of any direct impact on the proposed extension.

Performance Criteria of P1.1 requires:

> Buildings and works, excluding coastal protection works, within a coastal erosion hazard area must have a tolerable risk, having regard to:
>
> (a) Whether any increase in the level of risk from coastal erosion requires any specific hazard reduction or protection measures;
>
> (b) Any advice from a state authority, regulated entity or a council; and
>
> (c) The advice contained in a coastal erosion hazard report.

P.1.1(a) The proposed extension does NOT result in an increase in the level of risk from coastal erosion and does NOT require any specific hazard reduction or protection measures.

- The extension is a land-based structure that does not involve modification to coastal processes, shoreline features, or sediment transport dynamics. Any perceived increase in risk is more appropriately attributed to the existing hazard context; the risk is inherent to the site and is not being introduced or intensified by the proposed extension.
- The proposed extension has been planned with a defined operational lifespan that extends only until such time as it can no longer maintain a tolerable level of coastal erosion risk. This approach allows for ongoing observation of site conditions and ensures that any changes in risk can be identified and addressed through appropriate management responses. On this basis, and given the nature and scale of the development, there will not be any requirement for specific hazard reduction or protection measures to support the proposed extension.

P.1.1(b) Any advice from State authority, regulated entity or a council.

- It is unknown what advice may be advised, and this element cannot be assessed.

P.1.1(c) The advice contained in a coastal erosion hazard report

The following advice is provided:

- Potentially additional subsurface excavation or investigation may be considered to provide additional information of the specific subsurface soil and rock strengths and provide more precise indications on material resilience to erosion, adjusting overlay boundaries.
- The property owners may wish to consider development of a risk management plan including trigger action and response planning. It is important that persons using the site would be aware of this risk management plan, as well as actions to vacate the site if deemed necessary. Risk management planning may include annual or routine monitoring of nearby shorelines and access waterways for early indicators of erosion. Observations of such changes in adjacent areas may provide advance warning of potential impacts to the

project site. If actioned, this should be developed in conjunction with the design considerations for the proposed extension to address the potential need for future mitigations.

- Disturbance to soil and surface materials during site use should be minimised wherever practicable, in order to preserve soil structure and maintain vegetation cover, both of which contribute to reducing the site's vulnerability to erosion.
- The use of flexible, durable materials may wish to be considered which may mitigate or reduce any risk of damage that may occur in the event of significant erosion events.
- The design and use of the proposed extension may wish to aim to minimise disturbance to surface vegetation and underlying soils during access and operation, particularly for the movement of people and equipment.
- Drainage systems may wish to be designed to avoid direct distribution of drainage and overland flows into soil area within the 'high' hazard zone, minimising the risk of contributing to elevated saturation of soil and potential reduction of strength parameters.

It is determined that the proposed extension CAN achieve and maintain a tolerable risk from coastal erosion, having regard to the components described above.

Performance Criteria P1.2 - requires that a coastal erosion hazard report demonstrates that:

(a) The building and works:

(i) Do not cause or contribute to any coastal erosion on the site, on adjacent land or public infrastructure; and

(ii) Can achieve and maintain a tolerable risk from a coastal erosion event in 2100 for the intended life of the use without requiring any specific coastal erosion protection works;

(b) Buildings and works are not located on actively mobile landforms, unless for engineering or remediation works to protect land, property and human life.

P1.2(a) It is determined that the proposed extension does NOT cause or contribute to any coastal erosion on the site, on adjacent land or public infrastructure, and DOES achieve and maintain a tolerable risk from a coastal erosion event in 2100 for the intended life of the use without requiring any specific coastal erosion protection works.

