21st May 2025

Resource Consents Team
Far North District Council
Private Bag 752
Kaikohe 0440

Attention Team Leader Resource Consents

RESOURCE CONSENT APPLICATION BY JOHN SILICH TO UNDERTAKE MINOR ALTERATIONS TO AN EXISTING DWELLING AND CONSTRUCT A GARAGE AT 23 KOTARE STREET, AHIPARA.

Zenith Planning Consultants have been engaged by John Silich to prepare a resource consent application for extensions and alterations to an existing dwelling and to construct a garage. The property is located within coastal hazard overlays and the proposed garage is also located within the road setback.

I have attached the following information in support of the application:

- Completed Application Form
- Planning Report and Assessment of Effects
- Plans and information for the dwelling extensions and new dwelling
- Current Certificates of Title
- Geotech Report
- Coastal Hazards Report

The has already paid the application fee online using the reference Silich RC.

Should you have any queries in respect to this application please contact me.

Yours faithfully

Wayne Smith
Zenith Planning Consultants Ltd
Principal | Director
BPlan | BSocSci | MNZPI
wayne@zenithplanning.co.nz
mob: +64 (0) 21 202 3898

Te Kaunihera o Te Hiku o te Ika
Far North District Council

Office Use Only
Application Number:

Application for resource consent or fast-track resource consent

(Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA)) (If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of Schedule 4). Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges — both available on the Council's web page.

1. Pre-Lodgement Meeting

Have you met with a council Resource Consent representative to discuss this application prior to lodgement? ◯ **Yes** ✔ **No**

2. Type of Consent being applied for

(more than one circle can be ticked):

- ✔ **Land Use**
- ◯ **Fast Track Land Use***
- ◯ **Subdivision**
- ◯ **Consent under National Environmental Standard** (e.g. Assessing and Managing Contaminants in Soil)
- ◯ **Discharge**
- ◯ **Change of Consent Notice (s.221(3))**
- ◯ **Extension of time (s.125)**
- ◯ **Other (please specify)** _____

The fast track is for simple land use consents and is restricted to consents with a controlled activity status.

3. Would you like to opt out of the Fast Track Process?

✔ **Yes** ◯ **No**

4. Consultation

Have you consulted with Iwi/Hapū? ◯ **Yes** ✔ **No**

If yes, which groups have you consulted with?	
Who else have you consulted with?	

*For any questions or information regarding iwi/hapū consultation, please contact Te Hono at Far North District Council **tehonosupport@fndc.govt.nz***

5. Applicant Details

Name/s: John Silich

Email: [redacted]

Phone number: [redacted]

Postal address:
(or alternative method of service under section 352 of the act) [redacted]

6. Address for Correspondence

Name and address for service and correspondence (if using an Agent write their details here)

Name/s: Zenith Planning Consultants Limited - Att. Wayne Smith

Email: [redacted]

Phone number: [redacted]

Postal address:
(or alternative method of service under section 352 of the act) [redacted]

**** All correspondence will be sent by email in the first instance. Please advise us if you would prefer an alternative means of communication.***

7. Details of Property Owner/s and Occupier/s

Name and Address of the Owner/Occupiers of the land to which this application relates (where there are multiple owners or occupiers please list on a separate sheet if required)

Name/s: John Silich

Property Address/ Location: 23 Kotare Street Ahipara

Postcode

8. Application Site Details

Location and/or property street address of the proposed activity:

Name/s:

Site Address/ Location: 23 Kotare Street, Ahipara

Postcode

Legal Description: Lot 15 DP 46532 **Val Number:**

Certificate of title: NA 1662/34

Please remember to attach a copy of your Certificate of Title to the application, along with relevant consent notices and/or easements and encumbrances (search copy must be less than 6 months old)

Site visit requirements:

Is there a locked gate or security system restricting access by Council staff? ◯ **Yes** ✔ **No**

Is there a dog on the property? ◯ **Yes** ✔ **No**

Please provide details of any other entry restrictions that Council staff should be aware of, e.g. health and safety, caretaker's details. This is important to avoid a wasted trip and having to re-arrange a second visit.

Nil

9. Description of the Proposal:

Please enter a brief description of the proposal here. Please refer to Chapter 4 of the District Plan, and Guidance Notes, for further details of information requirements.

To undertake extensions and alterations to an existing dwelling and to construct a new garage being located within Coastal hazards 2 area and road setback (garage).

If this is an application for a Change or Cancellation of Consent Notice conditions (s.221(3)), please quote relevant existing Resource Consents and Consent Notice identifiers and provide details of the change(s), with reasons for requesting them.

10. Would you like to request Public Notification?

◯ **Yes** ✔ **No**

11. Other Consent required/being applied for under different legislation

(more than one circle can be ticked):

- [x] **Building Consent** Enter BC ref # here (if known)
- [ ] **Regional Council Consent (ref # if known)** Ref # here (if known)
- [ ] **National Environmental Standard consent** Consent here (if known)
- [ ] **Other (please specify)** Specify 'other' here

12. National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health:

The site and proposal may be subject to the above NES. In order to determine whether regard needs to be had to the NES please answer the following:

Is the piece of land currently being used or has it historically ever been used for an activity or industry on the Hazardous Industries and Activities List (HAIL) ◯ **Yes** ✔ **No** ◯ **Don't know**

Is the proposed activity an activity covered by the NES? Please tick if any of the following apply to your proposal, as the NESCS may apply as a result. ◯ **Yes** ✔ **No** ◯ **Don't know**

- [ ] **Subdividing land**
- [ ] **Changing the use of a piece of land**
- [ ] **Disturbing, removing or sampling soil**
- [ ] **Removing or replacing a fuel storage system**

13. Assessment of Environmental Effects:

Every application for resource consent must be accompanied by an Assessment of Environmental Effects (AEE). This is a requirement of Schedule 4 of the Resource Management Act 1991 and an application can be rejected if an adequate AEE is not provided. The information in an AEE must be specified in sufficient detail to satisfy the purpose for which it is required. Your AEE may include additional information such as Written Approvals from adjoining property owners, or affected parties.

Your AEE is attached to this application ✔ **Yes**

13. Draft Conditions:

Do you wish to see the draft conditions prior to the release of the resource consent decision? ● **Yes** ◯ **No**

If yes, do you agree to extend the processing timeframe pursuant to Section 37 of the Resource Management Act by 5 working days? ✔ **Yes** ◯ **No**

14. Billing Details:

This identifies the person or entity that will be responsible for paying any invoices or receiving any refunds associated with processing this resource consent. Please also refer to Council's Fees and Charges Schedule.

Name/s: (please write in full)	As attached	
Email:		
Phone number:	Work	Home
Postal address: (or alternative method of service under section 352 of the act)		Postcode

Fees Information

An instalment fee for processing this application is payable at the time of lodgement and must accompany your application in order for it to be lodged. Please note that if the instalment fee is insufficient to cover the actual and reasonable costs of work undertaken to process the application you will be required to pay any additional costs. Invoiced amounts are payable by the 20th of the month following invoice date. You may also be required to make additional payments if your application requires notification.

Declaration concerning Payment of Fees

I/we understand that the Council may charge me/us for all costs actually and reasonably incurred in processing this application. Subject to my/our rights under Sections 357B and 358 of the RMA, to object to any costs, I/we undertake to pay all and future processing costs incurred by the Council. Without limiting the Far North District Council's legal rights if any steps (including the use of debt collection agencies) are necessary to recover unpaid processing costs I/we agree to pay all costs of recovering those processing costs. If this application is made on behalf of a trust (private or family), a society (incorporated or unincorporated) or a company in signing this application I/we are binding the trust, society or company to pay all the above costs and guaranteeing to pay all the above costs in my/our personal capacity.

Name: (please write in full)		
Signature: (signature of bill payer		Date

MANDATORY

15. Important Information:

Note to applicant

You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.

You may apply for 2 or more resource consents that are needed for the same activity on the same form.

You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

Fast-track application

Under the fast-track resource consent process, notice of the decision must be given within 10 working days after the date the application was first lodged with the authority, unless the applicant opts out of that process at the time of lodgement. A fast-track application may cease to be a fast-track application under section 87AAC(2) of the RMA.

Privacy Information:

Once this application is lodged with the Council it becomes public information. Please advise Council if there is sensitive information in the proposal. The information you have provided on this form is required so that your application for consent pursuant to the Resource Management Act 1991 can be processed under that Act. The information will be stored on a public register and held by the Far North District Council. The details of your application may also be made available to the public on the Council's website, www.fndc.govt.nz. These details are collected to inform the general public and community groups about all consents which have been issued through the Far North District Council.

15. Important information continued...

Declaration

The information I have supplied with this application is true and complete to the best of my knowledge.

Name: **(please write in full)** Wayne Smith

Signature:

Date 21-May-2025

A signature is not required if the application is made by electronic means

Checklist (please tick if information is provided)

- [x] Payment (cheques payable to Far North District Council)
- [x] A current Certificate of Title (Search Copy not more than 6 months old)
- [ ] Details of your consultation with Iwi and hapū
- [ ] Copies of any listed encumbrances, easements and/or consent notices relevant to the application
- [x] Applicant / Agent / Property Owner / Bill Payer details provided
- [x] Location of property and description of proposal
- [x] Assessment of Environmental Effects
- [ ] Written Approvals / correspondence from consulted parties
- [x] Reports from technical experts (if required)
- [ ] Copies of other relevant consents associated with this application
- [x] Location and Site plans (land use) AND/OR
- [ ] Location and Scheme Plan (subdivision)
- [x] Elevations / Floor plans
- [x] Topographical / contour plans

Please refer to Chapter 4 of the District Plan for details of the information that must be provided with an application. Please also refer to the RC Checklist available on the Council's website. This contains more helpful hints as to what information needs to be shown on plans.

14. Billing Details:

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Name/s: (please write in full)

Email:

Phone number:

Postal address:
(or alternative method of service under section 352 of the act)

[redacted]

Fees Information
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Name: (please write in full) John Alan Silich

Signature:
(signature of bill payer)

[redacted]

Date 17-May-2025

MANDATORY

15. Important Information:

Note to applicant
You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.
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ZENITH
Planning Consultants Ltd

Planning Report and Assessment of Effects

John Silich

To Undertake Extensions and Alterations to an Existing Dwelling and to Construct a new Garage within a Coastal Hazard and Road Setback

23 Kotare Street, Ahipara

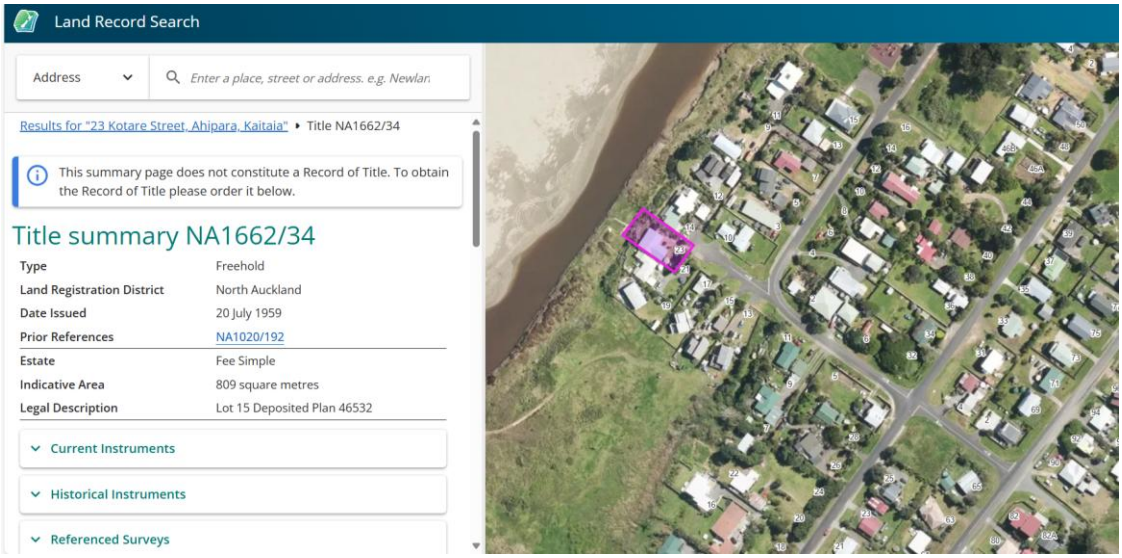
PLANNING REPORT AND ASSESSMENT OF EFFECTS

1.0 Application Description and Project Background

1.01 Our client John Silich seeks resource consent to undertake extensions and alterations to an existing dwelling and to construct a new garage at his property at 23 Kotare Street, Ahipara. The proposed works covered by this application are located within a Coastal Hazard notation and the garage is also proposed to be located within the road setback. The proposal will be assessed against the respective rules of the operative district plan to confirm the areas of non-compliance. Consideration of the proposed district plan is also made for those provisions which have immediate legal effect.

1.02 The application site is located at 23 Kotare Street, Ahipara and is a relatively flat section fronting onto Ninety Mile beach. The dwelling sites on a small rise above the road level and well above the land level on Ninety Mile beach. The property is accessed directly off Kotare Street at the western end and which stops at the application site. There are a number of properties fronting onto Ninety Mile Beach which have access off both Kotare Street and Korora Street which runs parallel with the coast.

1.03 The site contains an existing dwelling which is centrally located within the site. The site contains limited landscaping but is partially screened by mature palm trees located along the road frontage. The following aerial details the pattern of development in Ahipara and which is typical of small coastal settlements within the Far North.



The application site located on the western stub end of Kotare Street. The site is located amongst other residential properties fronting on to Ninety Mile beach.

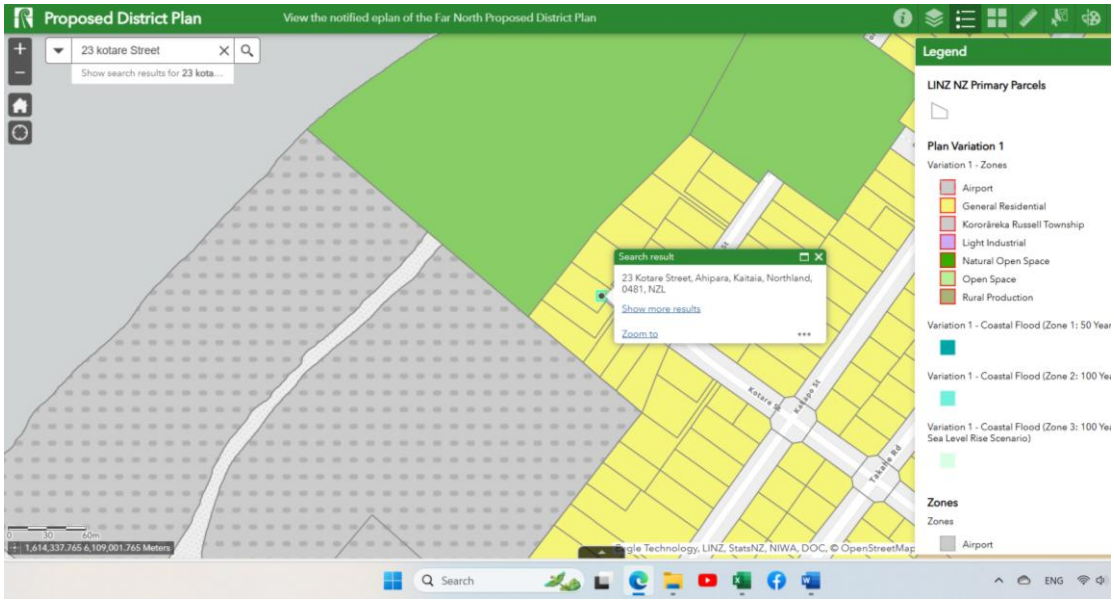
A view from the end of Kotare Street. The location of both the new garage (grassed area on the left of the driveway) and extensions to the house are visible in this photo. The legal road ceases at the end of the seal as illustrated.

1.04 The application site has a legal description of Lot 15 DP 46532 and is zoned Residential under the operative Far North District Plan. The site also has Coastal Hazard notations which apply to the site.

The property is zoned Residential (beige colour) in the Operative District Plan.

The site has coastal hazard notations which apply to the site. The coastal hazards are located to the left of the dashed lines as illustrated above. Coastal Hazard 2 encompasses the entire site while the Coastal Hazard 1 applies to the seaward half of the site.

1.05 The application site is also subject to the Proposed Far North District Plan which was publicly notified on the 27th July 2022 with submissions having closed on the 21st October 2022. Further submissions were sought and all submissions have been summarised by Council. The proposed plan has progressed with hearings currently being held and which are expected to conclude in late 2025.



The property is zoned General Residential under the Proposed District Plan

1.06 The majority of rules within in the Proposed District Plan do not have any legal effect until such time as Council publicly notifies its decisions on submissions. To date, there have been no interim decisions made around rules or other relevant matters which have any influence on resource consent applications.

1.07 There are however certain rules that have been identified within the proposed plan which have immediate legal effect and that need to be considered in assessing all applications. Such rules may affect the activity status of the required application. These will be commended on later within this report.

The Coastal Environment Overlay applies to the site and all neighbouring properties as well.

1.08 The application site is wholly located within the Coastal Environment overlay as noted above. A quick perusal of the submissions received for the Proposed District Plan suggest that there were no submissions which applied directly to the application site.

The coastal erosion lines apply to the site although the site is not subject to coastal flooding.

1.09 There have been submissions made to several of the zoning rules, coastal environment, and the hazard sections with final provisions be determined following the hearings process, deliberations, and then decisions. The notations applicable will likely remain

with the rule thresholds for these overlays and the zone rules themselves still to be considered as part of the future district plan process.

2 ASSESSMENT OF RULES UNDER THE FAR NORTH OPERATIVE DISTRICT PLAN

2.01 The proposal has been assessed against the zone rules and the district wide provisions which apply to the site. The proposal comprises two components which are assessed collectively for the purposes of this application. The proposal involves minor alterations and extensions to the existing dwelling and the construction of a new garage as detailed within the attached plans and supporting information.

2.02 For the purposes of completeness, the project involves only minor vegetation removal (modest garden) to accommodate the house extensions and minor earthworks for the garage foundations. There are no intended changes to the use of the dwelling for residential purposes.

RESIDENTIAL ZONE RULES – OPERATIVE DISTRICT PLAN

RULE	ASSESSMENT
7.6.5.1.1 RELOCATED BUILDINGS Buildings are permitted activities provided that they comply with all the standards for permitted activities in the Plan, and further provided that where the building is a relocated building all work required to reinstate the exterior including painting and repair of joinery shall be completed within six months of the building being delivered to the site. Reinstatement work is to include connections to all infrastructure services and closing in and ventilation of the foundations.	The proposed activity does not involve relocated buildings. Permitted
7.6.5.1.2 RESIDENTIAL INTENSITY (a) Each residential unit for a single household shall have available to it a minimum net site area of: Sewered sites: 600m² Unsewered sites: 3,000m²	The extensions and new garage do not change the residential use of the site Permitted
7.6.5.1.3 SCALE OF ACTIVITIES The total number of people engaged at any one period of time in activities on a site, including employees and persons making use of any facilities, but excluding people who normally reside on the site or are members of the household shall not exceed: 2 persons per 600m² (sewered) 2 persons per 3,000m² (unsewered) None of the exceptions or exemptions apply	Not applicable as no commercial use is proposed
7.6.5.1.4 BUILDING HEIGHT The maximum height of any building shall be 8m.	The proposed extensions and garage comfortably comply with the maximum height requirement. Permitted
7.6.5.1.5 SUNLIGHT No part of any building shall project beyond a 45 degree recession plane as measured inwards from any point 2m vertically above ground level on any site	The garage location and design has been completed to comply with the sunlight rule. The extensions to the dwelling are centrally located within the site.

boundary (refer to definition of Recession Plane in Chapter 3 - Definitions), except that: ……	Permitted
7.6.5.1.6 STORMWATER MANAGEMENT The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 50%.	The extent of impermeable surfaces complies with the proposed and existing impermeable surfaces equating to 46.71% of the site which is below the permitted allowance. Permitted
7.6.5.1.7 SET BACK FROM BOUNDARIES (a) The minimum building setback from road boundaries shall be 3m, except that; (i) no building shall be erected within 9m of any road boundary with Kerikeri Road on properties with a road frontage with Kerikeri Road between its intersection with SH10 and Cannon Drive; and (b) The minimum set-back from any boundary other than a road boundary, on all sites other than Lot 1 DP 28017, Lot 1 DP 46656, Lot 1 DP 404507, and Lot 1 DP 181291, Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333 and Pt Lot 1 DP 58333 (and any sites created as a result of a subdivision of these lots), shall be 1.2m except that no set-back is required for a maximum total length of 10m along any one such boundary; and (c) Not less than 50% of that part of the site between the road boundary and a parallel line 2m there from (i.e. a 2m wide planting strip along the road boundary) shall be landscaped, on all sites other than Lot 1 DP 28017, Lot 1 DP 46656, Lot 1 DP 404507, and Lot 1 DP 181291, Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333 and Pt Lot 1 DP 58333 (and any sites created as a result of a subdivision of these lots).	The proposed extensions and alterations and the new garage are located in compliance with all setback from boundary requirements, except for road. The proposed garage is to be located 2.57m from the legal road and not the required 3m. There is some existing screening which exists but does not meet the required depth of 2m as stated within the rule. Restricted Discretionary
7.6.5.1.8 SCREENING FOR NEIGHBOURS - NON-RESIDENTIAL ACTIVITIES Except along boundaries adjoining a Commercial or Industrial zone, outdoor areas providing for activities such as parking, loading, outdoor storage and other outdoor activities associated with non-residential activities on the site shall be screened from adjoining sites by landscaping, wall/s, close boarded fence/s or trellis/es or a combination thereof. They shall be of a height sufficient to wholly or substantially separate these areas from the view of neighbouring properties. Structures shall be at least 1.8m in height, but no higher than 2.0m, along the length of the outdoor area. Where such screening is by way of landscaping it shall be a strip of vegetation which has or will attain a minimum height of 1.8m for a minimum depth of 2m.	Not applicable
7.6.5.1.9 OUTDOOR ACTIVITIES Except as otherwise provided by Rule 7.6.5.1.10, any activity may be carried out outside except that any commercial non-residential activity involving manufacturing, altering, repairing, dismantling or processing of any materials, live produce, goods or articles shall be carried out within a building.	No non-residential activities are proposed to be undertaken outdoors
7.6.5.1.10 VISUAL AMENITY These provisions do not apply to the application site.	Not applicable
7.6.5.1.11 TRANSPORTATION Refer to Chapter 15 – Transportation for Traffic, Parking and Access rules.	See below

7.6.5.1.12 SITE INTENSITY - NON-RESIDENTIAL ACTIVITIES (a) except as provided in (b) hereunder, the maximum net area of activities other than residential units on any site shall be 1,000m² for sewered sites, and 5,000m² for unsewered sites, except that this area may be exceeded for public reserves without buildings; ….	Not applicable
7.6.5.1.13 HOURS OF OPERATION - NON-RESIDENTIAL ACTIVITIES (a) the maximum number of hours the activity shall be open to visitors, clients or deliveries shall be 50 hours per week; and (b) hours of operation shall be limited to between the hours: 0700 - 2000 Monday to Friday 0800 - 2000 Saturday, Sunday and Public Holidays Provided that this rule does not apply: (i) where the entire activity is located within a building; and (ii) where each person engaged in the activity outside the above hours resides permanently on the site; and (iii) where there are no visitors, clients or deliveries to or from the site outside the above hours. Exemptions: This rule does not apply to activities that have a predominantly residential function such as lodges, motels and homestays.	Not applicable as the site is for residential purposes.
7.6.5.1.14 KEEPING OF ANIMALS No site shall be used for factory farming, a boarding or breeding kennel or a cattery.	Not applicable
7.6.5.1.15 NOISE All activities shall be conducted so as to ensure that noise from the site shall not exceed the following noise limits as measured at or within the boundary of any other site in this zone, or at or within the notional boundary of any dwelling in a rural or coastal zone: 0700 to 2200 hours 50 dBA L10 2200 to 0700 hours 45 dBA L10 and 70 dBA Lmax Noise Measurement and Assessment: Sound levels shall be measured in accordance with NZS 6801:1991 “Measurement of Sound” and assessed in accordance with NZS 6802:1991 “Assessment of Environmental Sound”. The notional boundary is defined in NZS 6802:1991 “Assessment of Environmental Sound” as a line 20m from any part of any dwelling or the legal boundary where this is closer to the dwelling. Construction Noise: Construction noise shall meet the limits recommended in, and shall be measured and assessed in accordance with, NZS 6803P:1984 “The Measurement and Assessment of Noise from Construction, Maintenance and Demolition Work”.	The residential use of the site will not breach this provision. Any noise associated with the construction phase of the dwelling extensions, new garage and internal renovations, will comply with construction noise limitations as noted within the rules. Permitted
7.6.5.1.16 HELICOPTER LANDING AREA Helicopter landing areas are not permitted.	Not applicable
7.6.5.1.17 BUILDING COVERAGE Any new building or alteration/addition to an existing building is a permitted activity if the total Building Coverage of a site does not exceed 45% of the gross site area.	The building coverage for existing and proposed works equates to 29.64% and comfortably complies with the building coverage allowance. Permitted

DISTRICT WIDE PROVISIONS – OPERATIVE DISTRICT PLAN

2.03 As noted earlier within this report the site is located within both hazard 1 and 2 areas. The following rules relate to extensions and alterations of new buildings.

12.4.6.1.1 COASTAL HAZARD 2 AREAS

On land identified on the Coastal Hazard maps (Maps CH 1 - 17) as lying within a Coastal Hazard 2 Area, excavation and filling, and alterations to existing buildings/ structures, may be carried out as a permitted activity if they are associated with:

- *(a) the maintenance of flood protection works or existing drains, buildings/structures; or*
- *(b) the establishment, repair or replacement of any permitted utilities; or*
- *(c) the erection of fences; or*
- *(d) the planting of trees and plants.*

Provided that, in the case of buildings/structures, no changes are made to the external dimensions.

Note: The erection of new buildings/structures, and alterations and additions to existing buildings/structures that increase the external dimensions, are controlled activities in Coastal Hazard 2 Areas (refer to Rule 12.4.6.2.1).

The proposed works do not fall within the scope of this provision for permitted works and on this basis a Resource Consent is required.

2.04 The following rule applies to the half of the site closest to the road access and which falls within the Coastal Hazard 2 notation. It is noted that under this application, no works are proposed which results in external changes to the footprint of the existing dwelling within the Coastal 1 notation. The extent of the proposed works falls wholly within the Coastal Hazard 2 Area.

12.4.6.2.1 NEW BUILDINGS & ADDITIONS TO EXISTING BUILDINGS IN COASTAL HAZARD 2 AREAS

The erection of new buildings/structures and additions to existing buildings/ structures that increase the external dimensions, on land identified on the Coastal Hazard maps (Maps CH 1-17) as lying within a Coastal Hazard 2 Area, are controlled activities provided a report from a person suitably qualified in coastal processes is lodged with the Council in respect of the proposed development. In order for the activity to be regarded as a controlled activity, the report shall specify that the design of the new building/structure or addition will not increase the risk to people, property or the environment.

Note: If no report is provided with the application, or if the report cannot state that the design of the new building/structure or addition will not increase the risk to people, property or the environment, then the activity becomes a discretionary activity, under Rule 12.4.6.3 below.

In considering an application under this provision the Council will restrict the exercise of its control to the following matters:

- *(a) the adequacy of the design in light of the environmental risks;*
- *(b) the measures proposed to mitigate adverse effects of the proposed development.*

2.05 The proposed extensions to the dwelling and the new garage/ shed are located within the Coastal 2 Zone area. The supporting coastal hazards assessment relating to the

coastal hazard has been provided. This reports not only focuses on the entire site but specifically the works under this application, the potential risks and offers recommended mitigation measures.

2.06 With a report being provided the application is assessed as a Controlled Activity. There is an assessment criteria, provided within this rule, which details the matters to be addressed as part of the coastal hazards report. Council shall grant resource consent for a controlled activity and conditions can be imposed as part of the decision. Some of the recommendations will have immediate and future obligations and depend on whether the hazard changes as a result of an adverse weather event or a coastal process.

2.07 With no proposed works to be completed on the seaward side of the site which falls within the Coastal Hazard 1 area, rule 12.4.6.3.1 is not applicable to this proposal.

2.08 The road setback breach is a Restricted Discretionary Activity and the proposed works within a Coastal Hazard 2 Area (which has a coastal hazard assessment provided) is a Controlled Activity.

The application overall is assessed as being a **Restricted Discretionary Activity**.

PROPOSED DISTRICT PLAN

2.09 As previously noted, the majority of rules within the Proposed District Plan do not have legal effect until such time as Council publicly notifies its decisions on submissions following hearings and deliberations. There are however certain rules that have been identified in the proposed plan which have immediate legal effect and that may therefore apply. These rules are clearly identified and need to be considered in assessing this application. Such rules may affect the activity status of the application.

2.10 The rules with immediate legal effect related to hazardous substances, scheduled sites or areas of significance to Maori, significant natural areas, and a scheduled heritage resource. None of these apply as none of these aspects are applicable to the location or the activity proposed. Additionally, Heritage Area Overlays, historic heritage rules, Excavation and Filling, and Notable Trees are also not applicable.

2.11 Although there are a number of provisions concerning coastal hazards and related policies and objectives, these provisions have been challenged via submission and are could be subject to change. The additional component which could change are the mapped areas subject to these hazard notations. However, given the application site has always been subject to coastal hazards it seems unlikely that this would result in any changes. It is contended that although the proposed plan is not applicable for this proposal, that the plan offers suitable assessment criteria which is consistent with the matters addressed within the Coastal Hazard Assessment completed to support this application.

2.12 On this basis no resource consent is required under the Proposed District Plan.

3.0 APPLICATION SITE

3.01 The site is a residential property located within a coastal settlement of Ahipara and which which fronts on to Ninety Mile beach. The site as noted earlier is occupied by a dwelling and has modest landscaping. The building orientation focuses on the extensive coastal views from deck on the western side of the dwelling. Outdoor living space is located in this western half of the property.

3.02 The site is flat but elevated above the legal road and the beach. The property is similar in terms of house location and house type to neighbouring properties although the dwelling is single level.

The Existing Environment

3.03 The existing environment is a coastal residential settlement with a range of housing types and occupancies. Some of the houses are lived in permanently while there are a number which are holiday homes. It is probable that some dwellings are used for holiday accommodation through agencies such as “book a bach”. The coastal settlement is serviced by local small scaled shops with most people travelling to Kaitaia as their regular service town.

3.04 The coastal hazard notation has been noted for a substantial period of time within current and past district plans with rules designed to ensure that the potential risks are noted and provided for. The entire extent of waterfront properties within this locality are subject to the identified coastal hazards but there appears to be little visible evidence of recent coastal erosion when walking along the seaward sides of the sites.

3.05 The proposed extensions and alterations to the dwelling and the new garage are not visible from the coastal marine area. The coastal marine area cannot be seen from Kotare Street. The view of the site from the road appears like any urban settlement as illustrated in the earlier photo.

3.06 The proposed works are partially screened by existing vegetation but the site is a small stub end of Kotare Street with limited visual catchment and traffic limited to residents immediately adjacent to the site. There is no passing traffic.

3.07 The existing environment is an important consideration because of the site is not different from those adjoining with the potential development not being out of character for this location.

Permitted Baseline

3.08 Pursuant to section 104(2), when forming an opinion for the purposes of section 104(1)(a) a council may disregard an adverse effect of the activity on the environment if the plan or a NES permits an activity with that effect (i.e. a council may consider the "permitted baseline").

3.09 The permitted baseline refers to permitted activities on the subject site and the existing environment for which resource consent has been secured. The extent of permitted activities is limited to those works detailed for the coastal hazard listed as follows:

- *the maintenance of flood protection works or existing drains, buildings/structures; or*
- *the establishment, repair or replacement of any permitted utilities; or*
- *the erection of fences; or*
- *the planting of trees and plants.*

3.10 All new buildings and proposed extension and alterations (which extend the footprint) to existing buildings, within the Coastal 2 Hazard area, are not permitted. These proposed works are considered as a Controlled activity and there is a high expectation that resource consent would be granted on the basis of a favourable coastal hazard assessment.

3.11 Buildings setback the required 3m is not substantially more than the 2.57m sought under this application. The breach is noted but in the context of the immediate area, the location would not be out of character or inconsistent with the immediate area. The variance between that proposed and that permitted is negligible in this context.

3.12 Although none of the proposed works could be completed without resource consent the permitted baseline would not be ordinarily a material consideration. However, the difference between compliance with road setback and that which is proposed (and in the context of the location) is minimal. Furthermore, with the coastal hazard assessment completed, the risk remains low and the consent for works within this the Coastal Hazard 2 are a controlled activity which shall be granted consent.

3.13 The Permitted Baseline is an important consideration in this context not withstanding consenting requirements.

ASSESSMENT OF EFFECTS

4.01 The application is required to be considered as a Restricted Discretionary Activity with the road setback triggering this activity status. As a controlled activity for the proposed works within a Coastal Hazard 2, there is a brief commentary on this aspect with a heavy reliance placed on the coastal hazards report.

Road Setback

4.02 In assessing an application resulting from a breach of Rule 7.6.5.1.7 (Setback from Boundaries) the matters to which the Council will restrict its discretion are as follows. For each consideration which is relevant a commentary is provided.

(a) the extent to which the proposal is in keeping with the existing character and form of the street or road, in particular with the external scale, proportions and buildings on the site and on adjacent sites;

4.03 The proposed garage is a modest scaled building located behind some existing large palm trees. The building will be tucked behind these palms and although not offering full screening of the building does break up the building and maintain the local amenity.

4.04 The garage is not considered to be out of character with similar buildings located within this location and is not disproportionately sized in relation to the existing dwelling.

4.05 Kotare Street in this location is a stub road and stops at the boundary with the application site. This circumstance does not offer a typical through road perspective. Except for those persons who visit the application site or the neighbouring properties, the structure would not be clearly visible from where most traffic travels (Korora Street) and other parts of Kotare Street which link with other neighbouring streets.

4.06 The building complies with other boundary setbacks and importantly complies with the sunlight provisions. These two areas of compliance (which could impact on neighbours) are not relevant and therefore it is only the proposed garage in relation to the end of the stub road that need be considered.

4.07 The proposed garage is considered to not impact on the immediate area and does not impact in an adverse manner on road users of the immediate neighourhood. Effects are considered to be less than minor.

(b) the extent to which the building(s) intrudes into the street scene or reduces outlook and privacy of adjacent properties;

4.08 The proposed garage is located behind some existing palm trees which offer partial screening of the building from the road. It is not considered that the building will have any adverse effect on the immediate street scene. When considering outlook and privacy with respect to adjacent properties, it is important to note that compliance with the required setbacks from other boundaries and sunlight provisions are complied with.

4.09 As a general observation, the orientation of all sites (with their open space and privacy) is towards Ninety Mile beach and not within the front yards of these properties and towards Kotare Street.

4.10 The effects on the street scene are considered to be less than minor.

(c) the extent to which the buildings restrict visibility for vehicle manoeuvring;

4.11 The proposed garage location will not affect any visibility when exiting the site especially as the road stops at the application site and there is no passing traffic.

4.12 With respect to onsite manoeuvring, the garage location will require some minor widening of the driveway as illustrated and occupy space used for informal parking. The garage will off some storage space for a vehicle or boat (as required) but will not impact on onsite manoeuvring. The no exit road means that reversing onto Kotare Street would be safe and not interfere in traffic flow or other road users in this location.

4.13 The effects are less than minor.

(d) the ability to mitigate any adverse effects on the surrounding environment, for example by way of street planting;

4.14 The proposal does not generate or create an adverse effect on the receiving environment and it is contended that additional plantings along the road boundary need not occur. The existing palm trees does offer some partial screening but it is contended that additional plantings are not required.

4.15 Additional plantings undertaken are considered to be unnecessary and not contribute any significant improvement to local amenity or character. The degree of non-compliance with road setback is minimal and when combined with the modest scale of the building, results in less than minor effects on the immediate locality. There is a presumption that built form is appropriate within a Residential zoning and therefore screening of the building need only be applied, where there is an effect required to be mitigated. In this instance no further mitigation is considered to be required or imposed.

4.16 Additional landscaping is not considered necessary in this instance with effects concluded as being less than minor.

(e) for Lot 1 DP 28017, Lot 1 DP 46656, Lot 1 DP 404507, and Lot 1 DP 181291, Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333 and Pt Lot 1 DP 58333 (and any sites created as a result of a subdivision of these lots) and sites having frontage with Kerikeri Road between its intersection with SH10 and Cannon Drive:
(i) the scale of the buildings;
(ii) the extent of setback from Kerikeri Road and Cobham Road;
(iii) the visual appearance of the site from the Kerikeri Road and Cobham Road frontage;
(iv) the extent to which the building(s) are in harmony with landscape plantings and shelter belts;

Not applicable

(e) the extent to which the buildings and their use will impact on the public use and enjoyment of adjoining esplanade reserves and strips and adjacent coastal marine areas.

Not applicable

4.17 The potential effects resulting from a breach of the road setback rule is considered to be less than minor. It is further contended that no further mitigation is required as effects are less than minor.

Coastal Hazards

4.18 The Coastal Hazard 2 provisions note that where a coastal hazards assessment has been undertaken that any buildings shall be considered as a controlled activity. The report would need to satisfy Council that the inherent risk from the hazard was manageable or minor and provide recommendations, as required, for the proposed development.

4.19 In considering an application under this provision the Council will restrict the exercise of its control to the following matter.

(a) the adequacy of the design in light of the environmental risks;

(b) the measures proposed to mitigate adverse effects of the proposed development.

4.20 However, in order to derive not only an adequate design but also recommend any potential mitigation measures that may be required it is necessary to complete an assessment of the risk. The coastal hazards report evaluates the risks and source the supporting information which determines the risk profiles afforded to the respective hazards.

4.21 The coastal hazards assessment prepared by Geologix Consulting Engineers includes the following key elements:

- the site context including the site description, proposed development, existing coastal structures and available coastal data
- geomorphic settings including geology and geomorphology, topography, bathymetry and beach characteristics
- coastal processes
- coastal hazard assessment including regional analysis, coastal erosion and instability, and coastal inundation.
- hazard avoidance and mitigation.

4.22 The report provides an overview of the risks and identifies the means to address these risks for the proposed development. The report concludes that with certain design elements included that the risk remains low and acceptable.

4.23 The Coastal Hazards assessment was completed by Geologix Engineers prior to the final design for the house extensions and the new garage being completed and using draft plans of what was proposed.

4.24 The report set the premise for the assessment by providing the following context.

Based on the above information, the site is considered to be at risk of both coastal inundation potential and coastal erosion potential in an unprotected scenario. This has been undertaken by assessing erosion potential in an unprotected scenario to determine if the development is impacted by the process.

Similarly our assessment determines whether the site has suitable elevation and freeboard to cope with wave height including provisions for climate change.

Our assessment also considers any improvements, if required, to the site to provide recommendations for a suitable level of protection to the site and future maintenance requirements to provide continuous protection.

Consideration has been given to protection for a 50 and 100 year period from construction including provision for climate change to determine the consent condition of the proposed development in relation to CEHZ1 (50 year) and CEHZ2 (100 year) hazards.

4.25 The report went further to evaluate the risk and to provides some recommendations for the proposed development.

Based on this assessment, available information and the proposed development, protection of the structure is required to ensure the building can remain operable over the building design life.

A summary of positive aspects of the current development plans supplied to us at the time of writing include:

- *The seaward boundary of the site is formed by an elevated sand dune and is protected by a sand spit.*
- *The site is elevated on a dune formation partially above a 500mm freeboard above river/ storm flood hazards which allows some areas with ground level with enough freeboard and some areas where freeboard will need to be incorporated into the design of any development. To provide a satisfactory level of protection to the proposed shed:*
- *Minimum shed Finished Floor Level provides adequate 300 mm freeboard above the 2130 MHWS-10 level with provision for climate change. This would require the shed FFL to be set at a minimum of 4.7 m NZVD. The FFL shall be set out and confirmed on site by a registered surveyor as part of the Consent conditions. In the event that none of the above recommendations are adopted. It is considered that the following Building Code Clauses will require a waiver due to natural hazards.*
- *Clause E1 which prescribes minimum freeboard requirements if proposed mitigation against coastal inundation is not adopted in practice*

4.26 The recommended changes as noted above within the report were incorporated into the final design which resulted in minor changes to the new garage floor level and the garage itself to ensure compliance with boundary setback (other than road) and sunlight remained compliant. The shed floor level was raised and the building made smaller to accommodate these recommendations and to maintain compliance with the rules.

4.27 The coastal hazard assessment report by Geologix reaffirms the hazard risk but also reaffirms that with minor design changes adopted by the applicant that the risk remains adequate for the lifetime of the building. As with any potential hazard risk a specific event could change all previous considerations. The recommendations are based on the current circumstances and provides some scope for climate change and related and adopted assumptions.

4.28 As a controlled activity with mitigation measures adopted, the application from a hazard perspective should be approved.

CONCLUSION

4.29 The potential effects of the proposed extensions to the dwelling and the new garage are concluded as being less than minor. Measures to attend to the coastal hazard risk as recommended by Geologix have been adopted and incorporated into the final design presented to Council.

4.30 The road setback breach is considered to result in less than minor effects with no mitigation measures considered to be required.

5.0 OPERATIVE DISTRICT PLAN OBJECTIVES AND POLICIES

5.01 As a Restricted Discretionary Activity the road setback component of this application is considered to be generally consistent with objectives and policies of the district plan. This conclusion is reached assuming that effects to which Council has restricted its

discretion are addressed. The conclusion is that the setback effects are less than minor as a result on the proposed garage being within the 3m road setback.

5.02 With respect to Coastal Hazards, the activity status is a Controlled activity with the coastal hazards assessment being provided and concluding that with minor design changes, the application retains this status. As a controlled activity the proposal is considered to meet the objectives and policies of the plan.

5.03 The activity status therefore does not require consideration of the relevant objectives and policies because of the assumed consistency with them and therefore no assessment has therefore been completed.

PROPOSED DISTRICT PLAN – OBJECTIVES AND POLICIES

5.04 With the proposal being a Restricted Discretionary activity, the consideration of the Proposed Plan Objectives and Policies is not required. This is particularly relevant as there are no rules which have immediate legal effect which apply to the proposed development.

5.05 Notwithstanding the proposal's compliance with rules which have "immediate legal effect", the application can be also considered to be generally consistent with the relevant objectives and policies.

5.06 It is considered that the proposal is consistent with the objectives and policies of the Proposed District Plan.

6.0 REGIONAL POLICY STATEMENT CONSIDERATIONS

6.01 The development only triggers a Restricted Discretionary consent and therefore regional planning considerations are less important. However with the site have a Coastal Hazard 1 notation works completed within the seaward half of the site would trigger a Discretionary Consent and therefore key objectives and policies of the Northland Regional Policy Statement would apply.

6.02 The applicant is aware of the implications for development in this Coastal Hazard 1 area and will look to adopt any recommendations for futures development should it be considered. With the application status, the proposal is considered to be consistent with objective and policy considerations from the Regional Policy Statement.

7.0 PART 2 CONSIDERATIONS

7.01 The application does not conflict with any matter or consideration under Part 2 of the Act. The proposal is a modest scaled development which provides the applicant with a more functional property. The potential effects from the proposal are considered to be less than minor and not inconsistent with Part 2 consideraitons.

7.02 It is therefore contended that the application is appropriate and consistent with the intent and purpose of the Act.

8.0 NOTIFICATION ASSESSMENT S95A TO 95G OF THE ACT

8.01 Sections 95A to 95G require Council to follow specific steps in determining whether to notify an application. In considering the conclusions findings within this report are relied upon.

8.02 Public Notification section 95A

Step 1
Mandatory public notification in certain circumstances

(a) the applicant has requested that the application be publicly notified:
(b) public notification is required under section 95C:
(c) the application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.

The applicant has not requested public notification and none of the remaining matters as described are applicable.

Step 2 Public Notification precluded in certain circumstances

The criteria for step 2 are as follows:

(a) the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes public notification:
(b) the application is for a resource consent for 1 or more of the following, but no other, activities:
    (i) a controlled activity:
    (ii) a restricted discretionary or discretionary activity, but only if the activity is a subdivision of land or a residential activity:
    (iii) a restricted discretionary, discretionary, or non-complying activity, but only if the activity is a boundary activity:
    (iv) a prescribed activity (*see* section 360H(1)(a)(i)).

The activity is precluded from public notification a it is a residential activity. It has also been concluded that the effects on the wider environment are considered to be less than minor.

Step 3 – Public Notification required in certain circumstances

The criteria for Step 3 are as follows:

(a) the application is for a resource consent for 1 or more activities, and any of those activities is subject to a rule or national environmental standard that requires public notification:
(b) the consent authority decides, in accordance with section 95D, that the activity will have or is likely to have adverse effects on the environment that are more than minor.

The NES Regulation is not relevant to this application.

8.03 Affected Persons Assessment – Limited Notification Section 95B

If the application is not required to be publicly notified, a Council must follow the steps of section 95B to determine whether to limited notify the application.

Step 1: certain affected groups and affected persons must be notified

(2) Determine whether there are any—
(a) affected protected customary rights groups; or
(b) affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity).

There are no protected customary rights or customary marine titles which apply to the application site.

Step 2: if not required by step 1, limited notification precluded in certain circumstances
The criteria for step 2 are as follows:
(a) the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes limited notification:
(b) the application is for a resource consent for either or both of the following, but no other, activities:
    (i) a controlled activity that requires consent under a district plan (other than a subdivision of land):
    (ii) a prescribed activity (*see* section 360H(1)(a)(ii)).

The application is not precluded from Limited Notification as neither of the exemptions as described above apply to the application. The road setback breach is a Restricted Discretionary Activity.

Step 3: if not precluded by step 2, certain other affected persons must be notified

(7) Determine whether, in accordance with section 95E, the following persons are affected persons:
(a) in the case of a boundary activity, an owner of an allotment with an infringed boundary; and
(b) in the case of any activity prescribed under section 360H(1)(b), a prescribed person in respect of the proposed activity.

The proposed development complies with all boundary setback and sunlight rules except for road. The development is therefore compliant with respect to the relationship with the property boundaries and no neighbours are considered to be affected.

The breach of road setback is minor and does not impact any part of impact on the functionality of the road. The assessment criteria was considered and it was concluded that effects were less than minor.

No other persons from surrounding properties are considered to be affected by the application proposal.

