

# 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  Discharge  
 Fast Track Land Use\*  Change of Consent Notice (s.221(3))  
 Subdivision  Extension of time (s.125)  
 Consent under National Environmental Standard  
(e.g. Assessing and Managing Contaminants in Soil)  
 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?

Engineers -

For any questions or information regarding iwi/hapū consultation, please contact Te Hono at Far North District Council [tehonosupport@fndc.govt.nz](mailto:tehonosupport@fndc.govt.nz)



## 5. Applicant Details

Name/s:

Stella Terrell

Email:

Phone number:

Postal address:

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

## 6. Address for Correspondence

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

Name/s:

Versatile

Email:

Phone number:

Postal address:

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

\* 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:

Jim + Stella Terrell

Property Address/  
Location:

114 Waipapa Rd

Postcode



## 8. Application Site Details

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

Name/s:

Jim + Stella Terrell

Site Address/  
Location:

114 Waipapa Rd

Postcode

Legal Description:

Lot 3 DP 167464

Val Number:

Certificate of title:

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.

Breach of stormwater Management.  
Report Attached + completed by Highworkmen

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):

- Building Consent  (ref # here if known)
- Regional Council Consent (ref # if known)
- National Environmental Standard consent
- Other (please specify)

### 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  No *As part of engineers report.*

### 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)

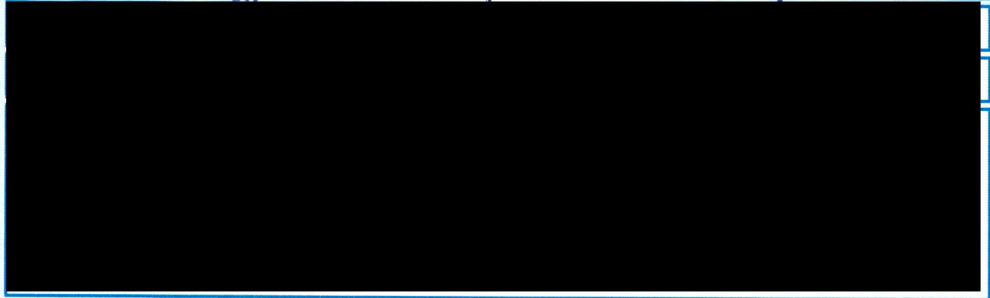
Versatile / MAJ (Masterton) Holdings LTD.

**Email:**

**Phone number:**

**Postal address:**

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



### 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)

Mick Clarke

**Signature:**

(signature of bill payer)

A black rectangular redaction box covers the signature of the bill payer.

Date 2/9/2024

**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](http://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)

Mike Clark

Signature:

[Redacted Signature]

Date 2/9/2024

made by electronic means

### Checklist (please tick if information is provided)

- Payment (cheques payable to Far North District Council)
- 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
- Applicant / Agent / Property Owner / Bill Payer details provided
- Location of property and description of proposal
- Assessment of Environmental Effects
- Written Approvals / correspondence from consulted parties
- Reports from technical experts (if required)
- Copies of other relevant consents associated with this application
- Location and Site plans (land use) AND/OR
- Location and Scheme Plan (subdivision)
- Elevations / Floor plans
- 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.





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** NA101C/568  
**Land Registration District** North Auckland  
**Date Issued** 14 February 1996

**Prior References**  
NA30A/1258

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**Estate** Fee Simple  
**Area** 1.1067 hectares more or less  
**Legal Description** Lot 3 Deposited Plan 167464  
**Registered Owners**  
Stella Anne Terrell as to a 1/4 share  
Terrell Trustee Limited as to a 3/4 share

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**Interests**

Appurtenant hereto are rights to convey water, transmit electricity and telecommunications specified in Easement Certificate C954439.3 - 14.2.1996 at 3.15 pm

The easements specified in Easement Certificate C954439.3 are subject to Section 243 (a) Resource Management Act 1991  
12859657.3 Mortgage to Bank of New Zealand - 30.11.2023 at 4:37 pm







Stormwater Management Report

For proposed building

114 Waipapa Road

Lot 3 DP 167464

for

Jim Terrell

*Haigh Workman reference 24 165*

28 August 2024 - Final



**(a) Revision History**

Revision N <sup>o</sup>	Issued By	Description	Date
	Alan Collins	Final	28 August 2024

Prepared by



Alan Collins  
Senior Civil Engineer  
MEngSt, BE (Hons)

Reviewed by



Tom Adcock  
Senior Civil Engineer  
BE (Civil), MEngNZ

Approved by



John Papesch  
Senior Civil Engineer  
CPEng, IntPE (NZ)

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## **1** *Executive Summary*

Haigh Workman Ltd was commissioned by Jim Terrell (the Client) to undertake a stormwater management report to support building consent application for a proposed building for 114 Waipapa Road. The building is to be built by Versatile Buildings.

The impervious surface area calculation shows 15.8% coverage making the proposed development a Controlled Activity.

Downstream stream inundation of certain buildings can be expected in a 1% AEP event. To not exacerbate the flood hazard, the 1% AEP event is to be attenuated.

The 2023 FNDC Engineering Standards were applied to calculated runoff effects for the 50%, 20%, and 1% AEP events. In order to attenuate to 80% predevelopment flowrate, 0.6L/s, 0.7L/s, and 1.3L/s is required to be detained in a 50%, 20%, and 1% AEP event respectively.

The required attenuation is achieved and exceeded with a standard 5000L detention tank collecting roof runoff from the proposed building. A single outlet orifice of 20mm diameter provides the necessary attenuation.

Outflows are to be directed to the northeast, mimicking the pre-development flow path.

## **2 Introduction**

Haigh Workman Ltd was commissioned by Jim Terrell (the Client) to undertake a stormwater management report to support building consent application for a proposed building (roof area 64.8m<sup>2</sup>). The proposed building is to be built by Versatile who have provided a site plan (see Appendix).

The Site as an existing dwelling and ancillary buildings with a total existing roof area of 507m<sup>2</sup>. A gravel culdesac driveway with parking area has an estimated area of 1080m<sup>2</sup>.

The Site is located at 114 Waipapa Road, Kerikeri in the Rural Living Zone. It is understood that the proposed development is a controlled activity in regard to impervious percentage (see Versatile drawing – Part Site Plan V243639 Sheet 02 in the Appendix)

### **2.1 Objective and Scope**

The objectives of this investigation were to:

- Review current regulation and stormwater neutrality requirements.
- Review flood hazard risk to downstream property.
- Conduct attenuation calculations.
- Propose detention tank design dimensions.

### **2.2 Limitations**

This report is intended to support the consent application with the Far North District Council. The information and opinions expressed in this report shall not be used in any other context without prior approval from Haigh Workman Ltd.

If at consent application the proposed development diverges from the provided scheme plan, the report will need to be revisited.

Haigh Workman Ltd does not take responsibility for factors that affect the engineering assessment of the proposed development that are not covered in the agreed brief.



### 3 Site Description

#### 3.1 Site Location

Site Address: 114 Waipapa Road  
Legal Description: Lot 3 DP 167464  
Total Site Area: 1.1067 ha

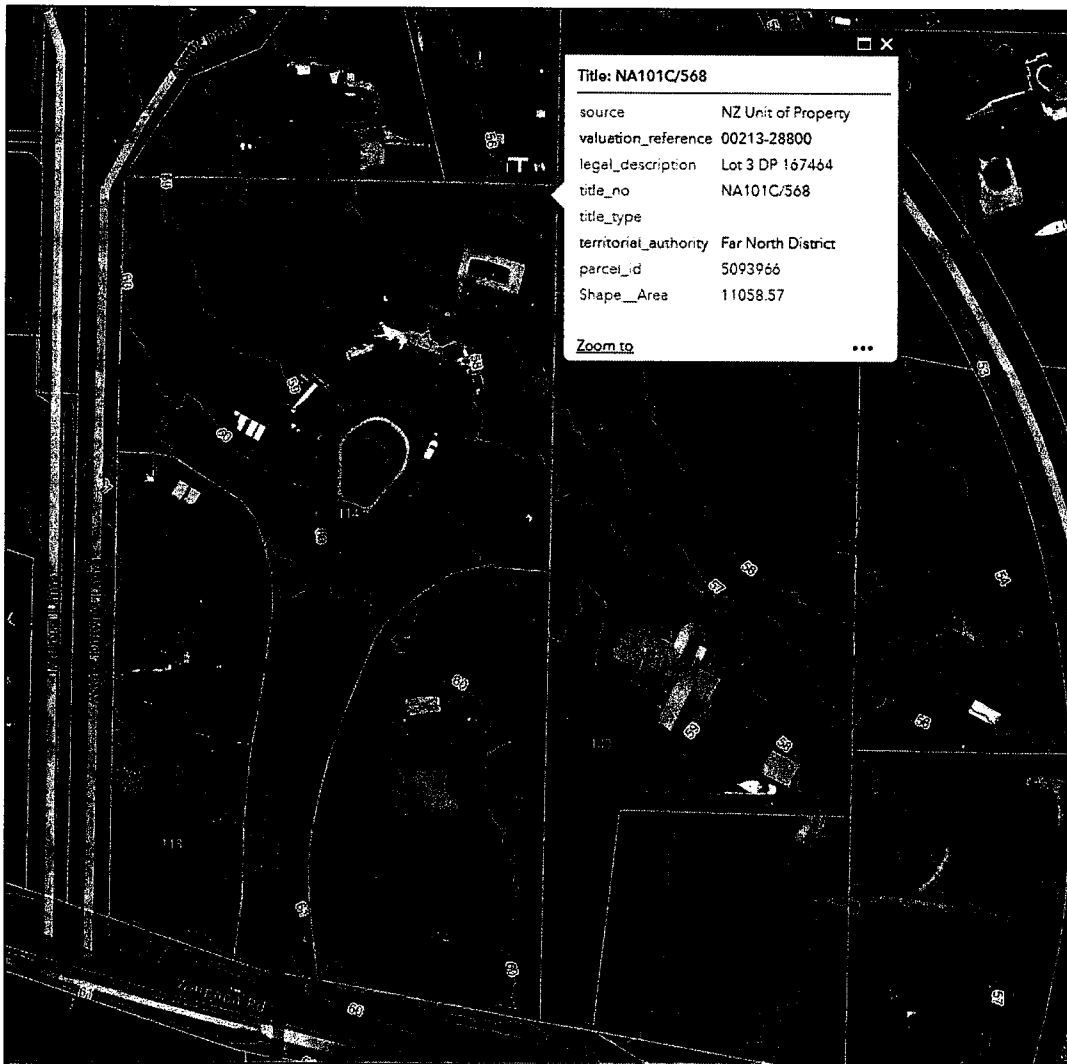


Figure 1: Site Plan view

#### 3.2 Site Features

The Site is built on the north side of Waipapa Road on a northeast facing incline (Approx. 4%). Runoff travels as sheet flow towards a swale within the western boundary of 13 Silkwood Lane. No: 13 has a Council 450mm culvert collecting the outfall and discharging into the Silkwood Lane swale. The swale continues along the

Silkwood Lane corridor to a stormwater pond at the end of the Lane. The overflow to this pond is an overland flowpath directly into the Waipapa River.

The soil on the Site is considered good draining and has historically been used for horticulture. The location of the proposed building currently has grass coverage.

Other infrastructure on the Site includes an existing dwelling, two smaller buildings, a gravel driveway and parking bay and a pool with patio area.

### **3.3 District Plan Zoning**

According to the Far North District Plan the Site is zoned as 'Rural Living'.

### **3.4 Proposed Development**

The proposed scheme plan can be found in the Appendix. A proposed building of 64.8m<sup>2</sup> roof coverage is to be built in an area of existing grass coverage.

No other alterations to the existing site layout are understood.



## 4 Stormwater Management

### 4.1 Impervious Surface Area

The proposed development will see the existing roof area and concrete access and parking area increased.

The Post Development impervious percentage is determined below:

Existing Roof Cover	507m <sup>2</sup>
Existing Pool Area	100m <sup>2</sup>
Existing Gravel Driveway and Parking	1080m <sup>2</sup>
Proposed Roof Cover	64.8m <sup>2</sup>
<b>Total Impervious</b>	<b>1715.8m<sup>2</sup></b>
<b>Total Site Area</b>	<b>11067m<sup>2</sup></b>
<b>Impervious Percentage</b>	<b>15.8%</b>

Under Rule 8.7.5.1.5 of the Far North Operative Plan, to be a Permitted Activity the maximum proportion of a gross site area in the Rural Living Zone that can be impermeable is 12.5%. The proposed development exceeds this provision.

Under Rule 8.7.5.2.2, to be a Controlled Activity the maximum proportion or amount of the gross site area covered by buildings and other impermeable surfaces shall be 20% or 3300m<sup>2</sup>, whichever is the lesser. The proposed development meets this provision.

The proposed development is considered a **Controlled Activity**. Rule 8.7.5.2.2 states that stormwater mitigation is required. While the Operative District Plan references the Verification Method E1/VM1 in the NZ Building Code as the design standard, it is understood that the FNDC Engineering Standards are now preferred.

### 4.2 Stormwater Quantity Control

#### 4.2.1 Regulative Framework

The 2023 Far North Engineering Standards allows for the Rational Method for assessing runoff effects, with C values that are more suited for Far North Conditions detailed in Table 4-3. Table 4-1 stipulates that the 50% and 20% AEP event is to be attenuated to 80% predevelopment flowrate. It is understood from previous Haigh Workman projects that this refers only to the land being developed and not to the entire lot area.