- The extension is a land-based structure that does not involve direct interaction with coastal processes or shoreline modifications. While it is located within a 'high' erosion hazard band, the nature and scale of the development suggest that it is very unlikely to influence erosion patterns in a measurable way. Nonetheless, ongoing monitoring of site conditions is recommended to ensure that any unforeseen impacts can be identified and addressed if necessary.
- The development has been planned with a conditional lifespan, whereby its continued use is contingent upon the site remaining within a tolerable coastal erosion risk. The structure is not intended to be permanent, nor is it reliant on engineered coastal defences to sustain its function. Instead, the approach adopted is one of managed exposure, where the extension will be decommissioned, relocated, or otherwise adapted once erosion risk exceeds tolerable levels.

P1.2(b) The proposed extension is NOT located on an actively mobile landform.

- No parts of the project land are considered to be within actively mobile landforms.

It is considered that the proposed extension CAN achieve and maintain a tolerable risk and will NOT cause or contribute to any coastal erosion on the site, on adjacent land or public infrastructure, having regard to the components described above.

It is also determined that the proposed extension is NOT located on an actively mobile landform.

This assessment is made based upon the current erosion hazard mapping as of May 2025 and may be subject to change in future.

5.5.6.2 C10.6.2 Coastal Protection works within a coastal erosion hazard area

The proposed extension at the project site is NOT considered to be coastal protection works and this section is NOT APPLICABLE.

5.5.6.3 C10.6.3 Buildings and works within a coastal erosion investigation area

The project land is NOT within a coastal erosion investigation area and this section is NOT APPLICABLE.

5.5.7 C10.7 Subdivision within a coastal erosion hazard area

The project does NOT include subdivision of land, and this section is NOT APPLICABLE.

5.6 Coastal Erosion Conclusions

Coastal Erosion Code 10

- Code C10.5 Use Standards
  - Code C10.5.1 is considered APPLICABLE to the proposed extension
    - An acceptable solution cannot be applied, and performance criteria must be considered
    - It is determined that the use of the proposed extension IS for a use which relies upon a coastal location to fulfill its purpose, as it's use aligns with P1.1(d) 'the need to service a marine or coastal related activity'
    - It is also deemed that any increase in the level of risk from coastal erosion does NOT require any specific hazard reduction or protection measures and the use CAN achieve and maintain a tolerable risk from a coastal erosion event in 2100 for the intended life of the use WITHOUT requiring any specific hazard reduction or protection measures
    - Therefore, it is considered that the use of the proposed extension CAN achieve and maintain a tolerable risk, having regard to the components described in Section 5.5.5.1
  - Code C10.5.2 is considered APPLICABLE to the proposed extension
    - An acceptable solution cannot be applied, and performance criteria must be considered
    - It is determined that the use of the proposed extension CAN achieve and maintain a tolerable risk from coastal erosion, having regard to the components described in Section 5.5.5.2.
  - Code C10.5.3 is considered NOT APPLICABLE to the proposed extension
  - Code C10.5.4 is considered NOT APPLICABLE to the proposed extension
- Code C10.6. Development Standards for Building and Works
  - Code C10.6.1 is considered APPLICABLE to the proposed extension
    - An acceptable solution cannot be applied, and performance criteria must be considered
    - It is determined that the proposed extension CAN achieve and maintain a tolerable risk from coastal erosion WITHOUT requiring any specific hazard reduction or protection measures, having regard to the components described in Section 5.5.6.1
    - It is considered that the proposed extension will NOT cause or contribute to any coastal erosion on the site, on adjacent land or public infrastructure, CAN achieve and maintain a tolerable risk from a coastal erosion event in 2100 for the intended life of the use WITHOUT requiring any specific hazard reduction or protection measures, and is NOT located on an actively mobile landform, having regard to the components described in Section 5.5.6.1
  - Code C10.6.2 is considered NOT APPLICABLE to the proposed extension

- Code C10.6.3 is considered NOT APPLICABLE to the proposed extension

- Code C10.7 Subdivision
  - Code C10.7 is considered NOT APPLICABLE to the proposed extension.