8.04 Notification Assessment Conclusion

Pursuant to sections 95A to 95G it is recommended that the Council determine that the application can be processed non-notified for the following reasons:

- In accordance with section 95A, public notification is not required, as the application is a residential activity which cannot be publicly notified. In addition the potential adverse effects are considered to be less than minor;
- In accordance with section 95B, no written approval has been provided as no persons are considered to be affected by the proposal; and,
- In accordance with section 95A(9) and 95B(10), there are no special circumstances to require public or limited notification.

9.0 SUMMARY

9.01 The application is for the construction of a new garage and extensions and alterations to an existing dwelling. The proposed works are located within a Coastal Hazard 2 notation which requires a Controlled Resource Consent application where a coastal hazard assessment is provided. A coastal hazard assessment was completed by Geologix and recommendations within the report were incorporated into the final design presented to Council. The changes reflected the needed to increase the floor level of the proposed garage. Minor changes were made to the design to ensure compliance with all boundary rules except for setback from road where a minor infringement was required.

9.02 For the setback from road breach, the proposal is a Restricted Discretionary Activity. Consideration of the respective assessment criteria concluded that effects were less than minor and it is not intended that further mitigation measures be required. Additional landscaping could be required but considered to be unnecessary in this context.

9.03 There are no persons considered to be affected by the proposed works and no written approvals have been sought.

9.04 The proposed development remains modest in scale and nature and does not result in any adverse effects. Consideration of relevant objectives and policies was not required because of the activity status.

9.05 The proposal offers an opportunity for the applicant to improve the functionality of the site.

9.06 In respect to conditions of consent. If any conditions are to be imposed, then a draft set of conditions would be appreciated with timely comments to be provided back to Council.

Should you have any queries in respect to this application please contact me.

Yours faithfully

Wayne Smith
Zenith Planning Consultants Ltd
Principal | Director
BPlan | BSocSci | MNZPI
wayne@zenithplanning.co.nz
mob: +64 (0) 21 202 3898

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA1662/34**
Land Registration District	**North Auckland**
Date Issued	20 July 1959

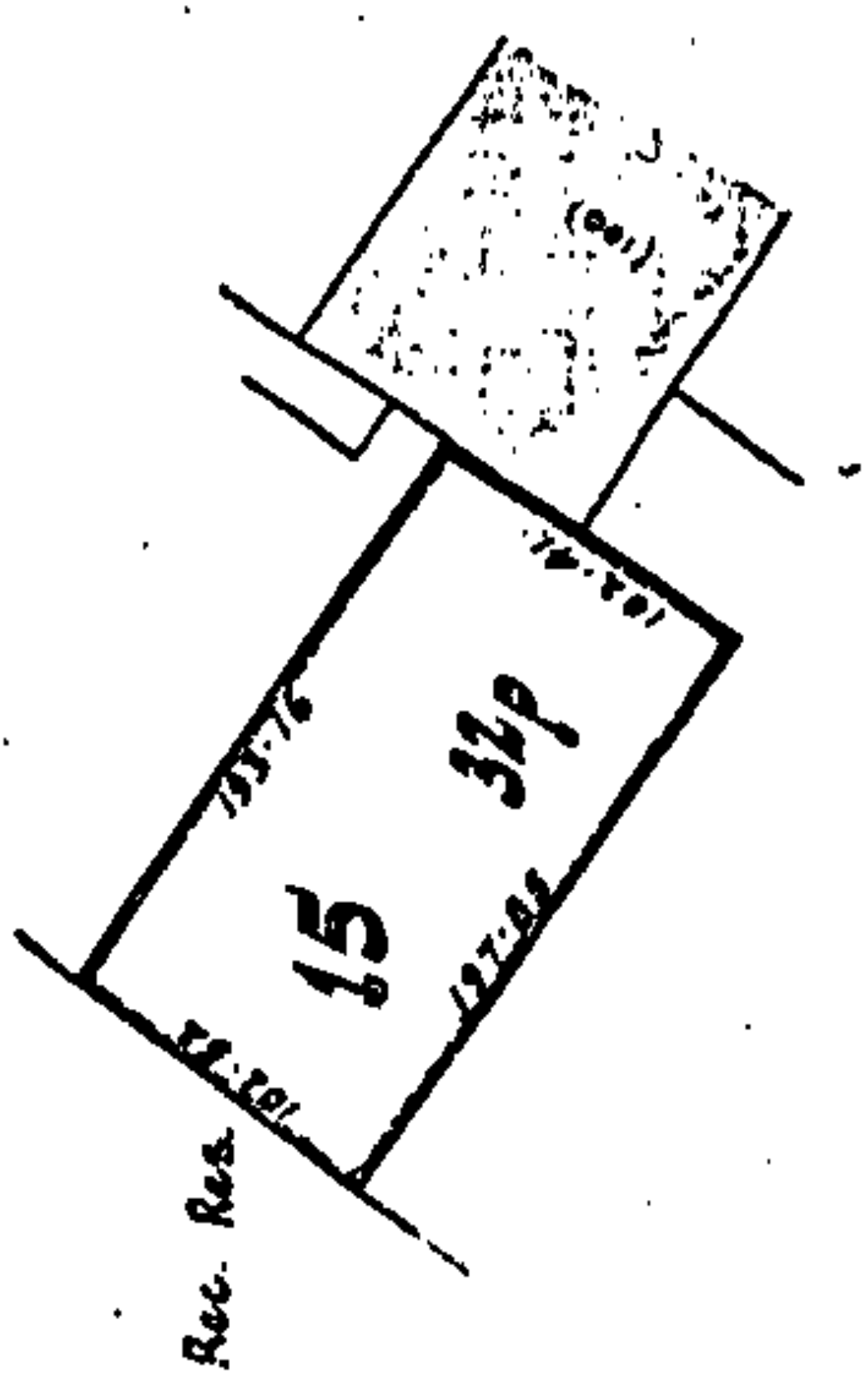
Prior References
NA1020/192

Estate	Fee Simple
Area	809 square metres more or less
Legal Description	Lot 15 Deposited Plan 46532
Registered Owners	

John Alan Silich

Interests

Fencing Agreement in Transfer 624094 - 20.7.1959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Rec. Res.

ADDITIONS & ALTERATIONS
TO EXISTING DWELLING FOR

JOHN SILICH

	SHEET INDEX
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A4803	Villaboard Details
A4804	Villaboard Details

LOT 15 DP 46532
23 KOTARE STREET AHIPARA
NORTHLAND

Arcline
Architecture

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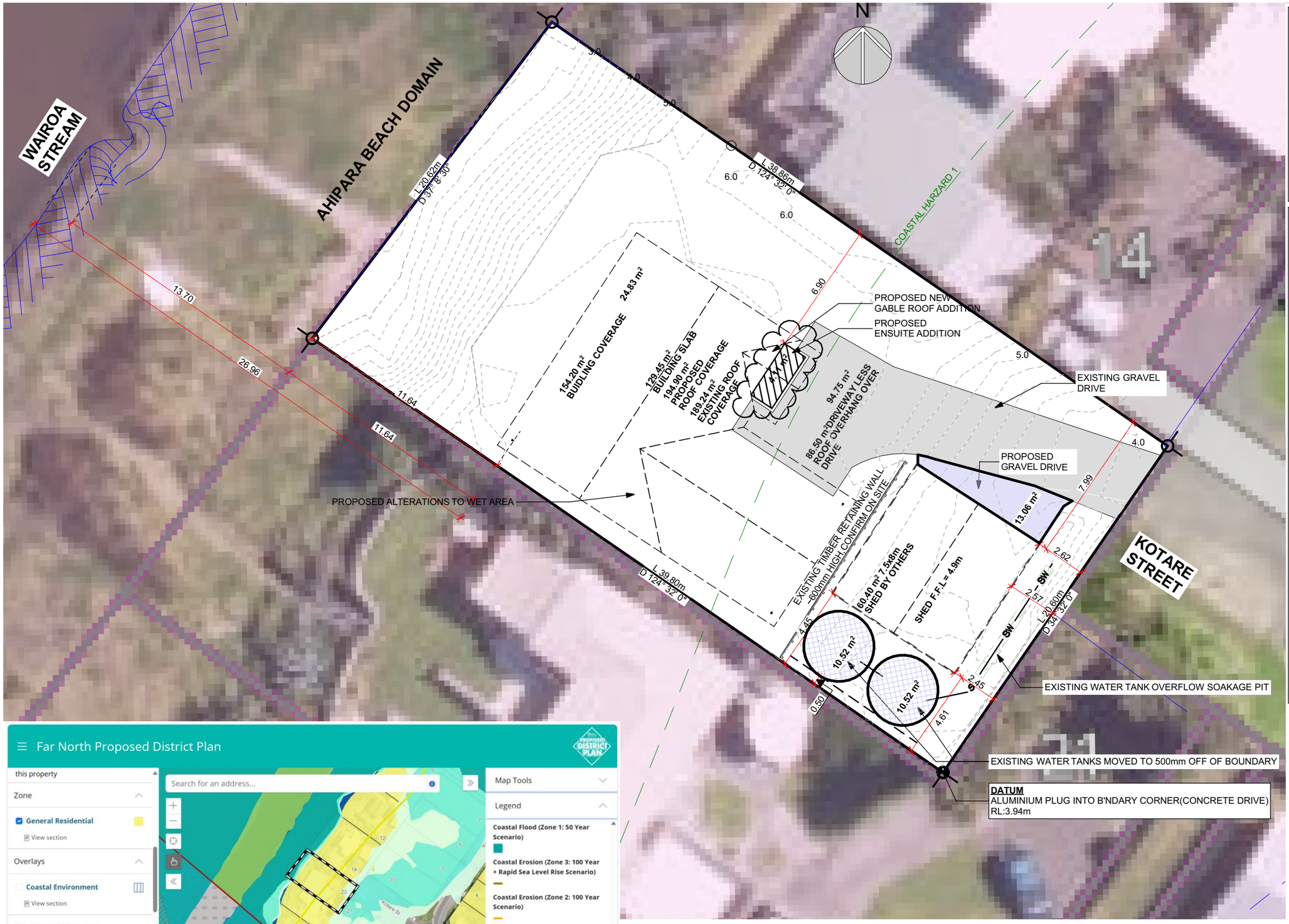
2/05/2025 9:26 am



SITE PLAN NOTES:

SITE DESCRIPTION

LOT NUMBER:	LOT 15
DP NUMBER:	DP 46532
ADDRESS:	23 KOTARE STREET AHIPARA NORTHLAND

SITE ENVIRONMENT

CLIMATE ZONE	1
EARTHQUAKE ZONE	ZONE 1
EXPOSURE ZONE	ZONE D
LEE ZONE	NO
WIND ZONE	VERY HIGH
WIND REGION	A
RAINFALL RANGE	80-90mm/hr
SNOW ZONE	N0

DISTRICT PLAN COMPLIANCE

PLANNING ZONE	RESIDENTIAL
SITE AREA	809.00m²
BUILDING COVERAGE(45% ALLOWED)	
EXISTING HOUSE COVERAGE:	154.20m²
PROPOSED HOUSE	
BATHROOM ADDITION:	4.11m²
TOTAL HOUSE :	158.31m²
PROPOSED SHED:	60.40m²
TOTAL BUILDING COVERAGE: 218.71m²(27.03%)	
COVERAGE INCLUDING WATER TANKS=239.75m²(29.64%)	
(2x10.52=21.04m²)	
PROPOSED ROOF AREA HOUSE	194.90m²
PROPOSED SHED ROOF AREA (EAVES 600+ WIDE)	60.40m²
TOTAL	**255.30m²**

STORMWATER MANAGEMENT
50% MAX. ALLOWED IMPERMEABLE SURFACE AREA

PROPOSED ROOF AREA (NEW GABLE ADDITION)	194.90m²
EXISTING DRIVEWAY LESS ROOF OVER:	86.50m²
PROPOSED DRIVEWAY ADDITION	13.06m²
7.55x8m SHED BY OTHERS	60.40m²
TOTAL(EXCLUDING EXISTING WATER TANKS) :	**354.86m²(43.86%)**
COVERAGE INCLUDING 2x EXISTING WATER TANKS=	**377.86m²(46.71%))**
BUILDING HEIGHT	NO CHANGE
HIRB	NO CHANGE

SETBACK TO BOUNDARIES
3.0m IN FROM ROAD BOUNDARIES
1.2m IN FROM OTHER BOUNDARIES
NO SETBACK REQUIRED FOR MAX. 10m LENGTH
COMPLIES

SETBACK TO BUSH
GREATER THAN 20m?YES
COMPLIES

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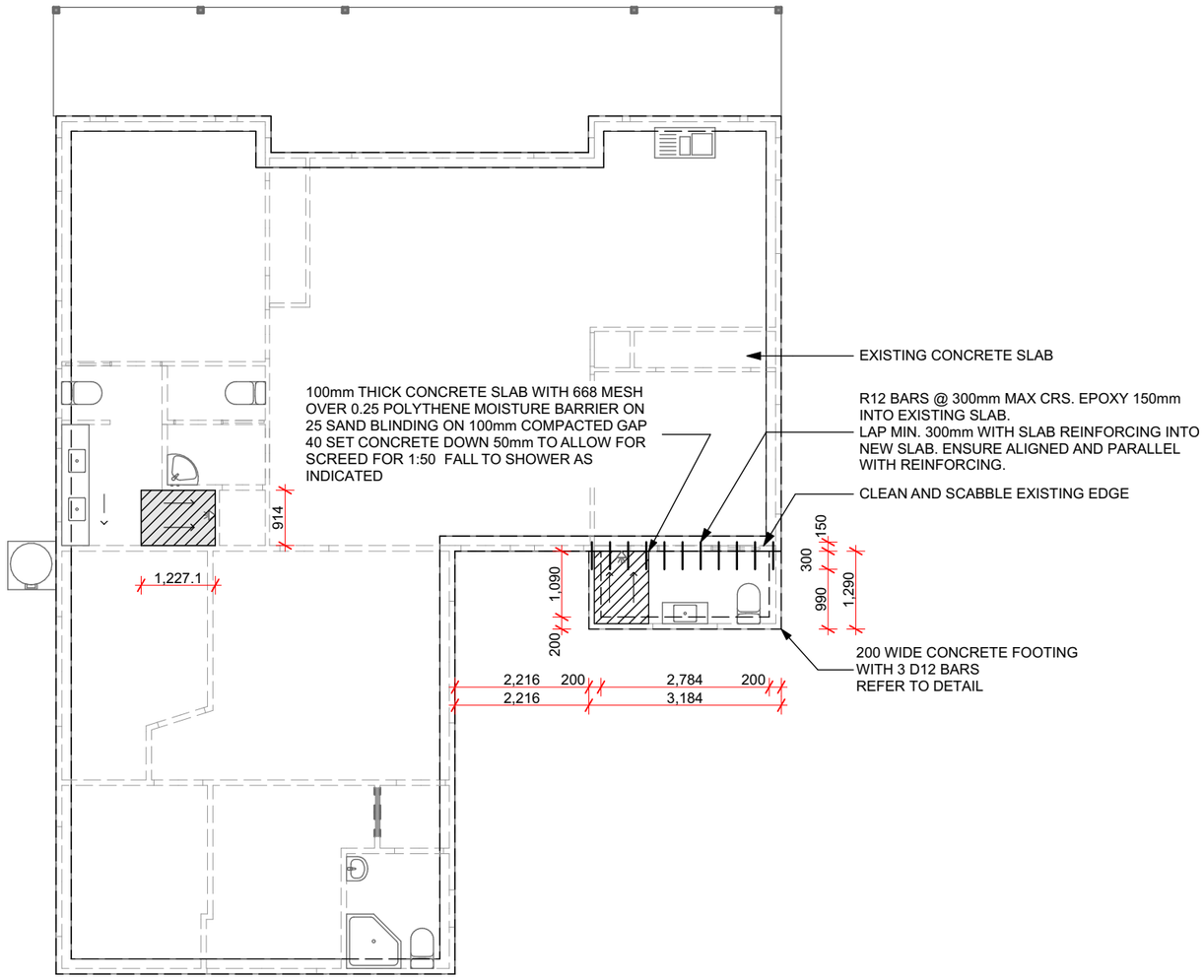
Site Plan

JOHN SILICH
23 KOTARE STREET
AHIPARA
NORTHLAND

Rev No.	Revision	Date

Scale @ A3: 1:200
Drawn By RH,JM
Issued: 2/05/2025 9:26 am
SILICH ALTERATIONS_DD_270325.pln

Sheet No: **A1001**



FOUNDATION NOTES
FLOOR SLAB
100mm THICK 20MPa CONCRETE FLOOR SLAB
500E MESH WITH 30mm TOP COVER (LAP JOINS MIN. 225mm)
0.25mm POLYTHENE MOISTURE BARRIER (TAPE ALL CUTS AND PENETRATIONS AND LAP MIN. 225mm AT ALL SEAMS).
25mm BLINDING ON
100mm MIN. COMPACTED GAP 40 OR OTHER ACCEPTIBLE HARDFILL
30mm STEEL COVER - ENCLOSED
50mm STEEL COVER - EXPOSED
75mm STEEL COVER - TO GROUND

FLOOR SLAB LEGEND

LEVEL ENTRY SHOWER
LEVEL ENTRY TILED SHOWER WITH MIN. 1:50 FALL TO WASTE. REDUCE HEIGHT OF PODS TO ENSURE 95mm MIN. SLAB DEPTH

Arcline Architecture
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Foundation Plan

JOHN SILICH
23 KOTARE STREET
AHIPARA
NORTHLAND

Rev No.	Revision	Date

Scale @ A3: 1:100
Drawn By RH,JM
Issued: 2/05/2025 9:26 am
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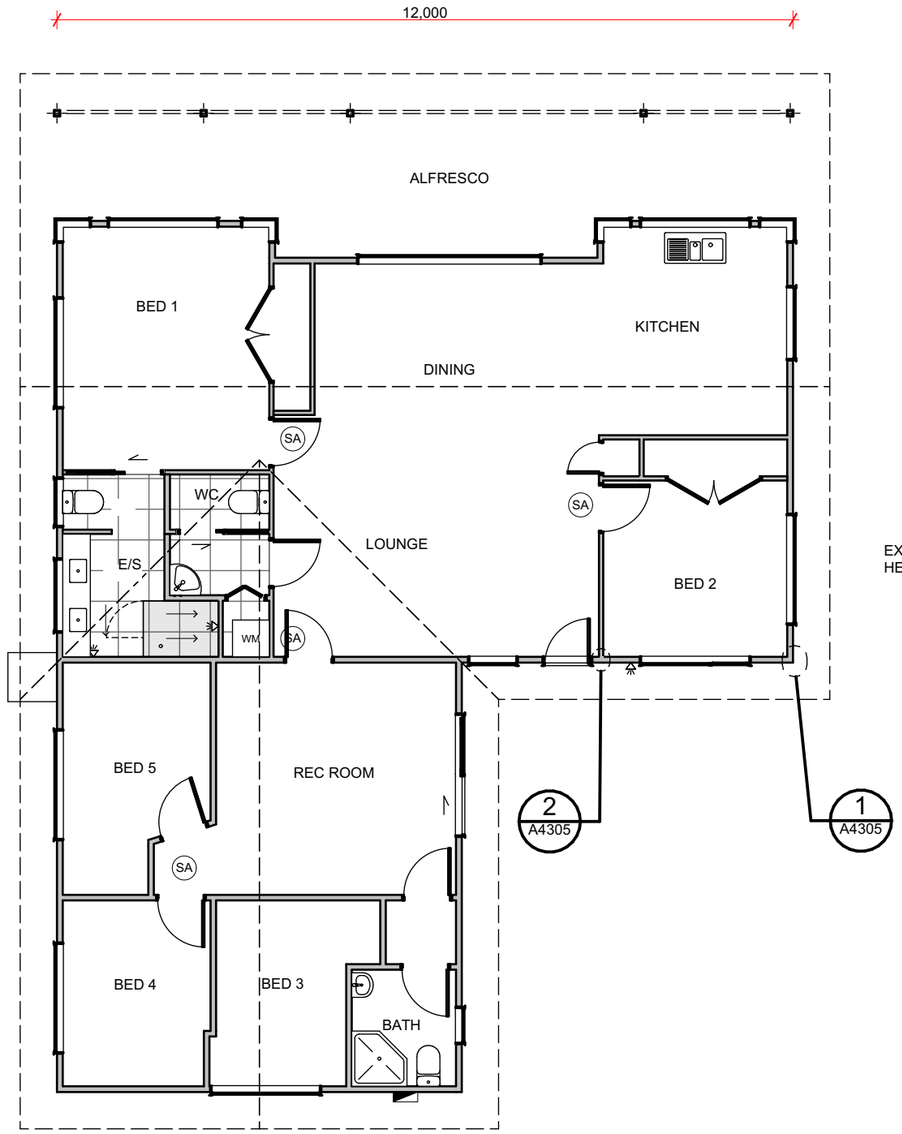
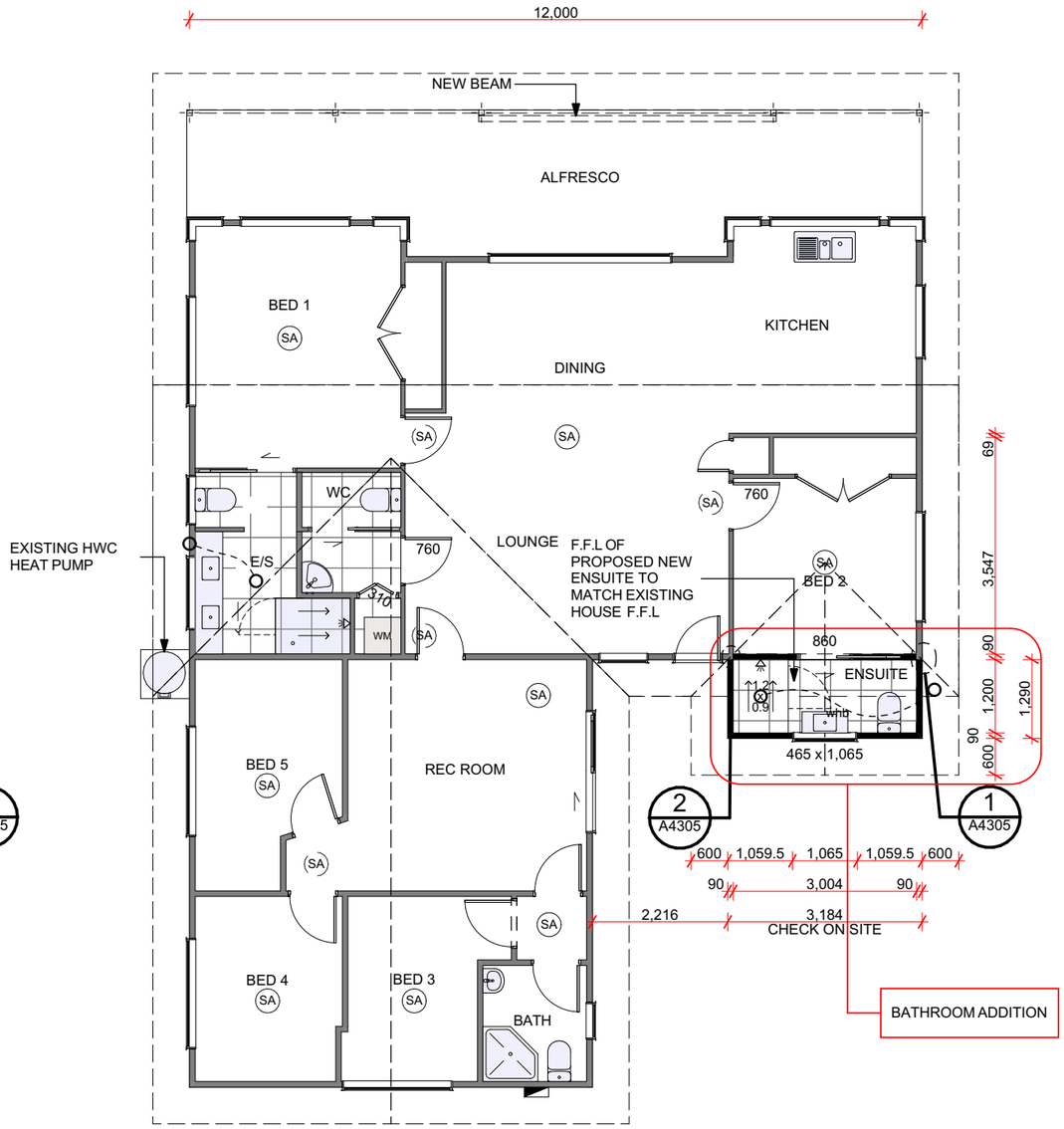
A1401



Floor Plan (Existing) 1:100



Floor Plan (Proposed) 1:100

FLOOR AREAS

EXISTING FLOOR AREA:	129.45m²
PROPOSED NEW FLOOR AREA:	1.75m²
TOTAL FLOOR AREA:	**131.20m²**

INTERIOR LININGS / TRIMS

WALL LININGS
9mm VILLABOARD TO TILED WALLS IN WET AREAS INCL. TILED SHOWER AREA.

CEILING LININGS
13mm GIB AQUALINE TO BATHROOM CEILING

INTERNAL DOORS
2.0m TYPICAL INTERNAL DOOR HEIGHT.

TRIMS
60x10 FJ PINE, SINGLE BEVEL SKIRTING.
MATCH ALL NEW TRIMS TO EXISTING TRIMS~40x18 TYPICAL SCOTIA, CONFIRM ON SITE.

WET AREAS

- ALL DETAILS TO COMPLY WITH NZBC E3 INTERNAL MOISTURE AND MANUFACTURER'S PRODUCT DETAILS.
- 9MM VILLABOARD TO TILED WALLS.
- ALL FLOOR SURFACES OF SPACES CONTAINING SANITARY FIXTURES OR SANITARY APPLIANCES BE IMPERVIOUS AND EASILY CLEANED. EG. TILES ON MEMBRANE.
- ALL WALL SURFACES ADJACENT TO SANITARY FIXTURES OR SANITARY APPLIANCES AND SURFACES OF BUILDING ELEMENTS THAT ARE LIKELY TO BE SPLASHED OR BECOME CONTAMINATED IN THE COURSE OF THE INTENDED USE OF THE BUILDING, BE IMPERVIOUS AND EASILY CLEANED. USE SEMIGLOSS WASH AND WEAR PAINTED AQUALINE GIB (WALLS AND CEILINGS).
- ALL SURFACES OF BUILDING ELEMENTS THAT ARE LIKELY TO BE SPLASHED ARE CONSTRUCTED IN A WAY THAT PREVENTS WATER SPLASH FROM PENETRATING BEHIND LININGS OR INTO CONCEALED SPACES.
- JOINTS BETWEEN FIXTURES & WALL LININGS; WHERE BATHS, BASINS, TUBS OR SINKS ABUTT IMPERVIOUS LININGS THE JOINT BETWEEN FIXTURE & LINING SHALL BE SEALED VIA SILICONE BATHROOM SEALANT TO PREVENT WATER PENETRATION TO CONCEALED SPACES OR BEHIND LININGS.

SHOWERS TO HAVE 1800mm HIGH 6MM SAFETY GLASS PANEL & DOOR PANEL.
ALL GLAZING TO WET AREAS TO BE GRADE A TOUGHENED SAFETY GLASS

WATER HEATING
EXISTING EXTERNAL HOT WATER HEAT PUMP

SMOKE ALARMS TO BE INSTALLED TO AS1670.6 REQUIREMENTS. EQUIPMENT TO COMPLY WITH AS3786.

INSULATION
R 6.0 BATTS ROOF INSULATION
R2.8 BATTS WALL INSULATION
ACOUSTIC INSULATION TO BE INSTALLED AROUND/ BETWEEN BATHROOMS AND BEDROOMS.

LEGEND:

- EXISTING WALLS
- PROPOSED NEW WALLS
- EXISTING WALLS TO BE REMOVED

KEY:

- FLOORING: TILES
- MECHANICAL VENT DUCTED TO EXTERIOR
- (SA) INTERCONNECTED SMOKE ALARM FITTED WITH HUSH & TEST ABILITY CONFORMING WITH NZBC F7/AS1, C/AS1 AND NZS 4514

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Floor Plans

JOHN SILICH
23 KOTARE STREET
AHIPARA
NORTHLAND

Rev No.	Revision	Date

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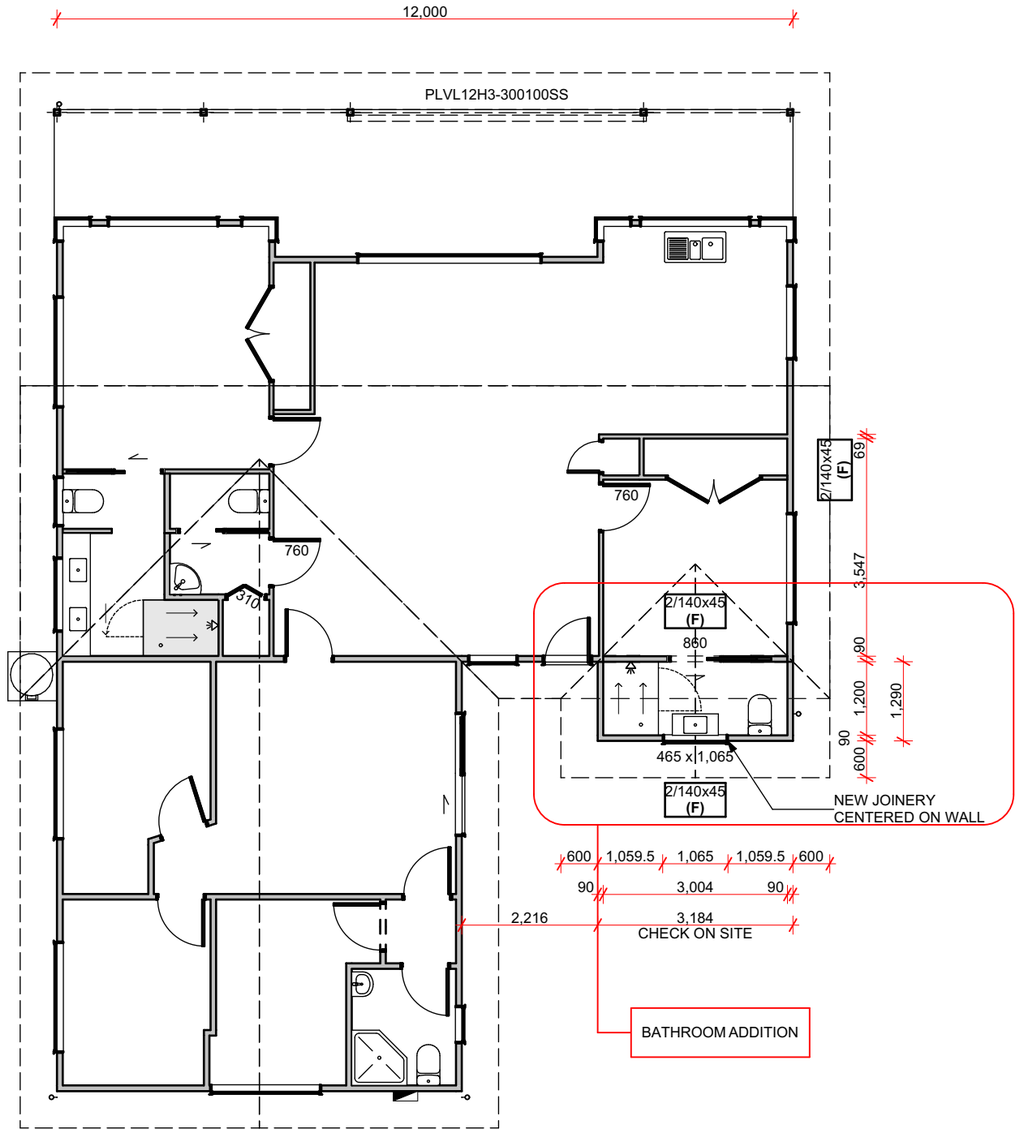

WALL FRAMING
GENERAL WALL FRAMING NOTES
ALL DIMENSIONS TO TIMBER FRAMING NOT FINISHED ROOM SIZES

FIXINGS / DURABILITY
PROTECTION REQUIREMENT FOR STEEL FIXINGS AND FASTENINGS TO BE IN ACCORDANCE WITH CURRENT NZS 3604 TABLE 4.1

ALL JOINERY SIZES ARE TO TRIM / OPENING SIZE

ALL FRAMING & BOTTOM PLATES TO BE H1.2 TREATED UNLESS SPECIFIED OTHERWISE

INTERIOR DOORS - 2.0m TYPICAL INTERNAL DOOR HEIGHT.

STUD HEIGHT
~2.460m(CONFIRM WITH EXISTING STUD HEIGHT ON SITE PRIOR TO COMMENCING WORKS))

STUD SIZES:
ALL STUDS H1.2 SG8 AND AS BELOW UNLESS STATED ON PLANS.

EXTERNAL WALLS: (TO VERY HIGH WIND ZONE)
UP TO 2.4m STUD
90 x 45mm STUDS @ MAX. 400mm CRS.

INTERIOR WALLS:
UP TO 3.0m STUD
90 x 45mm STUDS @ 600mm CRS.

NOGS :
EXTERIOR: ALL NOGS @ 400mm MAX. CRS.
INTERIOR: ALL NOGS @ 800mm MAX. CRS.
EXTRA NOGS:
WALL NOGGING FOR HAND RAILS BY TOILETS AND SHOWERS

LINTELS:
ALL LINTELS TO BE H1.2 SG8 UNLESS STATED OTHERWISE.
FIXINGS:
AS PER LUMBERLOK STUDLOK LINTEL FIXING TABLES (E = 1.4kN, F = 4.0kN, G = 7.5kN, H = 13.5kN).

TOP PLATES:
DOUBLE TOP PLATE. 2/ 90X45 TOP PLATE
FIXINGS:
EXTERIOR WALLS - STUDLOK TYPE **SL** (4.7kN)
INTERIOR NON-LOAD BEARING WALLS STUDLOK **2N**. SEE DETAILS ON SHEET A4701.

BOTTOM PLATES
H1.2 BOTTOM PLATES ON DPC TO CONCRETE FLOORS
FIX TO STUDS VIA 2/100x3.75mm END NAILS OR 4/75x3.75mm SKEW NAILS

BOTTOM PLATE FIXING
ALL PROPRIETARY ANCHORS TO BE STRICTLY INSTALLED TO MANUFACTURERS SPECIFICATIONS.
CONC. SLAB EDGE: 7kN SCREWBOLTS @ 900 CRS. MAX. 150mm FROM ENDS OF PLATE & CORNERS (MIN. 2kN FOR INTERNAL WALLS)

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Wall Framing Plan

JOHN SILICH
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AHIPARA
NORTHLAND

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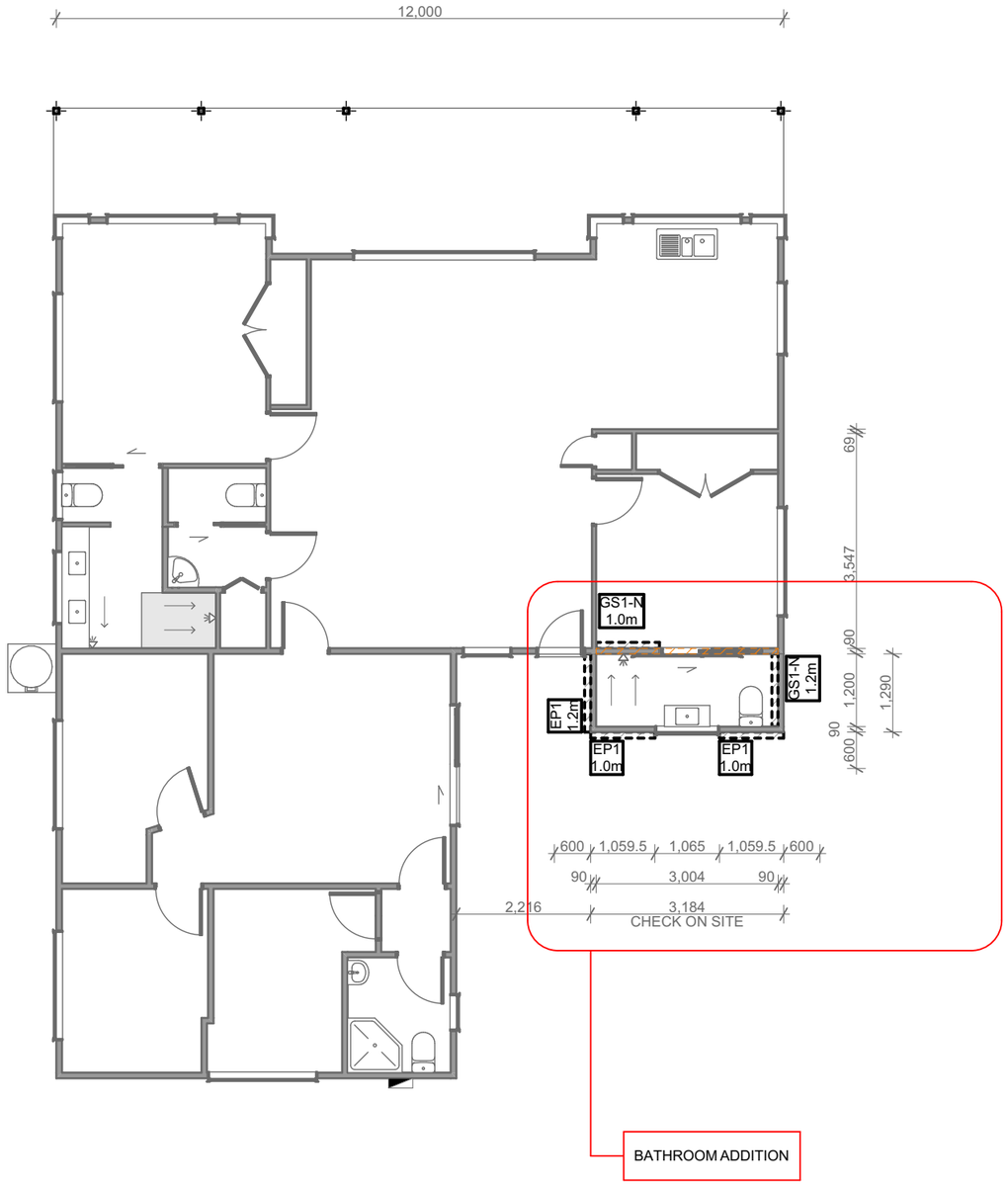
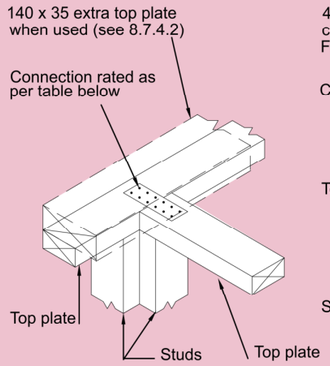
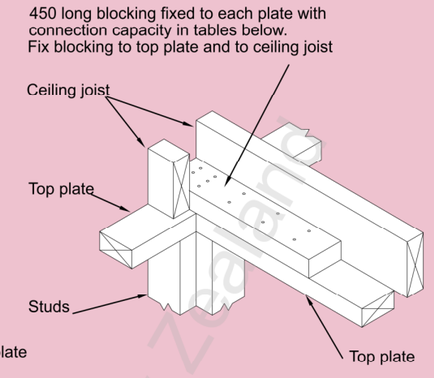




(A) BUTT JOINT



(B) BUTT JOINT (WITH CEILING JOIST)

Capacities of metal plate joints	
Up to 3 kN	3 / 30 x 3.15 mm nails per side
Up to 6 kN	6 / 30 x 3.15 mm nails per side

Capacities of nailed joints	
Up to 3 kN	3 / 100 x 3.75 mm nails per side
Up to 6 kN	6 / 100 x 3.75 mm nails per side

NOTE – See section 4 for durability requirements.

Unless otherwise stated, all dimensions are in mm.

BRACING NOTES:
BRACING SHOWN INSTALLED AS PER GIB EZYBRACE, CHH ECOPLY, SPECIFICATIONS AND INSTALLATION MANUAL

NO POWER POINTS OR LIGHT SWITCH OUTLETS TO BE SITUATED WITHIN 90mm OF EDGE OF THE BRACING ELEMENT.

LEGEND

CONTINUOUS TOP PLATE TO WALL
INTERNAL BRACED WALLS TO BE CONNECTED TO PERPENDICULAR EXTERNAL WALLS VIA TOP PLATE / CEILING BATTENS AS PER NZS3604:2011 8.7.3.4:

TOTAL BRACING UNITS ON WALL	FIXING AT TOP PLATE LEVEL
< 125 B/U	6kN (TO 1 WALL)
< 250 B/U	6kN (TO 2 WALLS)
> 250 B/U	2.4kN PER 100 B/U (TO 2 WALLS)

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Wall Bracing Plan

JOHN SILICH
23 KOTARE STREET
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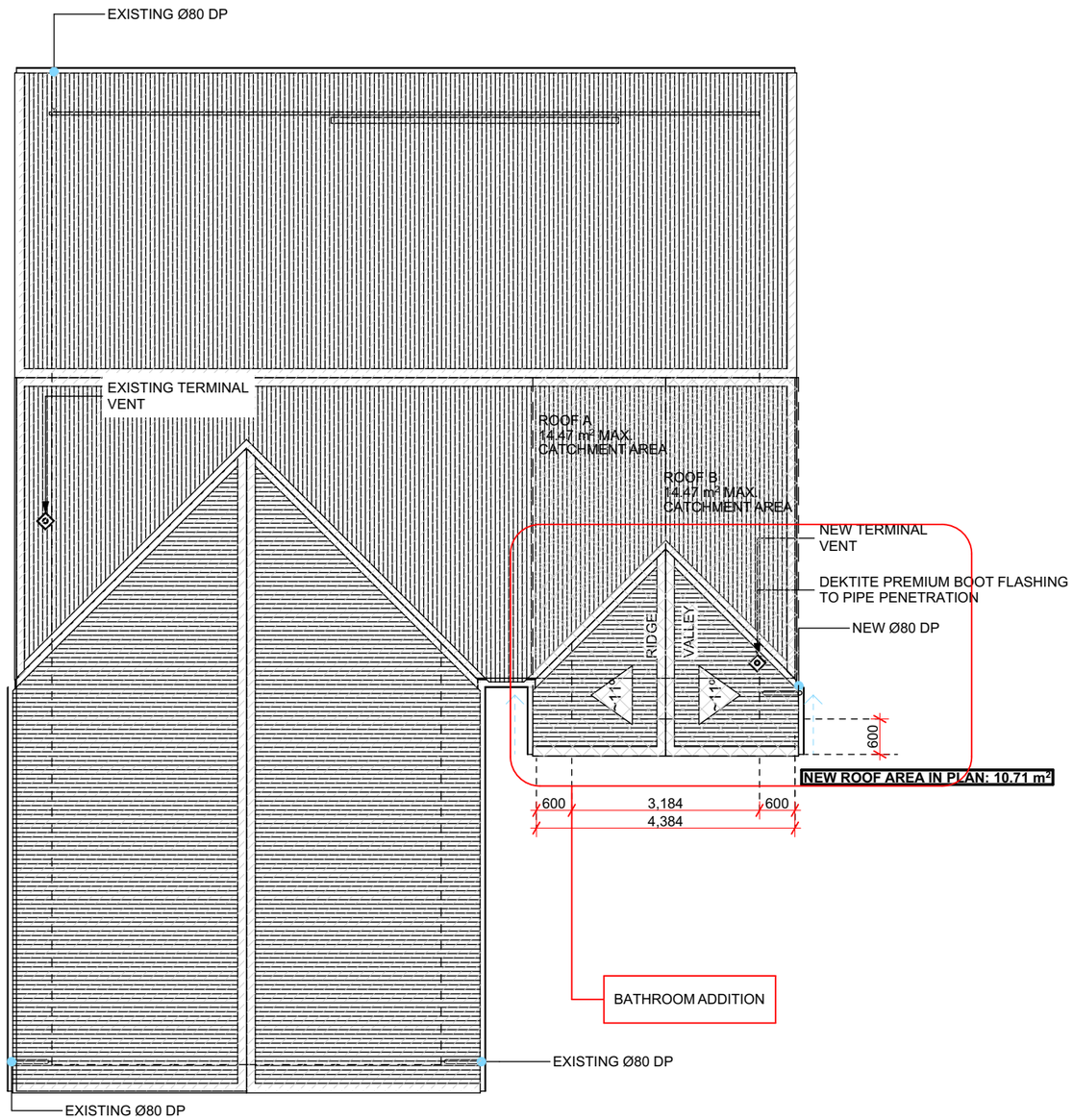

ROOF PLAN NOTES:

ROOFING
COLORSTEEL MAXAM.
0.40G CORRUGATE.
SCREW FIXED WITH
LOW CARBON NON CONDUCTING SEALING WASHERS OR PROFILED WASHERS WITH EPDM SEALING WASHER
AS PER ROOFING MANUFACTURERS SPECIFICATIONS
0.55 COLORSTEEL MAXAM EDGE FLASHINGS, COLOUR TO MATCH ROOFING

PURLINS
70x45 SG8 H1.2 PURLINS AT 900mm CRS.
80mm, 10g SCREW FIXING (BLUE SCREW)

ROOF UNDERLAY
RESIDENTIAL* BAYONET BAYOWRAP FLAMESPEC 05
ROOF UNDERLAY LAID HORIZONTALLY (OVER GALV MESH TO 3° ROOF ONLY).

GUTTER
NEW UPVC GUTTER TO MATCH EXISTING GUTTER PROFILE(UPVC) CONFIRM ON SITE.
MISC
INTERNAL BRACKETS WITH SS SCREWS
INSTALL TO MANUFACTURERS' RECOMMENDATIONS

DOWNPIPES
80Ø UPVC DOWNPIPES, COLOUR TO MATCH EXISTING
INSTALL TO MANUFACTURERS' RECOMMENDATIONS
LEAF SLIDERS

FASCIA
FASCIA TO MATCH EXISTING. Ex 25 H3.1 FASCIA BOARD.
CONTRACTOR TO CONFIRM ON SITE

FIX ROOF CLADDING IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. MAKE WATER TIGHT ALL FLASHINGS: HIPS, VALLEYS, APRONS, RIDGES ETC.