Where flood is required, the 1% AEP event is to be detained to the 80% pre-development flowrate.

The historical flood data can be used. The 80% pre-development flowrate requirement is adequate allowance for climate change.

Rule C.6.4.2 of the Northland Regional Plan provides for the diversion and discharge of stormwater from outside a public stormwater network provided (amongst other conditions) the diversion and discharge does not cause or increase flooding of land on another property in a storm event of up to and including a 10 percent annual exceedance probability or flooding of buildings on another property in a storm event of up to and including a one percent annual exceedance probability.

#### 4.2.2 Downstream Flooding Risk

Stormwater from the Site traverses as sheet flow in the northeast direction towards the Waipapa River. The NRC Priority River Model for the Waipapa River shows inundation for several bankside dwellings in a 1% AEP flood event (with climate change allowance). For example, 1 Waipapa Landing Place (see Figure 2). Because of the downstream flood risk, and because of the long time of concentration in comparison with the catchment length, it is necessary to provide attenuation to 80% pre-development flowrates in a 1% AEP + CC event to comply with Table 4-1 in the 2023 FNDC Engineering Standards



**Figure 2: Downstream Flooding Risk to buildings in a 1% AEP event.**

#### 4.2.3 Runoff Effects

Runoff effects for the 50%, 20% and 1% AEP events (10 min intensity) were assessed for changes in flowrate. Rainfall intensities are taken from the NIWA HIRDS database using the historical data. Runoff Coefficients were taken from Table 4-3 in FNDC Engineering Standards.



### Post-Development Runoff

	Area m <sup>2</sup>	C	I5 mm/hr	Q5 L/s	I <sub>100</sub> mm/hr	Q100 L/s	I <sub>2</sub> mm/hr	Q2 L/s
Proposed Roof Area	64.8	0.96	84.6	1.5	147	2.5	65.4	1.1
Existing Roof Area	507	0.96	84.6	11.4	147	19.9	65.4	8.8
Existing Gravel Driveway	1080	0.74	84.6	18.8	147	32.6	65.4	14.5
Open Space (75%+ grass coverage), Type C soil	9415.2	0.59	84.6	130.5	147	226.8	65.4	100.9
<b>Total</b>	<b>11067</b>			<b>162.2</b>		<b>281.9</b>		<b>125.4</b>

### Pre-Development Runoff

	Area m <sup>2</sup>	C	I5 mm/hr	Q5 L/s	I <sub>100</sub> mm/hr	Q100 L/s	I <sub>2</sub> mm/hr	Q2 L/s
Roof Area	507	0.96	84.6	11.4	147	19.9	65.4	8.8
Gravel Pavement	1080	0.74	84.6	18.8	147	32.6	65.4	14.5
Open Space (75%+ grass coverage), Type C soil	9480	0.59	84.6	131.4	147	228.4	65.4	101.6
<b>Total</b>	<b>11067</b>			<b>161.7</b>		<b>280.9</b>		<b>125.0</b>
Excess run-off				<b>0.6</b>		<b>1.0</b>		<b>0.4</b>
<b>Required Attenuation (to 80% predevelopment)</b>				<b>0.7</b>	<b>1.3</b>		<b>0.6</b>	

In order to detain flowrate in accordance with Table 4-1 of the FNDC Engineering Standards 2023, 0.6L/s, 0.7L/s, and 1.3L/s needs to be attenuated in a 50%, 20%, and 1% AEP respectively.

#### 4.2.4 Stormwater Detention Tank Details

The detention calculation was conducted using a 6-hour nested design storm for the historic rainfall intensities for the 50%, 20%, and 1% AEP events.

It is proposed that a standard 5000L HDPE tank (with standard 1.9m diameter) be utilised for the detention tank. The intake of the detention tank is to be the roof water collection of the proposed building (64.8m<sup>2</sup> roof area). With a 20mm internal diameter outlet orifice set 100mm above the invert of the tank. The achieved attenuation is 0.7L/s, 0.7L/s, and 1.8L/s for the 50%, 20%, and 1% AEP events respectively.

The maximum storage expected in the tank is 2.433m<sup>3</sup> in a 1% AEP event. An emergency overflow (100mm diameter) is to be positioned at the top of the tank in case of blockage. An access hatch is required for inspecting and cleaning the outlet orifice.

Outflows are to be directed in the northeast direction and dispersed with a T bar disperser laid parallel with the contours.

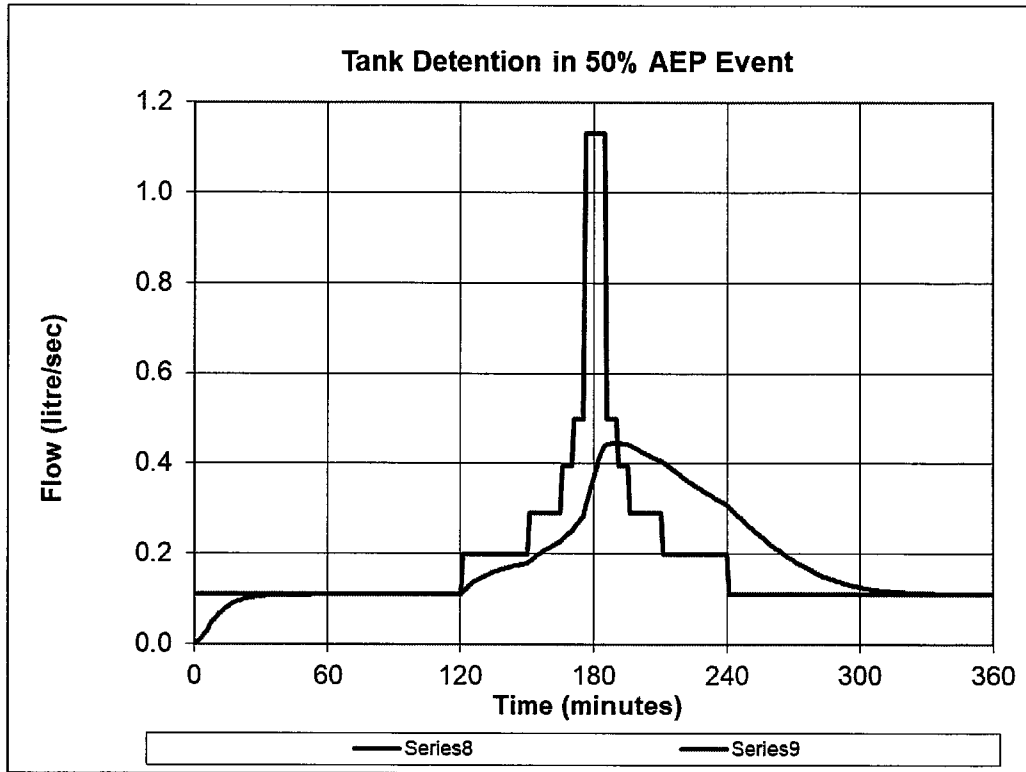


Figure 3: Attenuation in 50% AEP event.

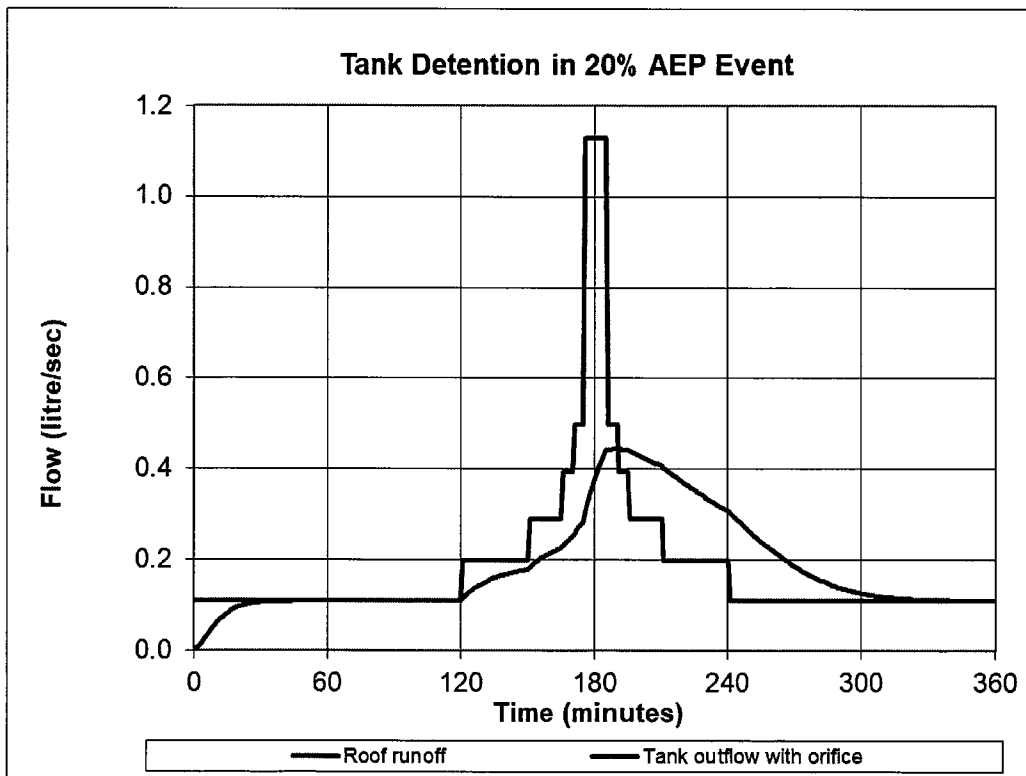


Figure 4: Attenuation in a 20% AEP event.



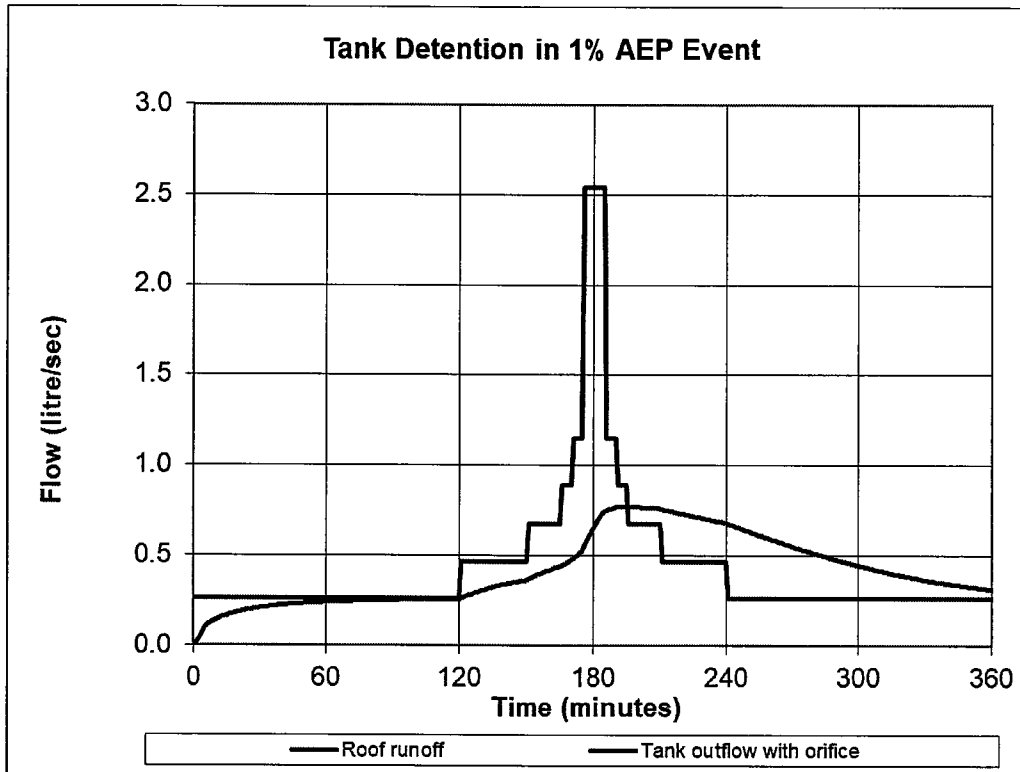


Figure 5: Attenuation in a 1% AEP event.

#### 4.2.5 Consideration for the 10% AEP event

Standard 4.1.3(e) in the 2023 Engineering Standards states that primary stormwater systems shall be capable of conveying a 10% AEP event without surcharge. Stormwater is discharged into a swale on the Silkwood Lane corridor. The swale is of a good size and is judged to have capacity for a 10% AEP event.

Attenuation calculations of a 10% AEP event was not considered necessary as the required detention is likely to be achieved with attenuating the 20% and 1% AEP events.