6. Conclusion

The assessment indicates that the proposed extension at 25 Aquaculture Drive, St Helens, Tasmania, falls within the 'medium' and ‘high’ erosion hazard bands.

This report has presented the requirements for assessment of the Erosion hazard code within the planning scheme.

It is determined that the proposed extension CAN address the appropriate performance criteria and achieve and maintain a tolerable risk from coastal erosion, having regard to the appropriate design considerations presented in Section 5.5.

Reference list

ADRKH (2022) ***Quick Guide: Flood emergency planning for special environments*** available from https://knowledge.aidr.org.au/media/10743/qg_fep_6_specialenvironments.pdf

DPAC (2016) ***Mitigating Natural Hazards through Land Use Planning and Building Control - Coastal Hazards Technical Report*** (December 2016) – Department of Premier and Cabinet

McInnes, K. L., White, C. J., Haigh, I. D., Hemer, M. A., Hoeke, R. K., Holbrook, N. J., Kiem, A. S., Oliver, E. C. J., Ranasinghe, R., Walsh, K. J. E., Westra, S. and Cox, R. (2016). **"Natural hazards in Australia: sea level and coastal extremes"**. Climatic Change, pp.1-15.

Sharples, C. (2006) ***"Indicative Mapping of Tasmanian Coastal Vulnerability to Climate Change and Sea Level Rise, 2nd edition",*** DPIW, Tasmania, available from www.dpipwe.tas.gov.au/conservation/climate-change

Sharples, C., Walford, H. and Roberts, L. (2013) ***Tasmanian Coastal Erosion Hazard Bands Map, version 1***. Hobart: Tasmanian Department of Primary Industries, Parks, Water and Environment & Tasmanian Department of Premier & Cabinet

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Supplementary Figures

Appendix A

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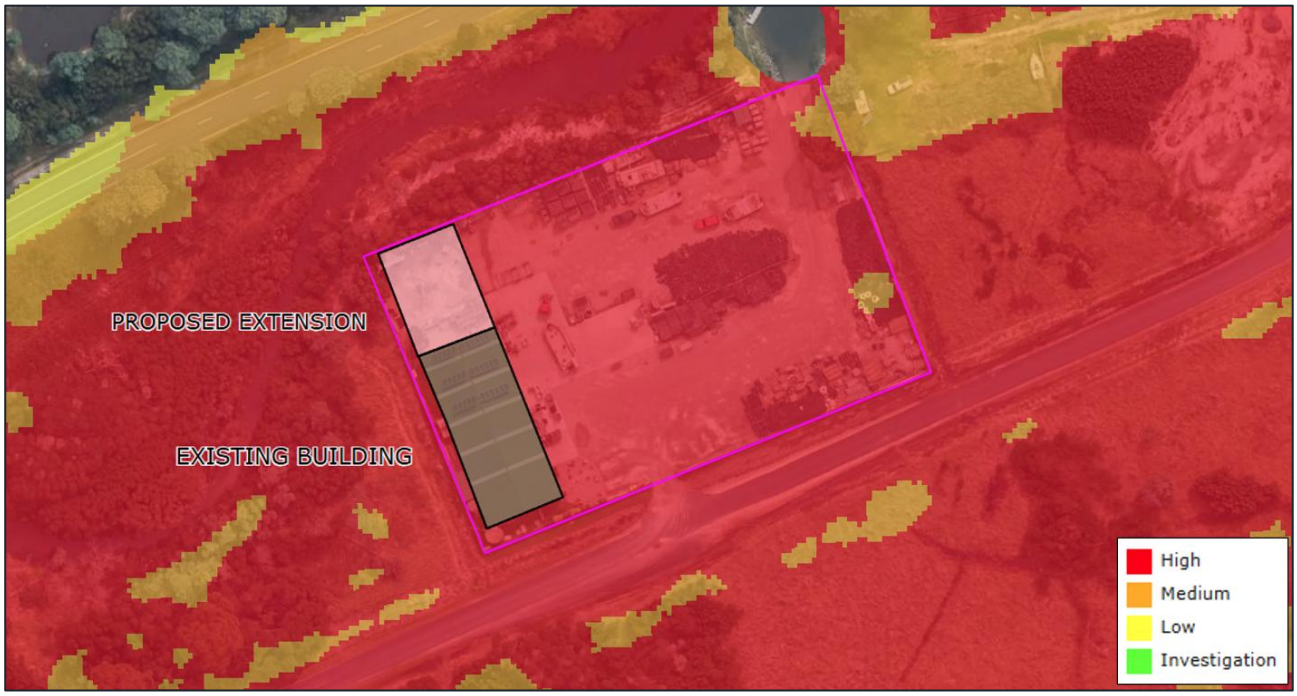