EXECUTE AND COMPLETE ALL PLUMBING AND DRAINAGE REQUIREMENTS IN ACCORDANCE WITH NZBC E1

LEGEND

GUTTER FALL: ARROW DENOTES DIRECTION OF FALL TO DOWNPIPE MIN. 1:500 FALL

LINE OF SOFFIT

DENOTES EXISTING ROOF

ROOF PLAN NOTES EXISTING:
ROOFING
CAREFULLY REMOVE EXISTING ROOFING, FLASHINGS & UNDERLAY TO AREA SHOWN ON PLAN.
CONFIRM THERE IS NO ASBESTOS IN ROOF CAVITY.
MAKE GOOD EXISTING ROOF TO ALLOW FOR NEW ROOFING TO BE INSTALLED OVER NEW NAIL PLATE TRUSSES. NEW ROOFING PROFILE TO BE COLORSTEEL MAXAM AND TO MATCH EXISTING ROOFING CORRUGATED PROFILE.

PURLINS
EXISTING PURLINS/ ROOF FRAMING TO REMAIN.
CONFIRM CONDITION OF EXISTING FRAMING, NOTIFY DESIGN AND PROJECT MANAGER IF ANY EXISTING FRAMING NEEDS TO BE REPLACED. REMOVE WHERE NEW NAIL PLATE TRUSSES ARE INDICATED AND INSTALL NEW PURLINS AS REQUIRED.

ROOF UNDERLAY
EXISTING UNDERLAY TO BE REMOVED TO AREA SHOWN ON PLAN AND INSTALL NEW ROOF UNDERLAY OVER NEW NAIL PLATE TRUSSES AS PER MANUFACTURERS INSTALLATION INSTRUCTIONS

GUTTER
EXISTING GUTTER TO BE REMOVED TO AREA SHOWN ON PLAN. INSTALL NEW UPVC GUTTER TO MATCH EXISTING GUTTER AS SHOWN

DOWNPIPES
INSTALL NEW D.P AS SHOWN TO MATCH EXISTING D.P PROFILE(80mmØ UPVC)

FASCIA
EXISTING FASCIA TO BE REMOVED TO AREA SHOWN ON PLAN.NEW H3.1 TIMBER FASCIA TO MATCH EXISTING TO NEW ROOF OVER PROPOSED NEW BATHROOM .

NOTE:ALLOW TO PROTECT THE BUILDING FROM THE WEATHERDURING CONSTRUCTION ONCE ROOFING REMOVED.

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Roof Plan

JOHN SILICH
23 KOTARE STREET
AHIPARA
NORTHLAND

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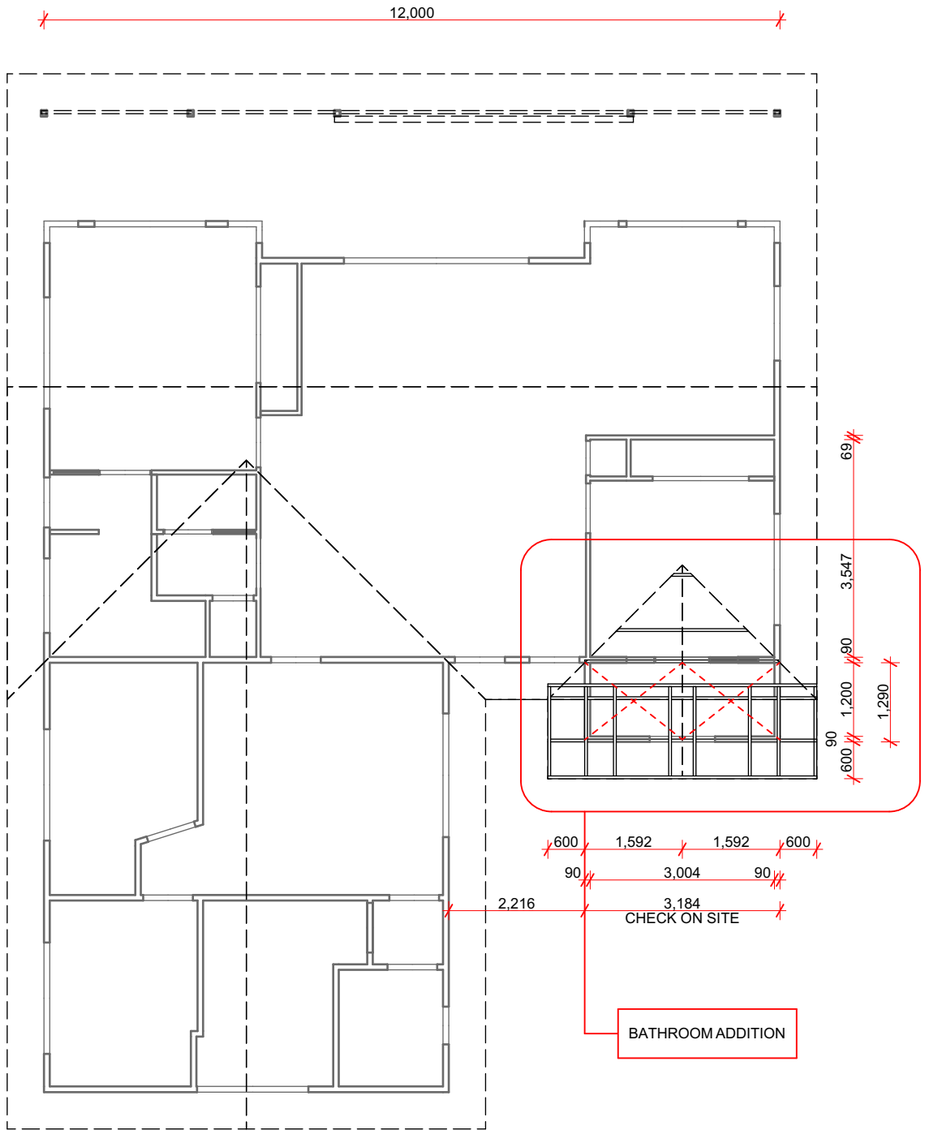

TRUSS REQUEST INFO:

CLIENT NAME:	JOHN SILICH
LEGAL DESCRIPTION:	LOT 15 DP 46532
ADDRESS:	23 KOTARE STREET AHIPARA NORTHLAND
SITE AREA:	809m²
WIND ZONE:	VERY HIGH
EXPOSURE ZONE:	ZONE D
ROOF PITCH:	~11º(CONTRACTOR TO CONFIRM ON SITE PRIOR TO ORDERING TRUSSES)
TRUSS SPACING:	900 CRS
TRUSS TREATMENT:	H1.2

CEILING TYPE
13mm GIB AQUALINE TO BATHROOM CEILING

ROOFING
COLORSTEEL MAXAM.
0.40G CORRUGATE.
SCREW FIXED WITH
LOW CARBON NON CONDUCTING SEALING WASHERS OR PROFILED WASHERS WITH EPDM SEALING WASHER AS PER ROOFING MANUFACTURERS SPECIFICATIONS
0.55 COLORSTEEL MAXAM EDGE FLASHINGS, COLOUR TO MATCH ROOFING

ROOF OVERHANG
EAVE-~600mm
BARGE-~600mm
CONFIRM EXISTING OVERHANGS, NEW OVERHANGS TO MATCH
CONTACT DESIGNER IF DIFFERENT FROM PLAN NOTES PRIOR TO ORDERING/ FABRICATING TRUSSES.

ROOF TRIMS
FASCIA TO MATCH EXISTING. Ex 25 H3.1 FASCIA BOARD. CONTRACTOR TO CONFIRM ON SITE
NEW UPVC GUTTER TO MATCH EXISTING GUTTER PROFILE(UPVC) CONFIRM ON SITE.
MISC
INTERNAL BRACKETS WITH SS SCREWS
INSTALL TO MANUFACTURERS' RECOMMENDATIONS,
80Ø UPVC DOWNPIPES, COLOUR TO MATCH EXISTING
INSTALL TO MANUFACTURERS' RECOMMENDATIONS
LEAF SLIDERS

ROOF FRAMING NOTES:

ALL EXPOSED ROOF FRAMING TO BE H3.2 TREATED.
ALL ENCLOSED ROOF FRAMING TO BE H1.2 TREATED.

TRUSSES
AS PER TRUSS DESIGN PLANS @ 900MM CRS MAX, FIXED TO TOP PLATE AS PER TRUSS DESIGN.
90x45 H1.2 RESTRAINTS REQUIRED TO TRUSS BOTTOM CHORDS @ 1.8m MAX. CRS. IF RONDO BATTENS USED

PURLINS
70x45 SG8 H1.2 PURLINS AT 900mm CRS.
80mm, 10g SCREW FIXING (BLUE SCREW)
TOP PURLINS 600MM MAX FROM RIDGE, BOTTOM PURLIN 600MM MAX FROM FASCIA.

CANTILEVERED PURLINS AS OUTRIGGERS:
PURLIN OR BATTEN TO EXTEND OVER AT LEAST 3 RAFTER/TRUSS SUPPORTS.
90x45 H1.2 SG8 PURLINS ON FLAT @ 900CRS.
CANTILEVERD MAX. 450mm
70x45 H1.2 SG8 PURLINS ON FLAT @ 900CRS
CANTILEVERED MAX. 300mm

OUTRIGGERS
H1.2 SG8 OUTRIGGERS, SIZE AND FIXINGS AS PER MITEK OUTRIGGER DETAILS ATTACHED. OUTRIGGERS TO LINE UP WITH PURLINS ABOVE.

FLY RAFTERS
H1.2 SG8 FLY RAFTERS, SIZE AND FIXINGS AS PER MITEK OUTRIGGER DETAILS ATTACHED

SOFFITS MIN. 6mm IN EH WIND ZONES
TYPICAL:
JH 4.5mm HARDIEFLEX SOFFIT LINING, INSTALL TO MANUFACTURERS RECOMMENDATIONS,(PVC JOINTERS).
VERANDAH:
?? JH 4.5mm HARDIEFLEX SOFFIT LINING ,INSTALL TO MANUFACTURERS RECOMMENDATIONS,(PVC JOINTERS).

LEGEND

ROOF PLANE BRACING
DIAGONALLY OPPOSING PAIR TENSIONED LUMBERLOK STRIP BRACE ROOF PLANE BRACING RUNNING FROM RIDGE TO TOP PLATE INSTALLED AS PER MANUFACTURERS SPECIFICAITONS
5/30X3.15 NAILS EACH END & 1/30X3.15 NAIL AT CROSSING (AFTER TENSIONING)

LOAD BEARING WALL
INTERNAL LOAD BEARING WALL BELOW SUPPORTING ROOF STRUCTURE ABOVE.

FLAT SOFFIT
FRAME OUT FOR FLAT SOFFIT. PROVIDE FRAMING @ 600mm MAX. CRS FOR SOFFIT FIXING TO TYPICAL SOFFIT HEIGHT.

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Roof Framing Plan

JOHN SILICH
23 KOTARE STREET
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NORTHLAND

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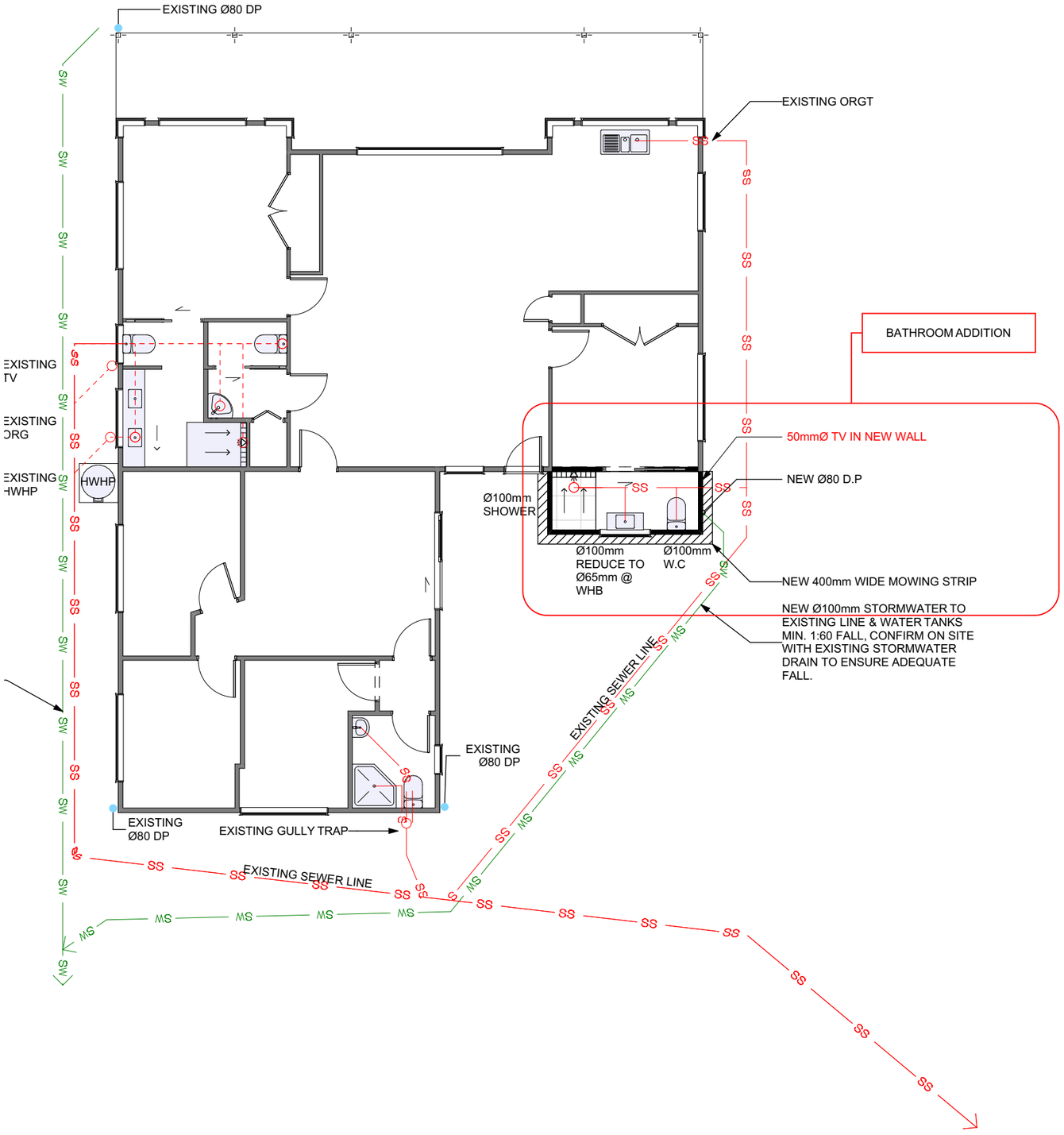

PLUMBING NOTES:
ALL PLUMBING & DRAINAGE TO COMPLY WITH AS/NZS3500 'THE NATIONAL PLUMBING AND DRAINAGE CODE'

INSTALL ALL PLUMBING 100mm BELOW CONCRETE FLOOR SLAB

CHECK POSITION OF SEWER AND STORMWATER LATERALS ENTERING SITE BEFORE START OF WORK. ALL INSPECITON POINTS /INSPECTION BENDS UNDER PAVING OR DRIVES TO HAVE REMOVABLE AIRTIGHT LIDS AT GROUND LEVEL

WATER SERVICES
WATER MAINS 25mm POLYTHENE
ALL INTERNAL WATER PIPES 15mm BUTYLENE

DRAIN JUNCTIONS.
ALL DRAIN JUNCTIONS SHALL BE BY MEANS OF A JUNCTION WITH AN UPSTREAM ANGLE NOT GREATER THAN 45° AND AS PER NZS 3500.2

SHOWERS
ALL SHOWERS MIN. 1:50 FALL TO EZY CLEAN WASTE.
CHANNEL DRAINS MIN. 1:100 FALL TO EZY CLEAN WASTE.
CONFIRM POSITION OF WASTE WITH CLIENT PRIOR INSTALLING WASTE PIPES

ALL MAIN SS DRAINS Ø100 WITH MIN. 1:60 FALL.

LEGEND

T.V.	TERMINAL VENT 50Ø
—SS—	SEWER LINE
—SW—	STORMWATER LINE
	SHOWER CHANNEL DRAIN. 120mm WIDE. MIN. 1:100 FALL TO EZYCLEAN WASTE.

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Plumbing Plan

JOHN SILICH
23 KOTARE STREET
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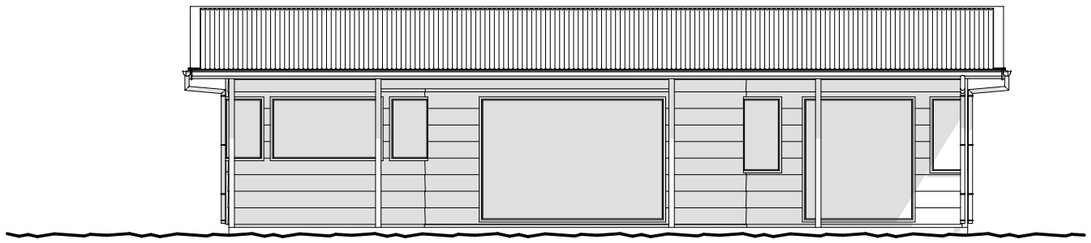
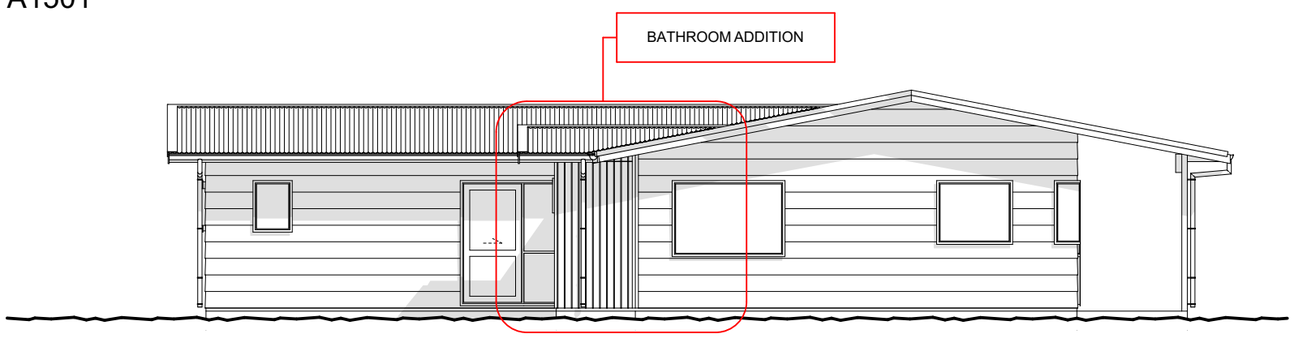
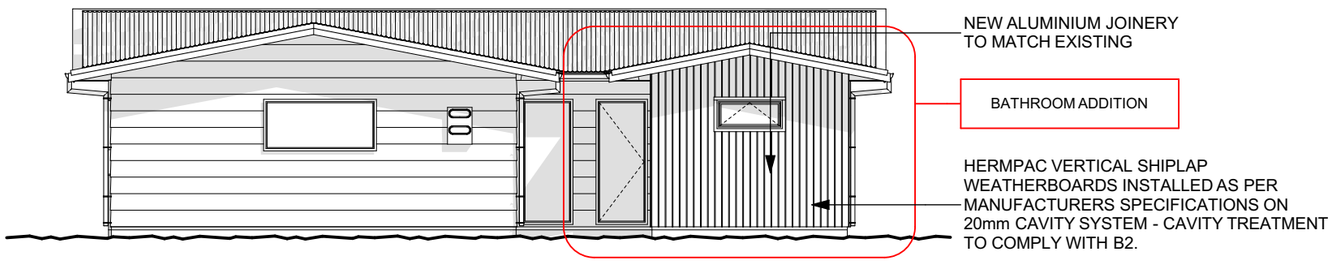
BUILDING ENVELOPE RISK MATRIX		
All Elevations		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	Very high risk	2
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Low risk	0
Deck design	Low	0
Total Risk Score:		**8**



1 North West Elevation 1:100
A1501



2 North East Elevation 1:100
A1501



3 South East Elevation 1:100
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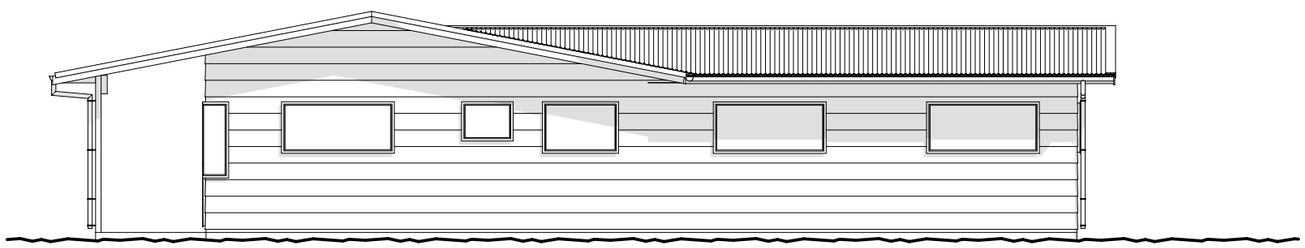

4 South West Elevation 1:100
A1501

ELEVATION NOTES

ROOFS
COLORSTEEL MAXAM.
0.40G CORRUGATE.
SCREW FIXED WITH
LOW CARBON NON CONDUCTING SEALING WASHERS OR
PROFILED WASHERS WITH EPDM SEALING WASHER
AS PER ROOFING MANUFACTURERS SPECIFICATIONS
0.55 COLORSTEEL MAXAM EDGE FLASHINGS, COLOUR TO MATCH ROOFING

NEW UPVC GUTTER TO MATCH EXISTING GUTTER PROFILE(UPVC) CONFIRM ON SITE.
MISC
INTERNAL BRACKETS WITH SS SCREWS INSTALL TO MANUFACTURERS' RECOMMENDATIONS

80Ø UPVC DOWNPIPES, COLOUR TO MATCH EXISTING
INSTALL TO MANUFACTURERS' RECOMMENDATIONS
LEAF SLIDERS

FASCIA TO MATCH EXISTING. Ex 25 H3.1 FASCIA BOARD. CONTRACTOR TO CONFIRM ON SITE

JH 4.5mm HARDIEFLEX SOFFIT LINING, INSTALL TO MANUFACTURERS RECOMMENDATIONS,(PVC JOINTERS).

WALLS
HERMPAC VERTICAL SHIPLAP WEATHERBOARDS INSTALLED AS PER MANUFACTURERS SPECIFICATIONS ON 20mm CAVITY SYSTEM - CAVITY TREATMENT TO COMPLY WITH B2.

GLAZING / JOINERY
DOUBLE GLAZED POWDER COATED ALUMINIUM JOINERY.

~2,015 WINDOW HEAD HEIGHT TYPICAL, CONTRACTOR CONFIRM ON SITE PRIOR TO COMMENCING WORKS.

INSULATION
R 6.0 BATTS ROOF INSULATION
R2.8 BATTS WALL INSULATION

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Elevations

JOHN SILICH
23 KOTARE STREET
AHIPARA
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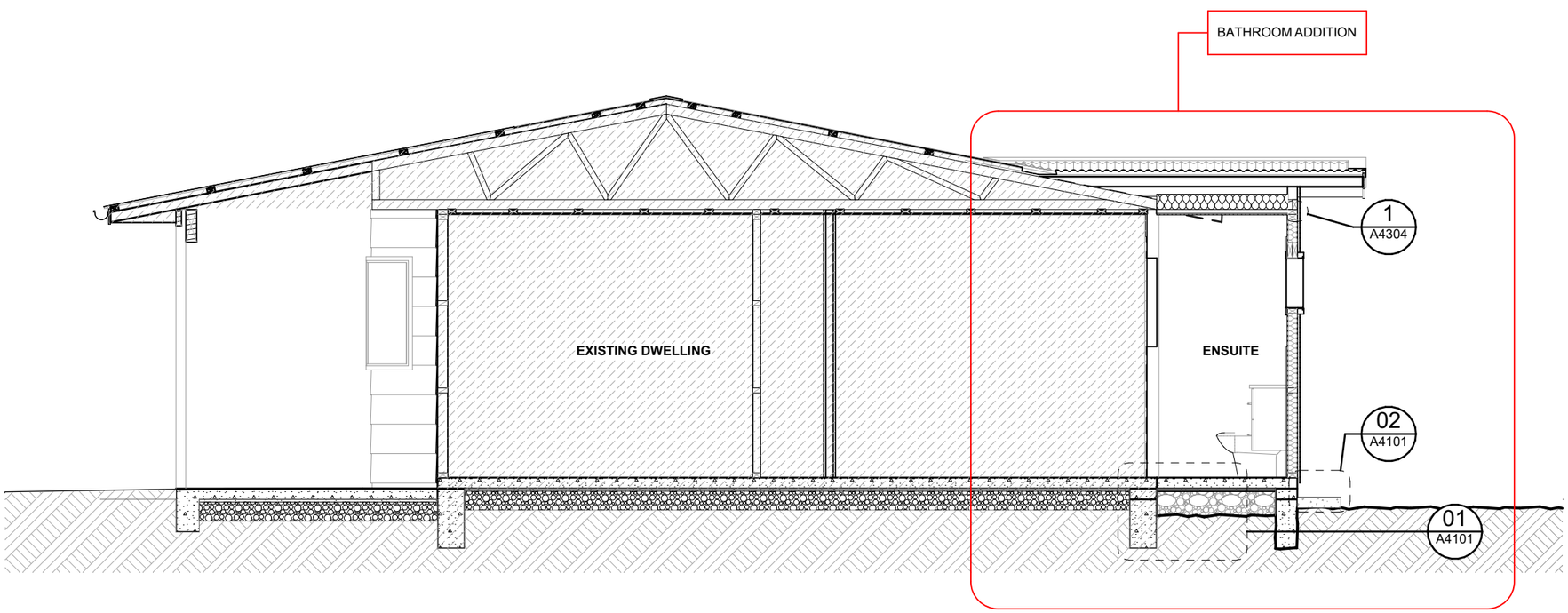

ROOF
COLORSTEEL MAXAM.
0.40G CORRUGATE.
SCREW FIXED WITH
LOW CARBON NON CONDUCTING SEALING WASHERS
OR
PROFILED WASHERS WITH EPDM SEALING WASHER
AS PER ROOFING MANUFACTURERS SPECIFICATIONS
0.55 COLORSTEEL MAXAM EDGE FLASHINGS, COLOUR
TO MATCH ROOFING

WALLS
WALL CLADDINGS
HERMPAC VERTICAL SHIPLAP WEATHERBOARDS
INSTALLED AS PER MANUFACTURERS SPECIFICATIONS
ON
20mm CAVITY SYSTEM - CAVITY TREATMENT TO COMPLY
WITH B2.

BAYONET BAYOWRAP WALL UNDERLAY.

BOTTOM PLATES
H1.2 BOTTOM PLATES

JOINERY
ALUMINIUM FRAMED JOINERY TO MATCH EXISTING

FLOORS
FLOOR SLAB
100mm THICK 20MPA CONCRETE FLOOR SLAB, SE62
500E MESH 30mm TOP COVER(LAP JOINS 225mm) OVER
25 SAND BLINDING 0.25mm POLYTHENE MOISTURE
BARRIER (TAPE ALL CUTS AND PENETRATIONS AND LAP
225mm AT ALL SEAMS) OVER 100mm MIN COMPACTED
GAP 40 OR OTHER ACCEPTABLE HARDFILL.

SLAB FOUNDATIONS
BOXED FOOTINGS.

FLOOR FINISHES
TILES-WET AREAS
CARPET

LININGS
WALL LININGS DWELLING
9mm VILLABOARD TO TILED WALLS IN WET AREAS

CEILING LININGS DWELLING
13mm GIB AQUALINE TO BATHROOM CEILING

CEILING BATTENS
70x35 H1.2 TIMBER BATTENS @ 600 CRS

INTERIOR FITOUT
INTERIOR DOORS
2.0m TYPICAL INTERNAL DOOR HEIGHT.
TRIMS
60x10 FJ PINE, SINGLE BEVEL SKIRTING.
MATCH ALL NEW TRIMS TO EXISTING TRIMS~40x18
TYPICAL SCOTIA, CONFIRM ON SITE.

INSULATION
R 6.0 BATTS ROOF INSULATION
R2.8 BATTS WALL INSULATION
ACOUSTIC INSULATION TO BE INSTALLED AROUND/
BETWEEN BATHROOMS AND BEDROOMS.

SHOWERS
TILED SHOWER (9mm VILLABOARD)

WATER HEATING
EXTERNAL HOT WATER HEAT PUMP

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Section A-A

JOHN SILICH
23 KOTARE STREET
AHIPARA
NORTHLAND

Rev No.	Revision	Date

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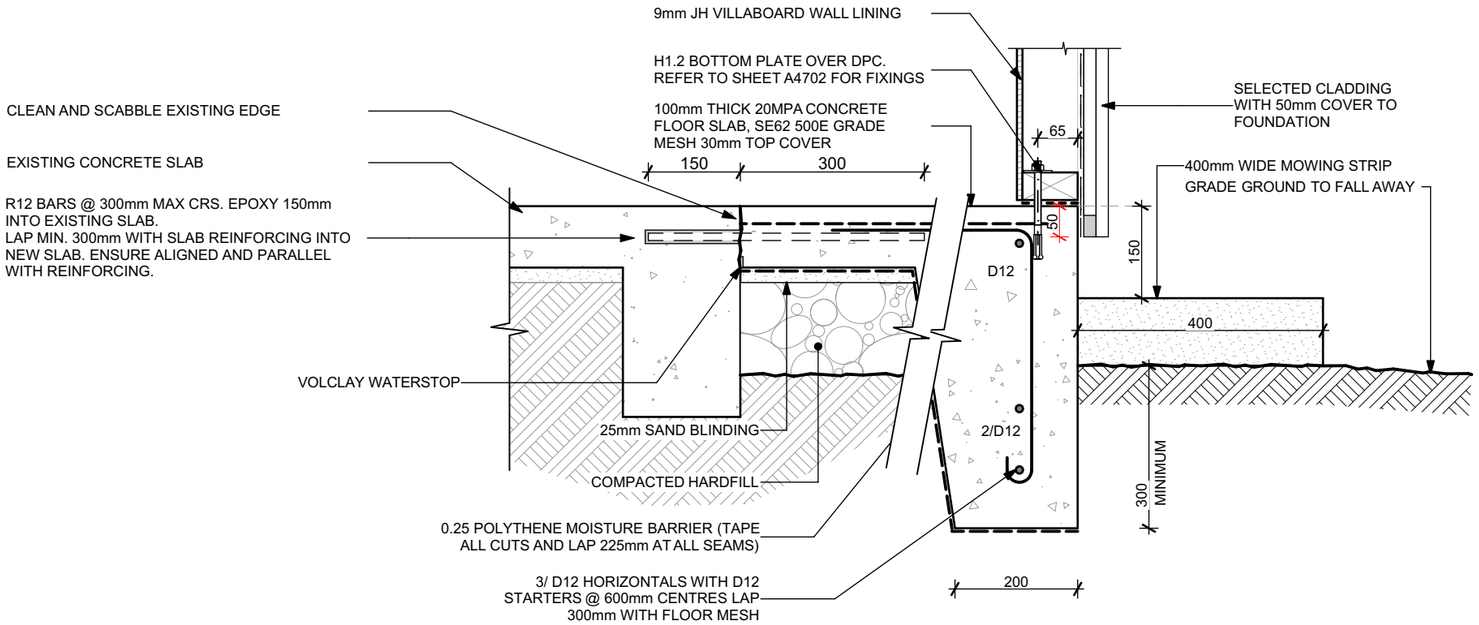
Sheet No:
A2501



01 FOUNDATION/ CHANNEL DRAIN DETAIL 1:10

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Foundation Details

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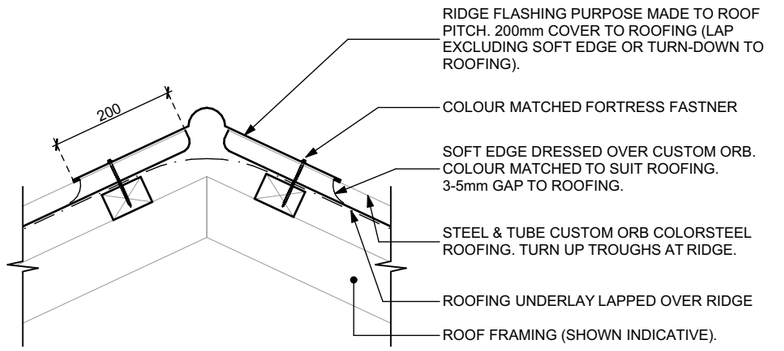
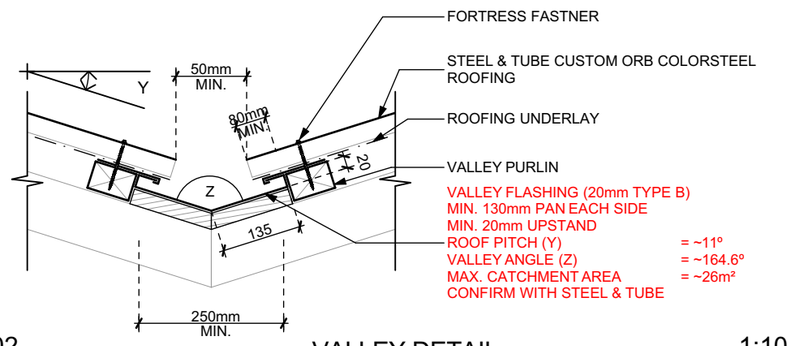
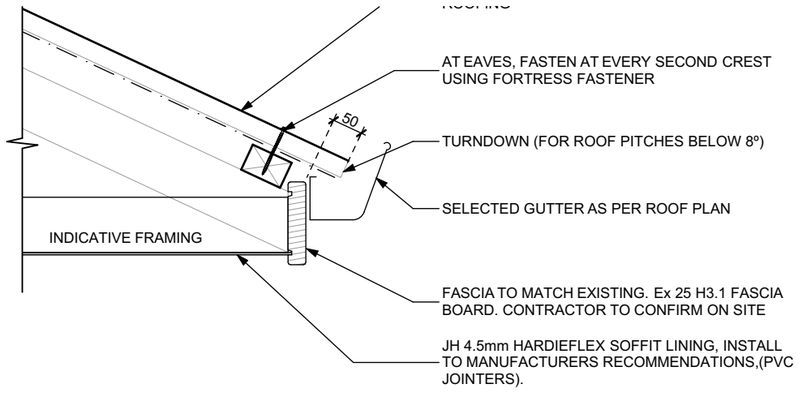


01 CUSTOM ORB RIDGE DETAIL TYPICAL 1:10

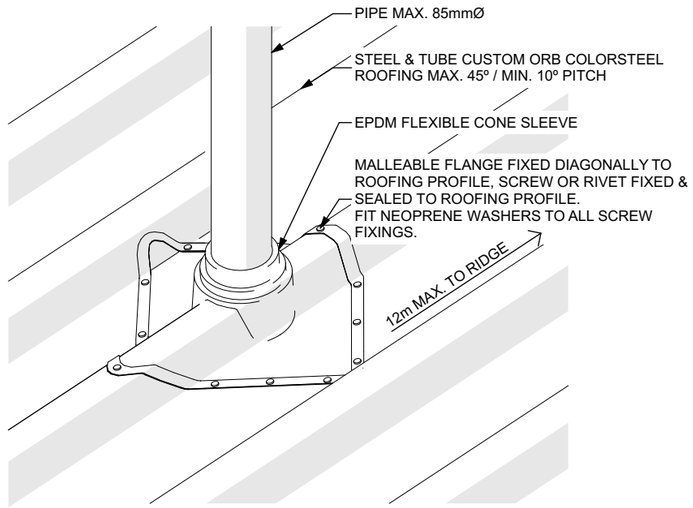


02 VALLEY DETAIL 1:10

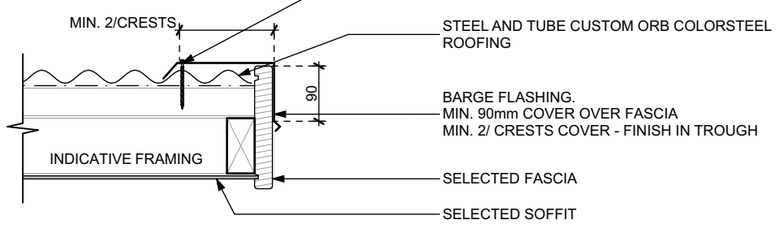


03 TYPICAL GUTTER DETAIL 1:10

TYPICAL NOTES:
- THESE DETAILS ARE GENERALLY IN COMPLIANCE WITH E2/AS1 AND / OR THE NZMRM CODE OF PRACTICE, AND IN SOME CASES SPECIFIC DETAILS BY 'STEEL & TUBE'.
- THE ROOFER IS ULTIMATELY RESPONSIBLE TO ENSUIRE THAT DETAILS USED MEET THE REQUIREMENTS OF THE NZ BUILDING CODE FOR THE SPECIFIC PROJECT.
- DETAILS OF THE SUPPORTING STRUCTURE INCLUDING CAVITY BATTENS ARE INDICATIVE ONLY AND ARE AS SHOWN ON THE RELATIVE PLANS.
- UNDERLAY SELECTION AND BUILDING WRAP TYPES / SUPPORT ARE AS NOTED ON THE ROOF AND WALL FRAMING PLANS.
- THESE DETAILS ARE TO BE READ WITH THE STEEL & TUBE PROFILE TECHNICAL SUMMARY REGARDING WIND LOADS AND FIXINGS.
- FURTHER INFORMATION CAN BE OBTAINED FROM THE NZMRM CODE OF PRACTICE OR E2/AS1



04 PIPE PENETRATION DETAIL - UP TO 85mmØ 1:10



05 BARGE DETAIL 1:10

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Roof Details

JOHN SILICH
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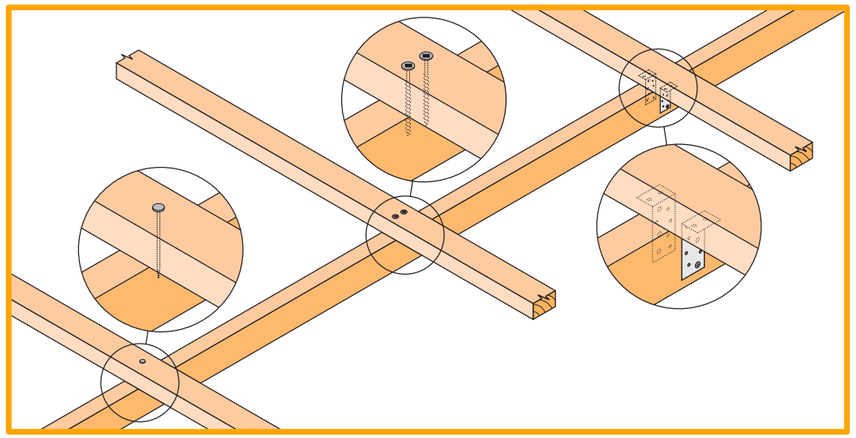
PURLIN & BATTEN FIXING CHART
ALTERNATIVE SOLUTION TO NZS 3604:2011
TABLES 10.10 & 10.12

NOTE:

- All purlin and batten sizes are as per NZS 3604:2011
- All fixings assume that the purlin and battens are installed on their flat over the top of the rafter or truss
- The minimum fixing requirements apply to all purlin locations within the roof area
- The LUMBERLOK BLUE SCREW where specified requires a minimum of 30mm penetration into rafter or truss i.e. it is suitable for rough sawn timber up to 50mm thick at 18% moisture content



SELECTION CHART FIXING OPTIONS
(minimum fixing requirements)

ROOF WEIGHT	MAX. PURLIN SPAN (mm)	MAX. PURLIN CRS. (mm)	WIND ZONE				
			L	M	H	VH	EH
HEAVY ROOF Tile Battens	900	370	A	A	A	B	C
LIGHT ROOF Tile Battens	900	370	A	A	B	C	C
	1200	370	A	B	C	C	C
LIGHT ROOF Purlins	900	900	C	C	C	C	D
	1200	900	C	C	C	D	D
	1200	1200	C	C	D	E	E

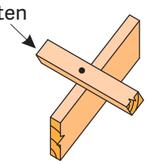
Wind Zone:
As per NZS 3604:2011

L = Low Wind
M = Medium Wind
H = High Wind
VH = Very High Wind
EH = Extra High Wind

FIXING TYPE C 2.4kN

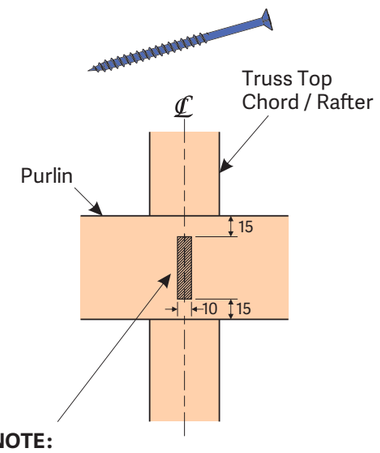
1 BLUE SCREW

Purlin / Batten



FIXING TOLERANCES

LUMBERLOK BLUE SCREW

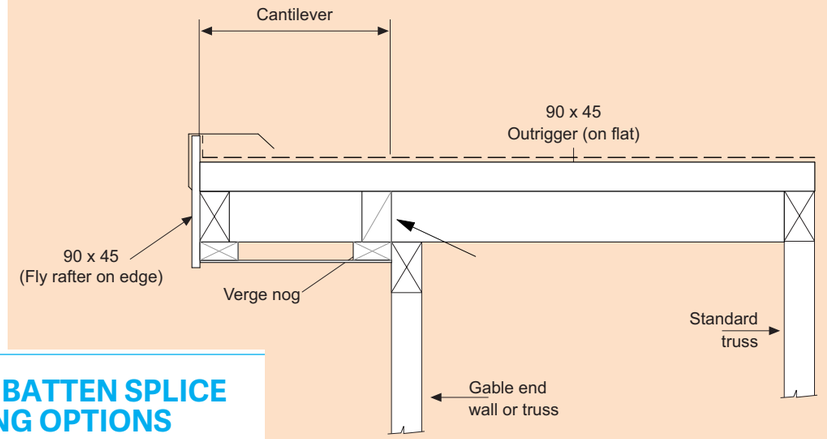


NOTE:
Locate fixings within the shaded area. Care to be taken to avoid over tightening of Screws.

Table 10.9 – Outriggers – SG 8 (see 10.2.1.15.3)

Outrigger size and orientation (mm)	Maximum outrigger spacing for a maximum cantilever of: (mm)		Boundary / Fly rafter size (mm)
	600	750	
70 x 45	900	600	70 x 45 (on edge)
90 x 45	1200	900	90 x 45 (on edge)
45 x 90	600	400	90 x 45 (on edge)

NOTE – All joints fixed using a minimum of 2 / 90 x 3.15 mm nails.



NOTE – Typical detail showing fly rafter and outrigger orientations. Sizes and orientation to be taken from table 10.9.

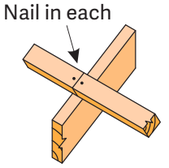
Unless otherwise stated, all dimensions are in mm.

Figure 10.16(a) – Fly rafter/outrigger orientation

PURLIN / BATTEN SPLICE FIXING OPTIONS

FIXING TYPE A & B OVER PURLIN SPLICE

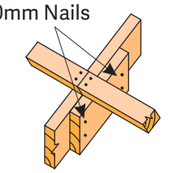
1 Nail in each



NOTE:
Skew nail when fixing to 35mm rafter or truss

FIXING TYPE C, D or E OVER PURLIN SPLICE

90 x 45mm Block fixed to Chord or Rafter with 4 x 90mm Nails



- TYPE C
  1 BLUE SCREW to each purlin
- TYPE D & E
  1 NAIL plus 1 BLUE SCREW to each purlin

FIXING DEFINITIONS

NAIL = Either 90mm x 3.15 dia. power-driven nail or 100mm x 3.75 dia. hand-driven nail

BLUE SCREW = 80mm x 10 gauge LUMBERLOK BLUE SCREW

WIRE DOG = LUMBERLOK WIRE DOG either LH or RH

CT200 = LUMBERLOK Ceiling Tie CT200 bend over purlin, 4 x LUMBERLOK Product Nails 30mm x 3.15 dia. each end

CPC40 = LUMBERLOK CPC40 with 2 x Type 17 - 14g x 35mm Hex Head Screws per flange

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Purlin Fixing Details

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NORTHLAND

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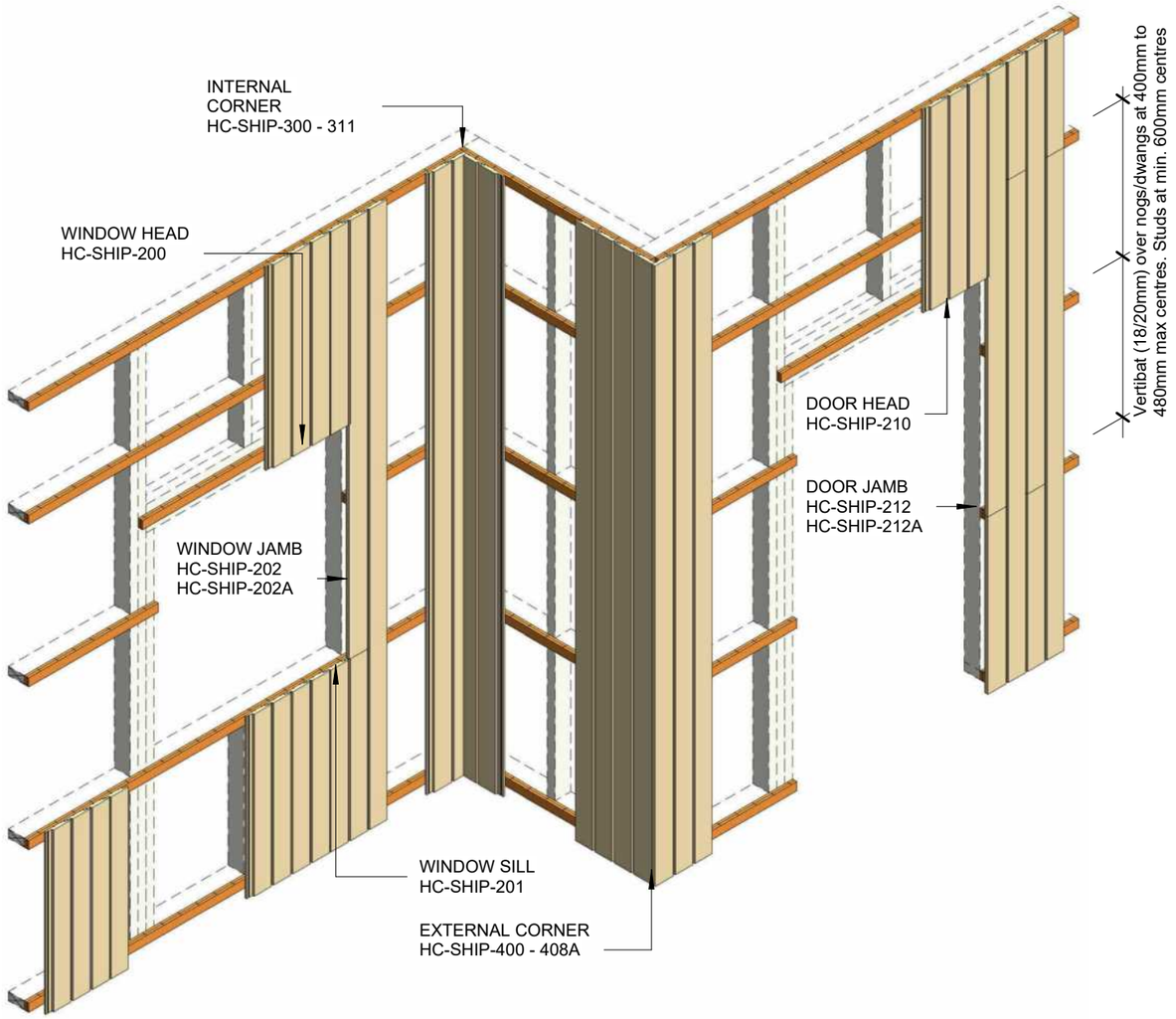
- *Refer to NZBC Acceptable Solution E2/AS1 Table 21 for the separation requirements between CCA treated battens and metal flashings.*
- *Prior to installation, refer to Hermpac Vertical Shiplap Technical Installation Specifications.*



Refer HC-SHIP40 drawings if fixing using 40/45mm Vertibat Cavity Battens

Note:
Building Underlay and Flashings not shown for clarity.