### 4.3 Assessment Criteria

Assessment Criteria is taken from 11.3 of the FNDC Operative Plan:

Assessment	Comment	Acceptable
(a) The extent to which building site coverage and impermeable surfaces result in increased stormwater runoff and contribute to total catchment impermeability and the provisions of any catchment or drainage plan for that catchment.	The proposed detention tank system will mitigate any quantity effects.	Y
(b) The extent to which Low Impact Design principles have been used to reduce site impermeability.	The increase in impermeable surface is limited to the roof coverage of the proposed building. The dimensions of the access and parking areas are to remain unchanged.	Y
(c) Any cumulative effects on total catchment impermeability.	Not applicable.	N/A
(d) The extent to which building site coverage and impermeable surfaces will alter the natural contour	The are no changes to the natural contour or drainage patterns proposed.	Y

or drainage patterns of the site or disturb the ground and alter its ability to absorb water.		
(e) The physical qualities of the soil type.	Not applicable.	N/A
(f) Any adverse effects on the life supporting capacity of soils.	Not applicable.	N/A
(g) The availability of land for the disposal of effluent and stormwater on the site without adverse effects on the water quantity and water quality of water bodies (including groundwater and aquifers) or on adjacent sites.	The soil is not considered suitable for a soakage bed. However, some infiltration and evapotranspiration can be expected in the Silkwood Lane swale.	Y
(h) The extent to which paved, impermeable surfaces are necessary for the proposed activity.	The only new impermeable surface proposed is the roof for the proposed dwelling.	Y
(i) The extent to which landscaping may reduce adverse effects of run-off.	A small amount of landscaping is to be expected with residential usage. This has not been factored into the runoff effect calculation for the sake of conservatism.	Y
(j) Any recognised standards promulgated by industry groups	Not applicable.	N/A
(k) The means and effectiveness of mitigating stormwater run-off to that expected by the permitted activity threshold.	The existing infrastructure of the Site already exceeds the Permitted Activity threshold so it is not feasible.	N/A
(l) The extent to which the proposal has considered and provided for climate change.	Attenuation calculations were conducted using the NIWA HIRDS Historical Data. As per the 2023 Engineering Standards, attenuation is required to return flowrates to 80% predevelopment. This 20% discount is adequate allowance for the effects of climate change.	Y
(m) The extent to which stormwater detention ponds and other engineering solutions are used to mitigate any adverse effects.	A 5L detention tank is demonstrated to mitigate all stormwater quantity effects.	Y



## *Appendix A – Scheme Plan*

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO STARTING . ALL DIMENSIONS IN MM UNLESS STATED  
 Note: Construction to comply with NZS3604:2011 and the New Zealand Building Code

**Project Information:**  
 Lot 3  
 DP167464  
 Area: 1.1067ha  
 Val'n No. 00213-28800

**Wind Zone: HIGH**  
 A/Open/Exposed/T1  
 as per NZS3604:2011 Section 5.2

**Exposure Zone: C**  
**District Plan Zone:**  
 Rural Living

**Earthworks: for foundations only**

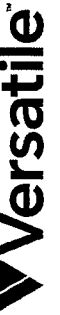
**STORMWATER MANAGEMENT**

**Impermeable Surfaces:**  
 Existing roof area: 507m<sup>2</sup>  
 Existing driveway: 1080m<sup>2</sup>  
 Existing pool: 100m<sup>2</sup>  
 Proposed building roof area: 64.8m<sup>2</sup>  
 Total impermeable Area: 1751.8m<sup>2</sup>  
 (15.8%)

**Permitted Activity maximum:**  
 the lesser of 12.5% or 3000m<sup>2</sup>  
(12.5% of 1.1067ha = 1383m<sup>2</sup>)

**Building Coverage:**  
 Existing Buildings footprint: 447m<sup>2</sup>  
 Proposed Building footprint: 64.8m<sup>2</sup>  
 Total Building Coverage: 511.8m<sup>2</sup>  
 (4.6%)

**Permitted Activity maximum:**  
 the lesser of 10% or 2400m<sup>2</sup>  
(10% of 1.1067ha = 1107m<sup>2</sup>)



PROPOSED VERSATILE BUILDING FOR:  
**TERRELL**  
 1114 WAIKAPA ROAD, KERIKERI

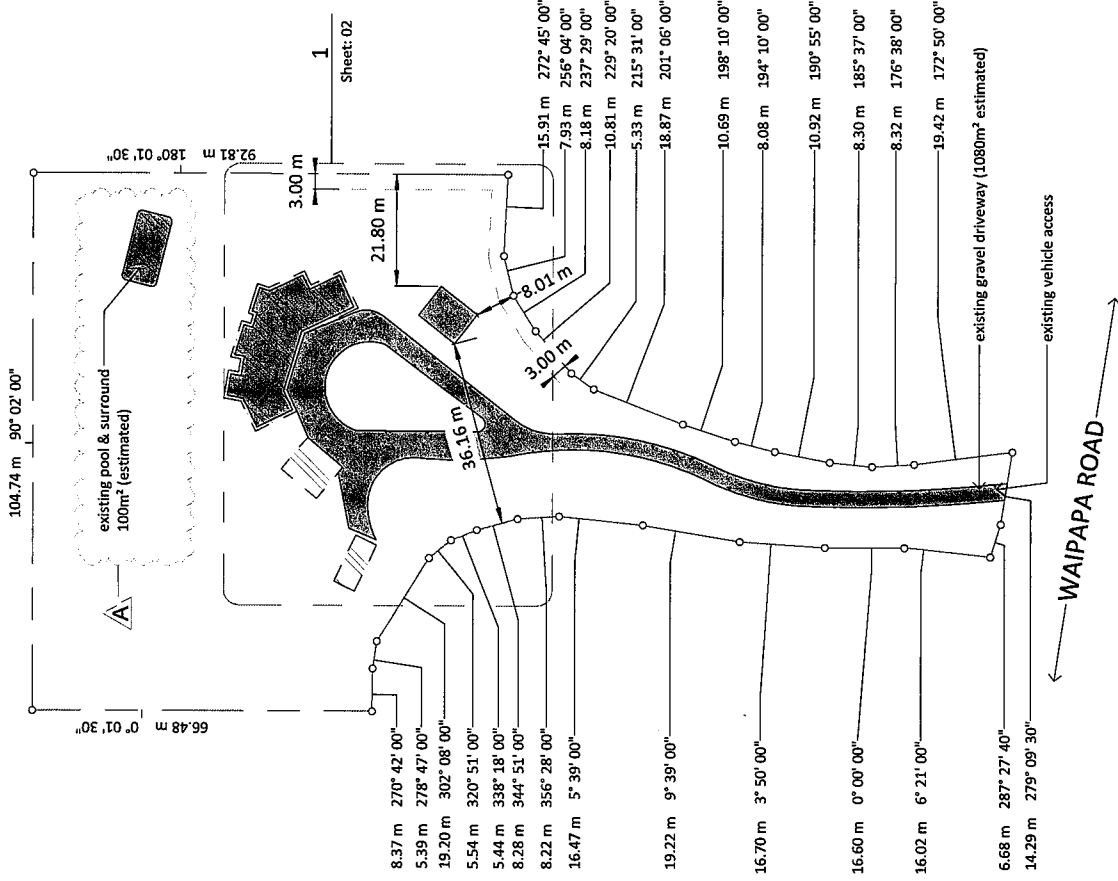
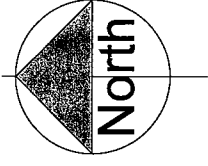
DRAWING TITLE:

SITE PLAN

SCALE @ A3 1 : 1000  
 DATE: JULY 2024  
 C.A.D. PROJECT #: V24639

SHEET No. 01  
 OF 3

REVISIONS:  
 A: 24/07/24 Show existing pool, update Impermeable Surfaces calculation



Sheet: 02

**Project Information:**

**Lot 3**  
**DP167464**  
**Area: 1.1067ha**  
**Val'n No. 00213-28800**

**Wind Zone: HIGH**  
*A/Open/Exposed/T1*  
 as per NZS3604:2011 Section 5.2

**Exposure Zone: C**  
**District Plan Zone:**  
**Rural Living**

**Earthworks: for foundations only**

**STORMWATER MANAGEMENT**  
 Impermeable Surfaces:  
 Existing roof area: **507m<sup>2</sup>**  
 Existing driveway: **1080m<sup>2</sup>**  
 Existing pool: **100m<sup>2</sup>**  
 Proposed building roof area: **64.8m<sup>2</sup>**  
 Total Impermeable Area: **1751.8m<sup>2</sup>**  
 (15.8%)  
 Permitted Activity maximum:  
 the lesser of 12.5% or 3000m<sup>2</sup>  
**(12.5% of 1.1067ha = 1383m<sup>2</sup>)**

**Building Coverage:**  
 Existing Buildings footprint: **447m<sup>2</sup>**  
 Proposed Building footprint: **64.8m<sup>2</sup>**  
 Total Building Coverage: **511.8m<sup>2</sup>**  
 (4.6%)  
 Permitted Activity maximum:  
 the lesser of 10% or 2400m<sup>2</sup>  
**(10% of 1.1067ha = 1107m<sup>2</sup>)**

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO STARTING. ALL DIMENSIONS IN MM UNLESS STATED.  
 Note: Construction to comply with NZS3604:2011 and the New Zealand Building Code

**EXISTING HOUSE**  
 roof plan area: 390m<sup>2</sup> (estimated)  
 building coverage: 330m<sup>2</sup> (estimated)

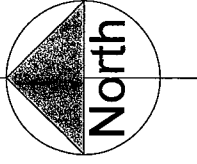
**EXISTING BUILDING 1**  
 roof plan area: 72m<sup>2</sup> (estimated)  
 building coverage: 72m<sup>2</sup> (estimated)

**EXISTING BUILDING 2**  
 roof plan area: 45m<sup>2</sup> (estimated)  
 building coverage: 45m<sup>2</sup> (estimated)

existing gravel driveway (1080m<sup>2</sup> estimated)

**PROPOSED VERSATILE BUILDING**  
 roof plan area: 64.8m<sup>2</sup>  
 building coverage: 64.8m<sup>2</sup>  
 provide 2\*650 downpipes  
 connect to existing collection system  
 at nearest downpipe on house in 1000  
 uPVC stormwater pipe

existing pool & surround  
 100m<sup>2</sup> (estimated)



92.81 m 180° 01' 30"

21.80 m

7.77 m  
 8.01 m

15.91 m 272° 45' 00"

7.93 m 256° 04' 00"

8.18 m 231° 20' 00"

36.16 m

8.22 m 356° 28' 00"

5.54 m 320° 51' 00"

5.44 m 338° 18' 00"

8.28 m 344° 51' 00"

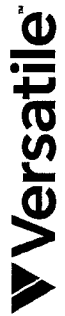
REVISIONS:  
 A. 24.07.24 Note existing pool, update Impermeable Surfaces calculation

SCALE @ A3 1:250  
 DATE: JULY 2024  
 C.A.D. PROJECT #: V24639

DRAWING TITLE: PART SITE PLAN

PROPOSED VERSATILE BUILDING FOR:  
**TERRELL**  
 114 WAIKAPA ROAD, KERIKERI

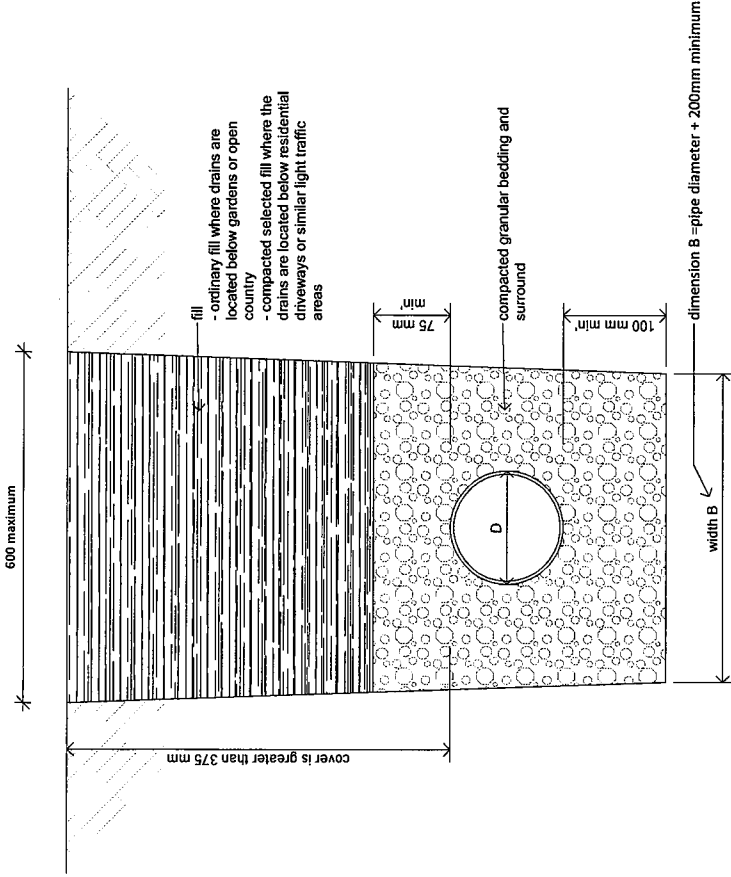
SHEET No. **02**  
 OF **3**





CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO STARTING - ALL DIMENSIONS IN MM UNLESS STATED  
 Note: Construction to comply with NZS3604:2011 and the New Zealand Building Code

**STORMWATER DRAIN GRADIENTS:**  
 80Ø - 1:100 minimum  
 100Ø - 1:120 minimum  
 150Ø - 1:200 minimum  
 (all as per Table 2 E1/AS1)



**(b) Cover greater than 375mm  
 Bedding type "D" of NZS 4452**

where cover depth is less than 375mm but greater than 125mm provide 75mm minimum of concrete instead of fill depth of compacted granular bedding over pipe may then be reduced to 50mm minimum

for trench width at top greater than 600mm provide 75mm concrete instead of fill

**Acceptable fill materials:**

- bedding material of clean granular non-cohesive material with a maximum particle size of 20mm (eg pea gravel)
- selected compacted fill of any fine-grained soil or granular material which is free from topsoil and rubbish and has a maximum particle size of 20mm
- Ordinary fill which may comprise any fill or excavated material

refer also NZBC E1/AS1

REVISIONS:

SCALE @ A3	DATE:	SHEET No.
1 : 5	JULY 2024	<b>03</b>
C.A.D. PROJECT #:		OF
V24639		3

DRAWING TITLE:

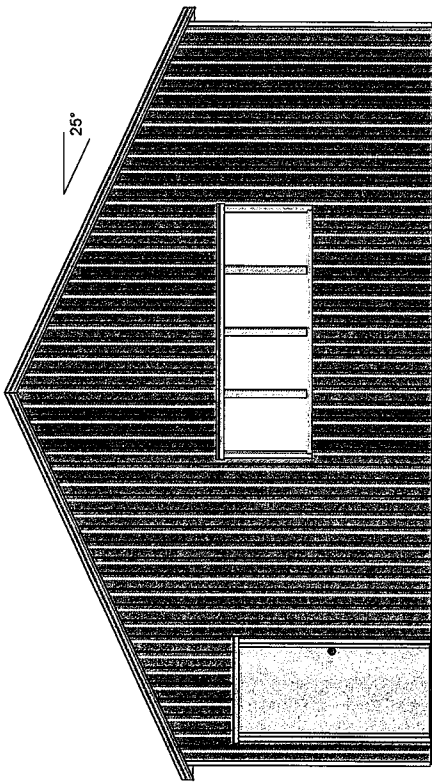
**DRAINAGE DETAIL**

PROPOSED VERSATILE BUILDING FOR:

**TERRELL**  
 114 WAIPAPA ROAD, KERIKERI



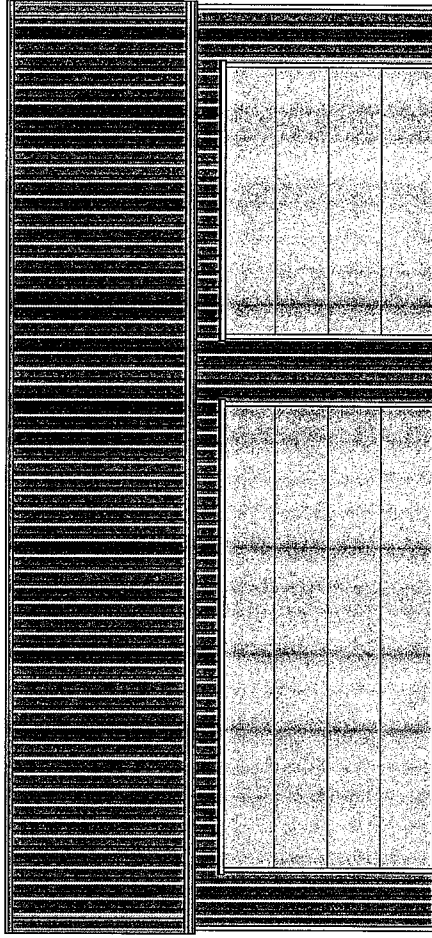
DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS



PA Door

4 Pane Window

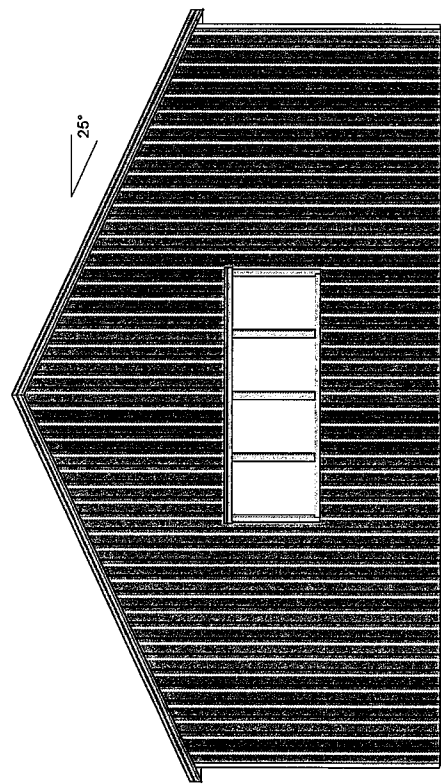
ELEVATION VIEW 1



Futura\_WG  
2075h x 4500w

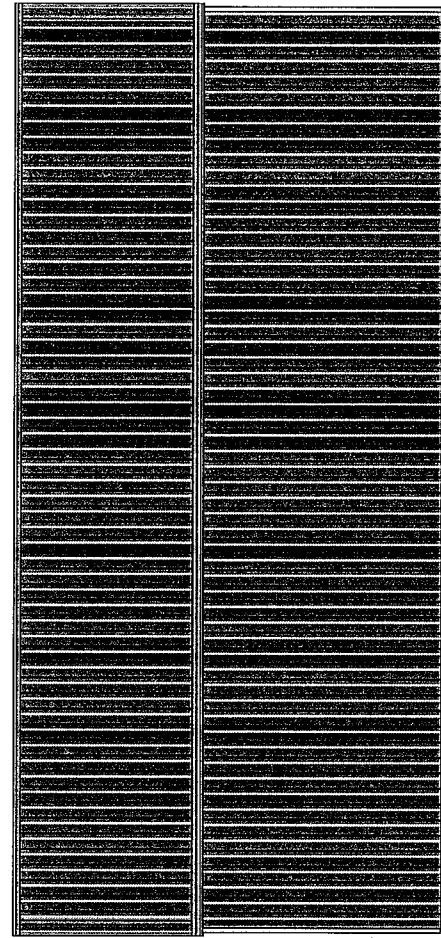
Futura\_WG  
2075h x 2600w

ELEVATION VIEW 2



4 Pane Window

ELEVATION VIEW 3



ELEVATION VIEW 4

SCALE A3-1:50

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**MiTek** MiTek New Zealand Limited  
 MITEK® LUMBERLOK® BOWMAC®  
**40** YEARS of Building Better for NZ

For: Jim Terrell  
114 Waipapa Road  
Kerikeri  
0230

VB2000 - Design

Elevations

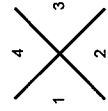
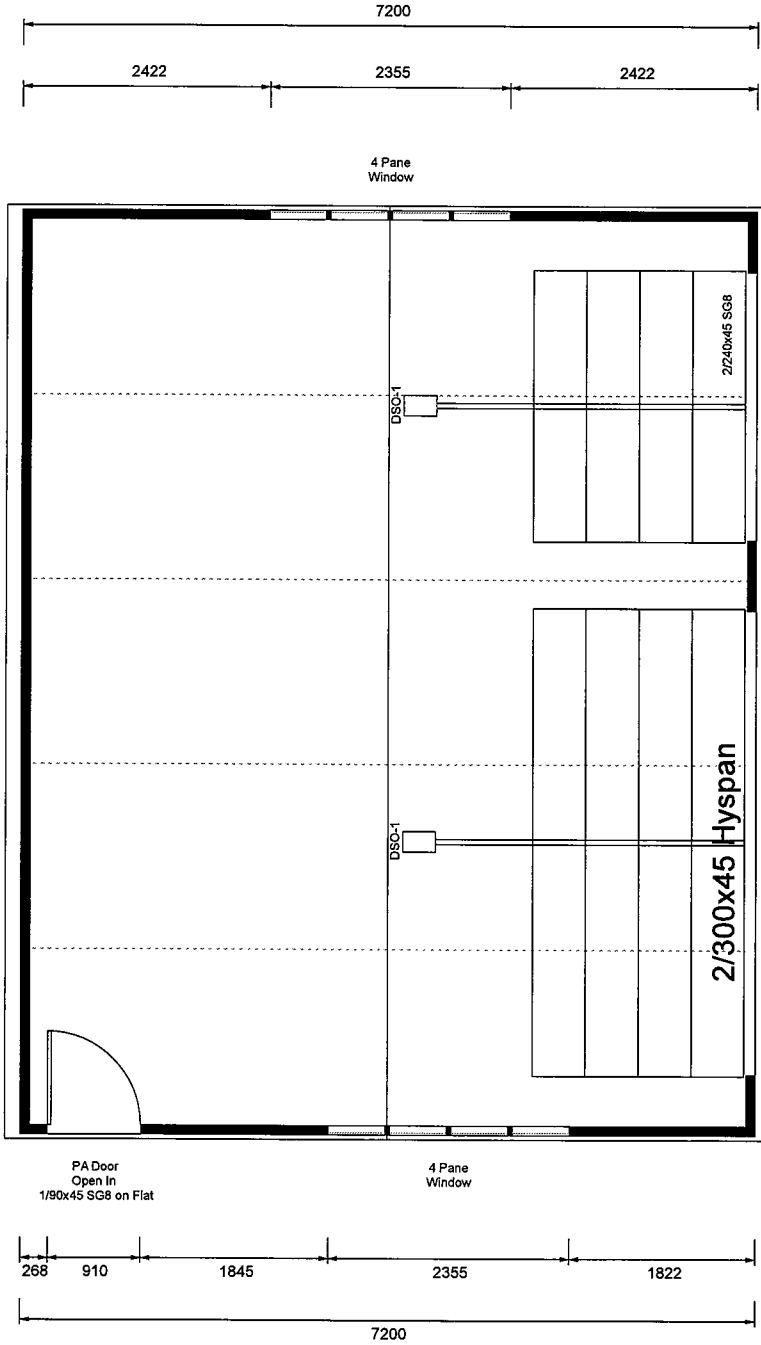
Sheet 10 of 26

9000

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

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LEGEND	
Sectional Door	WG
Woodgrain Finish	DSO-1
Auto Opener	DSO-1



SCALE A3-1:50

VB2000 - Design  
 Floor Plan General  
 Sheet 8 of 26

For: Jim Terrell  
 114 Waipapa Road  
 Kerikeri  
 0230

**MiTek** MiTek New Zealand Limited  
 MITEK LUMBERLOK BOWMAC  
 40 YEARS of Building Better for NZ



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 Note: Construction to comply with NZS3604.2011 and the New Zealand Building Code

**As of 27 July 2022 The Proposed District Plan requires that this consent complies with The Auckland Council Guidance Document GD005 for Erosion and Silt Control and Rule EW-S3 Accidental Discovery Protocol**

**Project Information:**  
 Lot 3  
 DP167464  
 Area: 1.1067ha  
 Val'n No. 00213-28800  
 Wind Zone: HIGH  
 A/Open/Exposed/T1  
 as per NZS3604:2011 Section 5.2

**Exposure Zone: C**  
**District Plan Zone:**  
 Rural Living

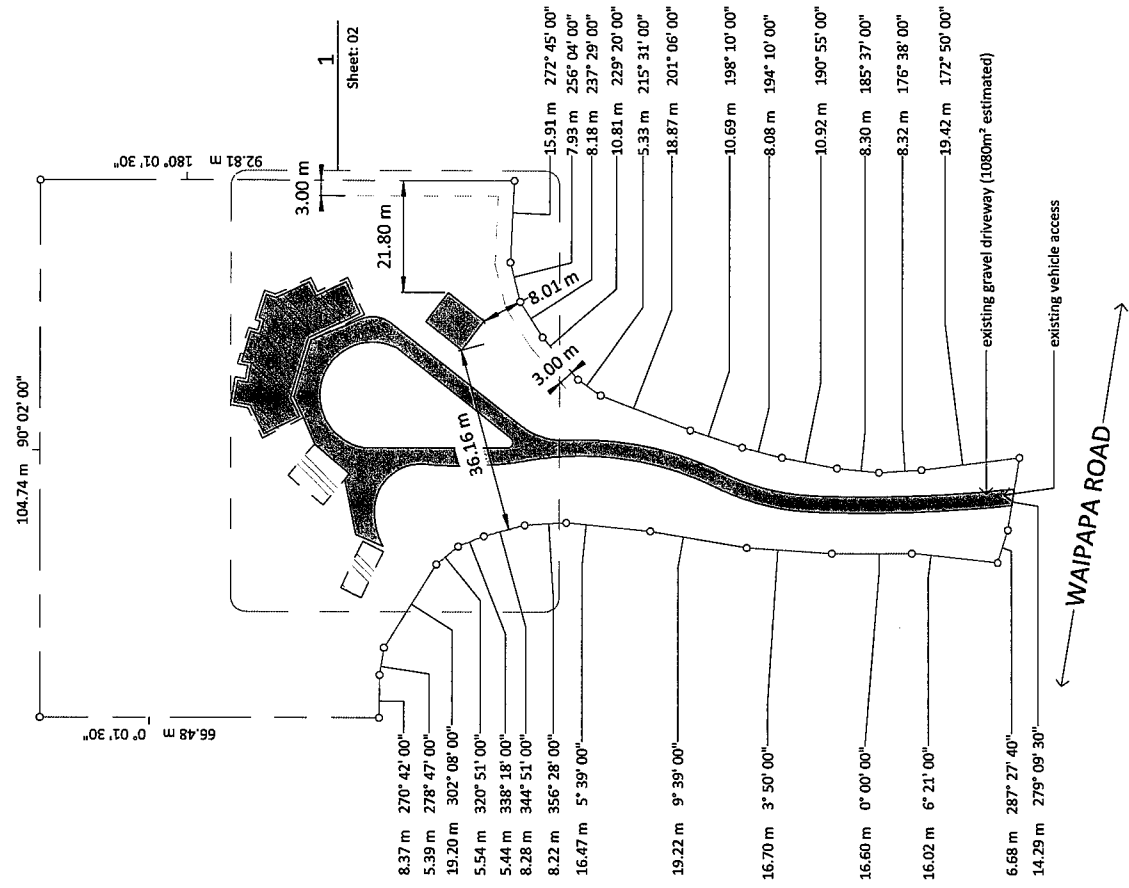
**Earthworks: for foundations only**

**STORMWATER MANAGEMENT**  
**Impermeable Surfaces:**  
 Existing roof area: 507m<sup>2</sup>  
 Existing driveway: 810m<sup>2</sup>  
 Proposed building roof area: 64.8m<sup>2</sup>  
 Total Impermeable Area: 1381.8m<sup>2</sup>  
 (12.48%)