Figure 7: Aerial Image of Coastal Inundation Hazard Bands at the site. Data source: The LISTmap.

Figure 8: Aerial Image of Future Coastal Refugia Areas near the site. Data source: The LISTmap.

Figure 9: Aerial Image of Waterway and Coastal Protection Areas near the site. Data source: The LISTmap.

Figure 10: Aerial Image of the 1% AEP Flood Depths at the site. Data source: The LISTmap.

Figure 11: Aerial Image of the 1% AEP + Climate Change Flood Depths at the site. Data source: The LISTmap.

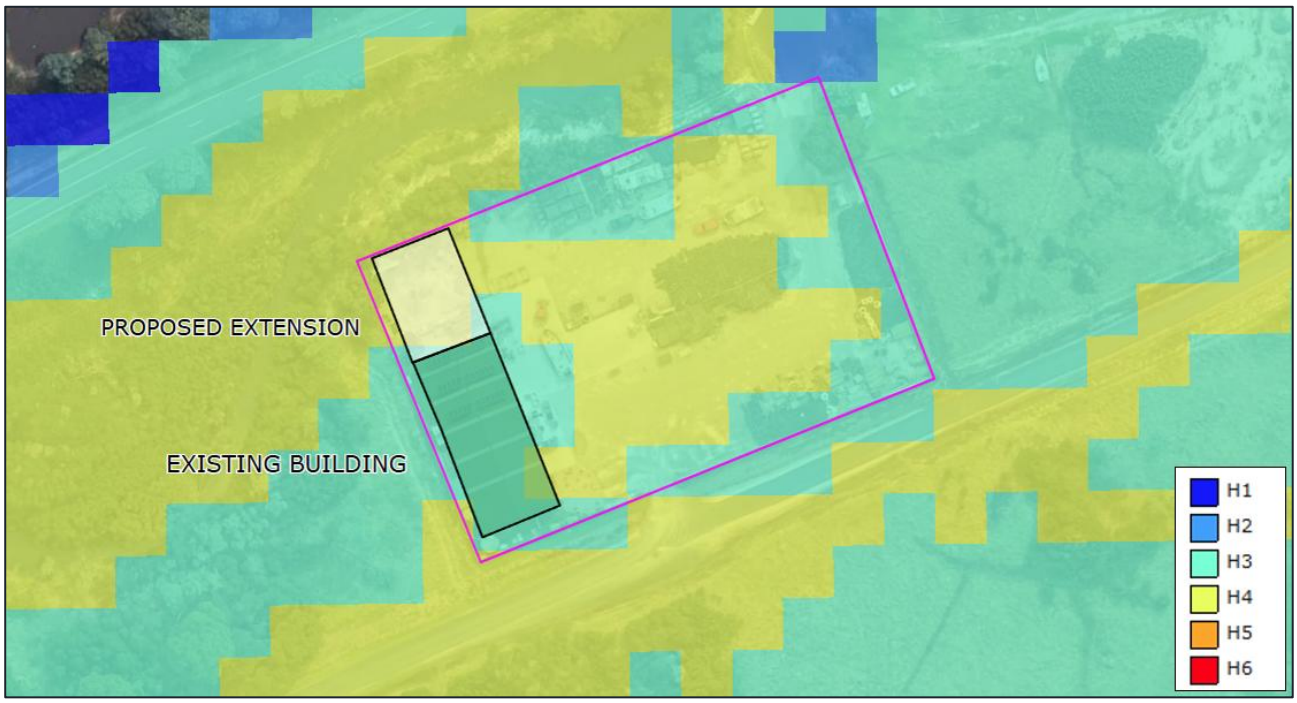

Figure 12: Aerial Image of the 1% AEP Flood Hazards at the site. Data source: The LISTmap.

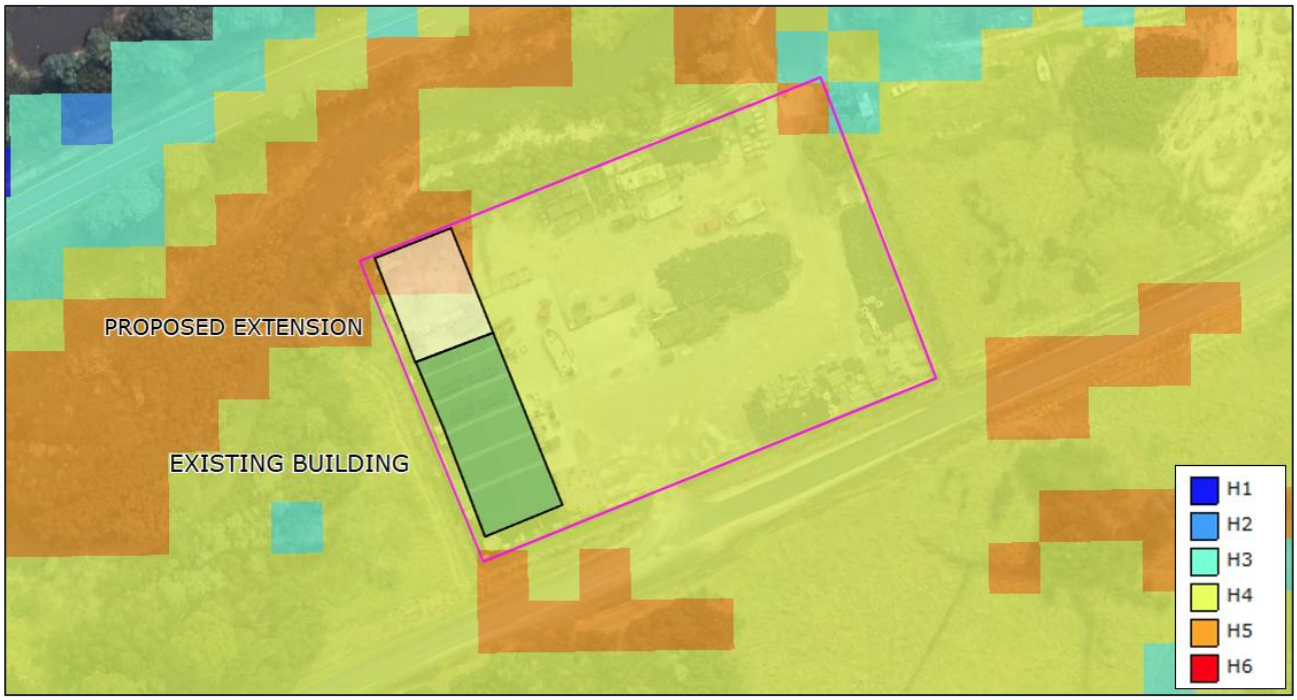

Figure 13: Aerial Image of the 1% AEP + Climate Change Flood Hazards at the site. Data source: The LISTmap.

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25 Aquaculture Drive, St Helens

Coastal Erosion Hazard Report

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