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Cavity Fix Vertical Shiplap Weatherboard System

Isometric View

CodeMark CERTIFIED CMNZ30036

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HC-SHIP-002
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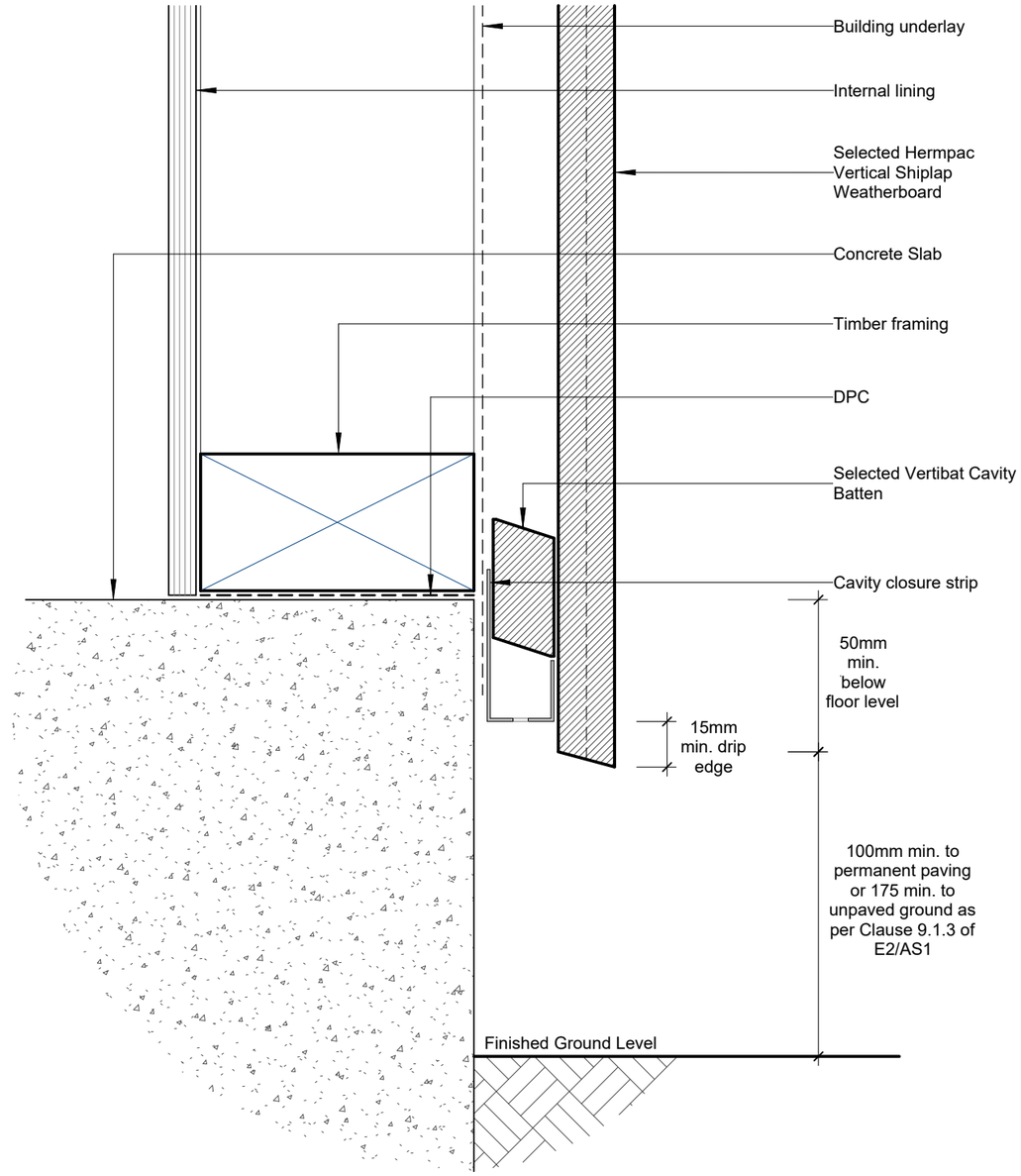

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Cavity Fix Vertical Shiplap Weatherboard System

Base of Wall,
Concrete

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HC-SHIP-500
DRAWING

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Hermpac Vertical Shiplap Details

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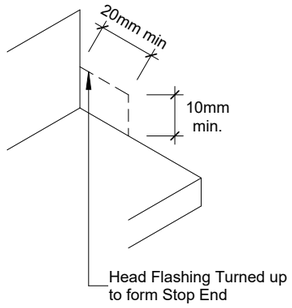
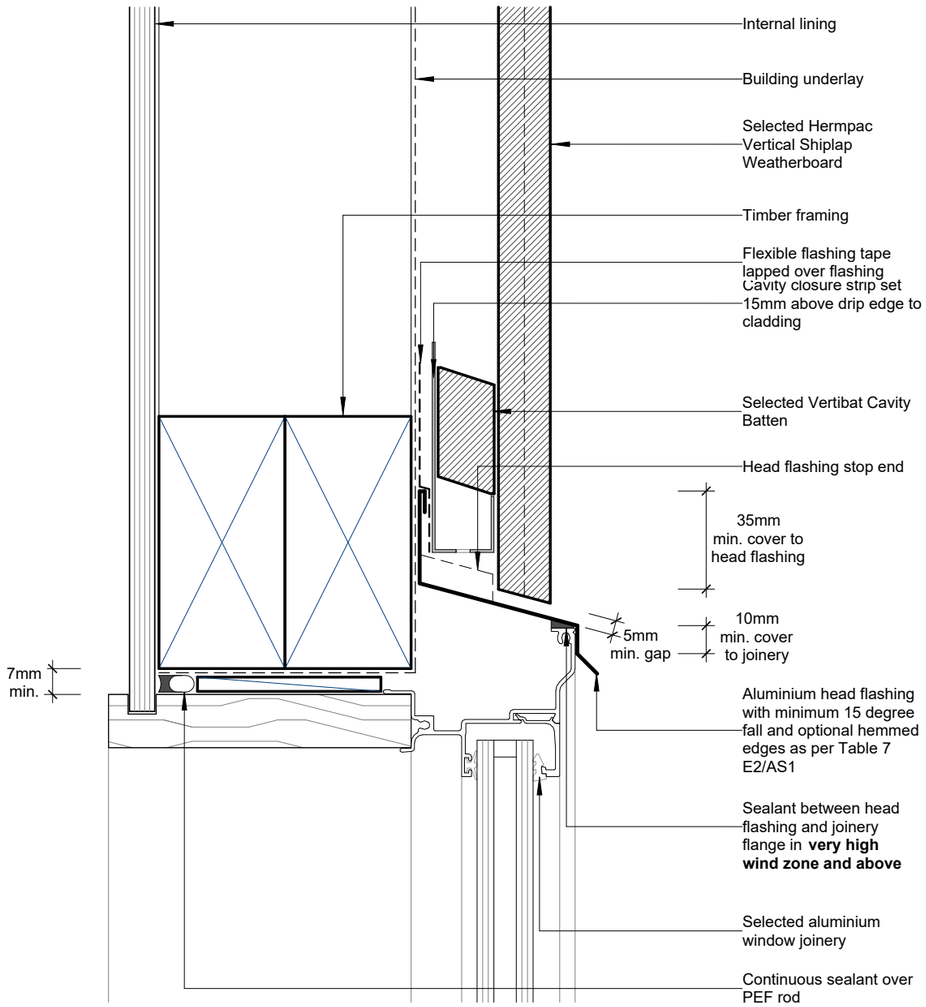
Sheet No:
A4301

NOTES:
- All weatherboard fixings pre-drilled maximum 1mm diameter smaller than the nail/screw gauge.
- All Hermpac timber products, cut ends and edges to be precoated as per Installation Specifications.
- All materials and fixtures are to comply with E2/AS1 Clause 2.2.
- For non-hemmed corner flashings, ensure a minimum 75mm cover to weatherboards beyond the point where BRANZ Bulletin 411 compliant weatherboard lap or rebate combinations terminate at the corner junction.
- In Extra High Wind Zone and above, the 75mm cover requirement remains and hemmed edges must also be used.
- Refer to NZBC Acceptable Solution E2/AS1 Table 21 for the separation requirements between CCA treated battens and metal flashings.
- Prior to installation, refer to Hermpac Vertical Shiplap Technical Installation Specifications.





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Cavity Fix Vertical Shiplap Weatherboard System

Window Head
Detail, Aluminium
Joinery

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1 : 2 @ A4	2022
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NOTES:
- All weatherboard fixings pre-drilled maximum 1mm diameter smaller than the nail/screw gauge.
- All Hermpac timber products, cut ends and edges to be precoated as per Installation Specifications.
- All materials and fixtures are to comply with E2/AS1 Clause 2.2.
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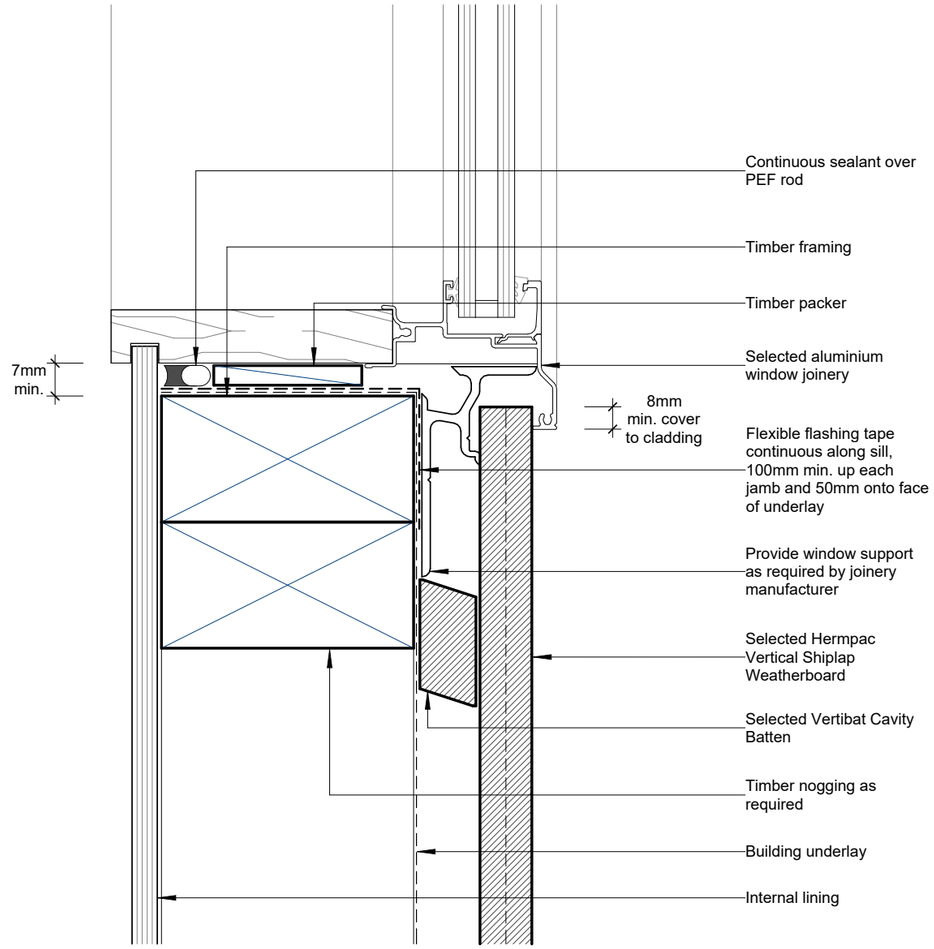
- Prior to installation, refer to Hermpac Vertical Shiplap Technical Installation Specifications.



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Cavity Fix Vertical Shiplap Weatherboard System

Window Sill
Detail, Aluminium
Joinery

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Hermpac Joinery Details

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A4302

NOTES:
- All weatherboard fixings pre-drilled maximum 1mm diameter smaller than the nail/screw gauge.
- All Hermpac timber products, cut ends and edges to be precoated as per Installation Specifications.
- All materials and fixtures are to comply with E2/AS1 Clause 2.2.
- For non-hemmed corner flashings, ensure a minimum 75mm cover to weatherboards beyond the point where BRANZ Bulletin 411 compliant weatherboard lap or rebate combinations terminate at the corner junction.
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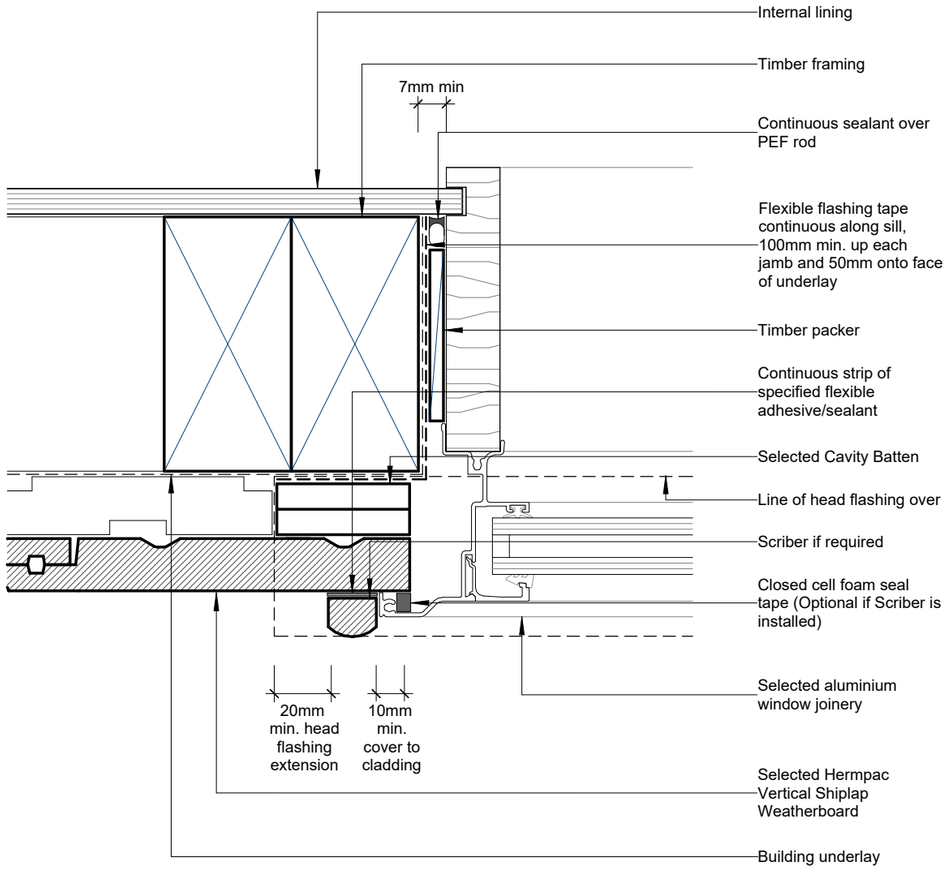
- Refer to NZBC Acceptable Solution E2/AS1 Table 21 for the separation requirements between CCA treated battens and metal flashings.
- Prior to installation, refer to Hermpac Vertical Shiplap Technical Installation Specifications.



Cavity Fix Vertical Shiplap Weatherboard System

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Window Jamb Detail, Aluminium Joinery

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NOTES:
- All weatherboard fixings pre-drilled maximum 1mm diameter smaller than the nail/screw gauge.
- All Hermpac timber products, cut ends and edges to be precoated as per Installation Specifications.
- All materials and fixtures are to comply with E2/AS1 Clause 2.2.
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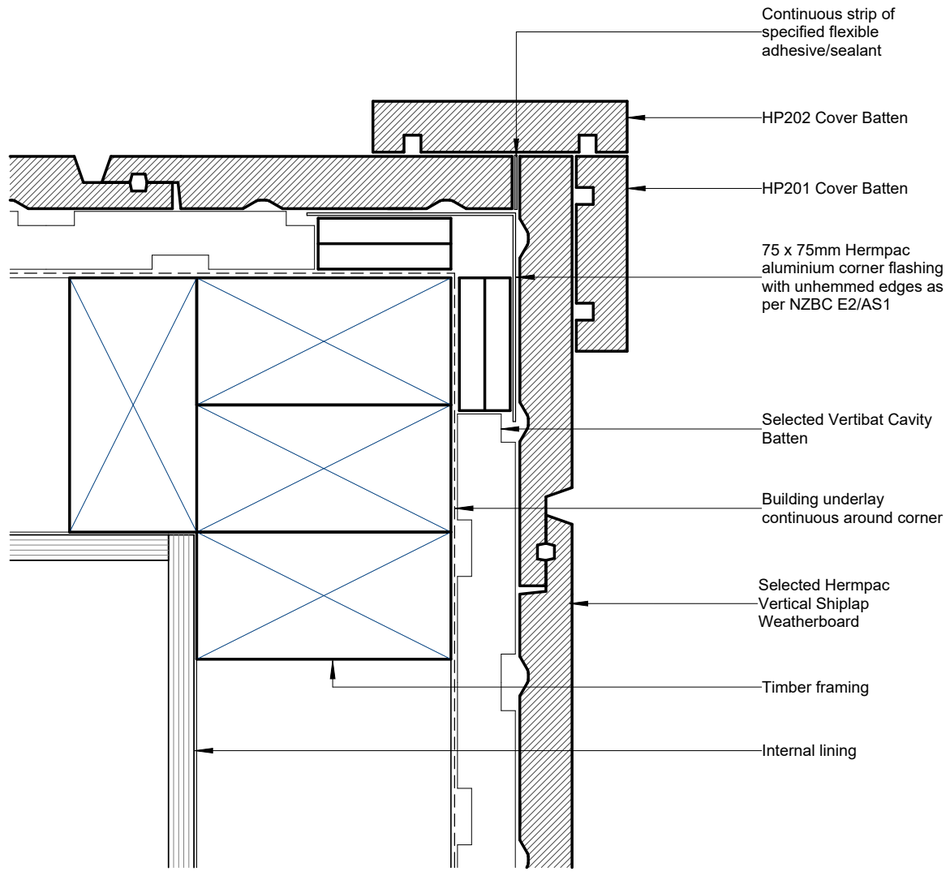
- Prior to installation, refer to Hermpac Vertical Shiplap Technical Installation Specifications.



NOTE:
For detailed installation and fixing information of timber corner mouldings refer to Hermpac VertiLine Vertical Shiplap Installation Specifications.

Cavity Fix Vertical Shiplap Weatherboard System

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External Corner Boxed

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Hermpac Joinery Details

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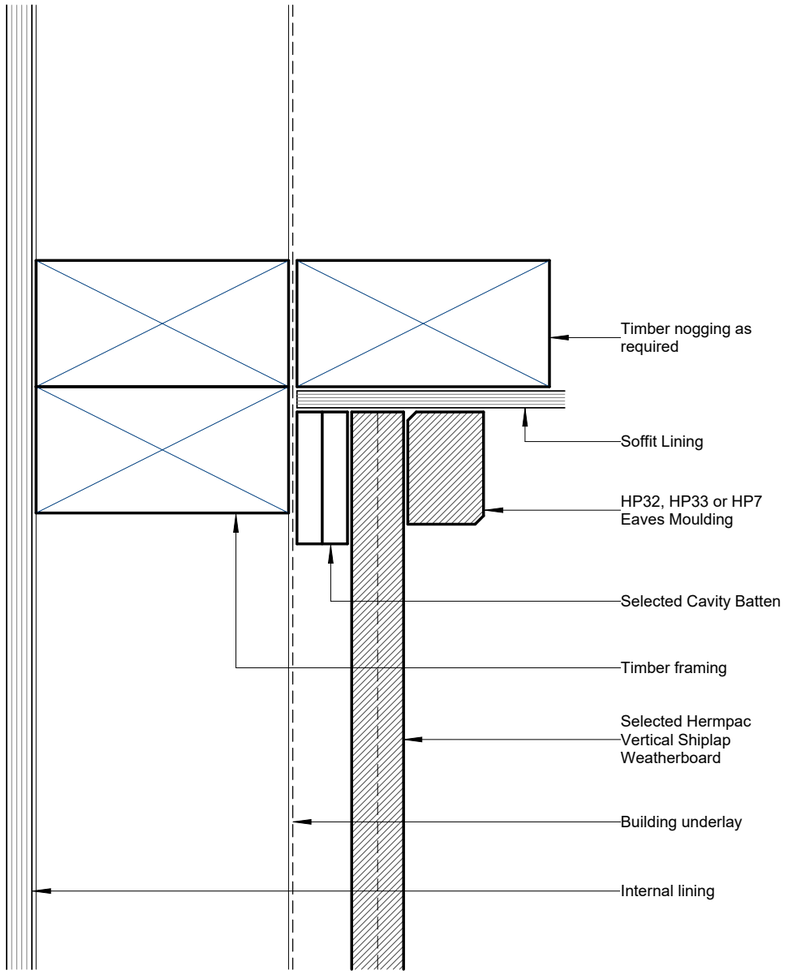
NOTES:
- All weatherboard fixings pre-drilled maximum 1mm diameter smaller than the nail/screw gauge.
- All Hermpac timber products, cut ends and edges to be precoated as per Installation Specifications.
- All materials and fixtures are to comply with E2/AS1 Clause 2.2.
- For non-hemmed corner flashings, ensure a minimum 75mm cover to weatherboards beyond the point where BRANZ Bulletin 411 compliant weatherboard lap or rebate combinations terminate at the corner junction.
- In Extra High Wind Zone and above, the 75mm cover requirement remains and hemmed edges must also be used.
- Refer to NZBC Acceptable Solution E2/AS1 Table 21 for the separation requirements between CCA treated battens and metal flashings.
- Prior to installation, refer to Hermpac Vertical Shiplap Technical Installation Specifications.



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Cavity Fix Vertical Shiplap Weatherboard System

Soffit Detail, Overhang

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1 : 2 @ A4	01/11/2021
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- All weatherboard fixings pre-drilled maximum 1mm diameter smaller than the nail/screw gauge.
- All Hermpac timber products, cut ends and edges to be precoated as per Installation Specifications.
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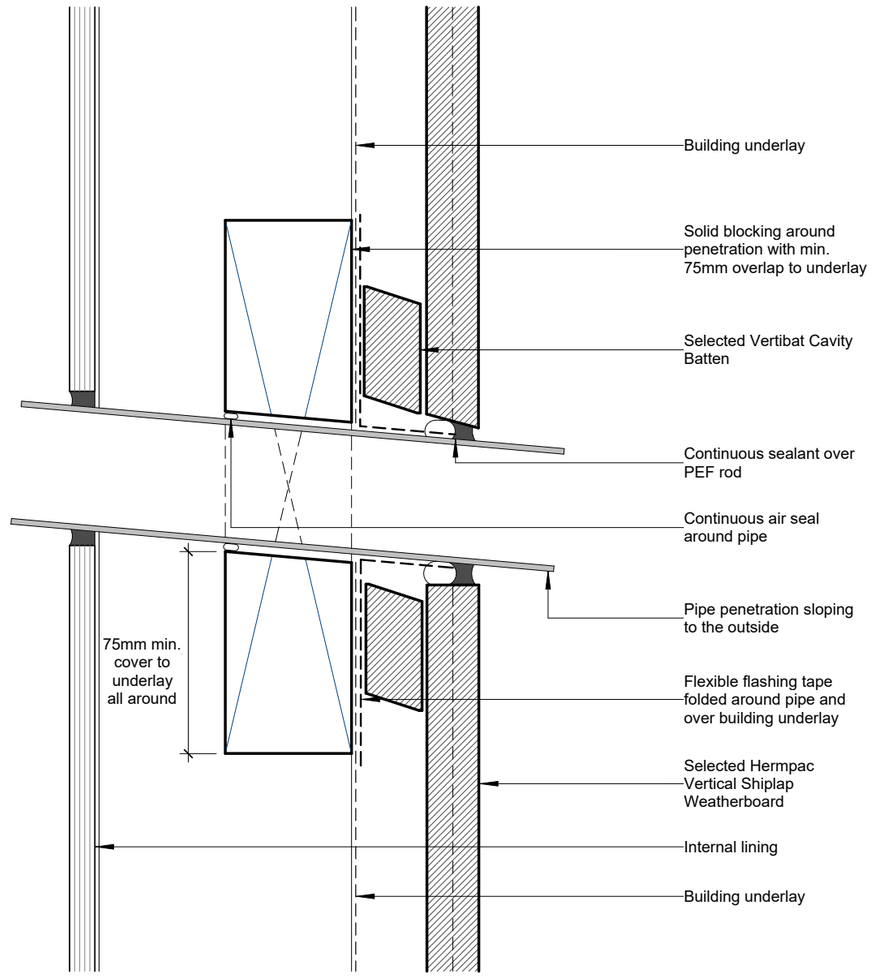
- For non-hemmed corner flashings, ensure a minimum 75mm cover to weatherboards beyond the point where BRANZ Bulletin 411 compliant weatherboard lap or rebate combinations terminate at the corner junction.
- In Extra High Wind Zone and above, the 75mm cover requirement remains and hemmed edges must also be used.
- Refer to NZBC Acceptable Solution E2/AS1 Table 21 for the separation requirements between CCA treated battens and metal flashings.
- Prior to installation, refer to Hermpac Vertical Shiplap Technical Installation Specifications.



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Cavity Fix Vertical Shiplap Weatherboard System

Pipe Penetration Detail

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Hermpac Details

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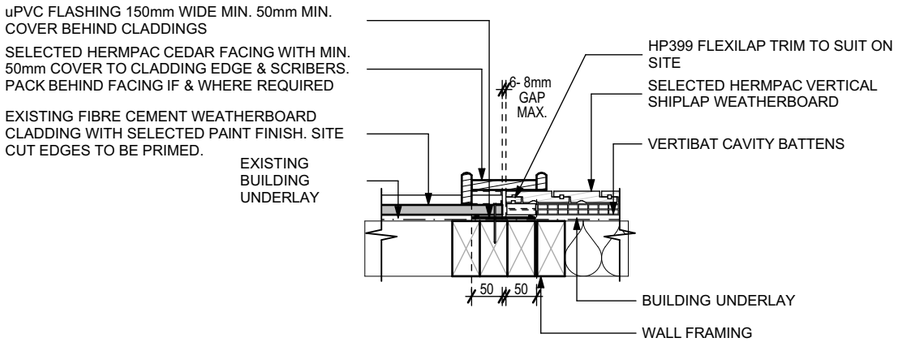
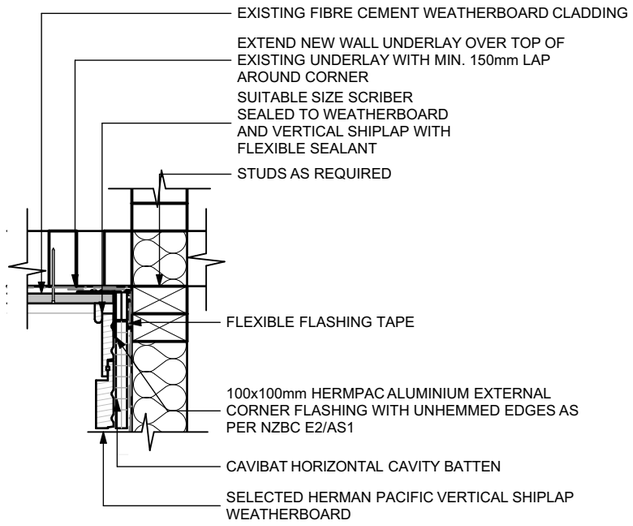


1 HERMPAC - BUTT JOIN TO EXISTING WEATHERBOARD CLADDING DETAIL 1:10



NOTES
- ALL WEATHERBOARD FIXINGS PRE-DRILLED MAXIMUM 1MM DIAMETER SMALLER THAN THE NAIL/SCREW GAUGE.
- ALL HERMPAC TIMBER PRODUCTS, CUT ENDS AND EDGES TO BE PRECOATED AS PER INSTALLATION SPECIFICATIONS.
- ALL MATERIALS AND FIXTURES ARE TO COMPLY WITH E2/AS1 CLAUSE 2.2.
- FOR NON-HEMMED CORNER FLASHINGS, ENSURE A MINIMUM 75MM COVER TO WEATHERBOARDS BEYOND THE POINT WHERE BRANZ BULLETIN 411 COMPLIANT WEATHERBOARD LAP OR REBATE COMBINATIONS TERMINATE AT THE CORNER JUNCTION.
- IN EXTRA HIGH WIND ZONE AND ABOVE, THE 75MM COVER REQUIREMENT REMAINS AND HEMMED EDGES MUST ALSO BE USED.
REFER TO NZBC ACCEPTABLE SOLUTION E2/AS1 TABLE 21 FOR THE SEPARATION REQUIREMENTS BETWEEN
- CCA TREATED BATTENS AND METAL FLASHINGS.
- PRIOR TO INSTALLATION, REFER TO HERMPAC VERTICAL SHIPLAP TECHNICAL INSTALLATION SPECIFICATIONS.

2 HERMPAC - INTERNAL CORNER DETAIL 1:10

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Rev No.	Revision	Date

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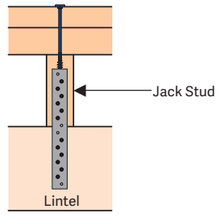
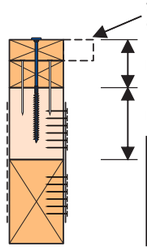
Sheet No: **A4305**

MiTek BOWMAC

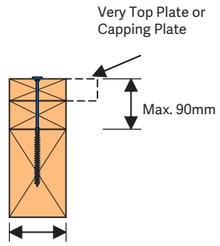
FIXING THROUGH VERY TOP PLATE OR CAPPING PLATE TO LINTEL WITH JACK STUD ARRANGEMENT



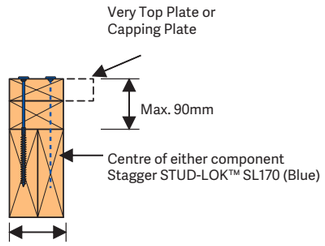


NOTE:
Connect jack stud to lintel with LUMBERLOK Sheet Brace Strap 200mm on one side with 6 x LUMBERLOK Product Nails 30mm x 3.15 dia. each end or a pair of Tylok 6T5 (one side each)

FIXING THROUGH VERY TOP PLATE OR CAPPING PLATE TO LINTELS DIRECTLY UNDER TOP PLATE

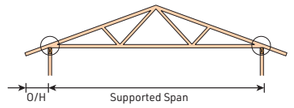


Solid Lintel



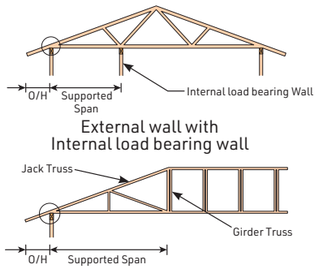
Component Lintel

LOADED DIMENSION DEFINITION



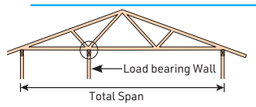
External wall with Standard truss

EXTERNAL WALL LOADED DIMENSION = $\frac{\text{SUPPORTED SPAN}}{2}$ + O/H



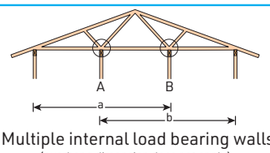
External wall with Rafter roof

External wall with Jack truss



Internal load bearing wall
(overhang dimension does not apply)

INTERNAL LOAD BEARING WALL LOADED DIMENSION = $\frac{\text{TOTAL SPAN}}{2}$



Multiple internal load bearing walls
(overhang dimension does not apply)

MULTIPLE INTERNAL LOAD BEARING WALLS LOADED DIMENSION FOR
WALL A = $a/2$
WALL B = $b/2$

FIXING SELECTION CHART

(Suitable for walls supporting roof members at 600, 900 or 1200mm crs.)

Wind Zones L, M, H, VH, EH as per NZS 3604:2011

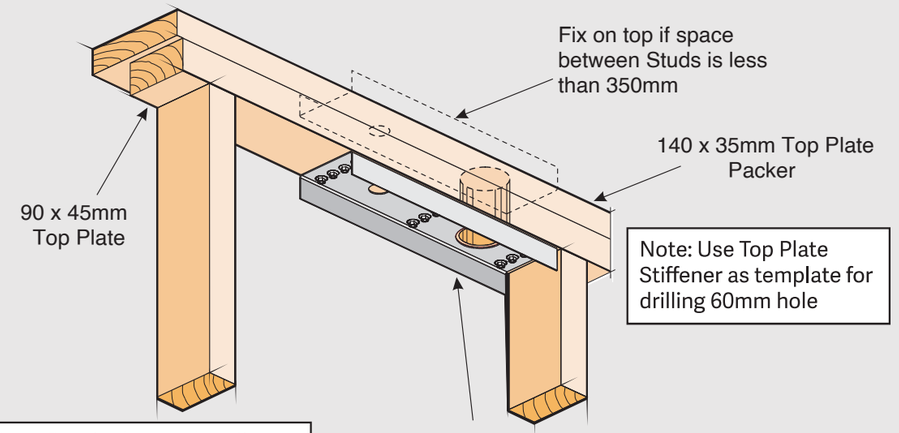
Loaded Dimension (m) Stud Centres			Light Roof Wind Zone					Heavy Roof Wind Zone				
300mm	400mm	600mm	L	M	H	VH	EH	L	M	H	VH	EH
3.0	2.3	1.5	2N	2N	SL	SL	SL	2N	2N	SL	SL	SL
4.0	3.0	2.0	2N	2N	SL	SL	SL	2N	2N	SL	SL	SL
5.0	3.8	2.5	2N	SL	SL	SL	SL	2N	2N	SL	SL	SL
6.0	4.5	3.0	2N	SL	SL	SL	SL	2N	2N	SL	SL	SL
7.0	5.3	3.5	2N	SL	SL	SL	SL	2N	2N	SL	SL	SL
8.0	6.0	4.0	2N	SL	SL	SL	SL	2N	2N	SL	SL	SL
9.0	6.8	4.5	SL	SL	SL	SL	SL	2N	2N	SL	SL	SL
10.0	7.5	5.0	SL	SL	SL	SL	SL	2N	2N	SL	SL	SL
11.0	8.3	5.5	SL	SL	SL	SL	SL	2N	2N	SL	SL	SL
12.0	9.0	6.0	SL	SL	SL	SL	SL	2N	2N	SL	SL	SL

2N = 2/90mm x 3.15 dia. Nails

SL = Single STUD-LOK SL170 (blue)
plus 2/90mm x 3.15 dia. Nails
or 100mm x 3.75 dia. Framing Nails

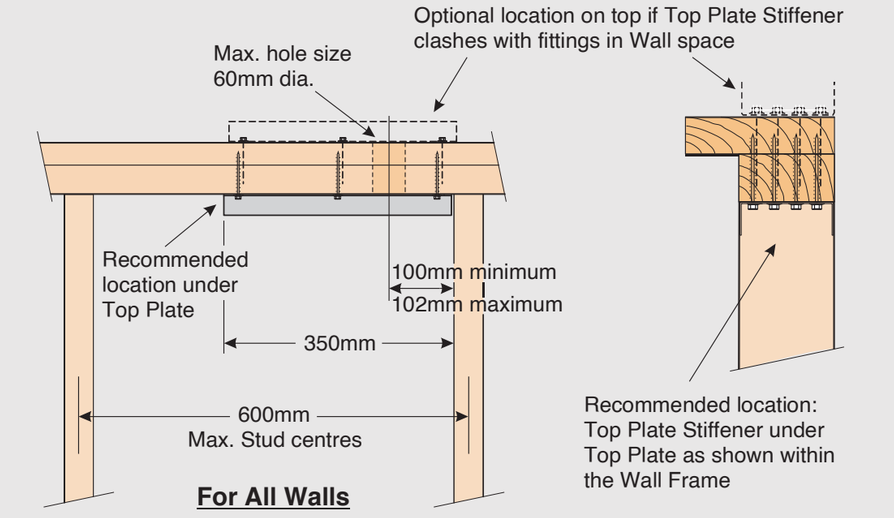
NOTE:
To calculate the number of STUD-LOK fixings required, divide the wall length by the stud centres, add 1 to this figure and locate this numbers of fixings as evenly as possible along the wall length. This figure includes the start and end studs in each wall length.

MiTek LUMBERLOK



Note: For single top plate fix with Type 17-14g x 35mm Hex Head Screws (not supplied)

Fix up into Top Plate and into Packer with 3 rows of 4 x Type 17-14g x 75mm Hex Head Screws (supplied). It may be advisable to drill pilot hole for each screw to assist installation



For All Walls

Code: **TPS**
Material: **1.55mm G300 Z275 Galvanised Steel**
Packed: **8 x Top Plate Stiffeners per Carton**
100 x Type 17-14g x 75mm Hex Head Galvanised Screws

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Top Plate Fixing Details

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NORTHLAND

Rev No.	Revision	Date

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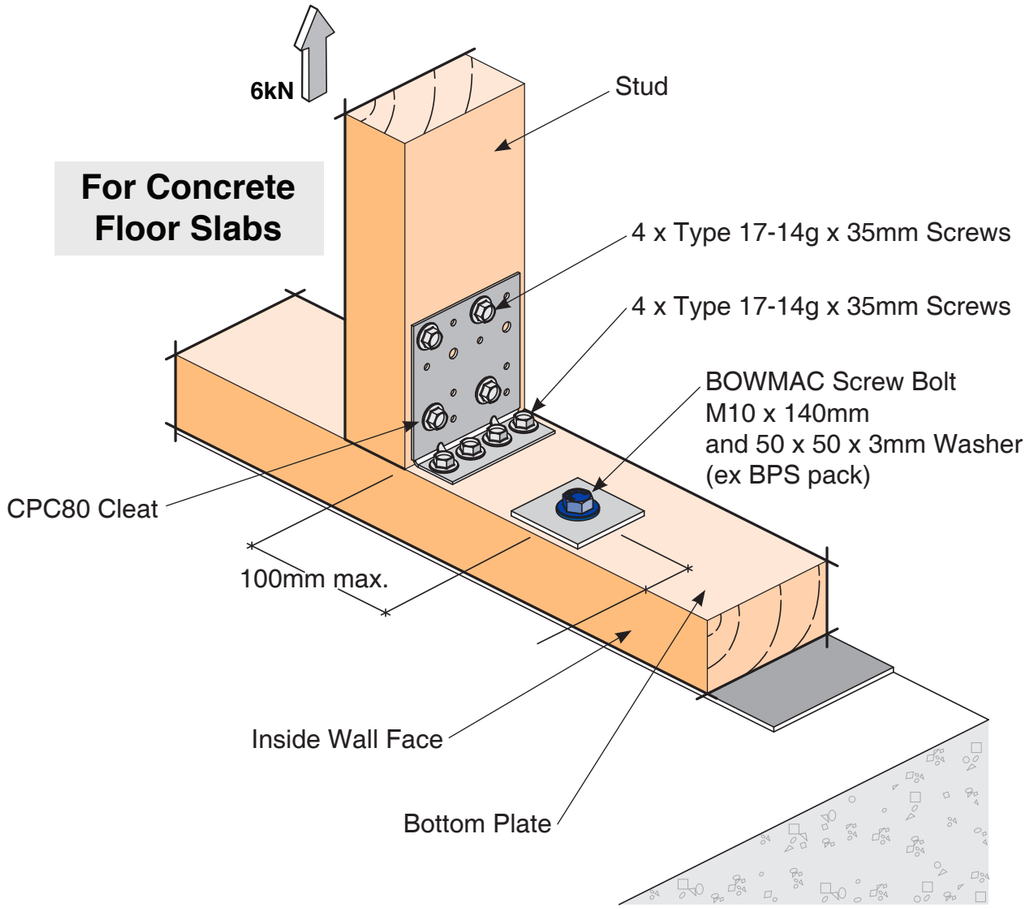
Sheet No: **A4701**

6kN STUD TO BOTTOM PLATE FIXING

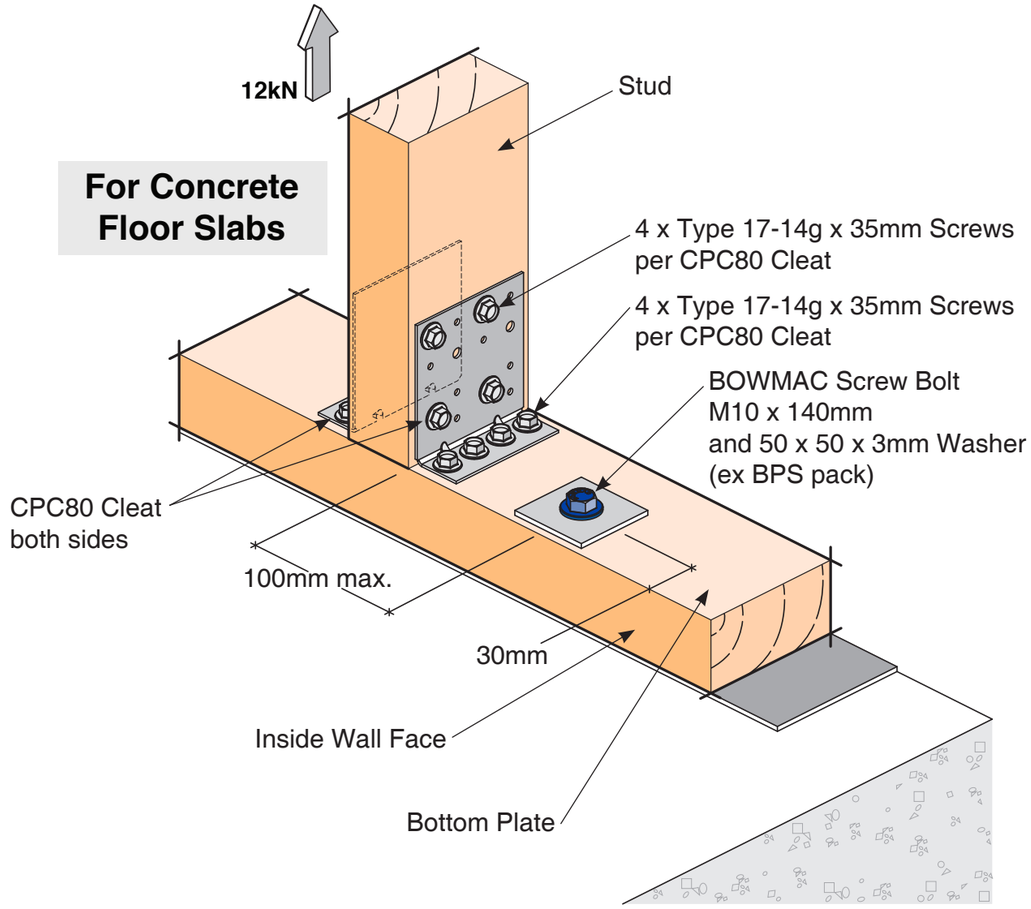
→ Ideal as retro fit fixing after lining/cladding is installed



Code: SBP
Material: CPC80 1.55mm G300 Z275 Galvanised Steel
Packed: 2 x CPC80 Cleats
16 x Type 17-14g x 35mm Hex Head Galvanised Screws

12kN STUD TO BOTTOM PLATE FIXING

→ Ideal as retro fit fixing after lining/cladding is installed
→ Two fixings per stud as shown



Code: SBP
Material: CPC80 1.55mm G300 Z275 Galvanised Steel
Packed: 2 x CPC80 Cleats
16 x Type 17-14g x 35mm Hex Head Galvanised Screws

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Bottom Plate Details

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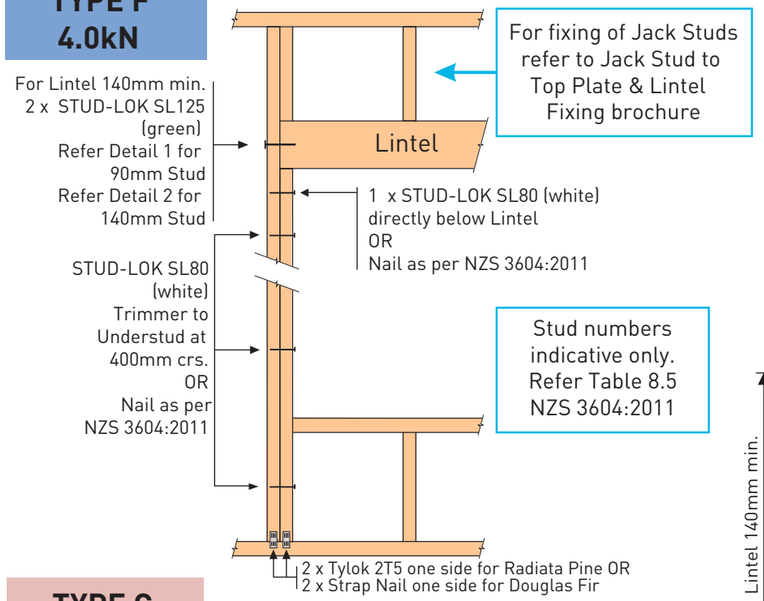
Sheet No: **A4702**