**Permitted Activity maximum:**  
 the lesser of 12.5% or 3000m<sup>2</sup>  
(12.5% of 1.1067ha = 1383m<sup>2</sup>)

**Building Coverage:**  
 Existing Buildings footprint: 447m<sup>2</sup>  
 Proposed Building footprint: 64.8m<sup>2</sup>  
 Total Building Coverage: 511.8m<sup>2</sup>  
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**Permitted Activity maximum:**  
 the lesser of 10% or 2400m<sup>2</sup>  
(10% of 1.1067ha = 1107m<sup>2</sup>)



REVISIONS:  
 - date -

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO STARTING . ALL DIMENSIONS IN MM UNLESS STATED  
 Note: Construction to comply with NZS3604:2011 and the New Zealand Building Code

**Project Information:**  
 Lot 3  
 DP167464  
 Area: 1.1067ha  
 Val'n No. 00213-28800

**Wind Zone: HIGH**  
 A/Open/Exposed/T1  
 as per NZS3604:2011 Section 5.2

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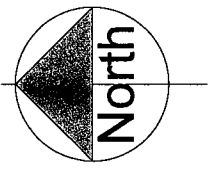
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 roof plan area: 390m<sup>2</sup> (estimated)  
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**EXISTING BUILDING 1**  
 roof plan area: 72m<sup>2</sup> (estimated)  
 building coverage: 72m<sup>2</sup> (estimated)

**EXISTING BUILDING 2**  
 roof plan area: 45m<sup>2</sup> (estimated)  
 building coverage: 45m<sup>2</sup> (estimated)

existing gravel driveway (810m<sup>2</sup> estimated)

**PROPOSED VERSATILE BUILDING**  
 roof plan area: 64.8m<sup>2</sup>  
 building coverage: 64.8m<sup>2</sup>  
 provide 2" 650 downpipes  
 connect to existing collection system  
 at nearest downpipe on house in 1000  
 uPVC stormwater pipe



92.81 m 180° 01' 30"

21.80 m

7.77 m  
 8.01 m

15.91 m 272° 45' 00"

7.93 m 256° 04' 00"

8.18 m 237° 25' 00"

36.16 m

8.22 m 356° 28' 00"

19.20 m 302° 08' 00"

5.54 m

320° 51' 00"

5.44 m

338° 18' 00"

8.28 m

344° 51' 00"

SHEET No. **02**  
 OF 3

SCALE @ A3 1 : 250  
 DATE: JULY 2024  
 C.A.D. PROJECT #: V24639

DRAWING TITLE:  
**PART SITE PLAN**

PROPOSED VERSATILE BUILDING FOR:  
**TERRELL**  
 114 WAIPAPA ROAD, KERIKERI



\*Includes GST Far North District Co  
uncil

GST No 52-004-926

\*\*\*\*Duplicate Receipt\*\*\*\*

Private Bag 752  
Memorial Ave Phone: 0800 920029  
Kaikohe 0400 09 4015200

Receipt No 8053590  
Date: 02-SEP-2024 Drawer:KCCS2

RC APPL  
STELLA ANDJIM TERRELL  
114 WAIPAPA ROAD  
KERIKERI

AP PP/RMA/7187

	1,595.00
Eft	-1,595.00

Receipt Amount:	1,595.00
Amount Tendered:	1,595.00
Change Issued:	
Rounding Amount:	



## BAY OF ISLANDS PLANNING (2022) LIMITED

**Kerikeri House**  
**Suite 3, 88 Kerikeri Road**  
**Kerikeri**

[office@bayplan.co.nz](mailto:office@bayplan.co.nz) Website - [www.bayplan.co.nz](http://www.bayplan.co.nz)

---

12 September 2024

Far North District Council  
John Butler Centre  
Kerikeri

Dear Team Leaders,

### **Re: Proposed building– 114 Waipapa Rd, Kerikeri**

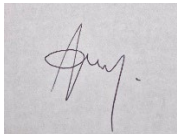
Our client Versatile is seeking a resource consent to construct a building on 114 Waipapa Road, Kerikeri. The site is zoned Rural Living within the operative Far North District Plan (**ODP**), and Rural Residential under the Proposed Far North District Plan (**PDP**). Resource consent is required to accommodate the building as the site exceeds the permitted standard for stormwater management.

The application is a **controlled activity** under the ODP and requires resource consent in respect of Stormwater Management. We attach information required to be included in this application by the relevant statutory documents as follows:

- Appendix A – Record of Titles & Relevant Instruments
- Appendix B – Application Plans & Elevations (Versatile)
- Appendix C – Stormwater Management Report (Haigh Workman)

Please do not hesitate to contact me should you require any further information.

Yours sincerely,



**Andrew McPhee**  
Consultant Planner

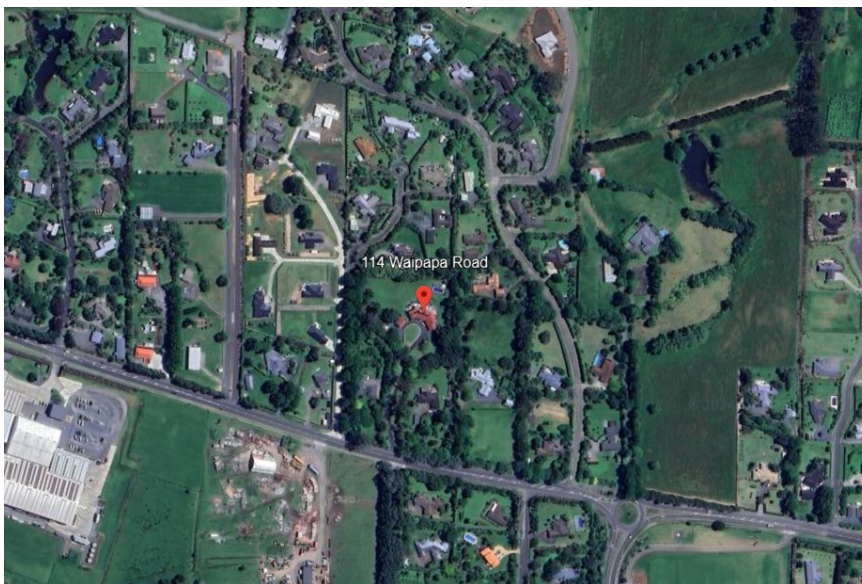
## 1. Introduction

The applicant is seeking a land use consent to construct a building on their property at 114 Waipapa Road in Kerikeri. The site is legally described as Lot 3 DP 167464 and comprises a land area of 1.1067ha. A copy of the relevant Records of Title is attached at **Appendix A**.

## 2. Site Description



**Figure 1 – Site (Source: Prover)**



**Figure 2 – Site Aerial (Source: Google Earth)**

The site is located on the northern side of Waipapa Road, with the access approximately 220 metres west

of the roundabout with the heritage Bypass. The site comprises a total land area of 1.1067ha and includes a number of buildings including a dwelling and two smaller buildings.

The site is generally grass covered with the boundaries and access landscaped with larger specimen trees. The site is larger than many of the surrounding properties in the Rural Living zone.

While the site has historically been used for horticultural activities, minimal earthworks are required for foundations only and the use of the site remains residential.

The site is not subject to Natural Hazards, nor is it within notable proximity to any waterbody or wetland.



Figure 3 – River Flood Hazard (Source: PDP Maps)

Far North Maps indicates that soil types are of high versatile value (LUC 3s2), however the site was part of a wider subdivision application creating small lifestyle sites with the intension of more intensive development rather than rural production activities. The National Policy Statement for Highly Productive Land does not apply to the Rural Living zone.

### 3. Record of Title, Consent Notices and Land Covenants

The site Record of Title is attached at **Appendix A**. No consent notices apply to the title.

### 4. Description of the Proposal

The applicant proposes to construct a 64.8m<sup>2</sup> building on the site at 114 Waipapa Road. The proposed dwelling will be in accordance with the site layout, floor plan and elevations prepared by Versatile and attached at **Appendix B**.



**Figure 4 - Proposed floor plan and elevations (Source: Versatile)**

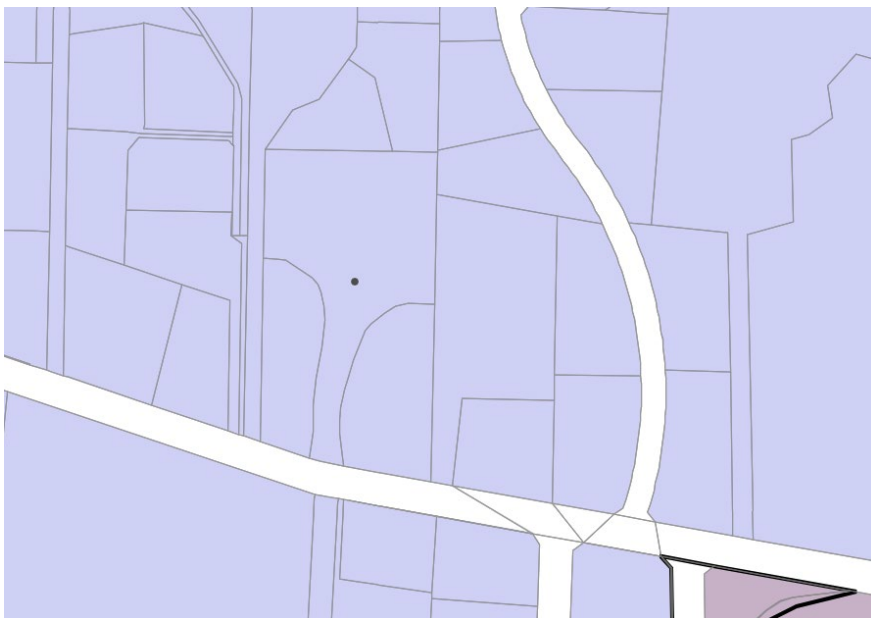
The total impermeable areas on the property would be 1715.8m<sup>2</sup> or 15.5% of the site area. Total building coverage area would comprise 511.8m<sup>2</sup> or 4.6% of the site area.

A 810m<sup>2</sup> of driveway will provide access to the proposed dwelling.

Proposed earthworks are only in relation to foundations for the proposed building.

## 5. Reasons for Consent

1. The Far North District Plan zones the site Rural Living Zone. There are no other identified Resource Features apart from being within a Kiwi 'Present' area.



**Figure 5 – ODP Map – Rural Living zone (Source: Far North Maps)**





Figure 6 – PDP Map – Rural Residential zone (Source: PDP Maps)

The following tables set out the applicable permitted development standards for the Rural Living zone and District Wide performance standards. Table 1 and 2 identifies the applicable rules and provides comment on compliance with those rules. An assessment against the PDP rules with immediate legal effect have also been provided (Table 3).