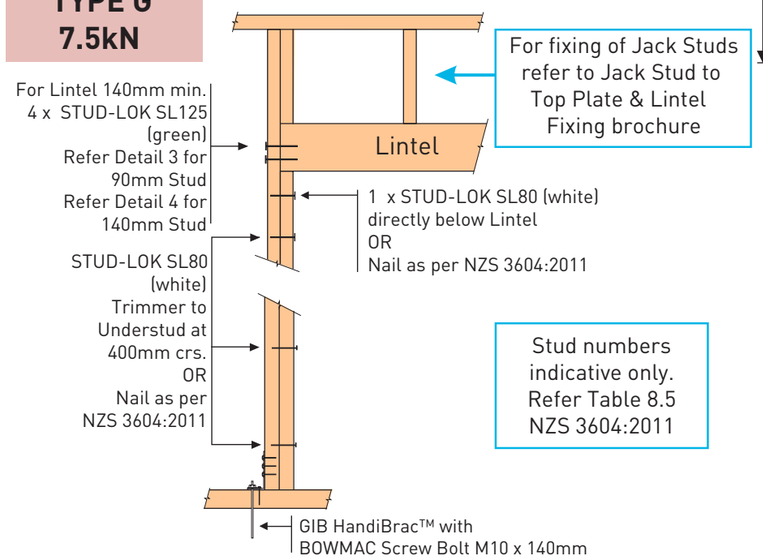
STUD-LOK LINTEL FIXING OPTIONS FOR ON-SITE

MiTek BOWMAC

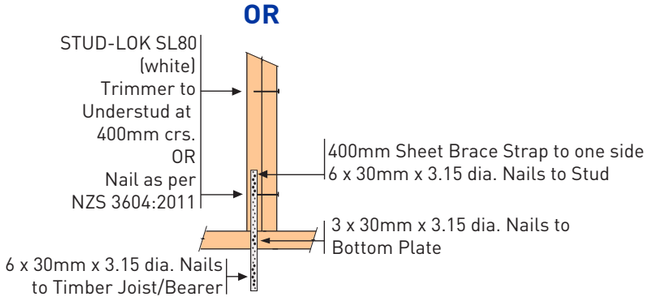
TYPE F 4.0kN



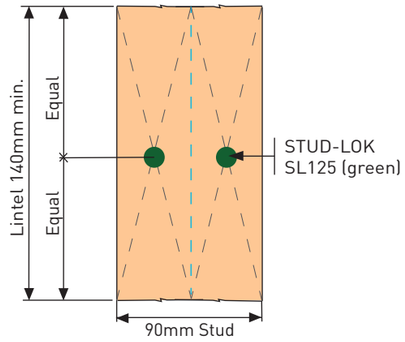
TYPE G 7.5kN



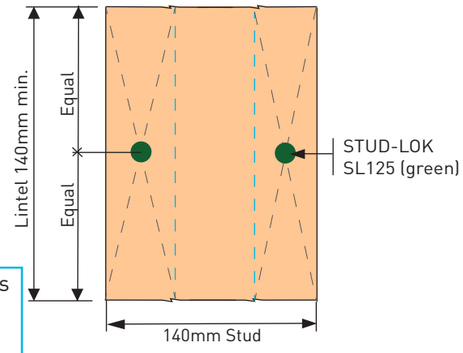
OR



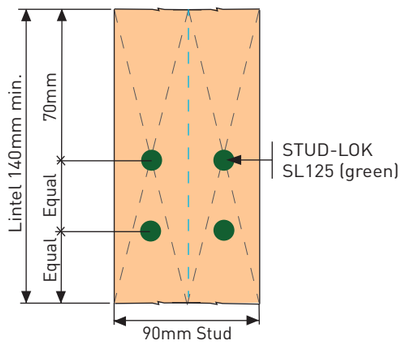
Detail 1



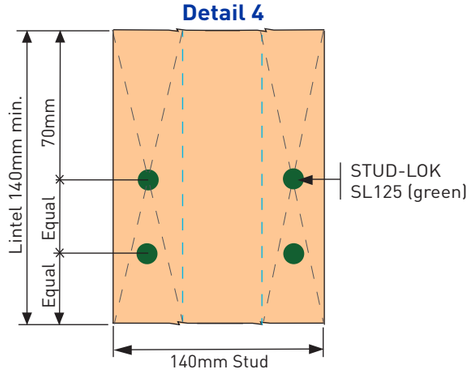
Detail 2



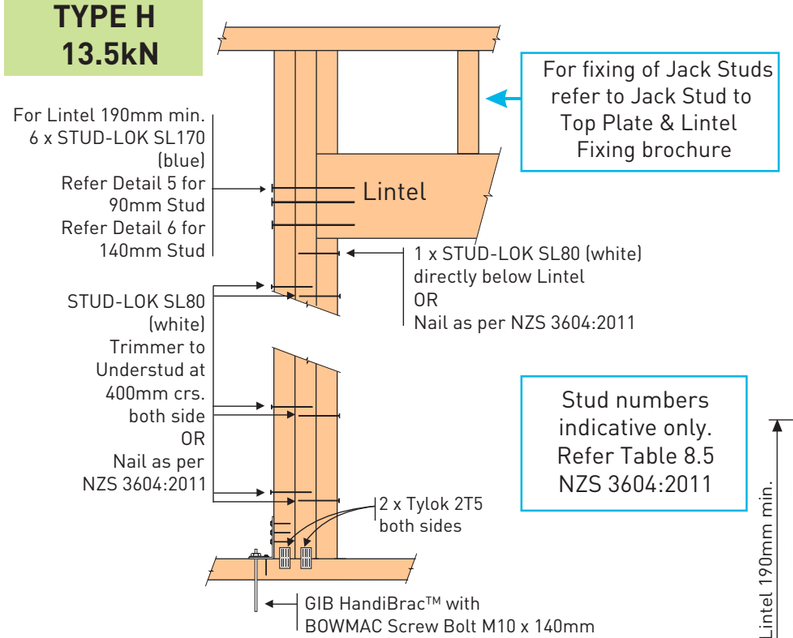
Detail 3



Detail 4



TYPE H 13.5kN



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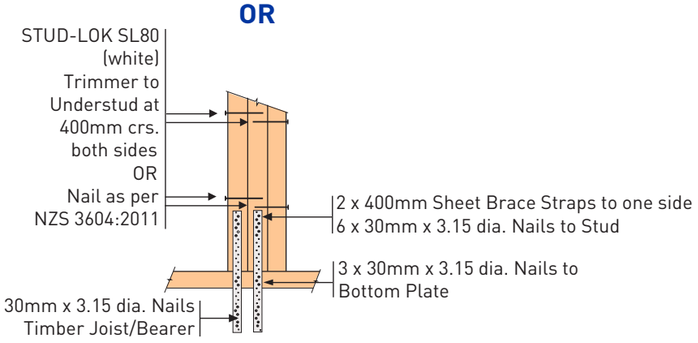
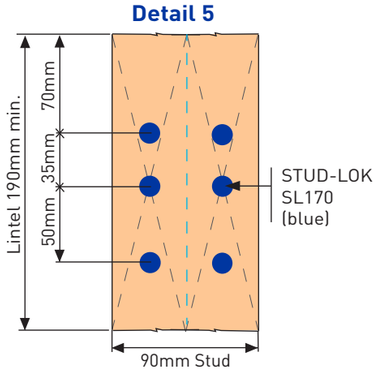


Detail 5



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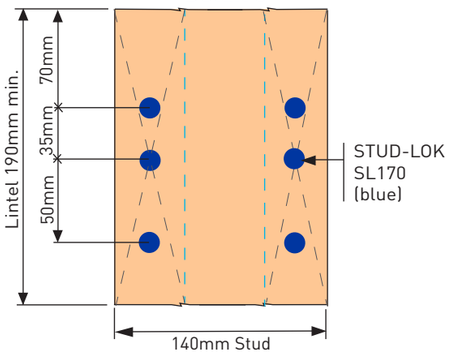

NOTE: STUD-LOK TYPE F 4.0kN fixing can be used for

TYPE E 1.4kN fixing

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Lintel Fixing Details

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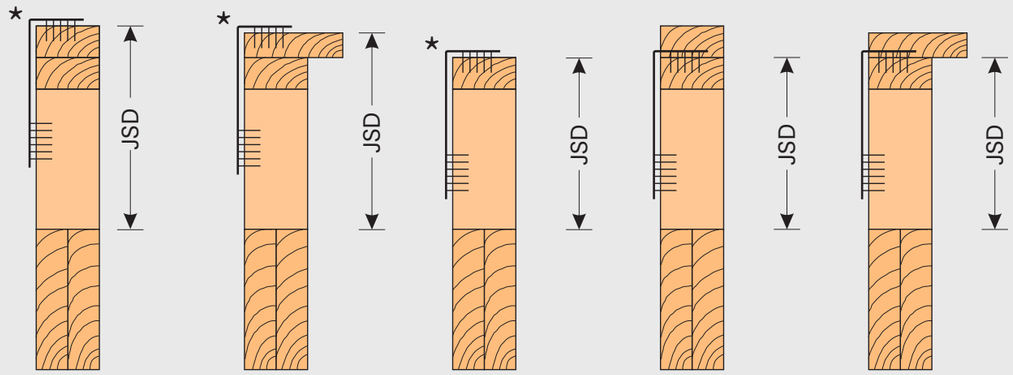
Sheet No: **A4703**

FRAMING ARRANGEMENTS

Jack Stud Dimension Definition **(JSD)**

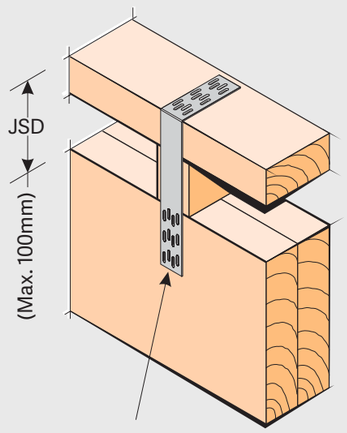


*Note: It is preferable for the top fixing to be located on the uppermost top plate or top plate packer to provide better fixing options for the truss connections

FIXING OPTIONS

FIXING 1

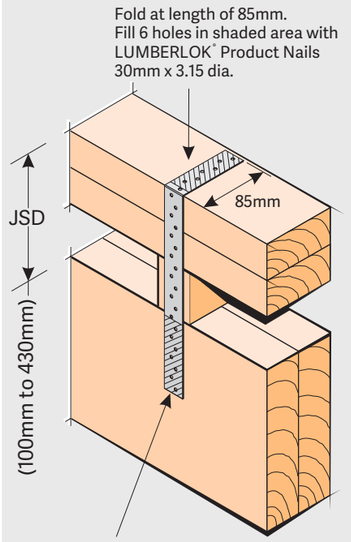
Jack Stud Dimension **(JSD)** up to a maximum of 100mm. Includes top Plate fixed directly onto Lintel i.e. no Jack Stud used.



Note:
Fix Jack Stud with 2/ 90mm x 3.15 dia. nails from top plate and 2/ 90mm x 3.15 dia. skew nails to Lintel (typical)

FIXING 2

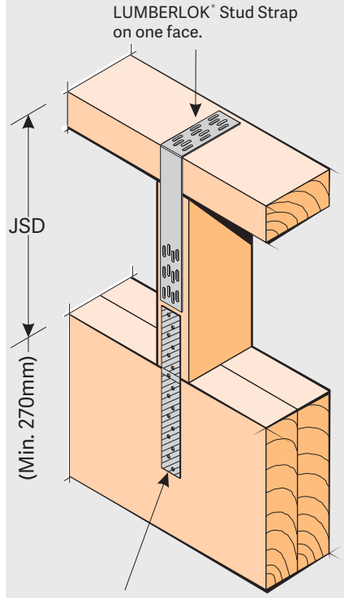
Jack Stud Dimension **(JSD)** from a minimum of 100mm to a maximum of 430mm.



Note:
- JSD up to 230mm use Sheet Brace Strap 400mm.
- JSD from 230mm to 430mm use Sheet Brace Strap 600mm.

FIXING 3

Jack Stud Dimension **(JSD)** from a minimum of 270mm. No maximum dimension.



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Jack Stud to Top Plate Details

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Sheet No: **A4704**

GIB EzyBrace® Systems specification GS1-N

Specification code	Minimum length (m)	Lining requirement
GS1-N	0.4	Any 10mm or 13mm GIB® Standard plasterboard to one side only

WALL FRAMING

Wall framing to comply with;

— NZBC B1 — Structure B1/AS1 Clause 3 Timber (NZS 3604:2011).
— NZBC B2 — Durability B2/AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604:2011 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber floor

Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or three power driven 90 x 3.15mm nails at 600mm centres.

Concrete floor

Internal Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for internal wall plate fixing or 75 x 3.8mm shot fired fasteners with 16mm discs spaced at 150mm and 300mm from end studs and 600mm centres thereafter.

External Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for external wall bottom plate fixing.

WALL LINING

— Any 10mm or 13mm GIB® plasterboard lining.
— Sheets can be fixed vertically or horizontally.
— Sheet joints shall be touch fitted.
— Use full length sheets where possible.

PERMITTED ALTERNATIVES

For permitted GIB® plasterboard alternatives refer to p. 5 in GIB EzyBrace® Systems literature.

FASTENING THE LINING

Fasteners

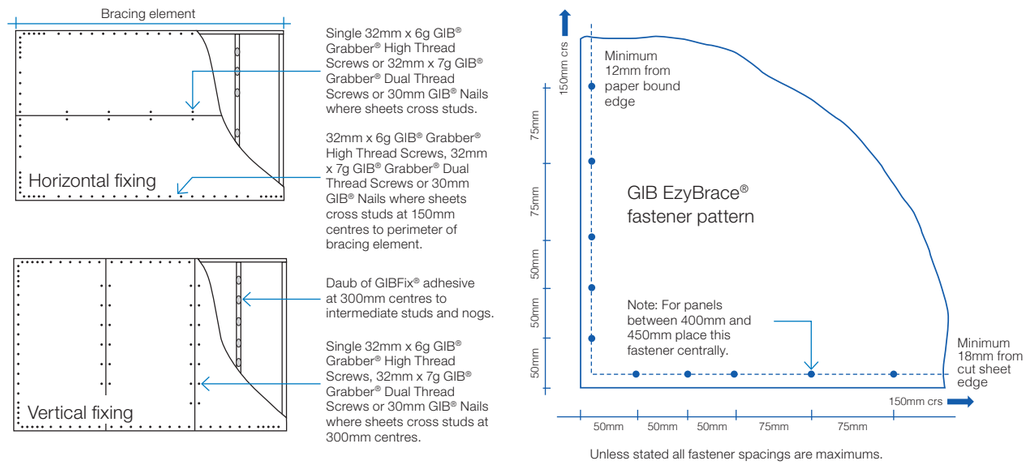
32mm x 6g GIB® Grabber® High Thread Screws, 32mm x 7g GIB® Grabber® Dual Thread Screws or 30mm GIB® Nails. If using the GIBFix® Angle use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

Fastener centres

50,100,150, 225, 300mm maximum from each corner and 150mm thereafter around the perimeter of the bracing element. For vertically fixed sheets place fasteners at 300mm maximum centres to intermediate sheet joints. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING

Joint strength is important in delivering bracing system performance. All fastener heads stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.



Unless stated all fastener spacings are maximums.

In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems

3.3 ECOPLY® BRACING SPECIFICATION - EP1

Table 10: Singled Sided Structural Plywood Brace

Specification No.	Minimum Wall Length	Lining Requirements	BUs/m Wind	BUs/m Earthquake
EP1_0.4	0.4m	Ecoply® one side	80	95
EP1_0.6	0.6m	Ecoply one side	95	105
EP1_1.2	1.2m	Ecoply one side	120	135

Framing

Wall framing must comply with:

- NZBC B1 - Structure: AS1 Clause 3 Timber (NZS 3604).
- NZBC B2 - Durability: AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height are as determined by the NZS 3604 stud and top plate tables for load bearing and non load bearing walls. Kiln dried verified structural grade timber must be used. Machine stress graded timber, such as Laserframe® of SG8 stress grade minimum, is recommended.

Bottom Plate Fixing

Use GIB Handibrac® hold-down connections at each end of the bracing element. Refer to manufacturer installation instructions supplied with the connectors for correct installation instructions and bolt types to be used for either concrete or timber floors. Within the length of the bracing element, bottom plates are fixed in accordance with the requirements of NZS 3604.

Lining

One layer of 7mm, 9mm or 12mm Ecoply® plywood fixed directly to framing. If part sheets are used, ensure nailing at required centres is carried out around the perimeter of each sheet or part sheet. A 2-3mm expansion gap should be left between sheets.

Fastening the Ecoply® Panels

Fasten with 50 x 2.8mm hot dipped galvanised or stainless steel flat head nails for direct fix. Place fasteners no less than 7mm or 3 fastener diameters from sheet edges. Screws cannot be used. Power driven nails are suitable. Do not overdrive, nails must be full round head.

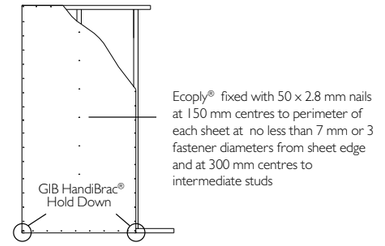
Fasteners for H3.2 CCA Treated Ecoply Panels

Where fasteners are in contact with H3.2 CCA treated timber or plywood, fasteners shall be a minimum of hot dip galvanised.

In certain circumstances stainless steel fasteners may be required. Refer to Table 8 of the Ecoply Specification and Installation Guide for these circumstances and further fastener selection advice. Where stainless steel nails are required, annular grooved nails must be used.

Fastening Centres

Fasteners are placed at 150mm centres around the perimeter of each sheet and 300mm centres to intermediate studs. Where more than one sheet forms the brace element each sheet must be nailed off independently.



Ecoply® Bracing Systems are designed to meet the requirements of the NZBC and have been tested and analysed using the P21 method referenced in NZS 3604:2011 listed as an acceptable solution B1/AS1 Structure. Testing was carried out using Ecoply manufactured by CHH Plywood and SG8 timber framing, and GIB® products manufactured by Winstone Wallboards Ltd. Substituting materials may compromise performance of the system. GIB® and GIB HandiBrac® are registered trade marks of Fletcher Building Holdings Ltd.

DECEMBER 2023

Arcline Architecture
Offices: Kaitaia | Kerikeri | Whangarei
(Ph): 09 408 2233
(Email): info@arcline.co.nz
(Web): www.arcline.co.nz

Bracing Details

JOHN SILICH
23 KOTARE STREET
AHIPARA
NORTHLAND

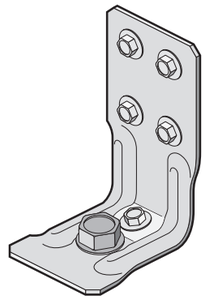
Rev No. Revision Date

Scale @ A3: NTS
Drawn By RH,JM
Issued: 2/05/2025 9:27 am

SILICH ALTERATIONS_DD_270325.pln

Sheet No: **A4705**

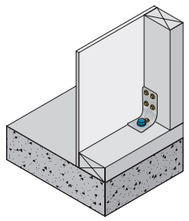
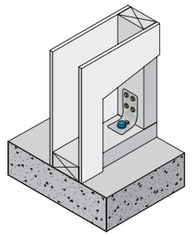
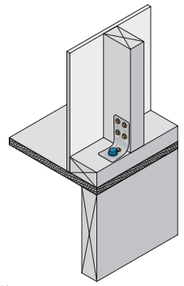
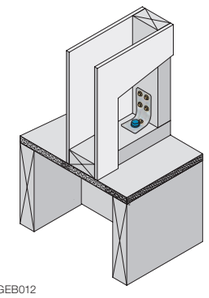
GIB HandiBrac® installation



Developed in conjunction with MiTek™, the GIB HandiBrac® has been designed and tested by Winstone Wallboards for use in GIB EzyBrace® elements that require hold-downs. The GIB HandiBrac® is a substitute for bottom plate hold-down straps.

- Quick and easy to fit.
- May be fitted at any stage before lining.
- Framing face is clear to allow flush lining.
- Easily inspected.

The GIB HandiBrac® with BOWMAC® blue head screw bolt is suitable for timber and concrete floors constructed in accordance with NZS 3604:2011.

Concrete floor		**Timber floor**	
External walls	Internal walls	External walls	Internal walls
 GEB009	 GEB010	 GEB011	 GEB012
Position GIB HandiBrac® as close as practicable to the internal edge of the bottom plate.	Position GIB HandiBrac® at the stud/plate junction and at mid-width of plate.	Position GIB HandiBrac® flush with the outside stud face, as close as practicable to the centre of the boundary joist.	Position GIB HandiBrac® in the centre of floor joist or full depth solid block.
Hold-down fastener requirements			
A mechanical fastening with a minimum characteristic uplift capacity of 15kN or use supplied BT10/140 screwbolt in GIB HandiBrac® pack.		12 x 150mm galvanised coach screw or use supplied BT10/140 screwbolt in GIB HandiBrac® pack.	

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Bracing Details

JOHN SILICH
23 KOTARE STREET
AHIPARA
NORTHLAND

Rev No. Revision Date

Scale @ A3: 1:1
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Issued: 2/05/2025 9:27 am

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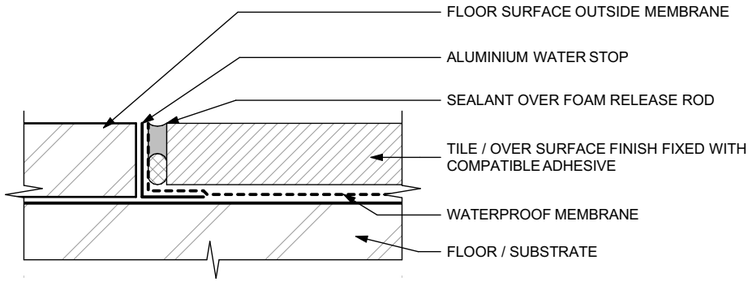
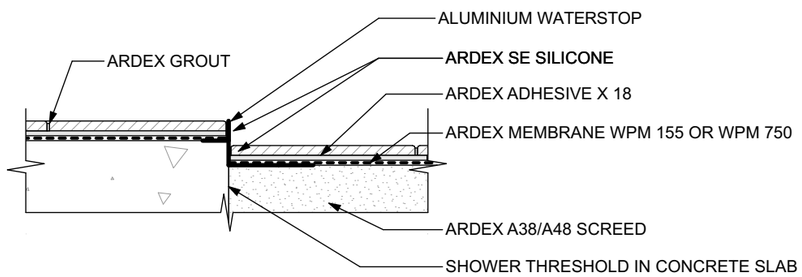
Sheet No:
A4706

ALL WORK TO BE AS PER WMAI CODE OF PRACTICE



01 WATER STOP DETAIL 1:5

ALL WORK TO BE AS PER WMAI CODE OF PRACTICE



02 TILED SHOWER THRESHOLD DETAIL (WATERSTOP) 1:5

ALL WORK TO BE AS PER WMAI CODE OF PRACTICE

03 SHOWER CHANNEL DRAIN 1:5

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Bathroom Details

JOHN SILICH
23 KOTARE STREET
AHIPARA
NORTHLAND

Rev No.	Revision	Date

Scale @ A3: NTS
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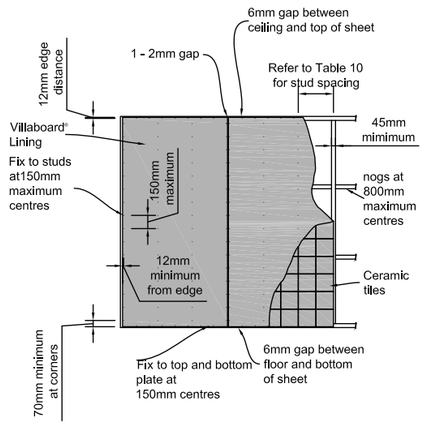
Sheet No: **A4801**

Tiled walls

Where Villaboard Lining is to be finished with tiles, the sheets must be fixed with fasteners only as shown in Figure 9.

For tiled wall applications studs spacing must be closed to 400mm for a 6mm Villaboard Lining, and between 400mm to 600mm centres for a 9mm Villaboard Lining. Refer to Table 9 for further information.

Figure 9: Fastening to wall frames for tiling



Notes

1. It is good practice to install Villaboard Lining horizontally for tiled applications.
2. When tiling in wet areas, apply water proofing membranes before tiling on walls. Ensure water proofing membranes manufacturers recommendations are followed.
3. The recessed edges are required to be stopped with Hardie™ Base Coat as per Section 6. The top coat is not required behind the tiles. The square sheet joint can be sealed with a flexible sealant before the installation of tiles. Refer to Figure 16.
4. When installed horizontally full perimeter sheet support and fixing is required. The vertical sheet joints can be staggered.
5. Fixings not to be staggered at the joint. Refer to Figure 9.
6. Fixings at 200mm centres maximum for untiled applications and 150mm centres maximum for tiled applications.

Figure 13: Vertical flush joint setout

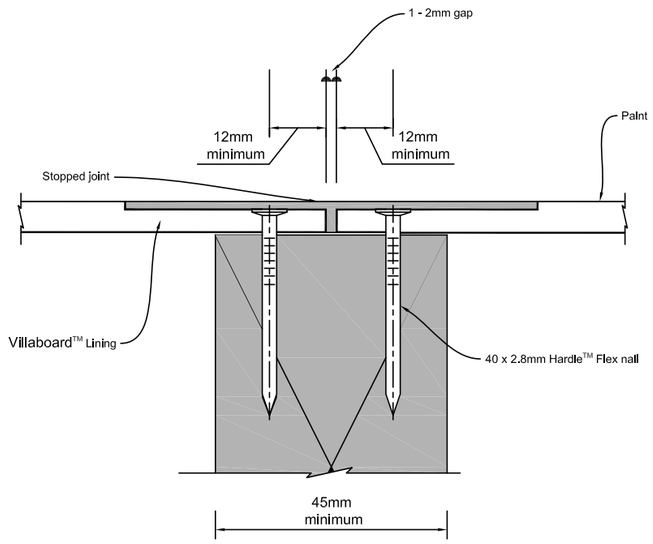
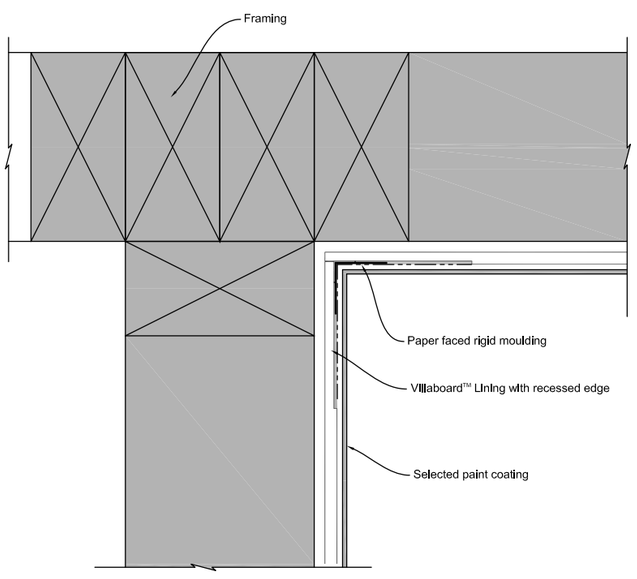


Figure 14: Wall to wall junction



Note: When Villaboard Lining is to be tiled the corners behind the Villaboard Lining must be tied together with a Lumberlok® Stud Saver steel corner angle. Refer to Figure 22 for this angle's location.

6.5 Butt Joint

Figure 15: Butt joint detail (dry area)

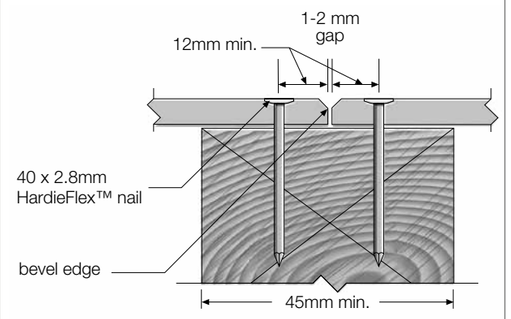


Figure 16: Butt joint detail (tiled over in dry and wet areas)

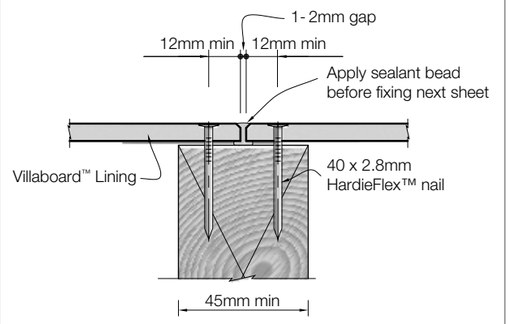
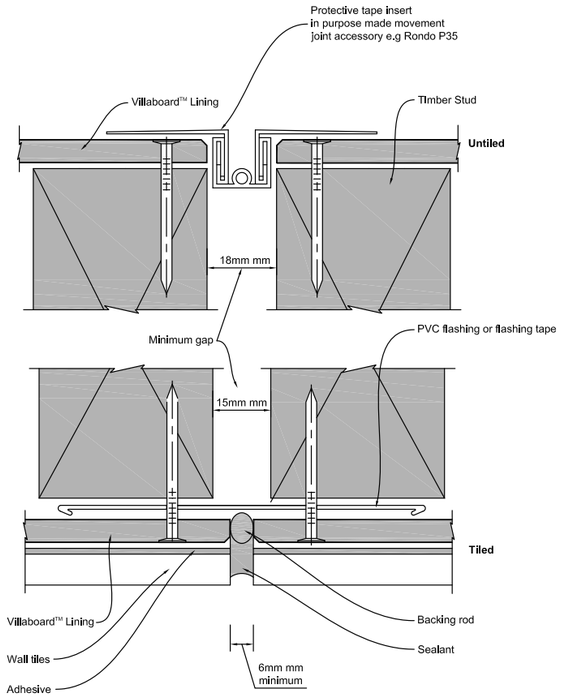
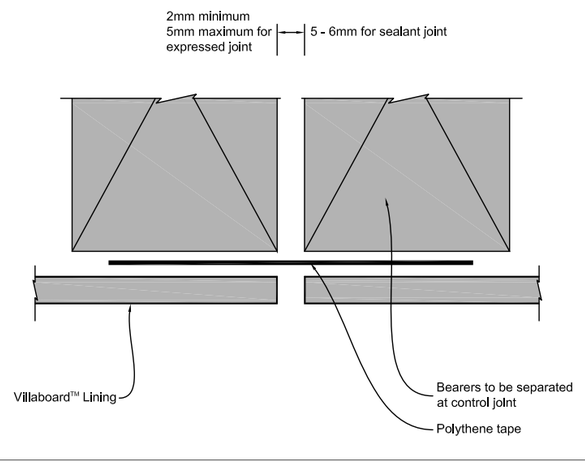


Figure 18: Control joint



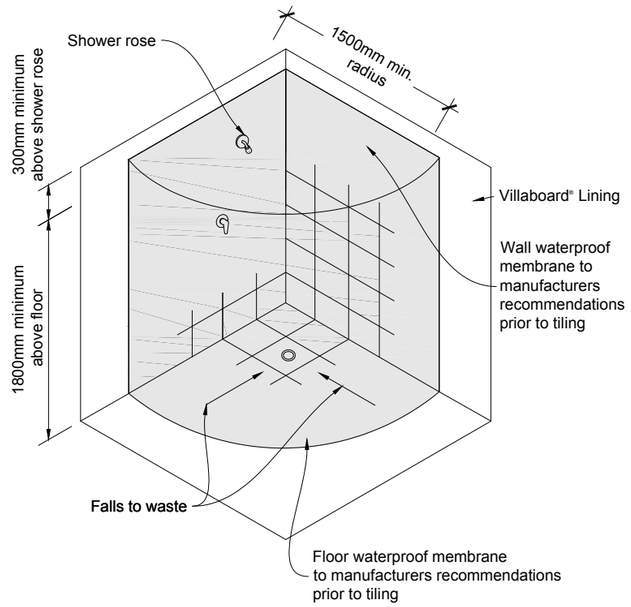
Notes: Alternatively a PVC control jointer supplied by James Hardie can also be used to form a control joint.

Figure 19: Control joint

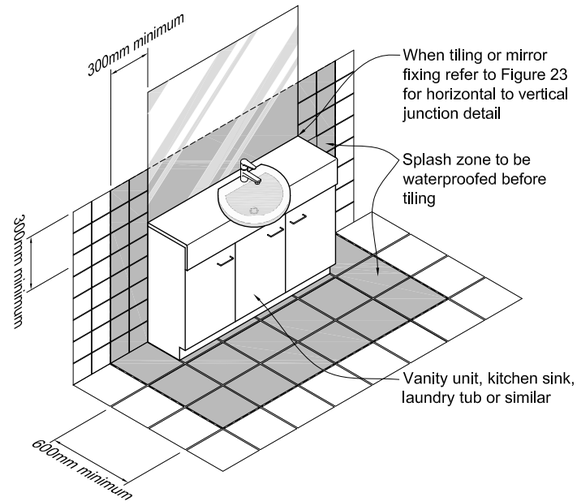


Note: Alternatively a PVC control jointer supplied by James Hardie can also be used to form a control joint.

Sealing around splash zones (showers)

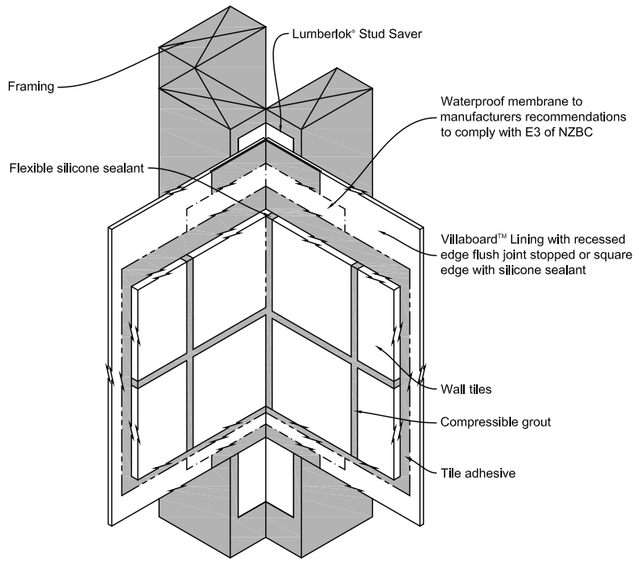


: Sealing around splash zones



Note: The extent of floor or wall waterproofing depends on the extent of water to be splashed over these areas. Recommended area to be waterproofed outside of bath, shower or vanity is a minimum of 300mm on walls and 600mm on floors.

Wall to wall wet area tiled wall internal corner



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Villaboard Details

JOHN SILICH
23 KOTARE STREET
AHIPARA
NORTHLAND

Rev No. Revision Date

Scale @ A3: NTS
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Issued: 2/05/2025
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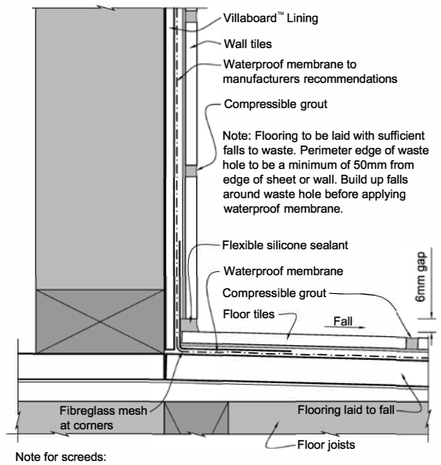
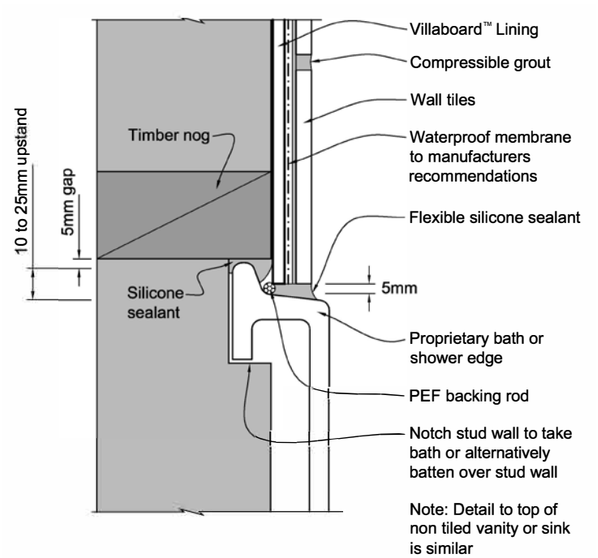
Sheet No:
A4803

Wall to floor junction



Note for screeds:
1. The thickness of screeds should be applied to achieve the desired slope in accordance with the manufacturers recommendations.
2. Clean down the surface of the sheet flooring thoroughly. Apply a coat of bonding chemical to improve the bonding of the mortar bed to the floor.
3. To prevent cracking of the floor tiles, the mortar bed must be reinforced over all joints in floor sheets with 150mm wide galvanised mesh placed centrally over joints and in the centre of bedding.
4. Control joints in the flooring must be continued through the tiles.
5. Epoxy mortar screeds may also be used.

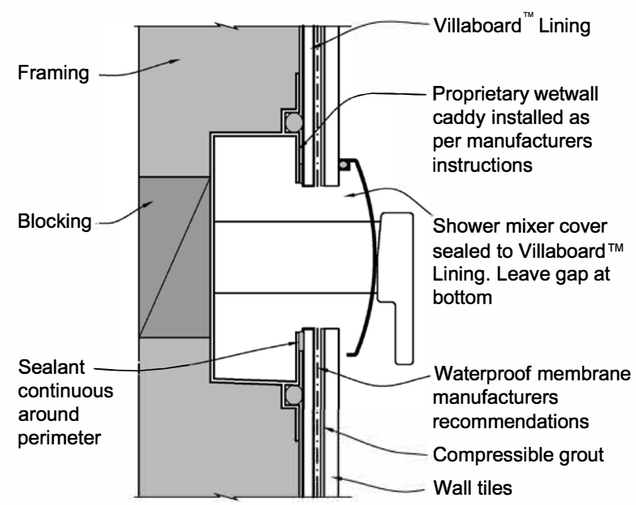
Wall to acrylic bath/shower



7.4 Wet area penetration

Sealing penetrations as per BRANZ Good Tiling Practice or as per Figure 26.

Figure 26: Wet wall caddy - optional



Note: Seal cut edges of Villaboard™ Lining

Arcline Architecture
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Villaboard Details

JOHN SILICH
23 KOTARE STREET
AHIPARA
NORTHLAND

Rev No. Revision Date

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SILICH ALTERATIONS_DD_270325.pln

Sheet No: **A4804**

PRODUCER STATEMENT
AND
STRUCTURAL DETAILS

CLIENT:

John Silich
23 Kotare st
Ahipara
0481

BUILDING:

VRS Project Ref:	476429
Model:	Versatile 600 Series
Size:	8.000m long x 7.000m wide, 2.714m stud height
Wind Zone:	Very High
Snow Loading:	None region, Sg = 0.0kPa
Earthquake Zone:	1
Exposure Zone:	Zone D
Roof Details:	15 degree pitch, 6 Rib 0.40mm roofing, NZ Steel Colorsteel
Trusses:	90x45mm kiln dried H1.2, stress graded timber as per floor plan
Wall Framing:	90x45mm kiln dried H1.2, stress graded timber
Cladding:	Superclad rollformed profile, NZ Steel Colorsteel
Downpipe Size:	Round PVC 80mm Diameter PVC
Floor Type:	Concrete

INDEX

BUILDING CONSENT AUTHORITY:

Far North District Council

DIMENSIONS IN mm UNLESS OTHERWISE STATED

Versatile® 40 YEARS of Building Better for NZ

For: John Silich
23 Kotare st
Ahipara
0481

VB2000

Site Plan

PRODUCER STATEMENT – PS1
DESIGN

BUILDING CODE CLAUSE(S): B1 and B2
ISSUED BY: Spanbild New Zealand Limited
(Engineering Design Firm)
TO: John Silich
(Owner/Developer)
TO BE SUPPLIED TO: Far North District Council
(Building Consent Authority)
IN RESPECT OF: Proposed Building (Garage)
(Description of Building Work)
AT: 23 Kotare st, Ahipara, 0481, New Zealand
(Address, Town/City)
LEGAL DESCRIPTION: N/A ☐

JOB NUMBER: 476429

We have been engaged by the owner/developer referred to above to provide *(Extent of Engagement)*:
VB2000, Sheets 1, 3-19
in respect of the requirements of the Clause(s) of the Building Code specified above for part only, as specified in the Schedule, of the proposed building work.

The design carried out by us has been prepared in accordance with:

- ☑ Compliance documents issued by the Ministry of Business, Innovation & Employment *(Verification method/acceptable solution)* B1/VM1, B1/VM4, B2/AS1, AS/NZS 1170 (Parts 0, 1, 2 & 3), NZS 3603:1993, NZS 3604:2011 and/or;
- ☐ Alternative solution as per the attached Schedule.

The proposed building work covered by this producer statement is described on the drawings specified in the Schedule, together with the specification, and other documents set out in the Schedule.

On behalf of the Engineering Design Firm, and subject to:

- Site verification of the following design assumptions: Building IL1, Light roof, Max. height 4.2m
- All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that:

- the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the Schedule, will comply with the relevant provisions of the Building Code and that;
- the persons who have undertaken the design have the necessary competency to do so.

~~I recommend the **N/A** level of **construction monitoring.**~~

I, *(Name of Engineering Design Professional)* Claude Antony Carter Cook , am:

- ☑ CPEng number 240891

and hold the following qualifications CP Eng, IntPE, BE(Hons)

The Engineering Design Firm holds a current policy of Professional Indemnity Insurance no less than $200,000
The Engineering Design Firm is not a member of ACE New Zealand.

SIGNED BY *(Name of Engineering Design Professional)*: Claude Antony Carter Cook

ON BEHALF OF *(Engineering Design Firm)*: Spanbild New Zealand Limited Date 02/05/2025

Note: This statement has been prepared solely for the Building Consent Authority named above and shall not be relied upon by any other person or entity. Any liability in relation to this statement accrues to the Engineering Design Firm only. As a condition of reliance on this statement, the Building Consent Authority accepts that the total maximum amount of liability of any kind arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in tort or otherwise, is limited to the sum of $200,000.

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

EXPLANATION

This design covers the structural aspects of a Versatile 600 Series building.
The sequence of design information is broken down
into the following categories:

- Concrete Floor
- Wall Framing.
- Truss Design.
- All Structural Fixings.
- Building Bracing Design for both Roof and Walls.

All other aspects of the structure are constructed in accordance with the standard Versatile Buildings details.

These buildings have been designed for a Building Importance Level 1, with a 50 year working life. Refer to AS/NZS 1170.0:2002

DESIGN LOADS

Dead Loads for Light Roof:
Truss Top Chord= 0.15kPa (includes weight of trusses, purlins , associated framing and zincalume roof).
Truss Bottom Chord=0.15KPa (no ceiling) or 0.20kPa if there is a ceilng for trusses @ 1200crs.

Live Loads:
Truss Top Chord= 1.1kN concentrated load, 0.25kPa uniform load.
Truss Bottom Chord=0.9kN concentrated load below 1200mm head height and
1.4kN concentrated load above 1200mm head height.

Wind Loads:
Building designed for Very High wind conditions.

Seismic loads:
Building designed for Seismic Zone 1.

Snow loads:
Buildings designed for None, Sg = 0.0kPa

Refer to Spanbild New Zealand Limited for any design modifications required for increase in snow loads or wind loads above those stated on the drawings.

DESIGN REFERENCES

- NZS3603:1993
- NZS3604:2011
- AS/NZS1170 Part 0:2002
- AS/NZS1170 Part 1:2002
- AS/NZS1170 Part 2:2011
- AS/NZS1170 Part 3:2003
- ANSI/TPI1 - 2002

For: John Silich
23 Kotare st
Ahipara
0481

VB2000 - Design

Producer Statement

MANUFACTURERS DURABILITY STATEMENT

INTRODUCTION.

To satisfy the requirements of Clause B2:'Durability' of the New Zealand Building Code, the following provisions must apply to the metal cladding.

RANGE OF PRODUCT AND USE.

Specification:	AS1397:2021
Coating Type:	Zinc/Aluminium & Painted
Steel Thickness Range:	0.35mm - 0.95mm BMT
Steel Grade Range:	G300 - G550
Application:	Cladding for Building Importance Level 1, with a 50 year working life. Refer AS/NZS 1170.0:2002
Fasteners:	Galvanised clouts. Aluminium rivets for all steel components. IFI114:2015

REQUIREMENTS, LIMITATIONS AND EXCLUSIONS.

- Applicable to buildings in sea-spray Zone D and exposure Zones B and C in accordance with Section 4, Durability, NZS 3604:2011 which is an acceptable solution under Clause B2 of the NZBC.
- Fixing and installation of the cladding must be done exactly in accordance with Versatile Buildings Specifications.
- Normal and regular maintenance must be carried out on the exterior surface of the cladding, and the following guide must be followed to ensure the durability requirements are met.

REGULAR MAINTENANCE.

Exposure Zones B and C. (All areas other than sea-spray zones - see below)

- Rain washing only required on the exposed sections. Sheltered or protected areas such as under spouting , top cladding boards and tops of doors require washing every three months.

Sea-spray Zone D (Within 500m from the sea or 100m from sheltered harbours or inlets) and areas of geothermal activity.

- Rain washing only required on exposed areas. Sheltered and protected areas such as under spouting, top cladding boards and tops of doors require washing down every month and when corrosive salts are present.

EXTENDED MAINTENANCE, PAINTING OR REPAINTING.

Extended Durability

- Once the metallic coating or the paint system has weathered away, signs of red rust for bare material or signs of the metallic coating for painted material painting of the entire surface is required to extend the life of the cladding product. Paint manufacturer's recommendations are to be followed for the surface preparation and paint type to be used.

Evident Corrosion

- Areas that show signs of white or red rust/corrosion (typically in unwashed areas) require cleaning back with a stiff brush and cleaner to remove all dust, surface contaminants and corrosion products. Present a sound substrate for painting. Priming of the surface and application of two coats of paint as per the paint manufacturer's recommendations is then required. Particular attention needs to be paid to laps (side, end, flashing etc) where earlier corrosion may have started, due to moisture and dirt entrapment. If evident corrosion is not treated quickly, rapid deterioration of the sheet may occur which could result in perforation. At this stage replacement of the affected sheet is the best option.

REFERENCES.

1. NZBC - Compliance Document - Clause B2 - Durability.
2. NZS 3604:2011, Section 4, Durability*

*NZS3604 has been used as a reference only to identify Corrosion zones, Sea-spray zones.

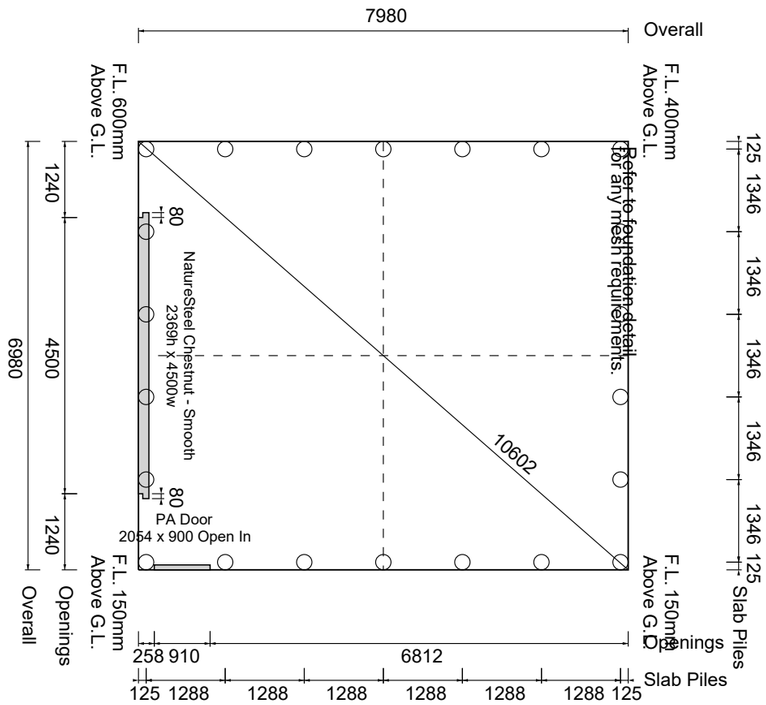
Versatile® 40 YEARS of Building Better for NZ

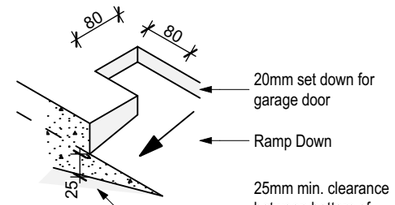
For: John Silich
23 Kotare st
Ahipara
0481

VB2000 - Design

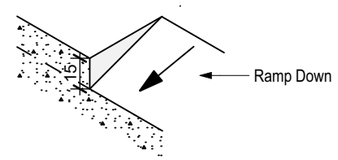
Durability Statement

LEGEND	
	Diagonal: 10602
- - - - - -	Expansion Cut
	250mm dia pile





GARAGE DOOR REBATE



PA DOOR REBATE

SCALE A3-1:100

Versatile® 40 YEARS of Building Better for NZ

For: John Silich
23 Kotare st
Ahipara
0481

VB2000 - Design

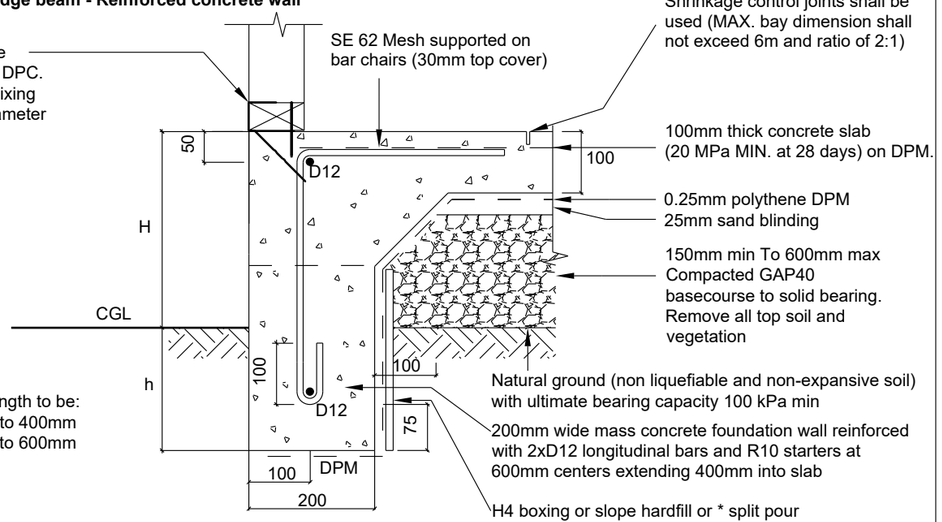
Foundation Details

GARAGE FOUNDATION DETAIL

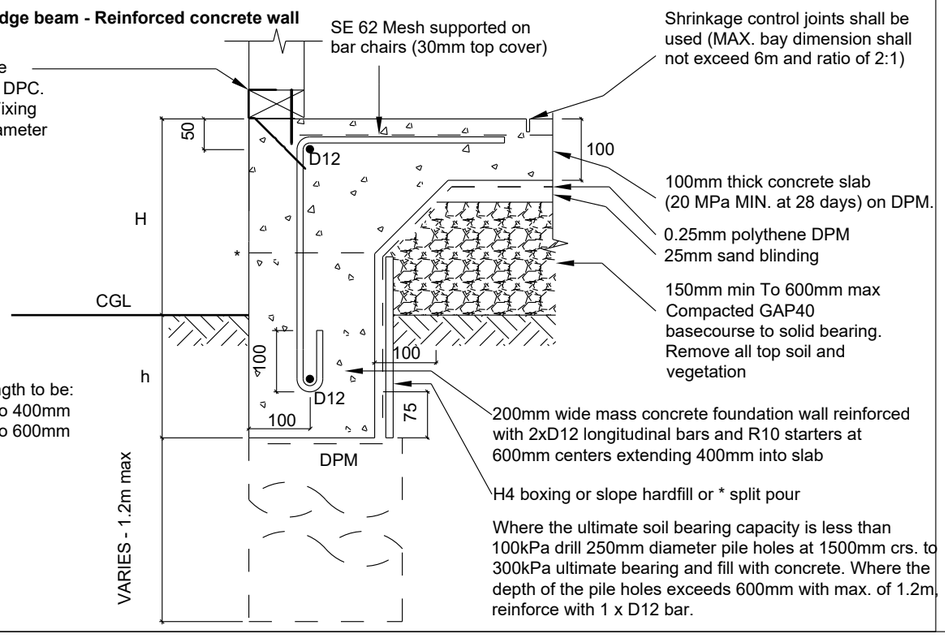
Notes:

1. **Concrete covers have been selected in accordance with NZS 3101, Part 1 Section 3.**
2. **Strip the site, removing vegetation, turf, soils containing organic matter and any loose or soft material, trim to a firm subgrade. Backfill as required with compacted granular material as defined by NZS 3604:2011 in max layers of 150mm.**
3. **Footing Type A shall be found in good ground defined by NZS 3604 but having a minimum ultimate bearing capacity of 100kPa.**
4. **Where the ultimate bearing capacity is less than 100kPa use Footing Type B.**
5. **For Type M and H Expansive Soils, use Footing Type B with 1200 deep pile reinforced with 1 vertical D12 400 mm return into slab.**
6. **28-Day concrete strength to be 25 MPa for zone D as per figure 4 in NZS 3604:2011.**
7. **Liquefaction Vulnerability where liquefaction damage is unlikely (very low or low liquefaction vulnerability).**

FOOTING TYPE A - Deep edge beam - Reinforced concrete wall



FOOTING TYPE B - Deep edge beam - Reinforced concrete wall



SCALE: A3-1:10

SCHEDULE TO PS1

The foundations/slabs have been designed to support Building Importance Level 1 Structures (Low Consequence of Failure*).
For further definition, refer to AS/NZS 1170.0 Table 3.1.
The design parameters of the footing/slab are referenced in the drawings labelled FOUNDATION DETAILS.

Furthermore, regarding the site conditions, a suitably qualified engineer will need to be notified when:

- Through reasonable inquiry, project information (PIM), and site observation show:
  - Evidence of buried services or revealed by excavation.
  - Record of landslips (land instability), surface creep having occurred in the immediate locality.

Any of the following:

- Earth fill and fill material is revealed, unless a certificate of suitability of earth fill for residential development has been issued in accordance with NZS 4431.
- Excavation for the footings reveals buried organic topsoils, tree/plant vegetation, peat, very soft clay, or expansive clay. Refer to NZS 3604:2011 sections 3.21 and 3.38 for further definition.

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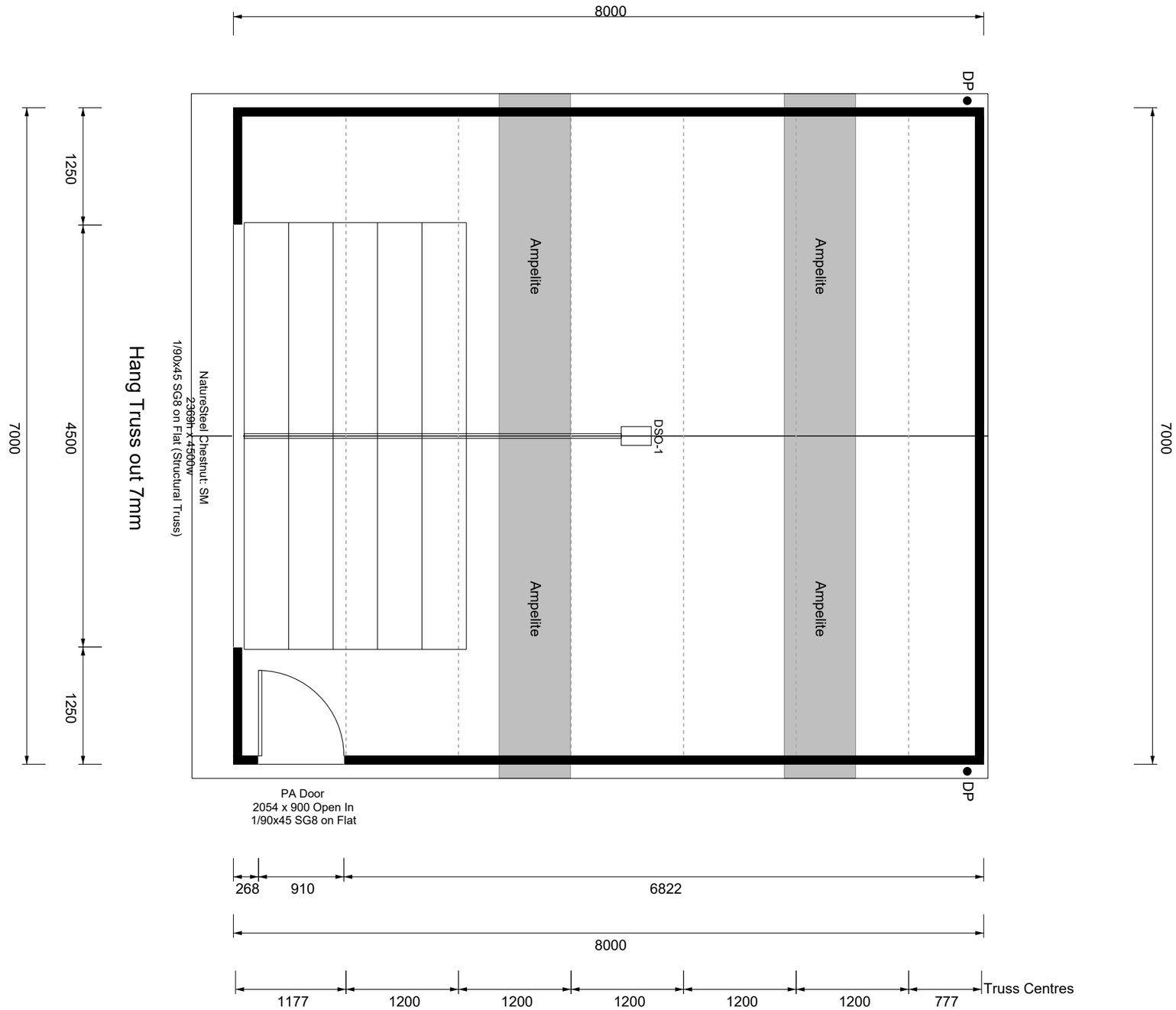
Foundation Details



SCALE A3-1:50

LEGEND

Sectional Door	
SM	Smooth Finish
DSO1	DSO-1 Auto Opener

PVC Downpipe	
DP	80mm dia

4
1 3
2

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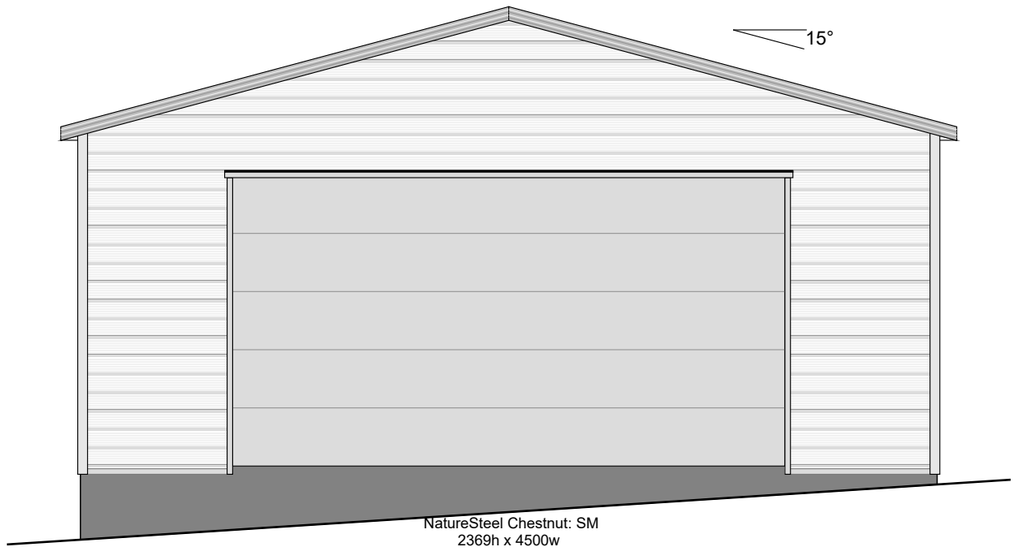
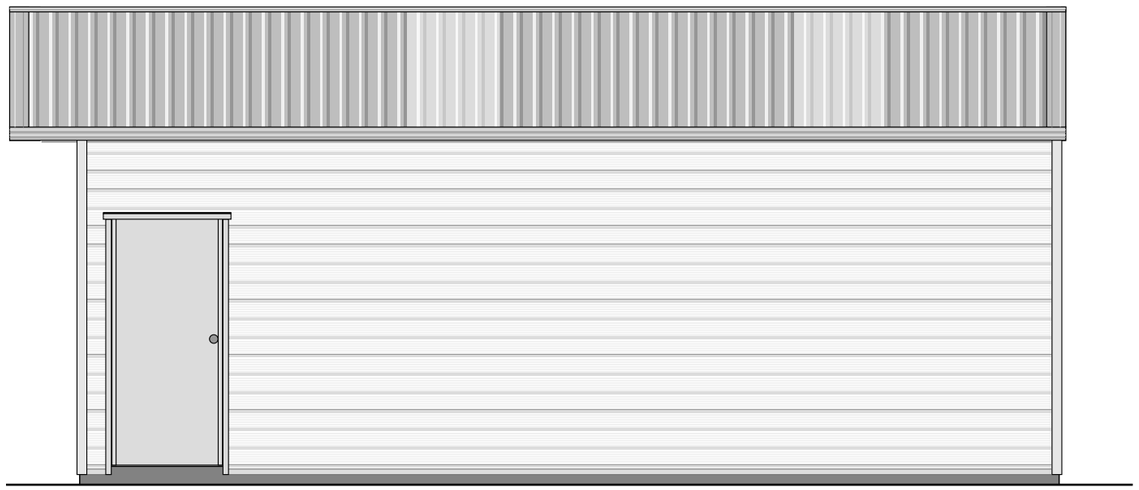
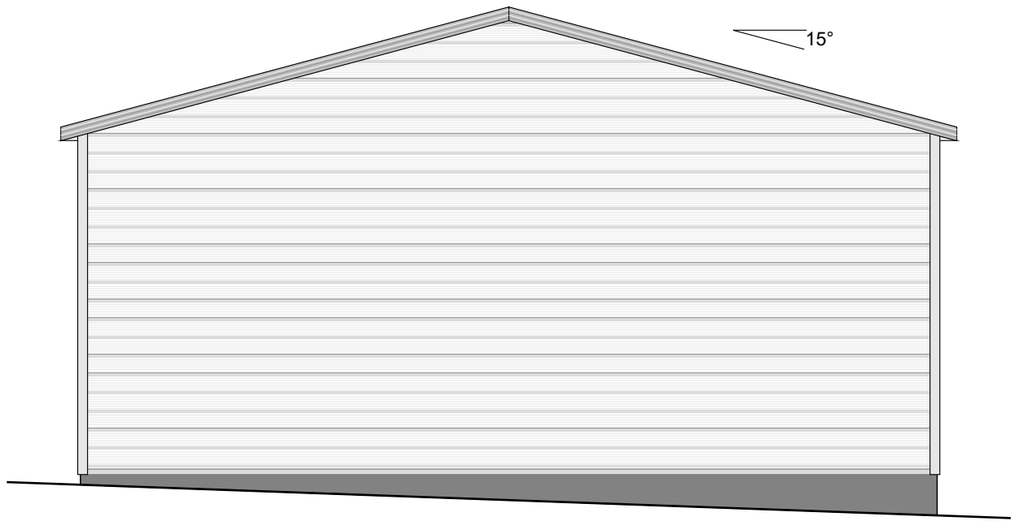
Floor Plan General



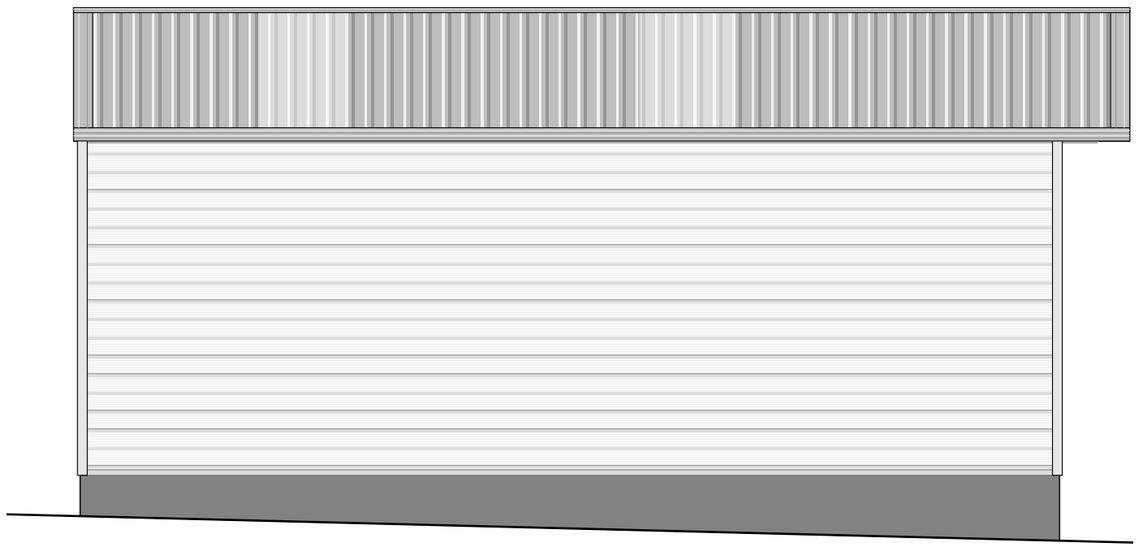
ELEVATION VIEW 1



ELEVATION VIEW 2



ELEVATION VIEW 3



ELEVATION VIEW 4

SCALE A3-1:50

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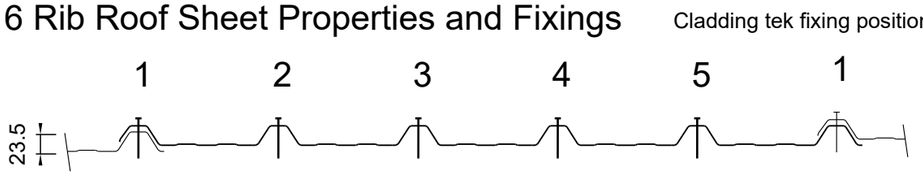
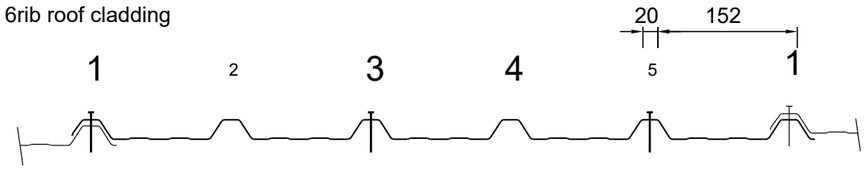
Elevations

6 Rib Roof Sheet Properties and Fixings

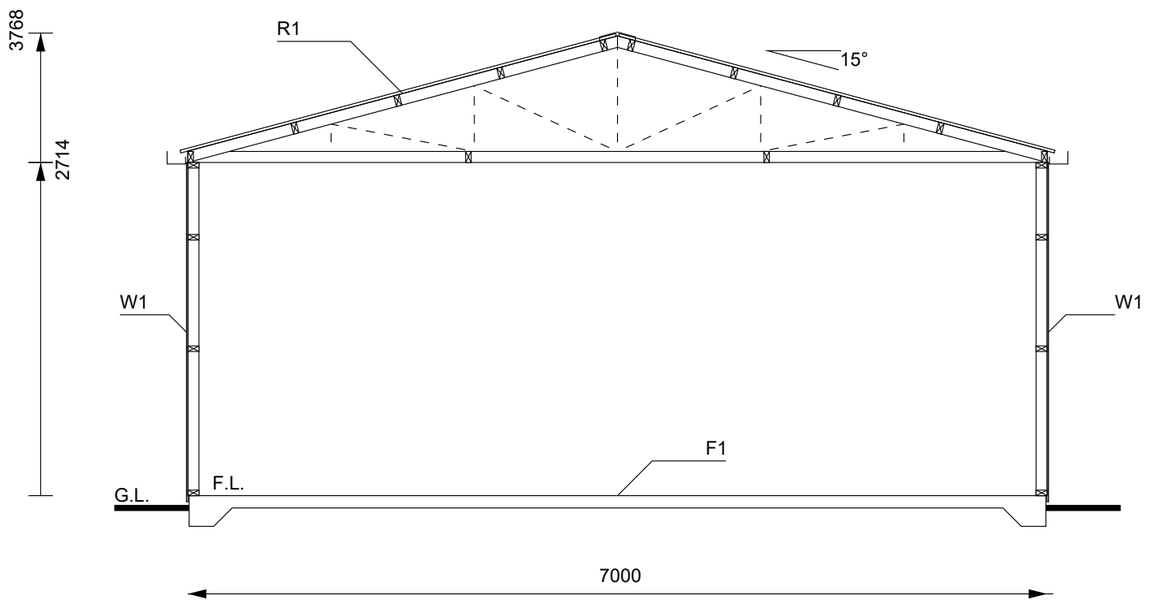
Cladding tek fixing positions for 6rib roof cladding



Ridge, gutter or sheet lap



Intermediate purlin



SCALE A3-1:50

NOTES

R1 : ROOF
• NZ Steel Colorsteel 6 Rib 0.40mm roofing over 90x45 SG8 H1.2 purlins @ 1000mm centres max, fixed between trusses.

• For purlin fixings and bottom chord truss stiffeners refer to 'Roof Framing' sheet 12 of 21.
• For truss centres refer to 'Floor Plan General' sheet 7 of 21.
• For truss design and fixings refer to 'Truss Design' sheet 13 of 21 and 'Truss Fixing Details' sheet 14 of 21.

W1 : WALLS
• NZ Steel Colorsteel Superclad cladding over 90x45 SG8 H1.2 studs @ 600mm centres max with 2 rows of 90x45 NLB H1.2 dwangs.

F1 : FLOOR
• For foundation details refer to 'Foundation Details' sheet 6 of 21.
• H3.2 Bottom plate to be fixed to the foundation with Lumberlok Bottom Plate Fixing Anchor with 75mm x 4mm diameter nail adjacent at 1200mm crs.

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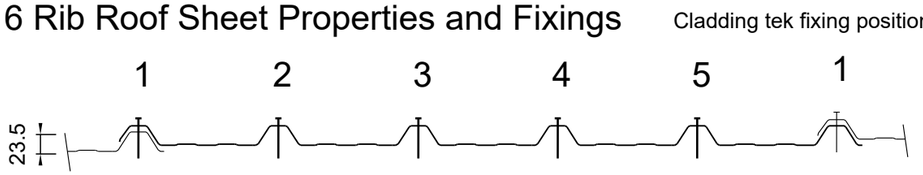
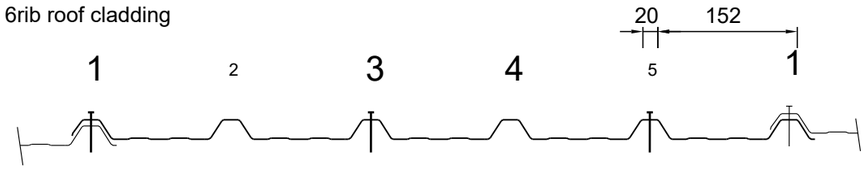
Cross Section

6 Rib Roof Sheet Properties and Fixings

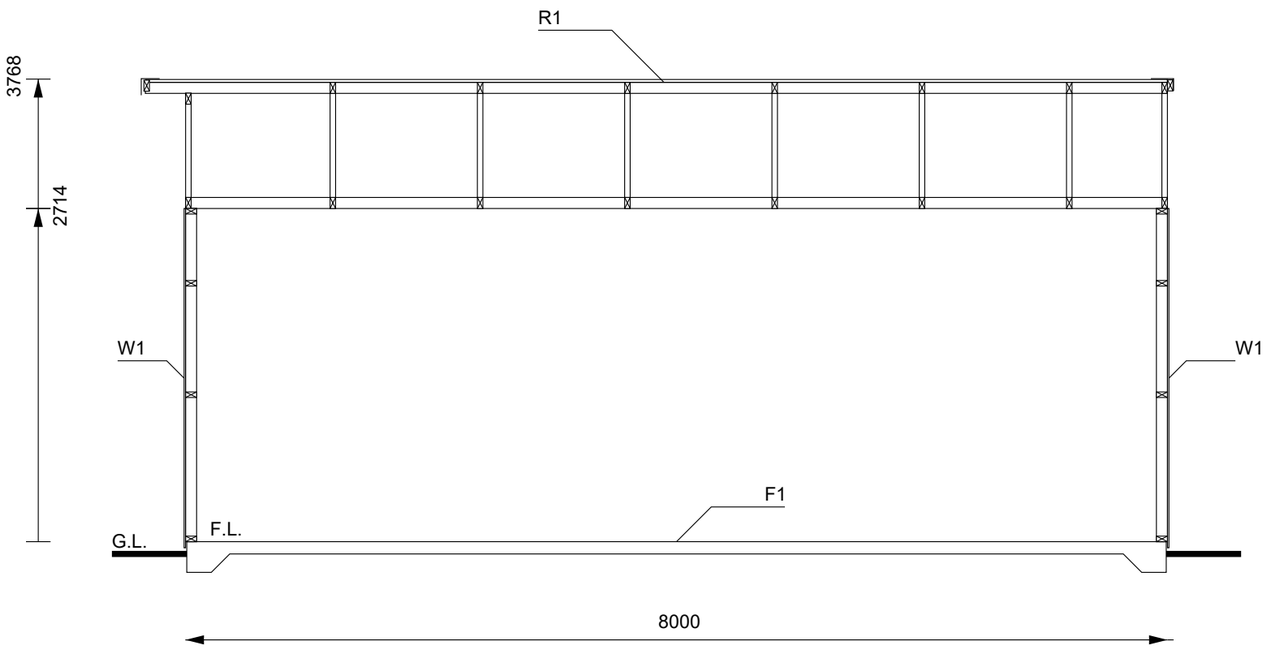
Cladding tek fixing positions for 6rib roof cladding



Ridge, gutter or sheet lap



Intermediate purlin



SCALE A3-1:50

NOTES

R1 : ROOF
• NZ Steel Colorsteel 6 Rib 0.40mm roofing over 90x45 SG8 H1.2 purlins @ 1000mm centres max, fixed between trusses.

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• For truss centres refer to 'Floor Plan General' sheet 7 of 21.
• For truss design and fixings refer to 'Truss Design' sheet 13 of 21 and 'Truss Fixing Details' sheet 14 of 21.

• For soffit details refer to .

W1 : WALLS
• NZ Steel Colorsteel Superclad cladding over 90x45 SG8 H1.2 studs @ 600mm centres max with 2 rows of 90x45 NLB H1.2 dwangs.

F1 : FLOOR
• For foundation details refer to 'Foundation Details' sheet 6 of 21.
• H3.2 Bottom plate to be fixed to the foundation with Lumberlok Bottom Plate Fixing Anchor with 75mm x 4mm diameter nail adjacent at 1200mm crs.

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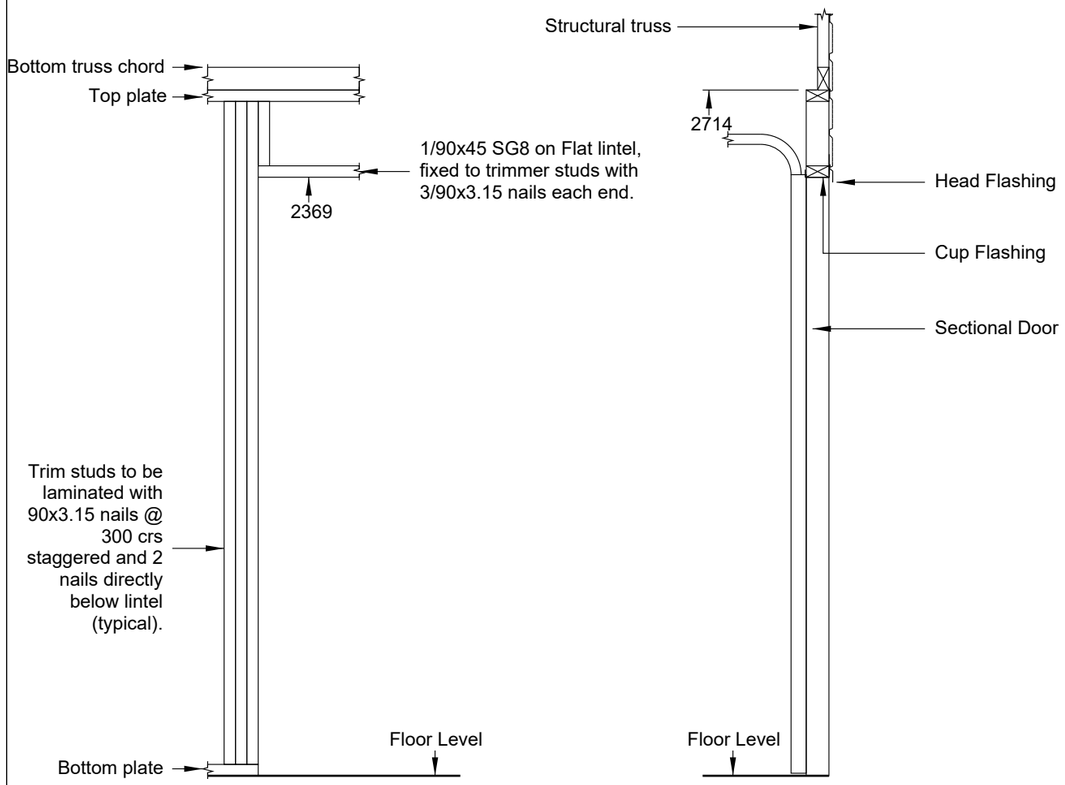
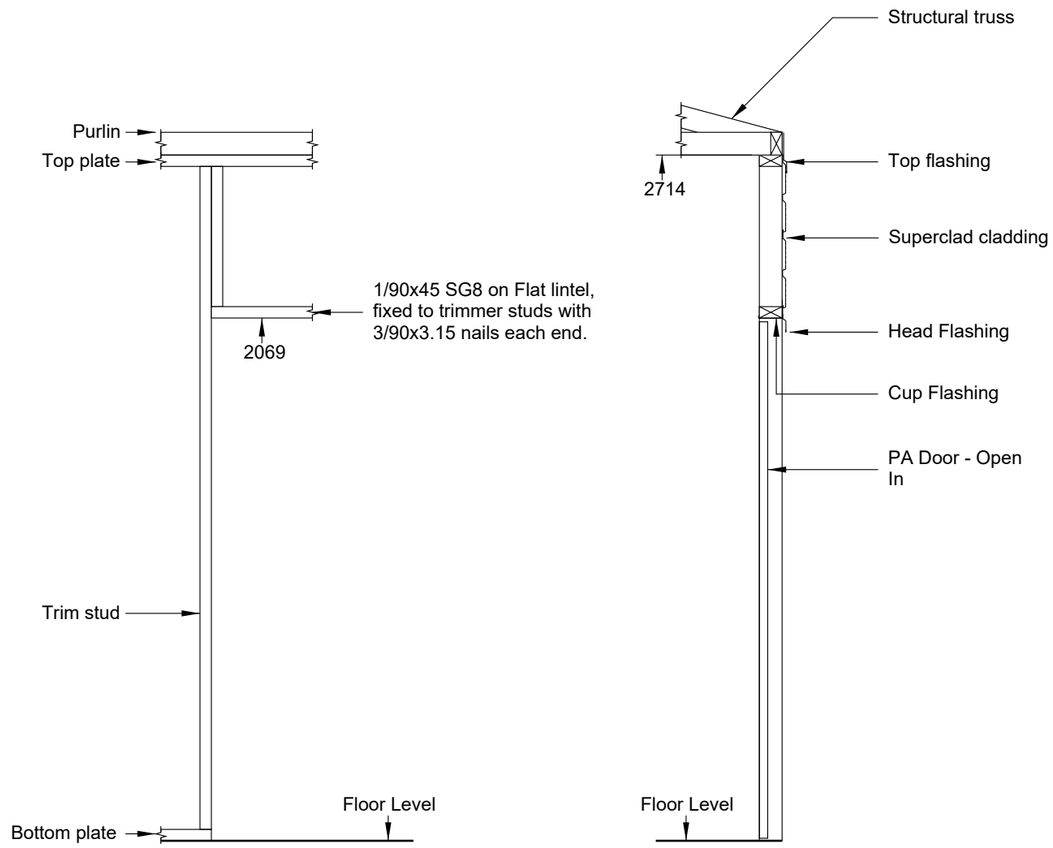
Cross Section

SECTIONAL DOOR



SCALE A3-1:25

PA DOOR



SCALE A3-1:25

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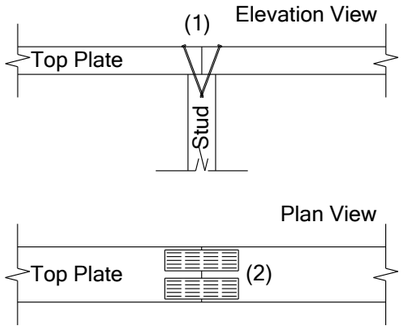
Opening Details

TOP PLATE AND ROOF FRAMING

TOP PLATE DETAILS

All top plates to be 90x45 SG8 H1.2.

Load Bearing Walls - Butt Joint Fixing Details

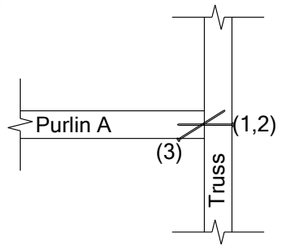


1. Skew nail top plates to stud with 4/90x3.15mm nails
2. Fix 2/4T5 Tylok plates over the joint.

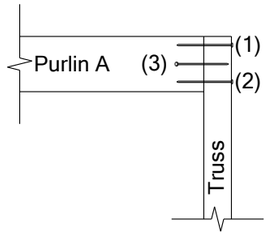
PURLIN DETAILS

All purlins 90x45 (on edge) SG8 H1.2 at 1000mm centres max fixed between trusses.

Plan View

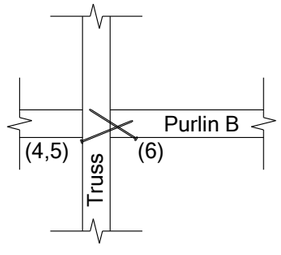


Elevation View

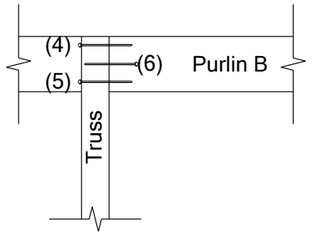


1. Nail 2/90x3.15mm nails (1,2) through the truss chord into the end of purlin A.
2. Skew nail 1/90x3.15mm nail (3) from purlin A into the truss chord.

Plan View



Elevation View

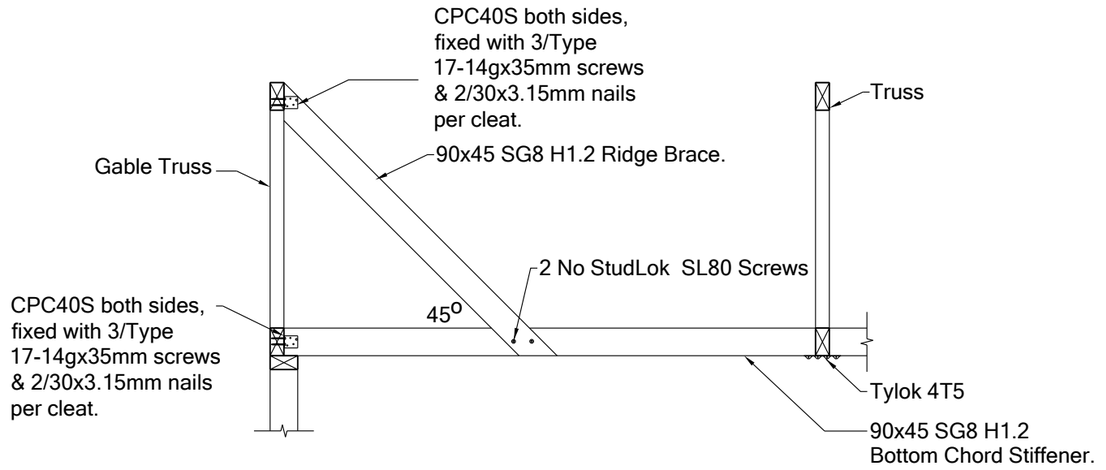


1. Skew nail 2/90x3.15mm nails (4,5) through the truss chord into the end of purlin B.
2. Skew nail 1/90x3.15mm nail (6) from purlin B into the truss chord.

SCALE: A3-1:10

STANDARD TRUSS STIFFENER

All truss stiffeners 90x45 SG8 H1.2. Refer to Truss Design (sheet 13 of 21) for centres



SCALE: A3-1:20

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Roof Framing

TRUSS DESIGN

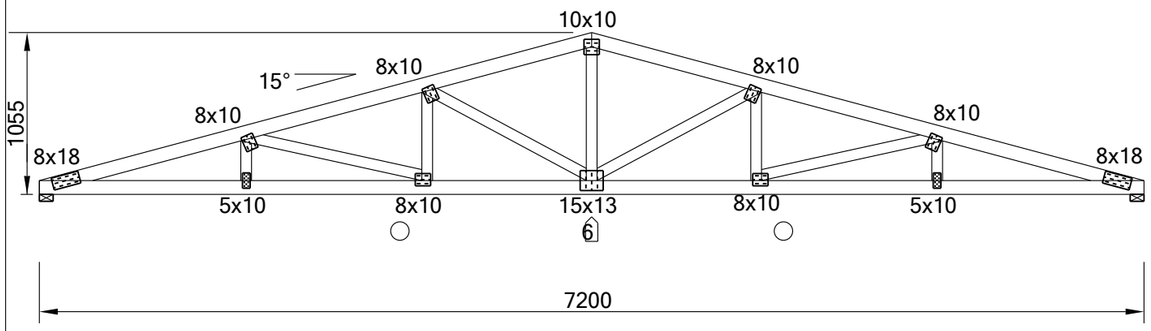
DESIGN LOADS

Dead Loads for Light Roof:
- Truss Top Chord= 0.15kPa (includes weight of trusses, purlins , associated framing and zincalume roof).
- Truss Bottom Chord=0.20kPa for trusses @ 1200crs with ceiling.

Live Loads:
- Truss Top Chord= 1.1kN concentrated load, 0.25kPa uniform load.
- Truss Bottom Chord=0.9kN concentrated load below 1200mm head height and 1.4kN concentrated load above 1200mm head height.

Wind Loads:
- Roof= Cfig = -1.1

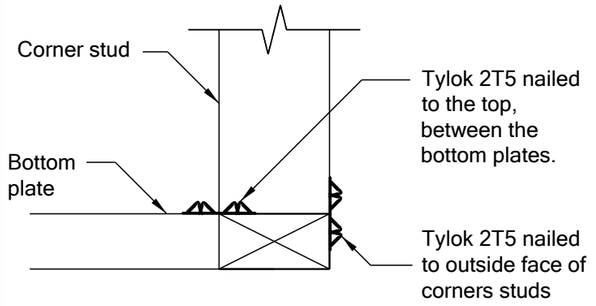
TRUSS DESIGN



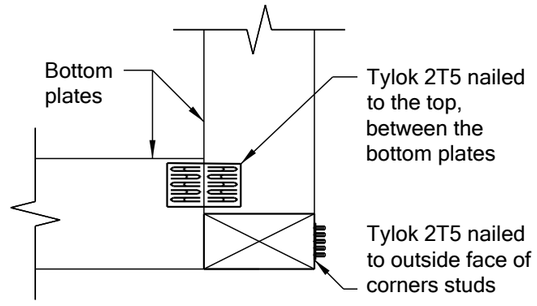
Scale: A3-1:40

NOTE:
1. ○ Indicates location of Bottom chord brace (truss stiffener).
2. 2 Indicates the truss camber (typical).
3. All truss plates are Gang-Nail GNQ type.
4. Nail plates are to be fully pressed home on both sides of joints.
5. The nail plate axis must be located in the specified or indicated direction.
6. Top and Bottom chords to be 90x45 SG10 H1.2 Radiata pine.
7. All webs to be 70x45 SG8 H1.2 Radiata pine.