**Table 1 – Rural Living Zone – Performance Standards**

RURAL LIVING ZONE STANDARDS		
Rule #	PERMITTED STANDARDS	PERFORMANCE/COMMENTS
8.7.5.1.1 <b>Residential Intensity</b>	One residential unit per site or 4,000m <sup>2</sup> . Rule does not apply to sites created by subdivision, where all other standards for permitted activities are complied with.	One residential unit exists.  <b>Complies</b>
8.7.5.1.2 <b>Scale of Activities</b>	<b>Scale of Activities:</b> 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 1 person per 1,000m <sup>2</sup> of net site area.	The site is utilised by residents.  <b>Complies</b>
8.7.5.1.3	<b>Building Height:</b> Maximum height 9 metres.	The proposed building is 4.217m.  <b>Complies</b>

RURAL LIVING ZONE STANDARDS		
Rule #	PERMITTED STANDARDS	PERFORMANCE/COMMENTS
8.7.5.1.4 <b>Sunlight</b>	<b>Permitted</b> - 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 boundary.	The proposed dwelling will not be within the sunlight recession plane in relation to any of the boundaries.  <b>Complies</b>
8.7.5.1.5 <b>Stormwater Management</b>	<b>Permitted</b> - Maximum of 12.5% of the total site area. <b>Controlled</b> - Maximum of 20% of the total site area.	Total Impermeable surfaces on the site will be 1715.8 <sup>2</sup> or 15.5%.  <b>Controlled</b>
8.7.5.1.6	<b>Setback from boundaries:</b> no building within 3m of boundary with various specified exceptions.	The proposed dwelling is not within 3m from any of the site boundaries.  <b>Complies</b>
8.7.5.1.7	<b>Screening for Neighbours – Non-Residential Activities</b> <b>Permitted</b> - 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	N/A
8.7.5.1.9	<b>Hours of Operation - Non-Residential Activities</b> <b>Permitted –</b> (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.	N/A
8.7.5.1.10	<b>Keeping of Animals</b>	N/A
8.7.5.1.11	<b>Noise:</b> noise at or within boundary of any other site in the zone not to exceed specified limits.	Residential activity.  <b>Complies</b>
8.7.5.1.12	<b>Helicopter Landings Area</b>	N/A

RURAL LIVING ZONE STANDARDS		
Rule #	PERMITTED STANDARDS	PERFORMANCE/COMMENTS
8.7.5.1.13	<p><b>Building Coverage:</b></p> <p><b>Permitted</b> - 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 10% or 2,400m<sup>2</sup>, whichever is the lesser, of the gross site area.</p>	<p>The proposed building coverage is 511.8m<sup>2</sup> or 4.6%.</p> <p><b>Complies</b></p>

**Table 2 – District Wide Performance Standards**

PART 3 – DISTRICT WIDE STANDARDS		
Rule #	STANDARDS	PERFORMANCE/COMMENTS
<b>Chapter 12 – Natural and Physical Resources</b>		
12.1 Landscape & Natural Features	<p><b>12.1.6.1.1 Protection of Outstanding Landscape Features</b></p> <p><b>12.1.6.1.2 Indigenous Vegetation Clearance in Outstanding landscapes</b></p> <p><b>12.1.6.1.3 Tree Planting in Outstanding Landscapes</b></p> <p><b>12.1.6.1.4 Excavation and/or filling within an outstanding landscape</b></p> <p><b>12.1.6.1.5 Buildings within outstanding landscapes</b></p> <p><b>12.1.6.1.6 Utility Services in Outstanding Landscapes</b></p>	N/A
12.2 Indigenous Flora and Fauna	<p><b>12.2.6.1.1</b> Indigenous Vegetation Clearance Permitted Throughout the District</p> <p><b>12.2.6.1.2</b> Indigenous Vegetation Clearance in the rural Production and Minerals Zones</p> <p><b>12.2.6.1.3</b> Indigenous Vegetation Clearance in the General Coastal Zone</p> <p><b>12.2.6.1.4</b> Indigenous Vegetation Clearance in Other Zones</p>	N/A
12.3 Earthworks	<p><b>12.3.6.1.2 Excavation and/or filling, excluding mining and quarrying, on any site in the Rural Living, Coastal Living, South Kerikeri Inlet Zone, General Coastal, Recreational Activities, Conservation, Waimate North and Point Veronica Zones</b></p> <p><b>Permitted</b> – Maximum of 300m<sup>3</sup> within a 12-month period and cannot be higher than 1.5m cut or fill.</p>	<p>Minimal earthworks required for foundations.</p> <p>Cut and Fill faces will be less than the permitted maximum.</p> <p><b>Complies</b></p>
12.4 Natural Hazards	<p><b>12.4.6.1.1</b> Coastal Hazard 2 Area</p> <p><b>12.4.6.1.2</b> Fire Risk to Residential Units</p>	N/A
12.5 Heritage	<p><b>12.5.6.1.1</b> Notable Trees</p> <p><b>12.5.6.1.2</b> Alterations to/and maintenance of historic sites, buildings and objects</p> <p><b>12.5.6.1.3</b> Registered Archaeological Sites</p>	N/A
12.5A Heritage Precincts	There are no Heritage Precincts that apply to the site.	N/A
12.6 Air	Not applicable	N/A

PART 3 – DISTRICT WIDE STANDARDS		
Rule #	STANDARDS	PERFORMANCE/COMMENTS
12.7 Lakes, Rivers, Wetlands and the Coastline	<p><b>12.7.6.1.1</b> Setback from lakes, rivers and the coastal marine area</p> <p><b>12.7.6.1.2</b> Setback from smaller lakes, rivers and wetlands</p> <p><b>Permitted</b> = for rivers minimum setback of 10 x the average width of the river where it passes through or past the site provided that the minimum setback is 10m and the maximum is no more than minimum required by <b>Rule 12.7.6.1.1</b></p> <p><b>12.7.6.1.3</b> Preservation of indigenous wetlands</p> <p><b>12.7.6.1.4</b> Land Use Activities involving the Discharges of Human Sewage Effluent</p> <p><b>12.7.6.1.5</b> Motorised Craft</p> <p><b>12.7.6.1.6</b> Noise</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>
12.8 Hazardous Substances		N/A
12.9 Renewable Energy and Energy Efficiency		N/A
Chapter 15 – Traffic, Parking and Access		
<b>15.1.6A.2.1</b> Traffic Intensity	<b>15.1.6A Maximum Daily One Way Traffic Movements Rural Living Permitted</b> – 20	The first residential unit on a site is exempt from this rule  <b>Complies</b>
<b>15.1.6B</b> Parking	<b>15.1.6B.1.1 On-site Car Parking Spaces: Permitted</b> – 2 per residential unit	The site can accommodate more than 2 vehicles.  <b>Complies</b>
<b>15.1.6C.1.1</b> Vehicle Access	Private Accessway in all zones <b>Permitted</b> – 3m wide carriageway	The existing access off Waipapa Road complies.  <b>Complies</b>
<b>15.1.6C.1.5</b> Vehicle Crossing	Vehicle Crossing Standards in Rural and Coastal Zone	The existing crossing is constructed in accordance with these standards.  <b>Complies</b>
<b>15.1.6C.1.7</b> General Access Standards	General Access Standards	The existing access can meet the required standards.  <b>Complies</b>

In terms of the ODP the application falls to be considered as a Controlled Activity in accordance with Section 104A of the Resource Management Act 1991 (RMA).



**Table 3 – PDP performance standards with immediate legal effect**

<b>Proposed District Plan</b>				
<b>Matter</b>	<b>Rule/Std Ref</b>	<b>Relevance</b>	<b>Compliance</b>	<b>Evidence</b>
Hazardous Substances Majority of rules relates to development within a site that has heritage or cultural items scheduled and mapped however Rule HS-R6 applies to any development within an SNA – which is not mapped	Rule HS-R2 has immediate legal effect but only for a new significant hazardous facility located within a scheduled site and area of significance to Māori, significant natural area or a scheduled heritage resource  HS-R5, HS-R6, HS-R9	N/A		Not relevant as no such substances proposed.
Heritage Area Overlays (Property specific) This chapter applies only to properties within identified heritage area overlays (e.g. in the operative plan they are called precincts for example)	All rules have immediate legal effect (HA-R1 to HA-R14) All standards have immediate legal effect (HA-S1 to HA-S3)	N/A		Not indicated on Far North Proposed District Plan
Historic Heritage (Property specific and applies to adjoining sites (if the boundary is within 20m of an identified heritage item)). Rule HH-R5 Earthworks within 20m of a scheduled heritage resource. Heritage resources are shown as a historic item on the maps) This chapter applies to scheduled heritage resources – which are called heritage items in the map legend	All rules have immediate legal effect (HH-R1 to HH-R10) Schedule 2 has immediate legal effect	N/A		Not indicated on Far North Proposed District Plan
Notable Trees (Property specific) Applied when a property is showing a scheduled notable tree in the map	All rules have immediate legal effect (NT-R1 to NT-R9) All standards have legal effect (NT-S1 to NT-S2) Schedule 1 has immediate legal effect	N/A		Not indicated on Far North Proposed District Plan
Sites and Areas of Significance to Māori (Property specific) Applied when a property is showing a site / area	All rules have immediate legal effect (SASM-R1 to SASM-R7) Schedule 3 has immediate legal effect	N/A		Not indicated on Far North Proposed District Plan

of significance to Maori in the map or within the Te Oneroa-a Tohe Beach Management Area (in the operative plan they are called site of cultural significance to Maori)				
Ecosystems and Indigenous Biodiversity SNA are not mapped – will need to determine if indigenous vegetation on the site for example	All rules have immediate legal effect (IB-R1 to IB-R5)	N/A		Not indicated on Far North Proposed District Plan. No vegetation clearance proposed.
Activities on the Surface of Water	All rules have immediate legal effect (ASW-R1 to ASW-R4)	N/A		Not indicated on Far North Proposed District Plan
Earthworks all earthworks (refer to new definition) need to comply with this	The following rules have immediate legal effect: EW-R12, EW-R13 The following standards have immediate legal effect: EW-S3, EW-S5	Yes	Complies	Proposed earthworks will be in accordance with the relevant standards including GD-05 and will have an ADP applied.
Signs (Property specific) as rules only relate to situations where a sign is on a scheduled heritage resource (heritage item), or within the Kororareka Russell or Kerikeri Heritage Areas	The following rules have immediate legal effect: SIGN-R9, SIGN-R10 All standards have immediate legal effect but only for signs on or attached to a scheduled heritage resource or heritage area	N/A		Not indicated on Far North Proposed District Plan
Orongo Bay Zone (Property specific as rule relates to a zone only)	Rule OBZ-R14 has partial immediate legal effect because RD-1(5) relates to water	N/A		Not indicated on Far North Proposed District Plan
<b>Comments:</b>				
No consents are required under the PDP.				

Overall, the application would fall to be considered as a **Controlled Activity**.

## 6. Statutory Considerations

Section 104A of the RMA governs the determination of applications for controlled activities:

#### **104A Determination of applications for controlled activities**

After considering an application for a resource consent for a controlled activity, a consent authority—

- (a) must grant the resource consent, unless it has insufficient information to determine whether or not the activity is a controlled activity; and
- (b) may impose conditions on the consent under [section 108](#) only for those matters—
  - (i) over which control is reserved in national environmental standards or other regulations; or
  - (ii) over which it has reserved its control in its plan or proposed plan.

Council must grant an application for a Controlled Activity and may impose conditions over which it has reserved control.

Section 104 of the RMA sets out matters to be considered when assessing an application for a resource consent.

#### **104 Consideration of applications**

- (1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to [Part 2](#) and [section 77M](#), have regard to—
  - (a) any actual and potential effects on the environment of allowing the activity; and
  - (ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and
  - (b) any relevant provisions of—
    - (i) a national environmental standard;
    - (ii) other regulations;
    - (iii) a national policy statement;
    - (iv) a New Zealand coastal policy statement;
    - (v) a regional policy statement or proposed regional policy statement;
    - (vi) a plan or proposed plan; and
  - (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.

In the determination of this application, those considerations include the actual and potential effects of an activity on the environment, the relevant provisions of the Northland Regional Policy Statement (or other relevant statutory document), the Far North District Plan and any other matter the consent authority considers relevant and reasonably necessary to determine the application.

The following assessment addresses all of the relevant considerations under s104 of the RMA.

#### **Assessment of Effects on The Environment**

The RMA (section 3) meaning of effect includes:

### 3 Meaning of effect

In this Act, unless the context otherwise requires, the term **effect** includes—

- (a) any positive or adverse effect; and
- (b) any temporary or permanent effect; and
- (c) any past, present, or future effect; and
- (d) any cumulative effect which arises over time or in combination with other effects—  
regardless of the scale, intensity, duration, or frequency of the effect, and also includes—
- (e) any potential effect of high probability; and
- (f) any potential effect of low probability which has a high potential impact.

Section 104(2) of the RMA states that:

*“when forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect.”*

This is referred to as the “permitted baseline”, which is based on the permitted performance standards and development controls that form part of a district plan. For an effects-based plan such as the Far North District Plan where specified activities are not regulated, determining the permitted baseline is a useful tool for determining a threshold of effects that are enabled by the zone.

Ordinarily the placement of buildings and impermeable surfaces on this site can amass a total coverage of 12.5% or 1,383.4m<sup>2</sup> in the ODP as a permitted activity. The proposed total impermeable surface coverage is 1,715.8m<sup>2</sup>, which is an additional 332.4m<sup>2</sup> or an additional 3% impermeable coverage for the site.

The focus of this assessment is on addressing the matters directly related to the rules in the ODP regarding the breach to stormwater management. Regard has also been given to the objectives and policies of the Northland Regional Policy Statement, ODP and PDP.

#### **Stormwater Management effects**

A comprehensive Stormwater Management Report has been prepared by Haigh Workman and supplied in **Appendix C**. The report has been prepared by a suitably qualified person and approved by a chartered professional engineer in accordance with Rule 8.7.5.2.2. Further, it has been prepared in accordance with the 2023 FNDC Engineering Standards calculated runoff effects for the 50%, 20%, and 1% AEP events.

An assessment of the matters Council has restricted the exercise of its control over is located in section 4.3 of the Stormwater Management Report (**Appendix C**). The report recommends a standard 5000L HDPE tank (with standard 1.9m diameter) be utilised for the detention tank to mitigate the effects of stormwater on the site.

It is considered that the mitigation of stormwater in accordance with the recommendations in the Stormwater Management Report will ensure that the effects of stormwater will be less than minor.

## **Statutory Plan Considerations**

The activity is controlled in the ODP meaning that the plan ‘enables’ the activity. This is because the effects of the activity are well understood, and it is consistent with the objectives and policies of the plan. There is no need or requirement to undertake a further assessment of the statutory documents.

Council must approve the application but may apply conditions related to the matters over which it has restricted discretion. The assessment of these matters was undertaken in the Stormwater Management Report in **Appendix C**.

## ***Proposed Far North District Plan Objectives & Policies & Weighting***

Section 88A(2) provides that “any plan or proposed plan which exists when the application is considered must be had regard to in accordance with section 104(1)(b).” This requires applications to be assessed under both the operative and proposed objective and policy frameworks from the date of notification of the proposed district plan.