GABLE TRUSS CORNER STUD / BOTTOM PLATE FIXING

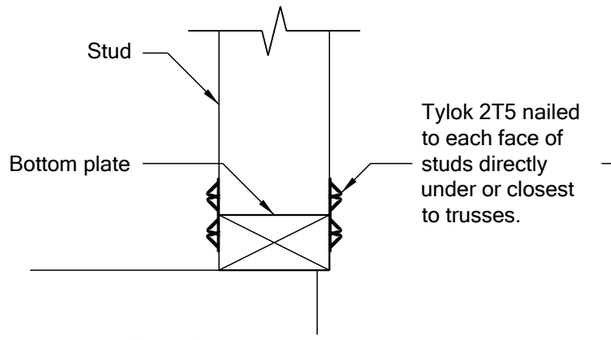


Corner Cross Section

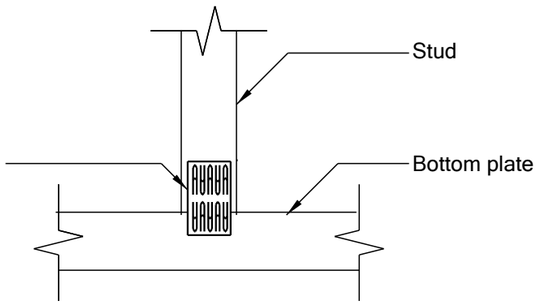


Corner Plan

TRUSS STUD / BOTTOM PLATE FIXING



Cross Section



Stud Face

SCALE: A3-1:5

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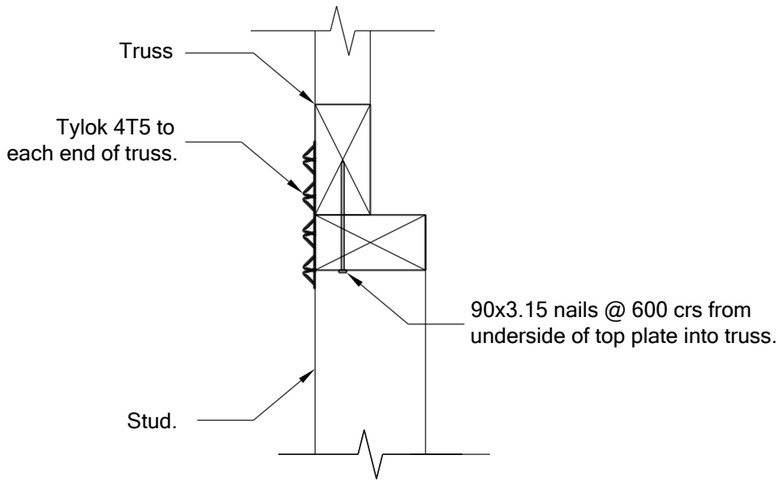
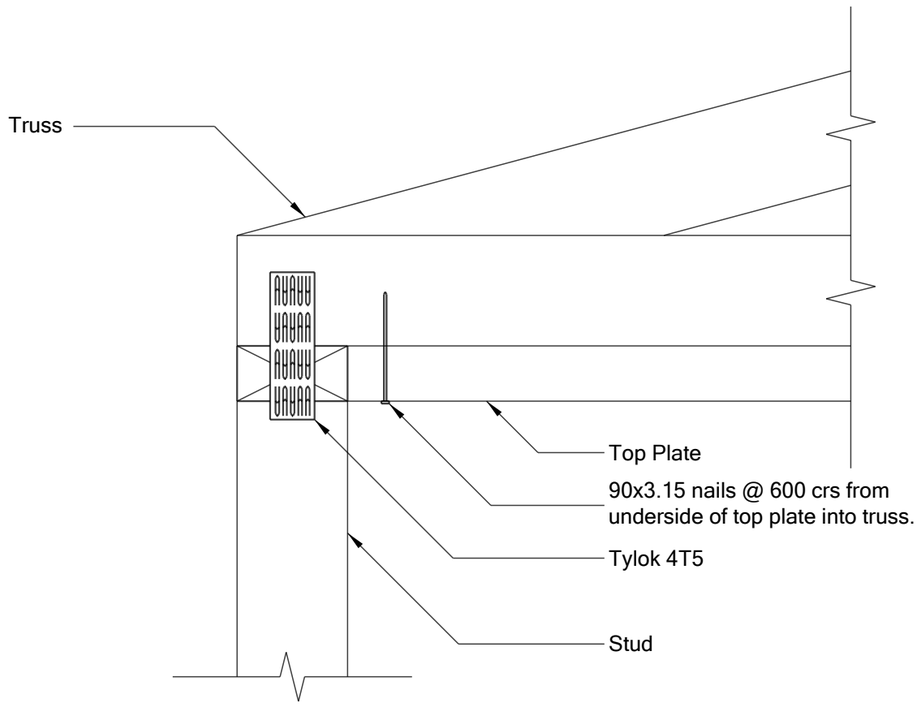
Truss Design

TRUSS FIXING DETAILS

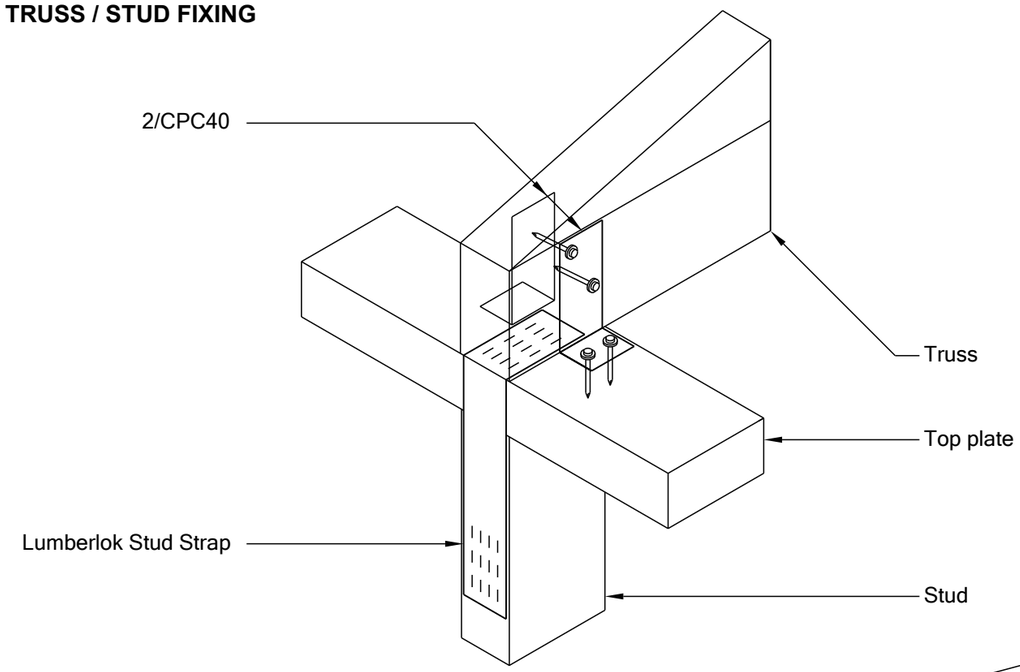
GABLE TRUSS / CORNER STUD FIXING

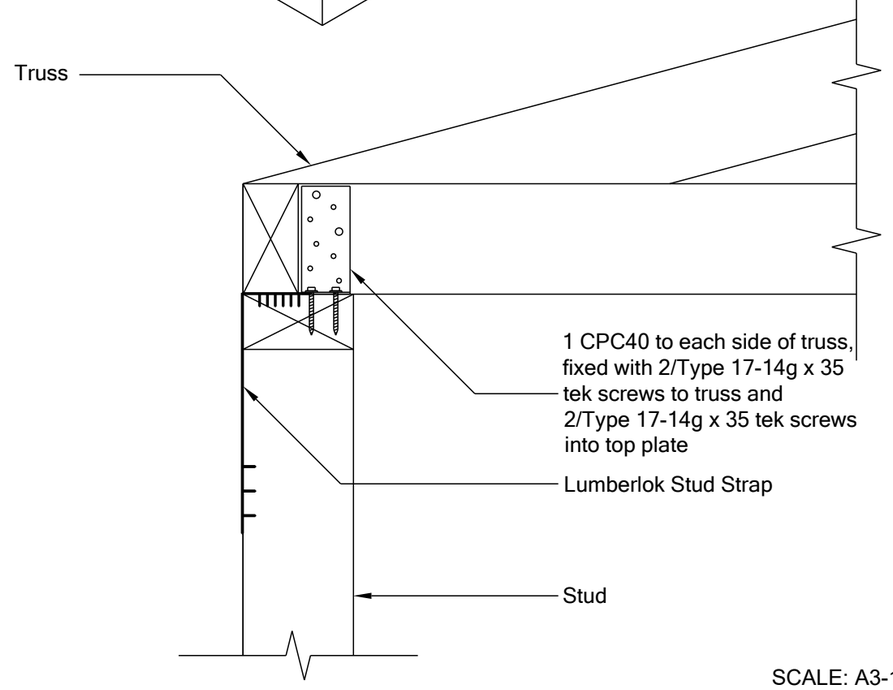




SCALE: A3-1:5

TRUSS / STUD FIXING





SCALE: A3-1:5

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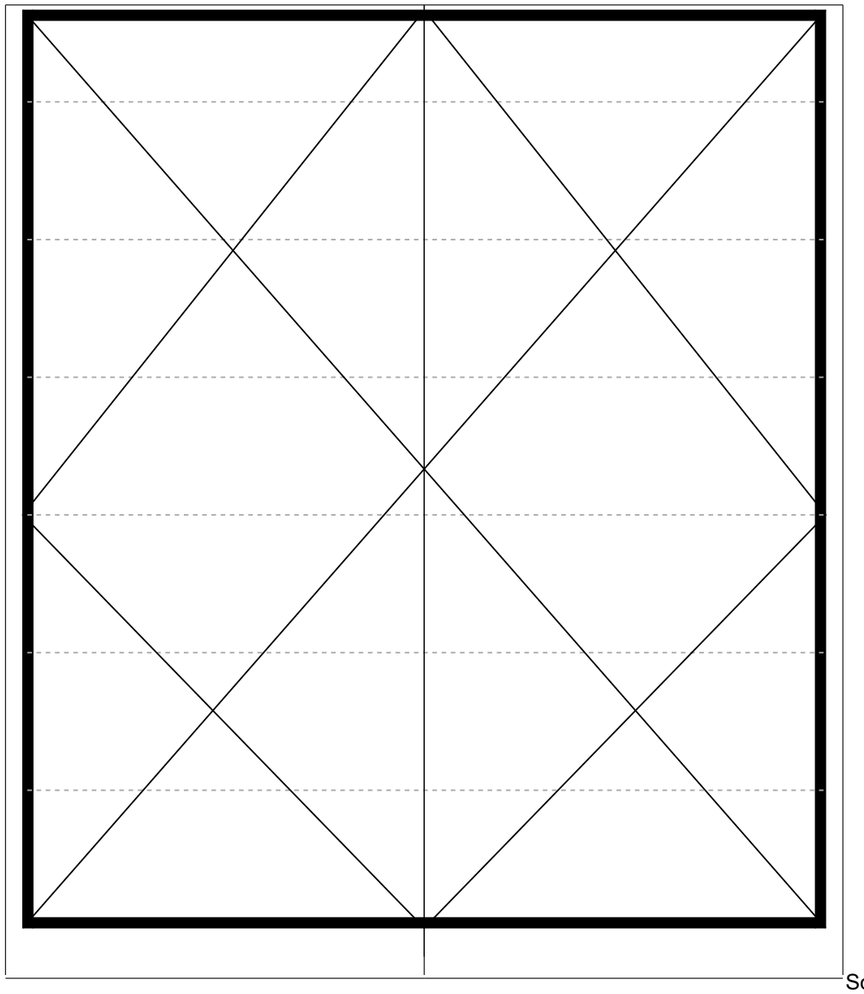
Truss Fixing Details

ROOF BRACING

EXPLANATION

Using a diaphragm approach, the roof is braced using a series of Lumberlok Multi Brace patterns in the plane of the truss top chords to transfer the bracing demand to the top plates. The loads at the top plate level are then transfered to the foundation through the wall bracing system.

ROOF BRACING PATTERN LAYOUT



Scale: NTS

FIXINGS

Each single row of Lumberlok Multi Brace to be tensioned up and laid over the top of the purlins. Fix each end with 11/30x3.15 nails and fix crossings with 2/30x3.15 nails.

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Roof Bracing

WALL BRACING DEMAND

EARTHQUAKE BRACING DEMAND

Using NZS 3604:2011, Section 5 Bracing Design, Table 5.10 - Bracing demand for various combinations of cladding for single and two-storey buildings on concrete slab-on-ground (2 kPa floor load, soil type D/E, earthquake zone 3)

Roof cladding	Single storey cladding	Roof pitch degrees	Single storey walls
Light roof	Light	15°	6 BU/m2

Multiplication factors	EQ zone = 1 Soil class = D&E Deep to very soft	0.5
Earthquake demand		3 BU/m2

Using factors based on ratios in AS/NZS1170.0:2002, part 5 from BIL2 - 50 years working life to BIL1 - 50 years working life.

Building Importance Level 1 modification factor.	0.5
EARTHQUAKE DEMAND REQUIRED (Along and Across)	1.5 BU/m2
BL 8.000m x BW 7.000m = 56m2	**56m2 x 1.5 BU/m2** **84 BU**

WIND BRACING DEMAND

Using NZS 3604:2011, Section 5 Bracing Design, Table 5.6 - Wind bracing demand for single or upper storey wall (BU/m).

Single or Upper Floor level to apex (H)	Roof height above eaves (H)	High Wind Zone Across	High Wind Zone Along
5 m	2 m	50 BU/m	55 BU/m

In wind zones other than High, multiply the figure above by the appropriate factor given opposite.	Very High = 1.3	
Wind demand with wind zone factor applied.	**Across** 65 BU/m	**Along** 71.5 BU/m

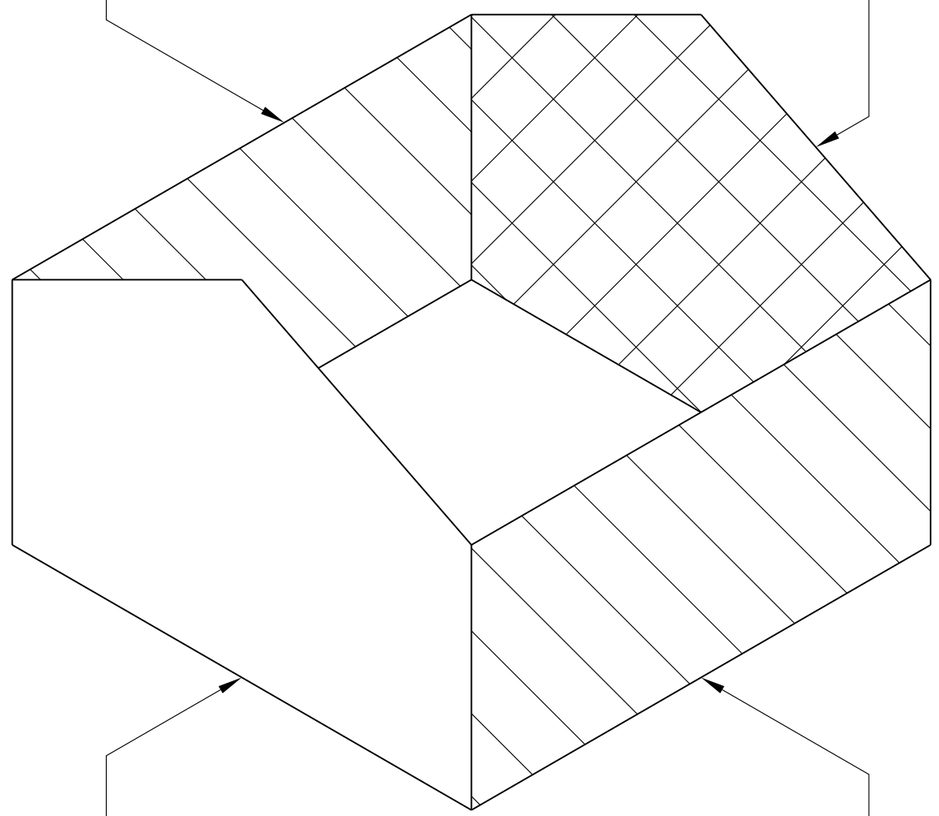
Using factors based on ratios in AS/NZS1170.0:2002, part 2 from BIL2 - 50 years working life to BIL1 - 50 years working life.

Building Importance Level 1 modification factor.	0.849	
WIND DEMAND REQUIRED	**Across** 55.2 BU/m	**Along** 60.7 BU/m
	BL 8.000m x 55.2 BU/m **442 BU**	**BW 7.000m x 60.7 BU/m** **425 BU**

BRACING UNITS DISTRIBUTION

VIEW	50% ALONG (BU)	
4	Wind	Earthquake
	213	42

VIEW	100% ACROSS (BU)	
3	Wind	Earthquake
	442	84



VIEW	0% ACROSS (BU)	
1	Wind	Earthquake
	0	0

VIEW	50% ALONG (BU)	
2	Wind	Earthquake
	213	42

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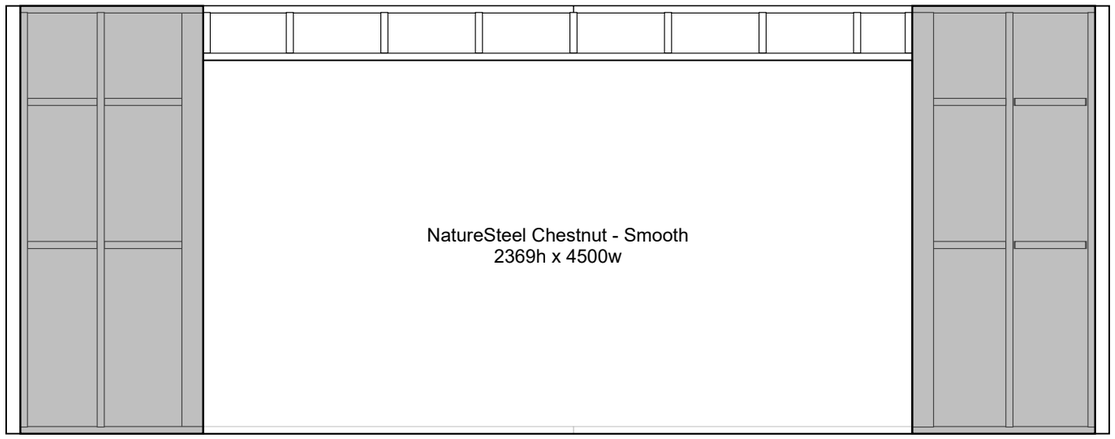
Wall Bracing Demand

DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS

BU ACHIEVED - VIEW 1

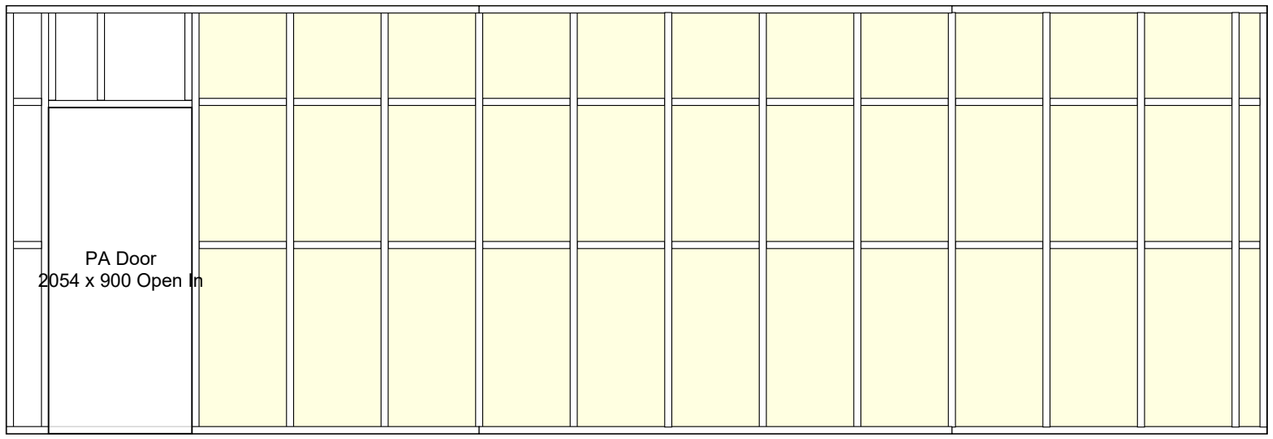


Cladding			
Wind BU			
EQ BU			
Hardware	BLP-H-04 x 1.1m		BLP-H-04 x 1.1m
Wind BU	118		118
EQ BU	132		132

SUMMARY - ACROSS (BU)		
	Wind	EQ
Required	221	42
Achieved	236	264

Scale NTS

BU ACHIEVED - VIEW 2



Cladding		SC6-27 x 6.8m
Wind BU		231
EQ BU		184
Hardware		
Wind BU		
EQ BU		

SUMMARY - ALONG (BU)		
	Wind	EQ
Required	213	42
Achieved	231	184

Scale NTS

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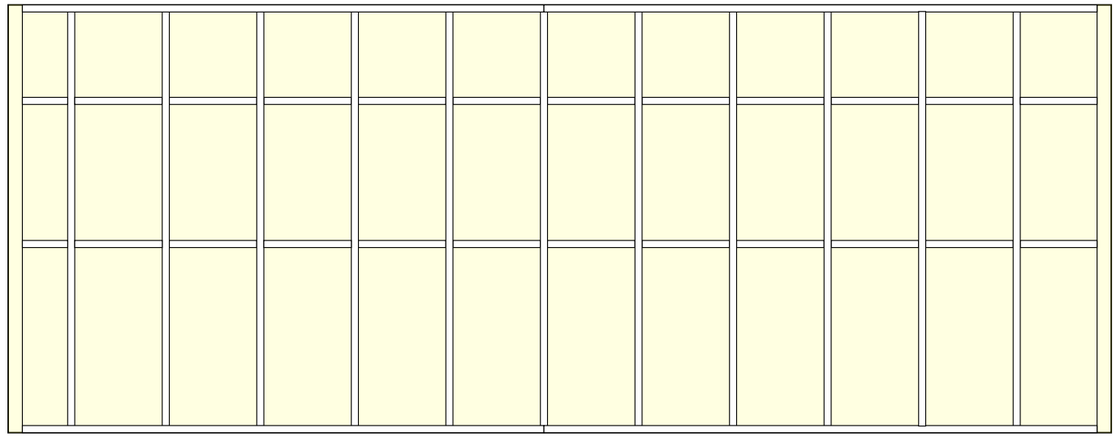
Wall Bracing Achieved

BU ACHIEVED - VIEW 3

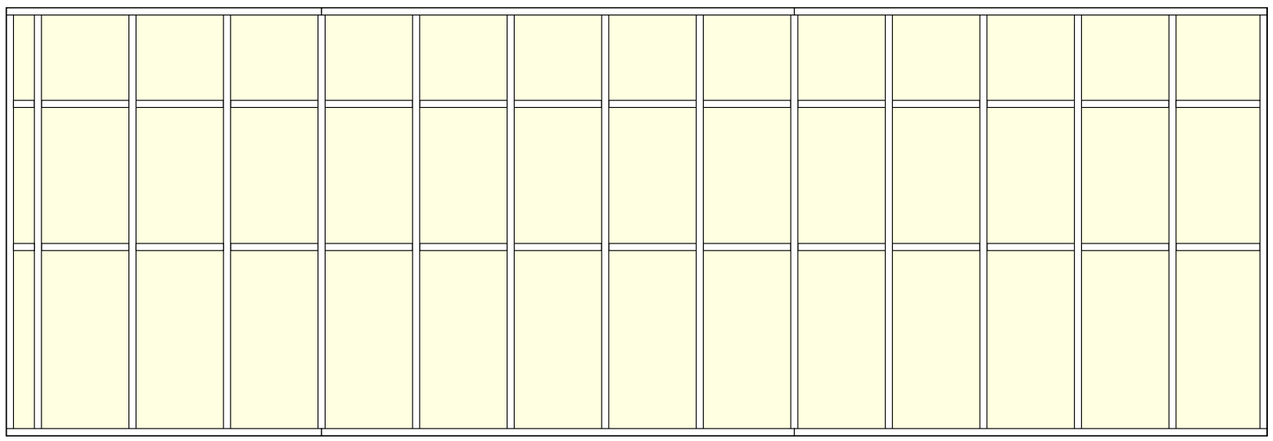


Cladding	SC6-27 x 7m
Wind BU	238
EQ BU	189
Hardware	
Wind BU	
EQ BU	

SUMMARY - ACROSS (BU)		
	Wind	EQ
Required	221	42
Achieved	238	189

Scale NTS

BU ACHIEVED - VIEW 4



Cladding	SC6-27 x 8m
Wind BU	272
EQ BU	216
Hardware	
Wind BU	
EQ BU	

SUMMARY - ALONG (BU)		
	Wind	EQ
Required	213	42
Achieved	272	216

Scale NTS

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Ahipara
0481

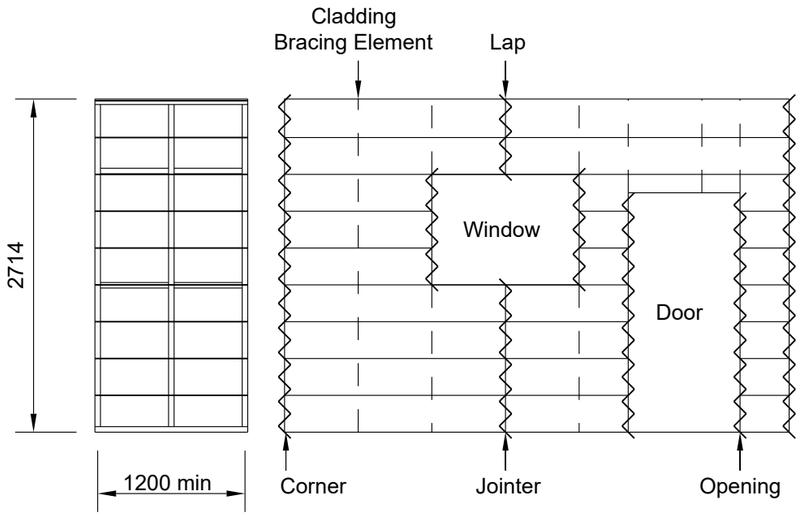
VB2000 - Design

Wall Bracing Achieved

BRACING ELEMENT: SC6-27

Superclad Cladding

Total BU/m	Wind	34
	Earthquake	27



Corners, openings and jointers must be nailed through all cladding layers at 150mm crs.

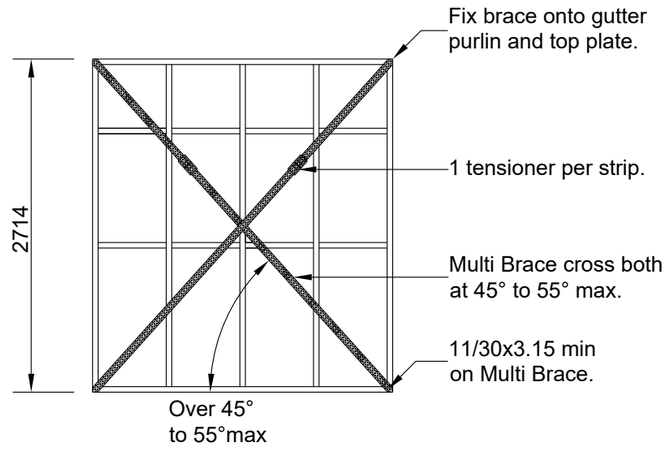
All other internal studs to be nailed through the inner cladding layer only at 300mm crs.

Nails to be galvanised FH
- 32x2.8mm twist shank or
- 40x2.8mm standard or ring shank

NTS

BRACING ELEMENT: MBX6-55-27

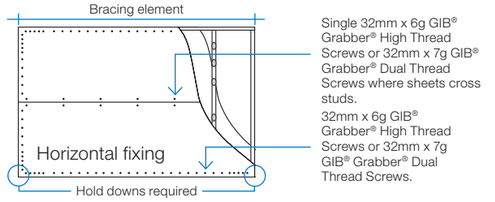
Total BU/m per Cross	Wind	135
	Earthquake	45



Scale A3-1:50

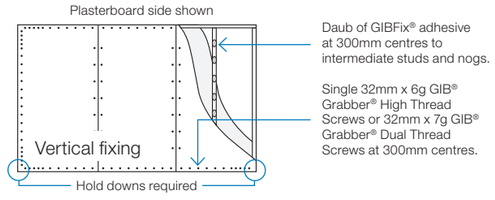
GIB EzyBrace® Systems specification BLP-H

Specification code	Minimum length (m)	Lining requirement	Other requirements
BLP-H	0.4	10mm or 13mm GIB Braceline® to one side of the frame plus minimum 7mm structural plywood manufactured to AS/NZ 2269.0 :2012 to the other side	Hold downs



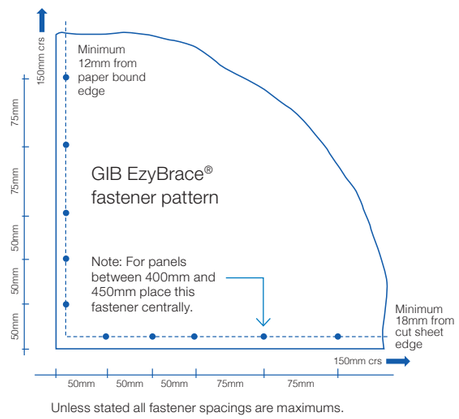
Single 32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws where sheets cross studs.

32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws.



Daub of GIBFix® adhesive at 300mm centres to intermediate studs and nogs.

Single 32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws at 300mm centres.



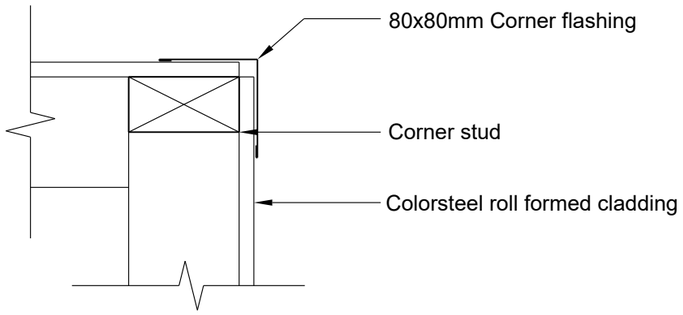
Unless stated all fastener spacings are maximums.

For: John Silich
23 Kotare st
Ahipara
0481

VB2000 - Design

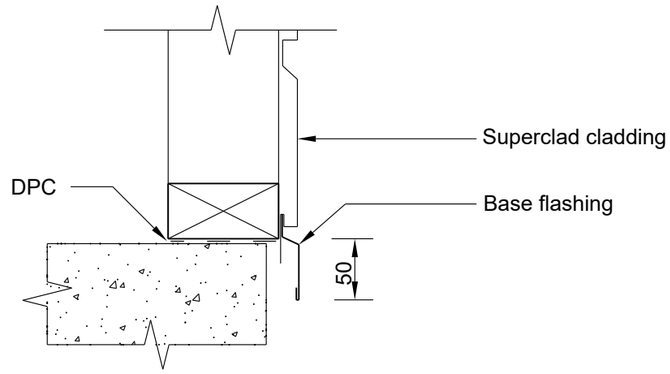
Bracing Elements

CORNER FLASHING DETAIL (NON HABITABLE)



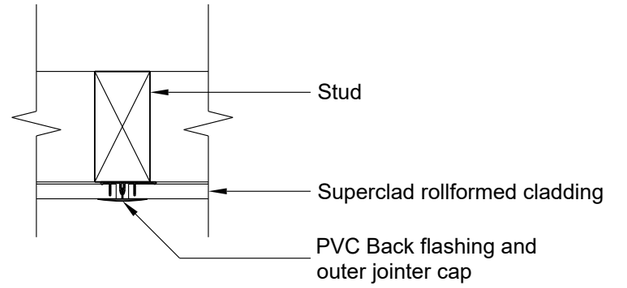
Scale A3-1:5

BASE FLASHING DETAIL



Scale A3-1:5

SUPERCLAD JOINTER DETAIL



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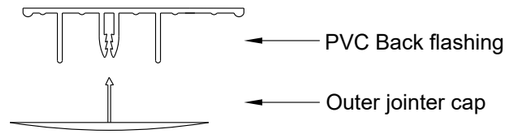
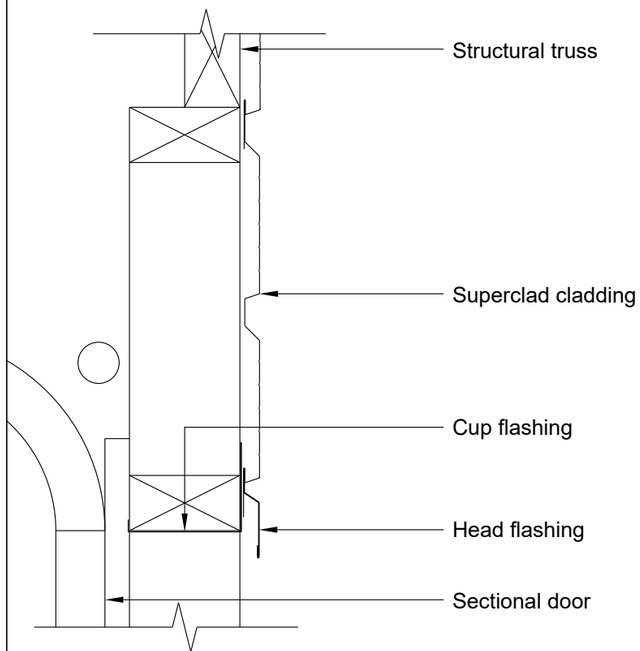


NTS

SECTIONAL DOOR HEAD DETAIL



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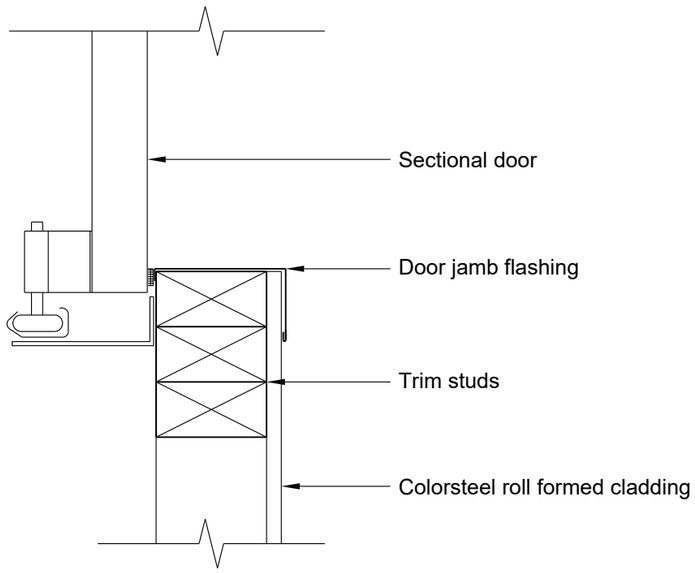
SECTIONAL DOOR JAMB DETAIL



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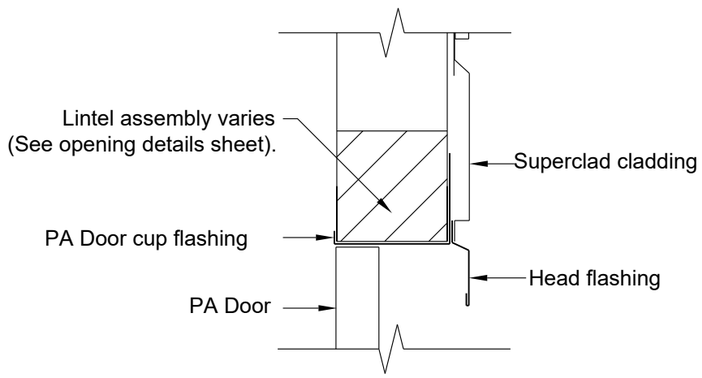
PA DOOR HEAD DETAIL



Scale A3-1:5

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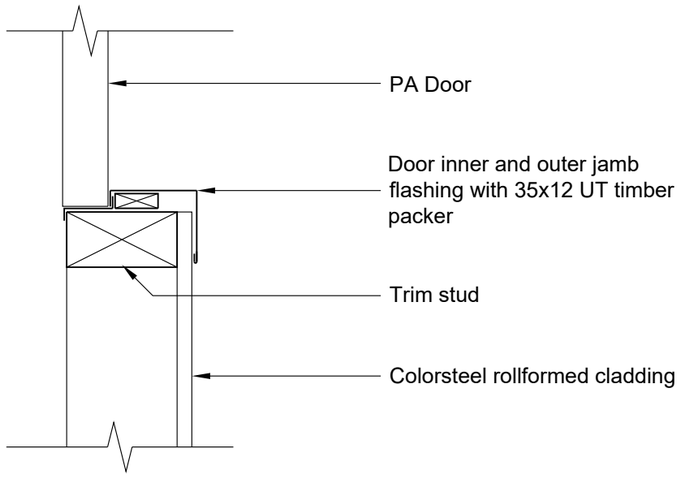
VB2000

Flashing Details

PA DOOR JAMB DETAIL (OPEN IN)



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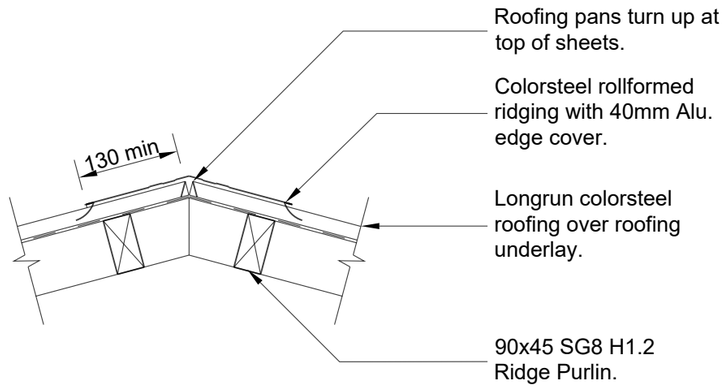
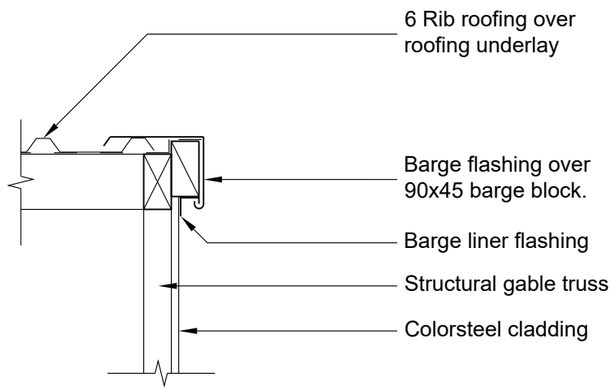
RIDGING DETAIL



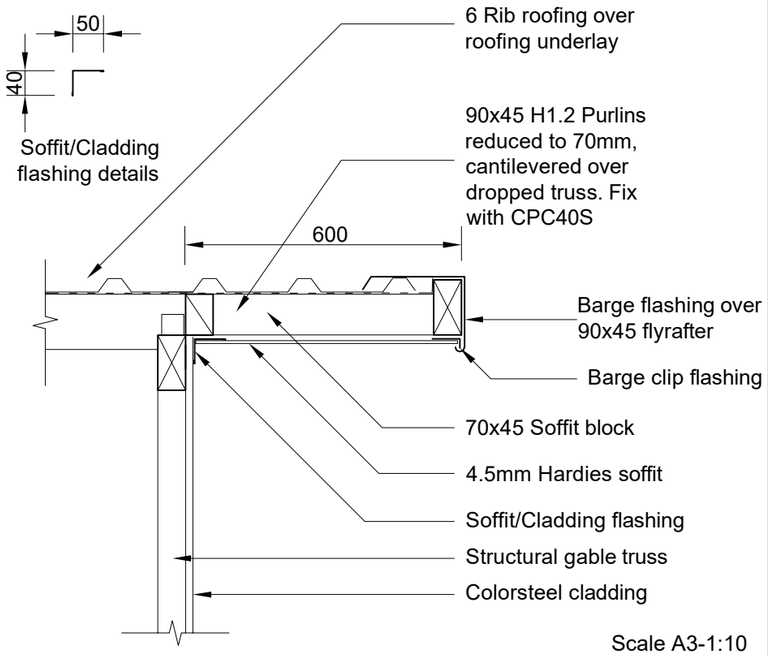
Scale A3-1:10

STANDARD BARGE DETAIL



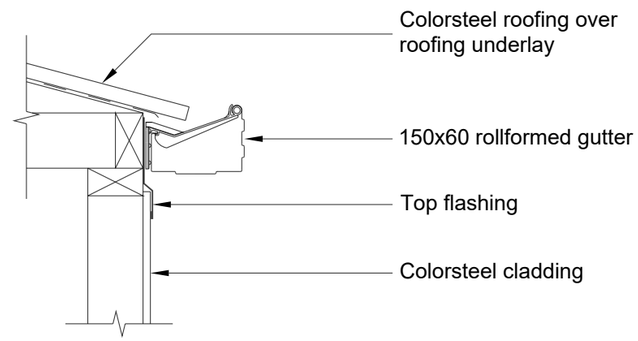
Scale A3-1:10

FRONT SOFFIT BARGE DETAIL



Scale A3-1:10

GUTTER DETAIL



Scale A3-1:10

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Flashing Details

geologix
consulting engineers

COASTAL HAZARD ASSESSMENT

23 KOTARE STREET, AHIPARA

ARCLINE ARCHITECTURE

C0612N-NH-01-R01
MARCH 2025
REVISION 01

www.geologix.co.nz 09 392 0007 13/2181 East Coast Road, Silverdale

geologix
consulting engineers

DOCUMENT MANAGEMENT

Document Title	Coastal Hazard Assessment and Report
Site Reference	23 Kotare Street, Ahipara
Client	Arcline Architecture
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Approved	Edward Collings Managing Director, CPEng, CMEngNZ, CenvP, Mphys (Hons)
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REVISION HISTORY

Date	Issue	Prepared	Reviewed
21 March 2025	First Issue – For Consent	AW	EC

geologix
consulting engineers

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FIGURES

TABLES

1 INTRODUCTION

This Coastal Hazard Assessment has been prepared by Geologix Consulting Engineers Ltd (Geologix) for Arcline Architecture as our Client in accordance with our standard short form agreement and general terms and conditions of engagement.

The purpose of this report is to assist with the Building Consent application in relation to the construction of a proposed new residential development at 23 Kotare Street, Ahipara, the 'site'. Specifically, this report provides a review of available coastal erosion, inundation and wave runup data to provide a site specific assessment for the proposed development.

This report may be used to assist with detailed design and Resource/ Building Consent application.

1.1 Guideline Documents

This report has been prepared in accordance with calculations and guidance presented within Auckland Council, GD2021/010, Coastal Hazard Assessment in the Auckland Region[1] and Predicting Auckland's Exposure to Costal Instability and Erosion[2] and the report prepared for the Northland Regional Council, Coastal Erosion Hazard Assessment for Selected Sites 2019-2020, October 2020 Tonkin and Taylor Ltd[3].

2 SITE CONTEXT

2.1 Site Description

The site is located on the seaward side of Kotare Street in Ahipara. The site is legally described as Lot 15 Deposited Plan 46532 and is rectangular in shape with a gross site area of approximately 809 m². The site is accessed at the Eastern boundary from Kotare Street. The Western boundary of the site is border to Ahipara Beach Domain Recreation Reserve which offsets the Coastal Margin Area (CMA) associated with the Wairoa River outlet. The site setting is presented schematically in the figure below.

[1] *Coastal Hazard Assessment in the Auckland Region Guideline document 2021/010 July 2022, Updated*

[2] *Predicting Auckland's Exposure to Coastal Instability and Erosion Technical Report 2020/021, December 2020*

[3] *Coastal Erosion Hazard Assessment for Selected Sites 2019-2020, October 2020 Tonkin and Taylor Ltd*

Figure 1: Site setting

2.2 Proposed Development

A proposed development was discussed with Geologix at the time of writing, the drawings provided show an alteration to the existing wet area (bathrooms), and addition of an ensuite bathroom and a shed. A retaining wall is understood to be reconstructed and extended, located on the eastern side of the dwelling, which is not shown in the drawings provided.

This understanding has been established from communications and proposed development plans supplied to Geologix at the time of writing. Amendments to the referenced development may require an update to the scope and/ or recommendations of this report.

2.3 Existing Coastal Structures

At the time of writing, no existing coastal protection structure was in place along the western boundary of the site. The property boundary comprised a grassed and shrubbed slope along the coastal frontage between the site and adjacent river. Beyond the river lies at an intertidal sand spit with dunes between the property and Ahipara Bay.

On the sand dune a small palisade timber retaining wall supports the building platform

formed for the dwelling on the site, for the purpose of this assessment it is assumed that the retaining wall is small and positioned above the coastal erosion elevation and would be completely undermined by shoreline regression. Subsequently, the retaining wall is disregarded in the assessment.

2.4 Available Coastal Data

A coastal study has been undertaken for the general Ahipara area for the use of Northland Regional Council[4]. However, the report recommends site specific assessment where the backshore morphology and/or topography changes significantly from that assessed at the shoreline and the shoreline is depicted as a dashed line, as such the site is assessed in this report.

The river outlet appears to have moved cyclically from South West to North East parallel to the coast over a length of approximately 870m, gradually receding the historical coastline and simultaneously coastal marine deposits and wind blown sand dunes have resulted in a the intertidal sandspit and dune formation separating the river from the sea. Based on the available shoreline mapping provided by Northland Regional Council[5] it appears that the movement of the river outlet may reverse at times seasonally and at times over multiple years and decades, resulting in a cyclic process of accretion and regression.

3 GEOMORPHIC SETTING

3.1 Geology and Geomorphology

Available geological mapping[6] indicates the site to be underlain by recent, late Holocene active dune deposits of Karioitahi Group. Windblown loosely deposited sands.

Site geology is expected to be underlain by Early Pleistocene to Middle Pleistocene windblown deposits shown immediately adjacent to the site on the east on the geological mapping[7], consisting of uncemented to moderately cemented and partly consolidated sand in coastal foredunes. Clay-rich sandy soils.

The site is also expected to be underlain by coastal alluvial deposits along the western property boundary to the west of the base of the sea facing slope.

The strata description appears consistent with the site observations and with proximity to the CMA.

---

4 *Coastal Erosion Hazard Assessment for Selected Sites 2019-2020, October 2020 Tonkin and Taylor Ltd*

5 *https://nrcgis.maps.arcgis.com/apps/webappviewer/*

6 *https://data.gns.cri.nz/geology/*

7 *https://data.gns.cri.nz/geology/*

3.2 Topography

Topographically, the site sits on a coastal dune with a small timber palisade wall and fill forming the existing dwelling building platform and a lower portion sits at approximately road level on the eastern portion of the site. On the western boundary beyond the timber palisade wall the site slopes down towards the river. The site boundary is separated from the shoreline by a flat and low lying alluvial plateau at above 2mRL.

A plan drawing is presented within Appendix A with contours and property boundaries.

3.3 Bathymetry

Bathymetry data for the site was sourced from available GIS information prepared by NIWA[8] and GNS[9]. The model indicates no sharp rise towards the coast line within the CMA boundary, adjacent to the site. Beyond the CMA, the bathymetry model indicates a long, gradually descending seabed to the north west into the Ahipara Bay, which is a relatively shallow bay that deepens with distance towards the west. The bathymetry depth profile is a consistent gradual increase in depth from 0m to 20m over 5km.

As a result, waves are expected to have a long runup, wave sizes along this coastline can reach up to over 8m out at sea. The wave size is shown by the regional study[10] to decrease as they approach the shoreline significantly to around 3m in size. The sandspit and dune with crest heights up to 2.5m RL provide the site limited and cyclic defence against wave action.

3.4 Beach Characteristics

The local Ahipara area is a coastal plain, fronted by recent sand dunes, 1.5km to the South West of the site lies a rock outcrop/reef in the inter-tidal zone. The general features of the beach areas on the sand spit in both directions from the site, are gently sloping beaches comprised of loosely deposited sands.

The site is situated adjacent to Ahipara Beach Domain Recreation Reserve which is situated on a combination of beach deposits, alluvial deposits and wind blown sand dunes. The site is located immediately adjacent to a sand spit feature directing the river parallel to the coastline. The wind blown dunes on top of the sand spit have approximate maximum elevations of 2 to 2.5m RL near the location of the site.

The site sits on coastal dunes which the toe of the dune is located at approximately 0 to 2m within the western boundary of the site. Beyond the dune toe a flat lying alluvial flood plain extend approximately 15m to the river edge.

---

[8] *https://data-niwa.opendata.arcgis.com/datasets/nz-bathymetry-250m-imagery-raster-layer/explore?location=-41.567130%2C171.857011%2C11.65*

[9] *https://data.gns.cri.nz/tez/index.html?map=TRAMZ-Bathymetric*

[10] *Coastal Erosion Hazard Assessment for Selected Sites 2019-2020, October 2020 Tonkin and Taylor Ltd*

Figure 2: View from 23 Kotare Street towards the sand spit (West)

Figure 3: View from shoreline towards the sand spit (North)

4 COASTAL PROCESSES

A summary of coastal processes active at the site are summarised as follows.

- The site can be broadly described as loosely deposited sands overlying dense clayey sands. Refer to Appendix C of this report for the investigation logs.
- The general site location presents as recessed coastal alignment with a river and sand spit between the beach and site.
- The location of the site is expected to provide some level of protection from wave erosion. However, there is a risk that the site is susceptible to storm surge erosion if king tides and adverse wave directions coincide, also as climate change increases sea levels and storm intensities.
- Sediment and beach material is expected to move by wave erosion along the beach by a process known as longshore drift.
- The regression susceptibility is expected to be sensitive to the location of the shifting river outlet.
- A specific coastal hazard assessment of the shoreline at the site is not available. Historical records of the shoreline suggests a dynamic shoreline, which varies between accretion and erosion, and river environment since 1950. Shown in the figures below.