In the event of differing directives between objective and policy frameworks, it is well established by case law that the weight to be given to a proposed district plan depends on what stage the relevant provisions have reached, the weight generally being greater as a proposed plan move through the notification and hearing process. In *Keystone Ridge Ltd v Auckland City Council*, the High Court held that the extent to which the provisions of a proposed plan are relevant should be considered on a case by case basis and might include:

- The extent (if any) to which the proposed measure might have been exposed to testing and independent decision making;
- Circumstances of injustice; and
- The extent to which a new measure, or the absence of one, might implement a coherent pattern of objectives and policies in a plan.

In my view the PDP has not gone through the sufficient process to allow a considered view of the objectives and policies for the Rural Residential Zone overlay, however regard has been had to the PDP and the application is considered to be consistent with it.

The activity is considered to be consistent with the objectives and policies of both the ODP and PDP.

## **7. Notification Assessment (s95matters)**

The Council will need to determine the basis on which the application will be processed. These include public notification, limited notification, or non-notification. Sections 95A and 95B provide a step-by-step process that Council must follow when determining whether to publicly or limited notify an application.



### ***Public Notification (s95A)***

Section 95A outlines the steps that must be followed to determine whether an application should be publicly notified.

**Step 1** – Details requirements for mandatory public notification. None of these apply to the proposal.

**Step 2** – Details situations where public notification is precluded in some circumstances. The application is for a controlled activity.

**Step 3** – Does not apply.

**Step 4** – Details requirements in special circumstances. It is considered that there are no special circumstances that would warrant notification.

### ***Limited Notification (s95B)***

S95B includes steps to be followed when deciding whether an application should be subject to limited notification.

**Step 1** – relates to the consideration of certain affected groups and affected persons including any protected customary rights groups or affected marine title groups. There are no such groups affected by this application.

**Step 2** – details requirements for limited notification where the application is for one or more activities that is precluded from limited notification by a rule or standard or is a controlled or prescribed activity. The application is for a controlled activity.

**Step 3** – Does not apply

**Step 4** – relates to requirements to notify where special circumstances exist. There are no special circumstances that would warrant limited notification of this application.

The application is precluded from limited and public notification.

## **8. PART II – Resource Management Act 1991**

### ***Purpose of the RMA***

The proposal can promote the sustainable management of natural and physical resources, as current and future owners and users of the land are able to provide for their social, cultural and economic wellbeing and their health and safety. Development of this site will contribute to the local economy, community

wellbeing, utilise local services and infrastructure for residential activities at a scale anticipated by Council. Any effects on the environment are anticipated to be less than minor.

### ***Matters of National Importance***

The site is within a Kiwi present area. However, the proposal is not anticipated to adversely affect kiwi habit. Māori are not considered to be adversely affected by this proposal, nor is any historic heritage likely to be impacted.

### ***Other Matters***

The proposal will result in an efficient use of resources with the development occurring on the periphery the Kerikeri township within the Rural Living zone. Amenity values will be maintained because the proposal is similar to existing activities on properties within this area. There will be no adverse impact on local ecosystems or overall.

## **9. Conclusion**

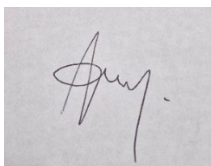
This application seeks a **Controlled Activity** resource consent to undertake construction of a building on a site within the Rural Living zone. The assessment of effects on the environment concludes that for the reasons outlined in the application, the effects of undertaking this proposal will be less than minor on the surrounding environment. The application is precluded from limited and public notification.

No currently gazetted National Environmental Standards or National Policy Statements including the New Zealand Coastal Policy Statement were considered to be relevant to this proposal.

As a controlled activity in the ODP the application is considered to be consistent with statutory documents.

An assessment of Part II of the RMA has also been completed with the proposal able to satisfy this higher order document.

We look forward to receiving acknowledgment of the application and please advise if any additional information is required.



Andrew McPhee  
Consultant Planner



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD**

**Guaranteed Search Copy issued under Section 60 of the Land  
Transfer Act 2017**



  
R. W. Muir  
Registrar-General  
of Land

**Identifier** **NA101C/568**  
**Land Registration District** **North Auckland**  
**Date Issued** 14 February 1996

**Prior References**  
NA30A/1258

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**Estate** Fee Simple  
**Area** 1.1067 hectares more or less  
**Legal Description** Lot 3 Deposited Plan 167464

**Registered Owners**  
Stella Anne Terrell as to a 1/4 share  
Terrell Trustee Limited as to a 3/4 share

---

**Interests**

Appurtenant hereto are rights to convey water, transmit electricity and telecommunications specified in Easement Certificate C954439.3 - 14.2.1996 at 3:15 pm  
The easements specified in Easement Certificate C954439.3 are subject to Section 243 (a) Resource Management Act 1991  
12859657.3 Mortgage to Bank of New Zealand - 30.11.2023 at 4:37 pm





**ENGINEERED BY:**



**PRODUCER STATEMENT  
AND  
STRUCTURAL DETAILS**

**CLIENT:**

Jim Terrell  
114 Waipapa Road  
Kerikeri  
0230

**BUILDING:**

VRS Project Ref: 2089990  
Model: Versatile 600 Series  
Size: 9.000m long x 7.200m wide, 2.420m stud height  
Wind Zone: High  
Snow Loading: None region, Sg = 0.0kPa  
Earthquake Zone: 1  
Exposure Zone: Zone C  
Roof Details: 25 degree pitch, 6 Rib 0.35mm roofing  
Trusses: 90x45mm kiln dried H1.2, stress graded timber as per floor plan  
Wall Framing: 90x45mm kiln dried H1.2, stress graded timber  
Cladding: Vertical 6 Rib 0.35mm rollformed steel profile  
Downpipe Size: Round PVC 65mm Diameter PVC  
Floor Type: Concrete

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- 4 Durability Statement
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- 11-12 Cross Section
- 13-14 Opening Details
- 15 Roof Framing
- 16 Truss Design
- 17-18 Truss Fixing Details
- 19 Roof Bracing
- 20 Wall Bracing Demand
- 21-22 Wall Bracing Achieved
- 23 Bracing Elements
- 24-26 Flashing Details

**BUILDING CONSENT AUTHORITY:**

Far North District Council

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VB2000 - Design

Sheet 1 of 26



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For: Jim Terrell  
114 Waipapa Road  
Kerikeri  
0230

VB2000

Site Plan

Sheet 2 of 26

**PRODUCER STATEMENT – PS1  
DESIGN**



**JOB NUMBER:** 2089990

**BUILDING CODE CLAUSE(S):** B1 and B2  
**ISSUED BY:** MiTek New Zealand Limited  
*(Engineering Design Firm)*  
**TO:** Spanbild New Zealand Limited  
*(Owner/Developer)*  
**TO BE SUPPLIED TO:** Far North District Council  
*(Building Consent Authority)*  
**IN RESPECT OF:** Proposed Building (Garage)  
*(Description of Building Work)*  
**AT:** 114 Waipapa Road, Kerikeri, 0230, New Zealand  
*(Address, Town/City)*  
**LEGAL DESCRIPTION:**

N/A

We have been engaged by the owner/developer referred to above to provide *(Extent of Engagement)*: VB2000, Sheets 1, 3-4, 8, 10-23 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, 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
- 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 a member of ACE New Zealand.

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

**ON BEHALF OF** *(Engineering Design Firm)*: MiTek New Zealand Limited

Date 24/06/2024

**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:

- 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

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**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 ceiling 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 High wind conditions.

Seismic loads:

Building designed for Seismic Zone 1.

Snow loads:

Buildings designed for None, Sg = 0.0kPa

Refer to MiTek 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: Jim Terrell  
 114 Waipapa Road  
 Kerikeri  
 0230

VB2000 - Design

Producer Statement

Sheet 3 of 26

## 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.  
 IF1114:2015

### 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.

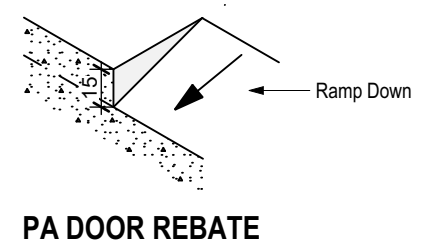
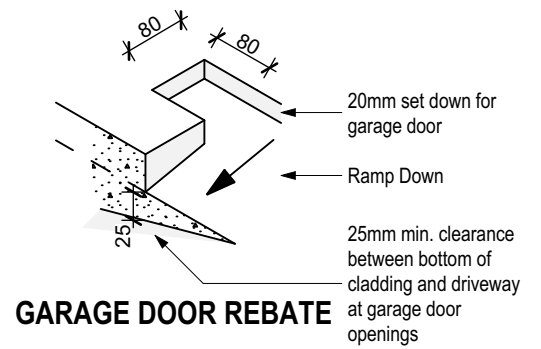
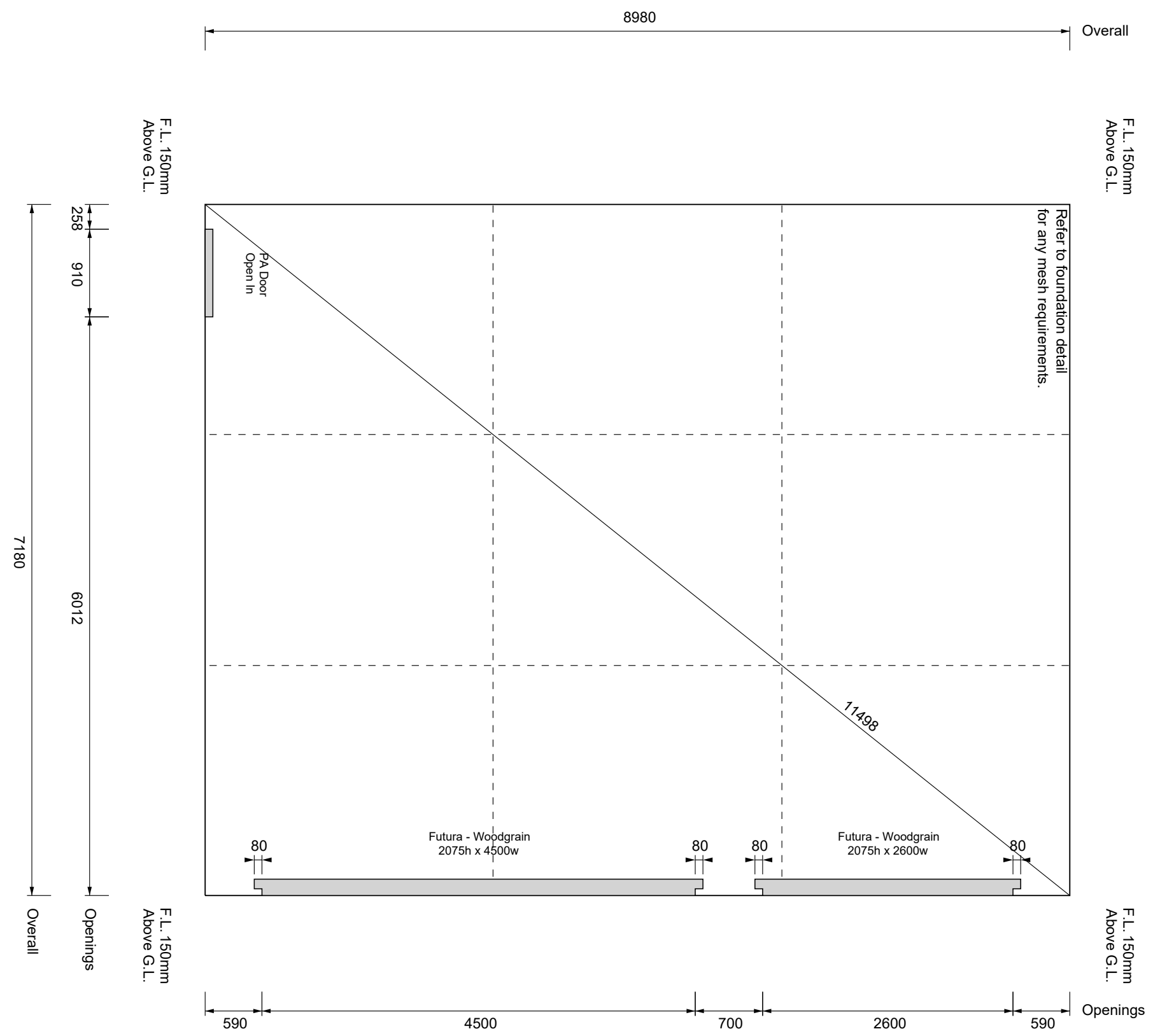
### REFERENCES.

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

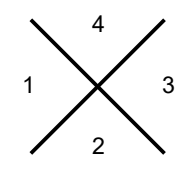
\*NZS3604 has been used as a reference only to identify Corrosion zones, Sea-spray zones.