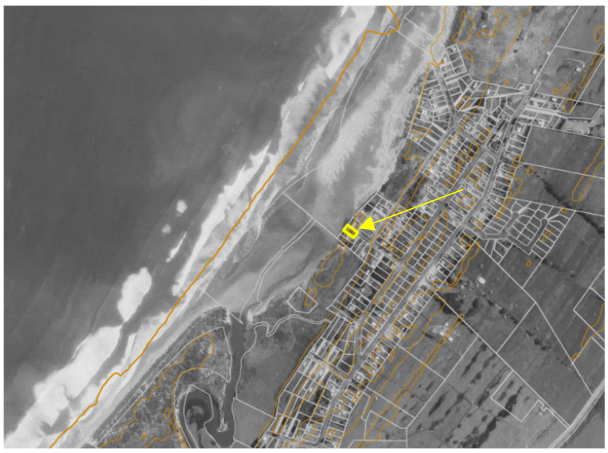


Figure 4: Aerial from 1981

Figure 5: Aerial from 2012

Figure 6: Aerial from 2013

Figure 7: Aerial from 2015

Figure 8: Aerial from 2016

Figure 9: Aerial from 2017

Figure 10: Aerial from 2021

Figure 11: Aerial from 2023

Based on the Northland Regional Council GIS records the site has undergone regression and accretion in the medium term as shown in the figure below.

Figure 12: Accretion and regression of the shoreline since 1950

5 COASTAL HAZARDS ASSESSMENT

Based on the above information, the site is considered to be at risk of both coastal inundation potential and coastal erosion potential in an unprotected scenario.

This has been undertaken by assessing erosion potential in an unprotected scenario to determine if the development is impacted by the process. Similarly our assessment determines whether the site has suitable elevation and freeboard to cope with wave height including provisions for climate change. Our assessment also considers any improvements, if required, to the site to provide recommendations for a suitable level of protection to the site and future maintenance requirements to provide continuous protection.

Consideration has been given to protection for a 50 and 100 year period from construction including provision for climate change to determine the consent condition of the proposed development in relation to CEHZ1 (50 year) and CEHZ2 (100 year) hazards.

5.1 Regional Analysis

Northland Regional Council's Mapping of Areas Susceptible to Coastal Instability and Erosion[11] (ASCIE) is shown below. The blue, teal, green and yellow lines indicate extent of predicted ASCIE of year 2050, 2080, 2130, 2130[12] respectively under Resource Concentration Pathway (RCP)8.5.

[11] *https://nrcgis.maps.arcgis.com/apps/webappviewer/index.html?id=81b958563a2c40ec89f2f60efc99b13b*

[12] *Extreme emissions scenario with no mitigation (RCP8.5H+) at 100+ year time frame. https://www.aucklandcouncil.govt.nz/environment/what-we-do-to-help-environment/Documents/predicting-auckland-exposure-coastal-instability-erosion.pdf , p7*

It is prudent to note that the predicted Council ASCIE is developed from a regionwide model whereby predictions are based upon stable developable areas considering a broad, region wide geological property assumption and no influence of groundwater. As the proposed building platform sits within the predicted ASCIE area the proposed development will be subject to a natural hazard unless a site-specific analysis as outlined by this report can prove there is a less than minor effect on the development.

The purpose of this assessment is to develop a site specific ASCIE prediction based upon our slope stability model, historical erosion processes and approximated regression rate and predicted sea level rise. The modelling process develops an approximate prediction which is influenced by the frequency and intensity of future storm events. It is recommended the actual regression rates are monitored.

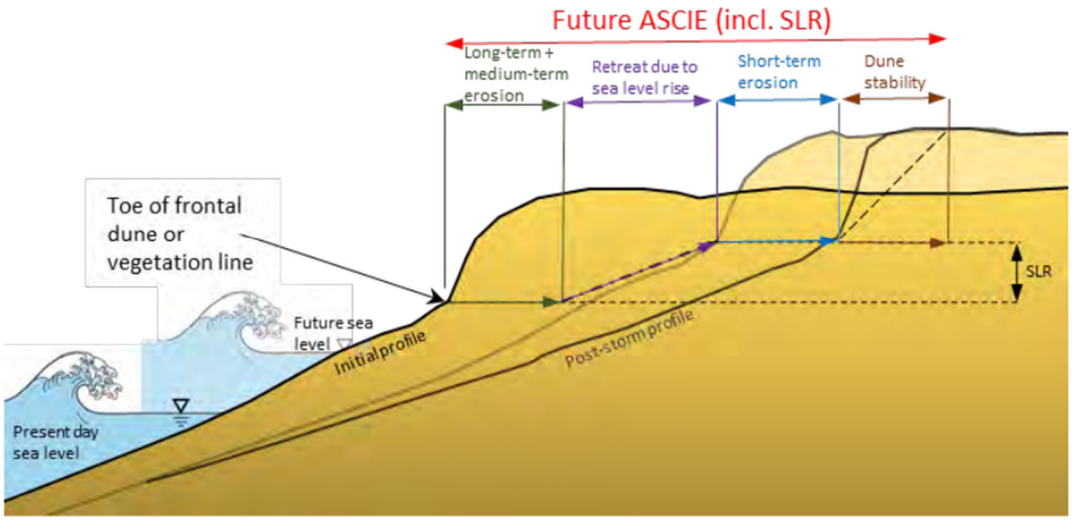
5.2 Coastal Erosion and Instability

While inundation due to sea level rise may be perceived as a major threat to coastal properties, long term coastal erosion may also have significant impacts. Coastal erosion is a complex process defined by the permanent loss of coastal cliff areas or long-term regression of natural beaches and dunes. Beaches and dunes consist of uncemented or very weakly bound materials. They are dynamic environments that are subject to both erosion and accretion, controlled by the prevailing coastal processes (e.g. wave energy, water level) and the availability of sediment.

5.2.1 Methodology

Auckland Council GD2021/010 and Technical Report 2020/021 present a calculation for predicting the current and future Areas Susceptible to Coastal Inundation and Erosion (ASCIE) for an open coast beach shoreline. This is shown schematically below as Figure 13.

Figure 13: ASCIE for Open Beach Shorelines



To provide a site specific assessment, we have considered a single cross section across the site through the sand dune forming the site. To determine the Current ASCIE the shoreline has conservatively been considered approximately the toe of the sand dune.

An assessment of historic erosion has been undertaken and the input and results are presented schematically in Appendix A. Future ASCIE modelling is shown in Section 5.2.7 of this report. Our model for coastal erosion of beaches is expressed by the following equations:

$$Current\ ASCIE_{Beach} = ST+DS$$

$$Future\ ASCIE_{Beach} = (LT * T)+SL+ST+DS+MT$$

Where:

DS = Dune Stability, defined as the horizontal distance from the base of the eroded dune to the dune crest at a stable angle of repose (m).

ST = Short-term horizontal shoreline changes influenced by storm erosion from single or multiple storm events, beach rotation, sediment supply and demand and cyclic wave climatic changes.

MT = Medium-term shoreline erosion including decade-scale of the erosion fluctuations due to ENSO, IPO consequences or sediment budget changes.

LT = Long-term erosion rate of horizontal shoreline movement (m/year).

T = Time frame for assessment, including 50 and 100 years in this case (years).

SL = Horizontal shoreline retreat due to increased Mean Sea Level (m).

5.2.2 *Dune Stability, DS*

Throughout the local area the alluvial platform was noted to be protecting the dune before instability processes can become dominant. The dune sits with a minimum slope of approximately 25 °. Based on a slope stability analysis of the dune to determine batters which corelate to appropriate design scenario FoS, the zone of potential dune instability has been taken as a typical 23 ° zone of influence taken over the frontal height of the dune. This is considered suitable for the current and conservative for future predicted events considering a flat backslope and that predicted sea level rise will cause an instability effect at a higher elevation.

The analysis of DS (critical design scenario) as a horizontal component is summarised below as Table 3. The stability analysis is presented in Appendix B.

Table 1: Summary of Dune Stability

Section	Location to Site and Comment	Critical Scenario	Dune Height (m)	DS (m)
A	West, unprotected	Static Slope Stability	2.5	5.9

5.2.3 *Short Term Effects, ST*

To calculate the current ASCIE Beach, short term changes (ST) is normally determined as changes in horizontal shoreline position associated with singular or a cluster of storms events.

Due to the rapid erosion inferred at the shoreline adjacent to the site, the ST rates have been made zero as they are already incorporated into the determination of LT and a conservative assumption has been given to the location of the shoreline location. This assumption is consistent with the Northland Regional Council Coastal Erosion Hazard Assessment for Selected Sites 2019 – 2020[13].

Table 2: Summary of Short Term Effects

Section	Location to Site and Comment	ST Component (m)
A	West, unprotected	0

5.2.4 *Medium Term Effects, MT*

Medium term effects are generally adopted where effects are evident and are rationalised based on literature or beach profile analysis. Visible effects are already captured under the LT Shoreline Change. Fluctuations in sediment supply or climate cycles over short periods of

[13] *Coastal Erosion Hazard Assessment for Selected Sites 2019-2020, October 2020 Tonkin and Taylor Ltd*

time, i.e. 10 to 25 years are considered medium term fluctuations if they fluctuate around the mean.

Based on the above, no MT erosion rate has been included in the assessment. This assumption is consistent with the Northland Regional Council Coastal Erosion Hazard Assessment for Selected Sites 2019 – 2020[14].

5.2.5 *Historical Shoreline Change, LT*

Available aerial imagery along with Northland Regional Council mapping of the shoreline adjacent to the site, shows that the dynamic shoreline shows cycles of accretion and regression in the long and medium term. This assessment ignores the cyclic nature and has determined a LT regression rate based on the regression which occurred from 1950 to 1981 (before accretion occurred), to provide a rate at which assumes no interruption from periods of accretion. A comparison is done for 2007 to the current shoreline.

Over a 31-year period from 1950 to 1981, the shoreline regression was approximately 9.5m and calculated as approximately 0.31 m/ year over the site location.

Coastal regression was also calculated for an additional time frame as a comparison with respect to the observation that some cycles are broken up by accretion.

Shoreline regression was estimated at 0.31 m/ year and 0.16 m/year at the same site.

The analysis of LT is summarised below as Table 3.

Table 3: Summary of Long Term Erosion

Section	Location to Site and Comment	LT Component (m/ year)
1950 to 1981	West, unprotected	0.31
1981 to 2007	No erosion occurring, period of accretion	NA
2007 to 2019	West, unprotected	0.16

The maximum regressive value of 0.31m/year was taken as LT for the purpose of this assessment.

5.2.6 *Sea Level Rise, SLR*

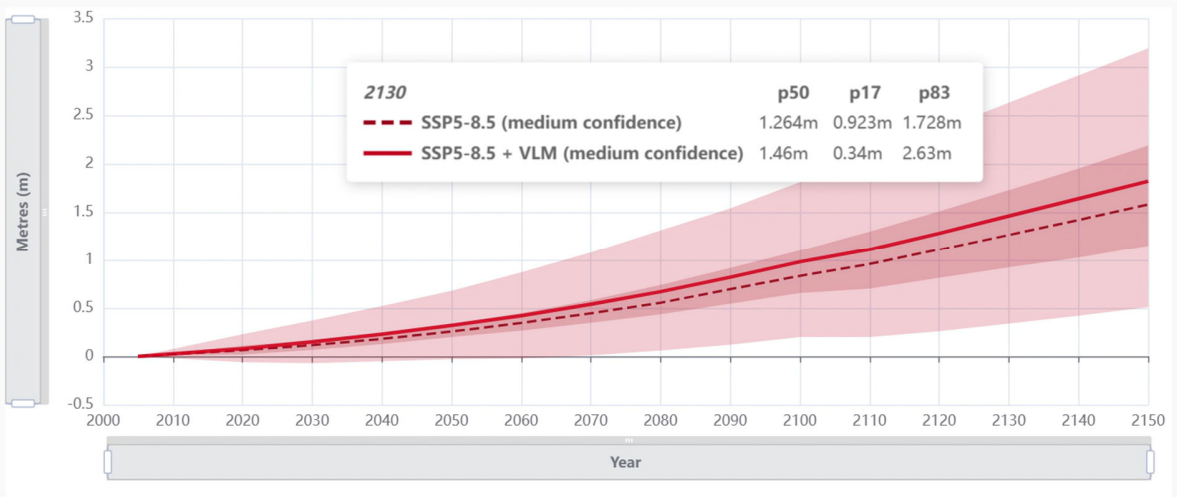
Various scenarios of climate change predictions have been modelled based on three greenhouses has concentration pathways over the 100 years. These scenarios are named RCP2.6, RCP4.5 and RCP8.5. Typically, in engineering design, the RCP8.5H^{+} scenario is adopted for inundation modelling. According to the searise.takiwa.co website using a slightly different naming system, for the SSP5-8.5 scenario, SLR from the present-day baseline was selected. The closest available site to the subject site was selected for SLR projections which

[14] *Coastal Erosion Hazard Assessment for Selected Sites 2019-2020, October 2020 Tonkin and Taylor Ltd*

was approximately 300m north of the site. The maximum confidence level was selected for the 50-year and 100-year scenario which is 0.639m and 1.617m respectively. This in turn equates to projected sea level rise rate of 13mm/year from present to year 2080, and 16mm/year from present to year 2130.

The MfE (2017) guideline document notes that for unconsolidated beach shorelines an average historical rate has been deducted from the projected SL value to provide an 'effective' SL for use in this assessment. This is on the basis that the existing long-term trends and processes already incorporate the response to the historical situation.

Figure 14: Sea Level Rise Prediction Scenarios



Adopted SL values for this assessment are summarised below as Table 4.

Table 4: Adopted Sea Level Rise

Timeframe	SL Scenario	Effective SLR from Present Day Basement (m)
2080/ 50 year	SSP5-8.5	0.639
2130/ 100 year	SSP5-8.5H	1.617

5.2.7 *Coastal Erosion Summary*

Considering the components outlined above we have developed a site specific model of coastal erosion potential for the three sections considering current and future requirements as follows:

Table 5: Coastal erosion assessment

Section	Component						
	ST (m)	DS (m)	LT (m/yr)	MT (m)	Current ASCIE (m)	Future ASCIE, 2080/ 50 year (m)	Future ASCIE, 2130/ 100 year (m)
West boundary (unprotected)	0	5.9	0.31	0	5.9	21.4	36.9

It is recommended that the protected model is adopted for determining the natural hazard potential on the proposed development. The above summary is presented schematically as in the figure below.

Figure 15: Assessed new ASCIE locations

5.3 Coastal Inundation

The site is presented as a low-lying, slightly elevated sand dune adjacent to the shoreline. As such, it can be considered to be susceptible to coastal inundation, in particular over the design life of the building when taking into account the effects of climate change. Based on the Northen Council GIS the 100 year Coastal Hazard Flood Zone including Rapid Sea Level Rise is at 4.4 m RL. This coincides with a small portion of the site as shown in the image below.

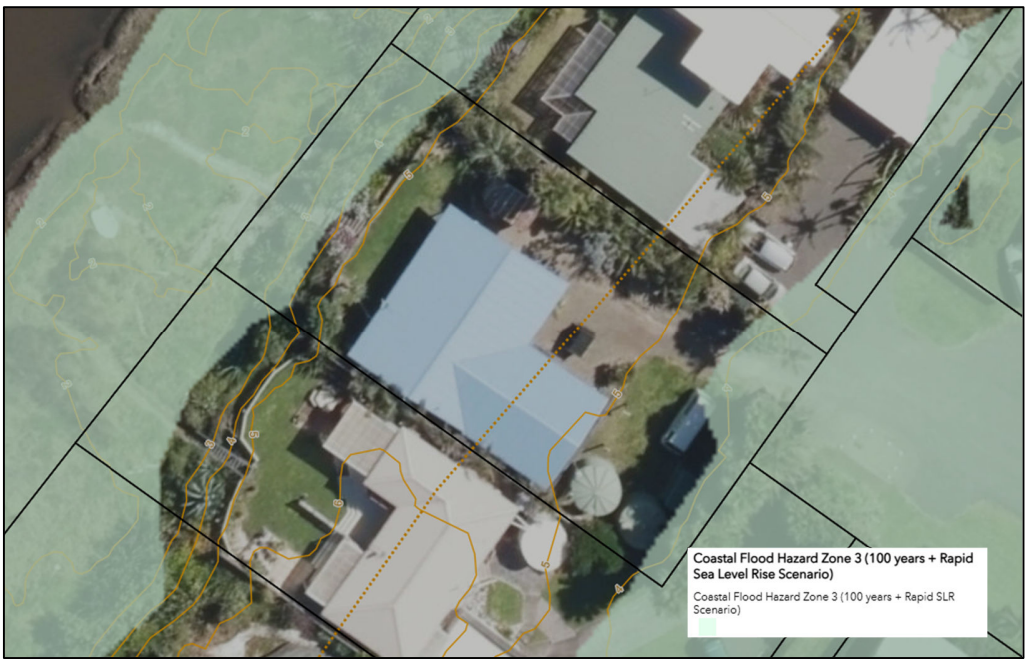


Figure 16: Coastal Hazard Zone 3

5.3.1 *Freeboard*

New Zealand Building Code provides minimum freeboard levels for habitable and non-habitable levels outlined in this report. A minimum freeboard of 500 mm above the 100 year Coastal Hazard Flood Zone for residential buildings is required to satisfy Building Code and FNDC Engineering Standards. This is represented by floor level at 4.9 m RL.

6 HAZARD AVOIDANCE AND MITIGATION

Based on this assessment, available information and the proposed development, protection of the structure is required to ensure the building can remain operable over the building design life.

A summary of positive aspects of the current development plans supplied to us at the time of writing include:

- The seaward boundary of the site is formed by an elevated sand dune and is protected by a sand spit.
- The site is elevated on a dune formation partially above a 500mm freeboard above river/ storm flood hazards which allows some areas with ground level with enough freeboard and some areas where freeboard will need to be incorporated into the design of any development.

To provide a satisfactory level of protection to the proposed shed:

- Minimum shed Finished Floor Level provides adequate 300 mm freeboard above the 2130 MHWS-10 level with provision for climate change. This would require the shed FFL to be set at a minimum of 4.7 m NZVD. The FFL shall be set out and confirmed on site by a registered surveyor as part of the Consent conditions.

In the event that none of the above recommendations are adopted. It is considered that the following Building Code Clauses will require a waiver due to natural hazards.

- Clause E1 which prescribes minimum freeboard requirements if proposed mitigation against coastal inundation is not adopted in practice.

7 CONSENT STATUS

7.1 Far North District Plan

Based on the assessment provided in this report, the site is interpreted to be categorised as "Coastal Hazard 2 Areas" in terms of the definitions used in the Far North District Plan.

According to the Far North District Plan clause 12.4.6.1.1 "The erection of new buildings/structures, and alterations and additions to existing buildings/structures that increase the external dimensions, are controlled activities in Coastal Hazard 2 Areas".

7.2 Northland Regional Council – Regional Policy Statement for Northland

According to the Northland Regional Council – Regional Policy Statement for Northland clause 7.1.3 Policy – New subdivision, use and development within areas potentially affected by coastal hazards (including high risk coastal hazard areas), the proposal should be assessed for the following items:

Table 6: Clause 7.1.3

Within areas potentially affected by coastal hazards over the next 100 years (including high risk coastal hazard areas), the hazard risk associated with new use and development will be managed so that:	
Redevelopment or changes in land use that reduce the risk of adverse effects from coastal hazards are encouraged;	No impact – the proposed development is on landward side of the dune formation
(b) Subdivision plans are able to identify that building platforms are located outside high risk coastal hazard areas and these building platforms will not be subject to inundation and / or material damage (including erosion) over a 100-year timeframe;	Not applicable
(c) Coastal hazard risk to vehicular access routes for proposed new lots is assessed;	Not applicable – no change to vehicular access
(d) Any use or development does not increase the risk of social, environmental or economic harm (from	No impact to adjacent properties

coastal hazards);	
(e) Infrastructure should be located away from areas of coastal hazard risk but if located within these areas, it should be designed to maintain its integrity and function during a hazard event	Proposed development is located in the Coastal Hazard 2 Area. The development is located on the landward side of the dune formation and may be removed, relocated prior to any 100 year risk eventuating.
(f) The use of hard protection structures is discouraged and the use of alternatives to them promoted; and	Not applicable
(g) Mechanisms are in place for the safe storage of hazardous substances	Not applicable

According to the Northland Regional Council – Regional Policy Statement for Northland clause 7.1.4 Policy – Existing development in known hazard-prone areas, the proposal should be assessed for the following items:

Table 7: Clause 7.1.4

In 10-year and 100-year flood hazard areas and coastal hazard areas, mitigation measures to reduce natural hazard risk to existing development will be encouraged. These may include one or more of the following:	
(a) Designing for relocatable or recoverable structures (when changing existing buildings);	Not applicable
(b) Providing for low or no risk activities within hazard-prone areas;	Not applicable
(c) Providing for setbacks (from rivers / streams or the coastal marine area);	Proposal set back to Coastal Hazard 2
(d) Managed retreat by relocation, removal, or abandonment of structures;	Not applicable
(e) Replacing or modifying existing development without resorting to hard protection structures (see Policy 7.2.2); or	Condition met - The development proposal does not incorporate hard protection structures for the purpose of hazard protection
(f) Protecting, restoring or enhancing natural defences against natural hazards (see Policy 7.2.1)"	Not applicable

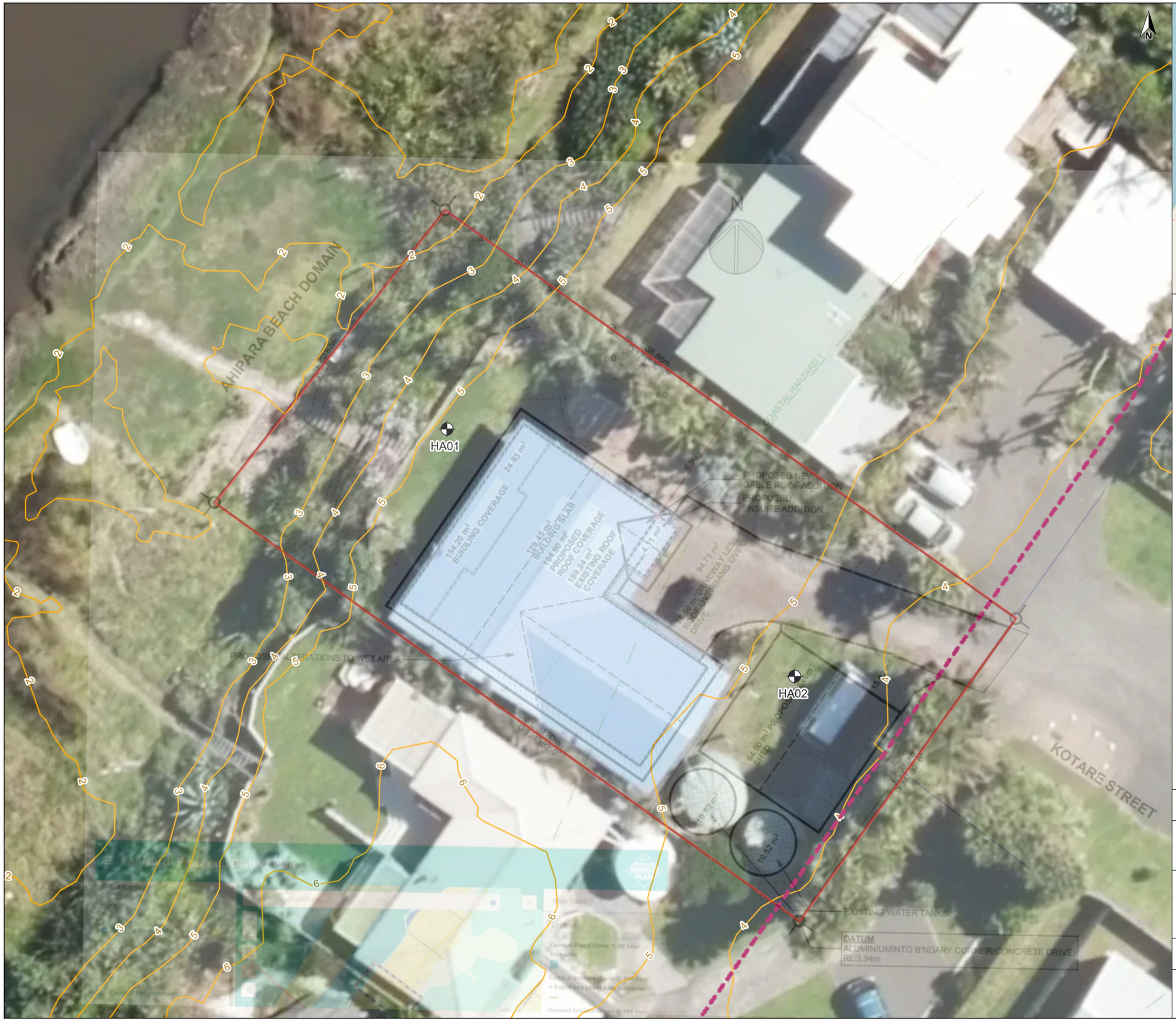
8 LIMITATIONS

This report has been prepared for Arcline Architecture as our Client. It may be relied upon by our Client and their appointed Consultants, Contractors and for the purpose of Consent as outlined by the specific objectives in this report. This report and associated recommendations, conclusions or intellectual property is not to be relied upon by any other party for any purpose unless agreed in writing by Geologix Consulting Engineers Ltd and our Client. In any case the reliance by any other party for any other purpose shall be at such parties' sole risk and no reliability is provided by Geologix Consulting Engineers Ltd.

The opinions and recommendations of this report are based on plans, specifications and reports provided to us at the time of writing, as referenced. Any changes, additions or amendments to the project scope and referenced documents may require an amendment to this report and Geologix Consulting Engineers should be consulted. Geologix Consulting Engineers Ltd reserve the right to review this report and accompanying plans.

APPENDIX A

Drawings



Legend

- Proposed Development Plan

Coastal Erosion Harzard Lines

Coastal Erosion Hazard Lines

- NRC CEH 50 years
- 50 years less certain
- NRC CEH 100 years
- 100 years less certain
- Coastal Erosion Hazard 1
- Coastal Erosion Hazard 2
- Site Boundary
- Geologix Hand Auger, March 2025

0 2.5 m 5 m

geologix consulting engineers

Produced by **Datanest.earth**

Title: Coastal Erosion Hazard Map (GIS)		
Client: Arcline Architecture Limited		Size: A3
Project: 23 Kotare Street, Ahipara	Drawn: AW	Drawing No.: 200
Date: 19-03-2025	Checked: EC	
Proj No: C0612N	Scale: 1:200	Version: draft

Legend

- New 100 Year ASCIE Line
- New 50 Year ASCIE line
- New Current ASCIE
- New Adopted Shoreline

0 2.5 m 5 m

geologix consulting engineers

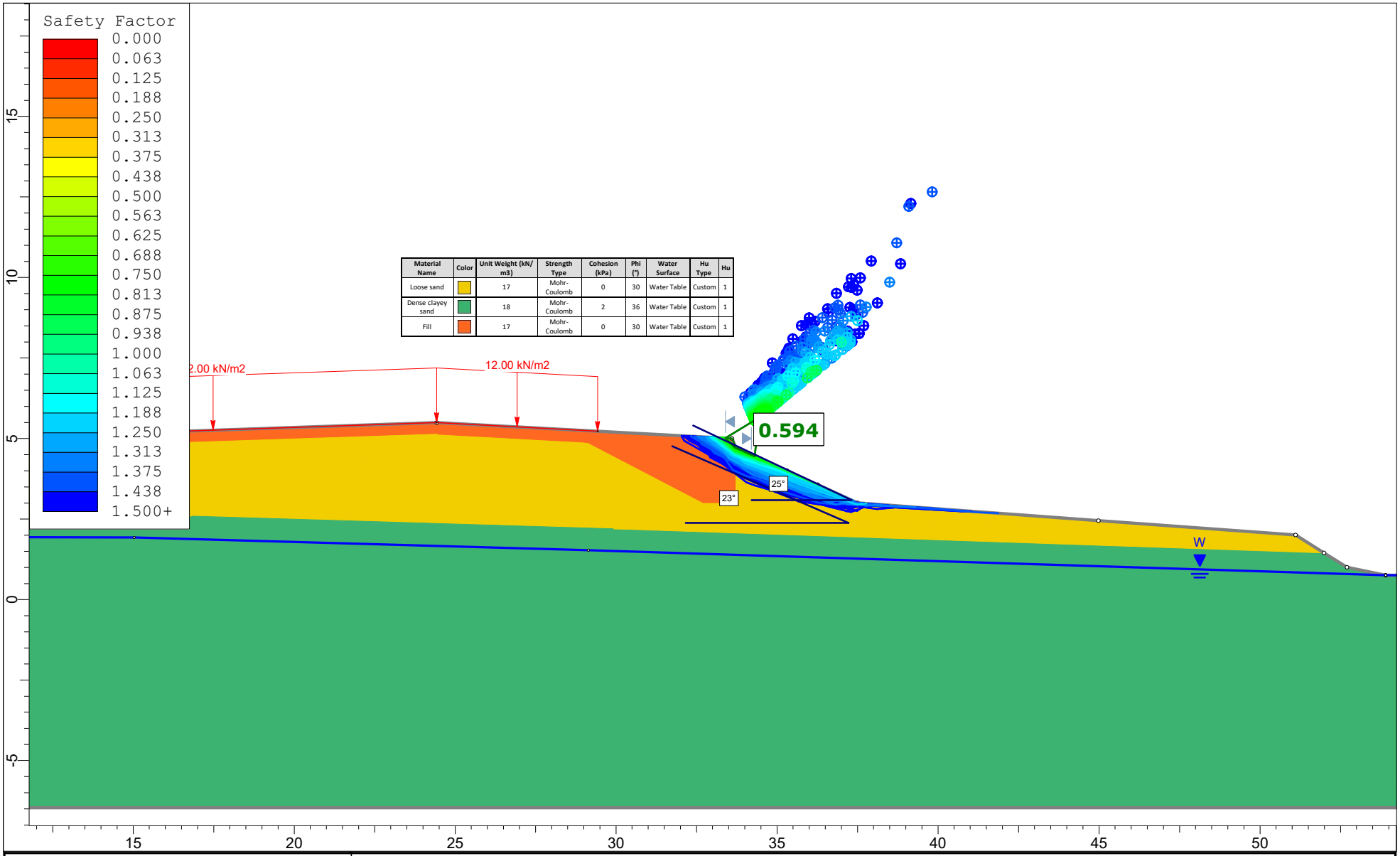
Produced by **Datanest.earth**

Title: Site Specific Coastal Regression Assessment		
Client: Arcline Architecture Limited		Size: A3
Project: 23 Kotare Street, Ahipara	Drawn: AW	Drawing No.: 201
Date: 21-03-2025	Checked: EC	
Proj No: C0612N	Scale: 1:200	Version: draft

geologix
consulting engineers

APPENDIX B

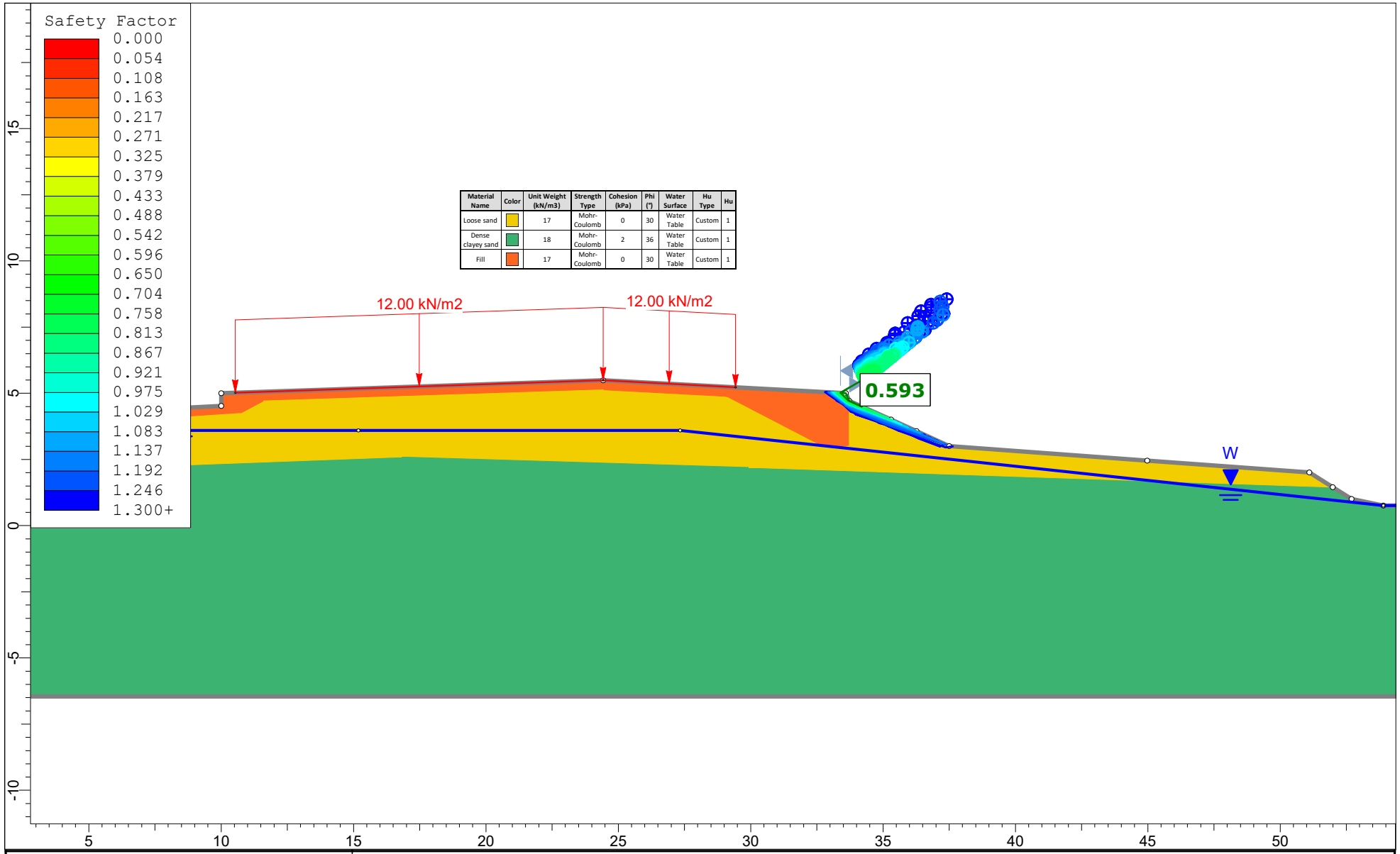
Dune stability assessment



rocscience

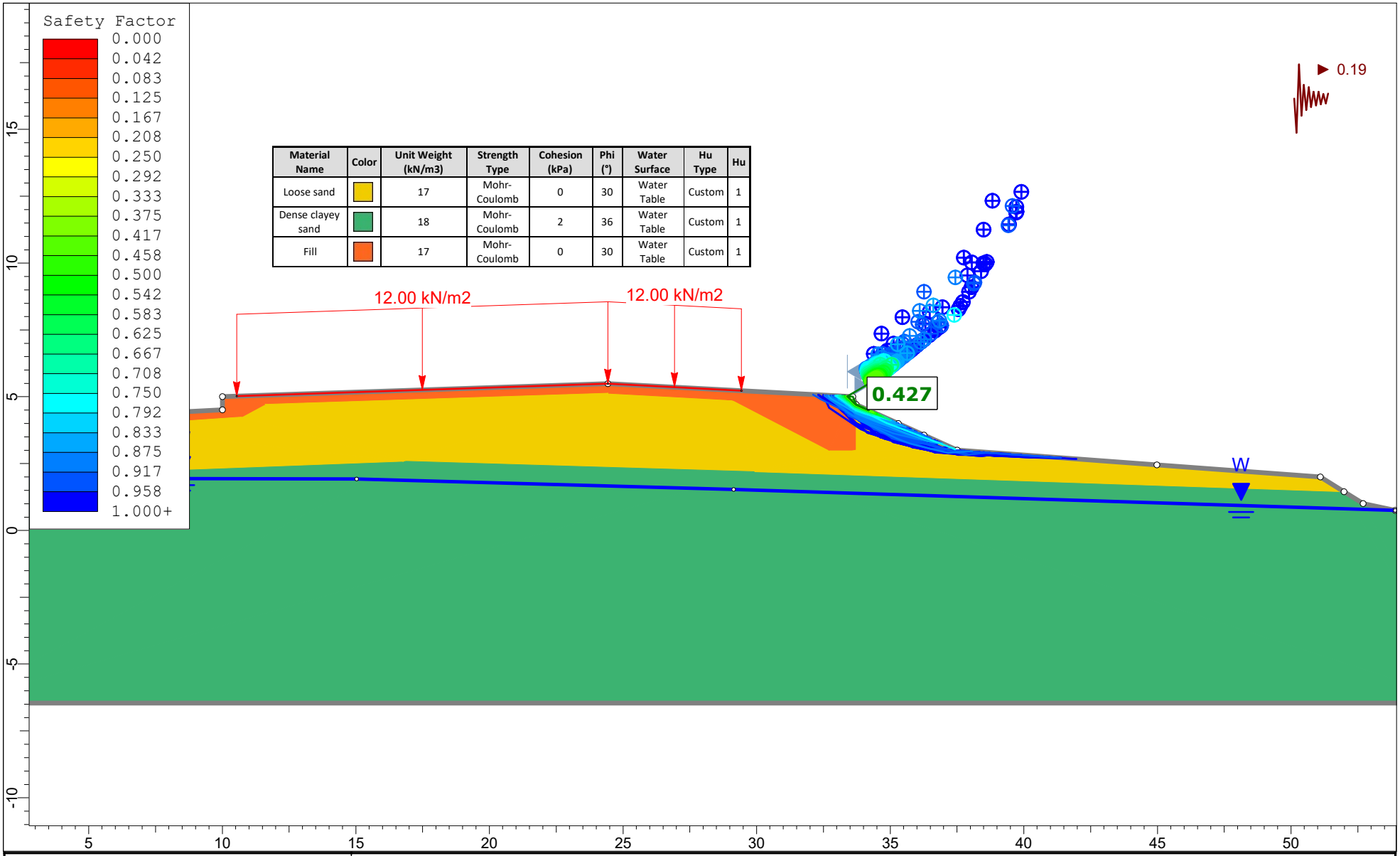
SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Group 1	*Scenario*	Static
Drawn By	AW	*Company*	Geologix Consulting Engineers Ltd
Date	18/03/2025, 7:22:36 pm	*File Name*	23 Kotare Street.slmd



rocscience	*Project*	Slide2 - An Interactive Slope Stability Program	
	Group	Group 1	*Scenario* Elevated Groundwater
	Drawn By	AW	*Company* Geologix Consulting Engineers Ltd
	Date	18/03/2025, 7:22:36 pm	*File Name* 23 Kotare Street.slmd

SLIDEINTERPRET 9.038



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Loose sand		17	Mohr-Coulomb	0	30	Water Table	Custom	1
Dense clayey sand		18	Mohr-Coulomb	2	36	Water Table	Custom	1
Fill		17	Mohr-Coulomb	0	30	Water Table	Custom	1

rocscience

SLIDEINTERPRET 9.038

Project	Slide2 - An Interactive Slope Stability Program		
Group	Group 1	*Scenario*	Seismic
Drawn By	AW	*Company*	Geologix Consulting Engineers Ltd
Date	18/03/2025, 7:22:36 pm	*File Name*	23 Kotare Street.slmd

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consulting engineers

APPENDIX C

Hand Auger Logs

INVESTIGATION LOG

HOLE NO.: HA01

CLIENT: Arcline Architecture Limited

PROJECT: 23 Kotare Street, Ahipara

JOB NO.: C0612N

SITE LOCATION: Refer to Geologix Site plan: C0612N -200

START DATE: 13/03/2025

CO-ORDINATES: 1614044mE, 6108802mN

ELEVATION: Ground

END DATE: 13/03/2025

CONTRACTOR: Internal

RIG: 50mm Auger head + DCP

DRILLER: DB

LOGGED BY: DB

MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	DEPTH (m)
FILL; Fine to medium SAND with minor fine to medium gravels; brown. Dry; friable.	0.0
SAND; brown. Loose; dry; sand, fine to medium; friable (Dune Deposits of Karioitahi Group).	0.4
Silty SAND; brown and dark brown. Loose; moist; [Dune Deposits of Karioitahi Group).	1.4
SAND; brown. Medium dense to dense; moist; sand, fine to medium; (Dune Deposits of Karioitahi Group).	1.6
1.7m - 2.8m: Becoming pale brown.	2.8
3.1m - 3.3m: Becoming very dense.	3.2
3.8m - 4.5m: Becoming very dense.	3.8
End Of Hole: 4.50m	4.5

SAMPLES | LEGEND | SCALA PENETROMETER (Blows / 100mm) | VANE SHEAR STRENGTH (kPa) | WATER

SCALA PENETROMETER (Blows / 100mm): 2 4 6 8 10 12 14 16 18

VANE SHEAR STRENGTH (kPa) Vane: 50 100 150 200 Values

Groundwater Not Encountered

PHOTO(S)

REMARKS

1. Hand auger terminated at 4.5 m bgl due to dense strata.
2. Hole collapsed at 1.7 m bgl.
3. DCP testing carried out from the surface to 5.0m bgl
4. Groundwater not encountered at the time of drilling

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

INVESTIGATION LOG

HOLE NO.: HA02

CLIENT: Arcline Architecture Limited
PROJECT: 23 Kotare Street, Ahipara
JOB NO.: C0612N

SITE LOCATION: Refer to Geologix Site plan: C0612N -200
START DATE: 13/03/2025
CO-ORDINATES: 1614026mE, 6108817mN
ELEVATION: Ground
END DATE: 13/03/2025
CONTRACTOR: Internal
RIG: 50mm Auger head + DCP
DRILLER: DB
LOGGED BY: DB

MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 100mm)	VANE SHEAR STRENGTH (kPa) Vane: Values	WATER
TOPSOIL; Fine to medium silty sand with minor fine to medium gravels; brown. Dry; friable.		0.0		3, 3		
Clayey SAND, with some gravel; brown with orange-brown and grey mottles. Dense; dry; gravel, fine; (Non-Engineered Fill).		0.2		15, 16, 15, 15		
0.6m - 0.8m: Becoming very dense.		0.6		19, 22 >>		
Silty SAND; brown. Loose; dry; sand, fine to medium; (Non-Engineered Fill).		0.8		10, 8		
Silty CLAY; orange brown with grey and brown mottles. Very stiff; dry; low plasticity; (Non-Engineered Fill).		1.0		3, 3, 3, 4, 4, 4, 4, 4, 4		
1.9m - 2.1m: Becoming stiff.		2.0		2, 2		
2.1m - 3.0m: Becoming loose; pale brown.		2.2		3, 3, 3, 3, 2, 3, 4, 3, 2		
SAND; brown. Dense; dry; sand, fine to medium; (Dune Deposits of Karioitahi Group).		3.0		8, 10, 10, 10, 15, 16, 16		
3.7m - 3.9m: Becoming very dense.		3.8		18, 20		
End Of Hole: 4.00m		4.0		16, 16, 18, 20, 22 >>, 18, 20, 19, 20, 22 >>, 20		Groundwater Not Encountered

PHOTO(S)

REMARKS

1. Hand auger terminated at 4.0 m bgl due to dense strata.
2. Hole collapsed at 2.5 m bgl.
3. DCP testing carried out from the surface to 5.0m bgl
4. Groundwater not encountered at the time of drilling

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Recreation Reserve
Ahipara Beach Domain

Lot 16
DP 46532

Lot 15
DP 46532

Lot 14
DP 46532

Lot 12
DP 46532

Kotare Street

Stake Placed

Stake Placed

4.51

6.82

20.62

23.87

2.66

9.78

27.36

9.59

11.01

3.66

Wooden Fence Generally on Bdy

Stairs

Telecom Location Marker

AL Plug placed into boundary corner
Datum RL: 3.93

Existing Dwelling

Paling Fence on Bdy
(Palings both sides, bdy is
between paling faces)

Shed eave
corners on bdy

Fence 0.1m inside bdy

Shed

Plastic
Water Tank

Plastic
Water Tank

Shed

Paling Fence

Fence 0.2m Inside bdy

Fence 0.25m Inside bdy

AL Plug placed
into boundary corner
(concrete drive)
Datum RL: 3.94

Fence on bdy

Paling Fence
150mm PVC pipe &
Fibre cable running
along base of Fence

Fence 0.25m inside bdy

Manhole Lid
Datum RL: 3.82

Cesspit

N

LEGEND

- Edge of Metal
- Eave Line
- Abutting Boundary Line
- Bank Top
- Boundary Line
- Edge of Seal
- Building Line
- Bank Bottom
- Fenceline
- Retaining Wall Top
- Palm Tree

0 5 25m

Bar Scale 1:200 @ A3

NOTES AND DISCLAIMERS

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Please check data and advise Thomson Survey Ltd of any discrepancies or omissions.

Appellation information shown hereon was sourced from Quickmap

The accompanying digital data must be read in conjunction with the information shown here.

Local Authority: Far North District Council

Coordinate System: NZGD Mt Eden 2000
Coordinate Origin: ALP 1 DP 552384

Level Datum: NZVD2016
Levels in terms of: BP 1 SO 470731 (EPTW)
RL: 10.87

Equipment used: Leica GS18 RTK GPS
All measurements are to GPS accuracy. Precise levels have not been done.

Contour interval is: 0.2m MINOR, 1.0m MAJOR

Manholes and Cespitts inverts are displayed clockwise from outlet. Eaves are measured at the face of barge or gutter as applicable.

All information supplied must be checked before construction.

THOMSON SURVEY LIMITED
315 Kerikeri Rd
P.O. Box 372 Kerikeri
Email: kerikeri@tsurvey.co.nz
Ph: (09) 4077360
www.tsurvey.co.nz
Registered Land Surveyors, Planners & Land Development Consultants

Topographical and Boundary Stake Survey of Lot 15 DP 46532

23 Kotare St, Ahipara

PREPARED FOR: Arcline

	Name	Date
Survey	MD	01/02/25
Survey		
Design		
Drawn	MD	04/02/25
Rev		

10732 Topo .LCD

ORIGINAL
SCALE 1:200
SHEET SIZE A3

Surveyors Ref. No: 10732
Series
Sheet 1 of 1