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

LEGEND	
	Diagonal: 11498
	Expansion Cut



SCALE A3-1:50



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For: Jim Terrell  
 114 Waipapa Road  
 Kerikeri  
 0230

VB2000 - Foundation Floor Plan
Foundation Details
Sheet 5 of 26

FNDC - Approved Building Consent Document - EBC-2025-45/0 - Pg 6 of 29 - 24/07/2024 - J.O

# PRODUCER STATEMENT – PS1 DESIGN



**JOB NUMBER:** 2089990

**BUILDING CODE CLAUSE(S):** B1 (see Note 1 for durability)

**ISSUED BY:** Egis NZ Limited

*(Engineering Design Firm)*

**TO:** Spanbild New Zealand Limited

*(Owner/Developer)*

**TO BE SUPPLIED TO:** Far North District Council

*(Building Consent Authority)*

**IN RESPECT OF:** Stand alone, non-habitable importance level 1 (IL1 - 50 year design life), building slab and foundation

*(Description of Building Work)*

**AT:** 114 Waipapa Road, Kerikeri 0230

*(Address, Town/City)*

**LEGAL DESCRIPTION:**

N/A

We have been engaged by the owner/developer referred to above to provide *(Extent of Engagement)*:

Structural Engineering Design, Foundation Details, Sheets 5-7

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 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: See notes 1-7 of 'Garage Foundation Detail'.
- 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)* John McCurran, am:

- CPEng number 48451

and hold the following qualifications BE(Civil)

The Engineering Design Firm holds a current policy of Professional Indemnity Insurance no less than \$200,000

The Engineering Design Firm is a member of ACE New Zealand.

**SIGNED BY** *(Name of Engineering Design Professional)*: John McCurran

**ON BEHALF OF** *(Engineering Design Firm)*: Egis NZ Limited

Date 24/06/2024

Building Consent lodgement must be prior to 15/04/2025

**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.

## SCHEDULE TO PS1

Alternative Solutions apply for areas that the potential for liquefaction or lateral spread has been identified as it is outside B1/VM4. The alternative solutions are MBIE guidance documents "Planning and engineering guidance for potentially liquefactionprone land" and Repairing and re-building houses affected by the Canterbury Earthquakes"

**The foundations require suitable soils. This IL1 foundation (generally unlined) has been designed for;**

- Geotechnical Ultimate Bearing Capacity of 100 kPa,
- Where there is no potential for liquefaction or lateral spread or
- Liquefaction Vulnerability where liquefaction damage is unlikely (very low or low liquefaction vulnerability),
- Non-expansive soils.

**Advise Calibre if through PIM or on site any of the following are noted or uncovered during foundation excavation;**

- Indications of local instability,
- Foundations closer than 3 x height of a bank plus 0.6 m measured from the foot of the bank, and the length of the flat at the base of the bank is a minimum of 4 times the height of the bank,
- Slope steeper than 5 degrees away from the building platform.
- Buried organic topsoil, peat, soft clays, buried services or expansive clays, any fill that does not have a certificate of suitability issued in accordance with NZS 4431

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For: Jim Terrell  
114 Waipapa Road  
Kerikeri  
0230

VB2000 - IL1 Foundation

Foundation Details

Sheet 6 of 26

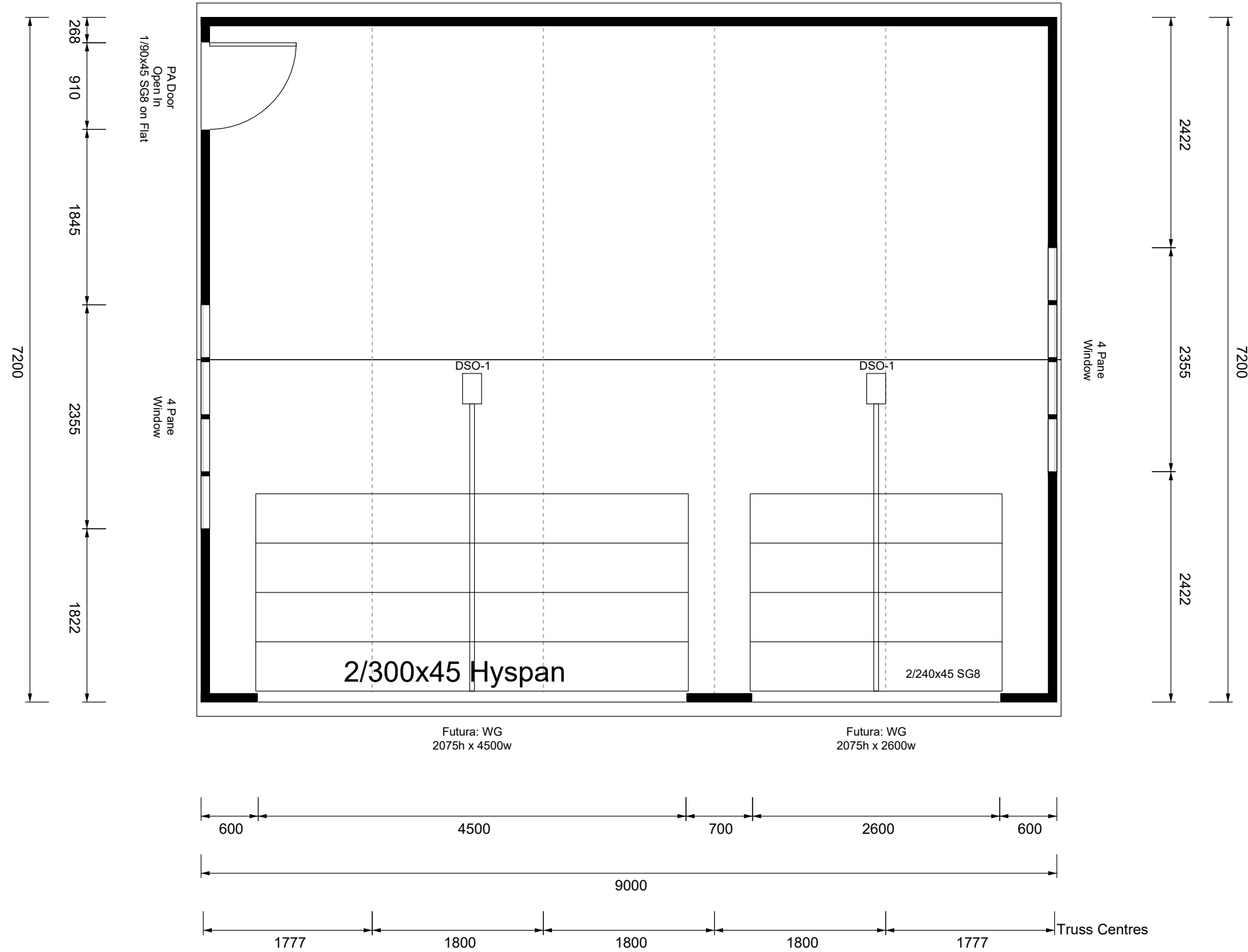




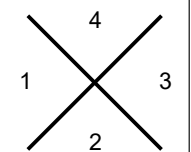
9000

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

LEGEND	
Sectional Door	
WG	Woodgrain Finish
DSO1	DSO-1 Auto Opener



SCALE A3-1:50



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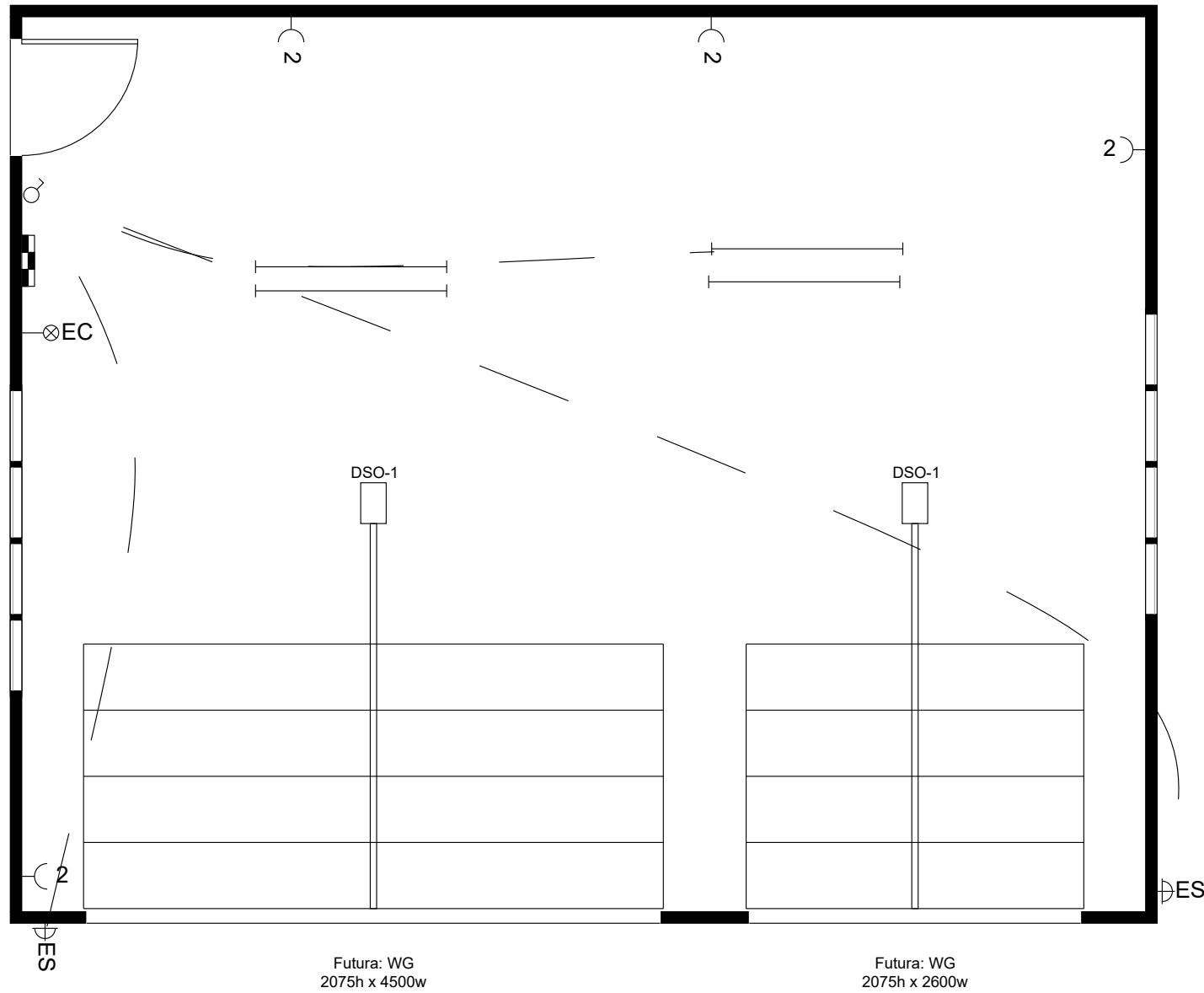
For: Jim Terrell  
114 Waipapa Road  
Kerikeri  
0230

VB2000 - Design

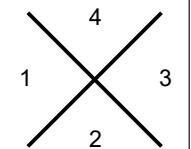
Floor Plan General

Sheet 8 of 26

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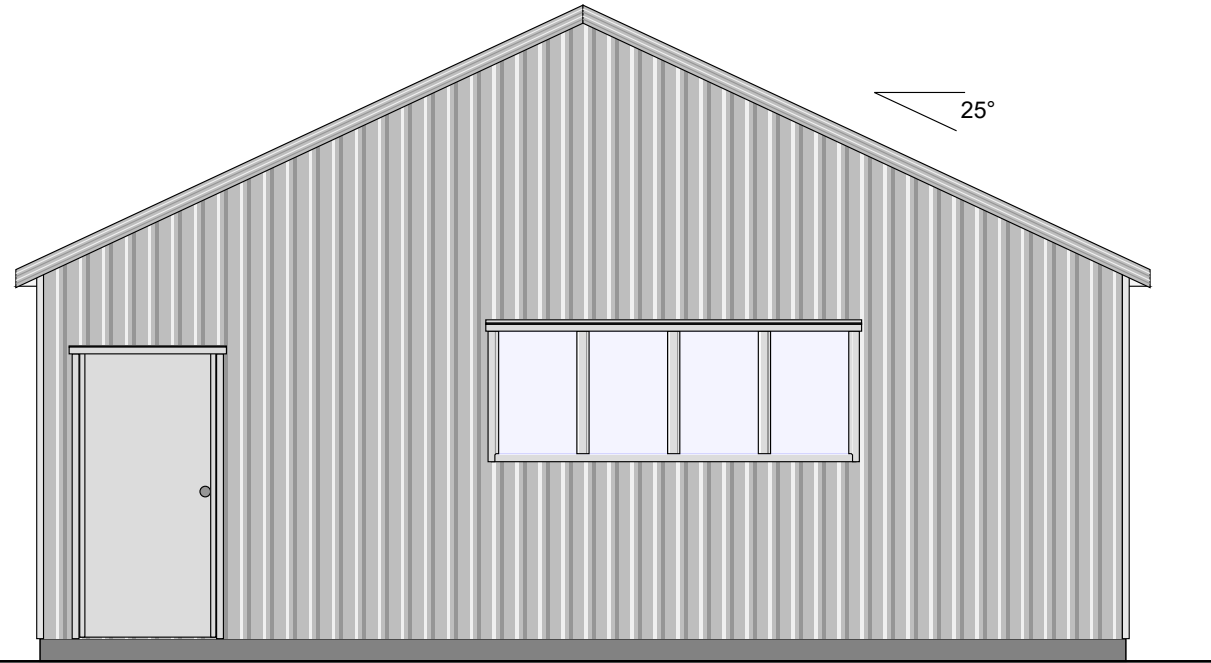


LEGEND	
	1500mm Fluro Light
	External Wall Light & Sensor
	Light Switch
	Double Power Outlet
	Conduit
	Switch Board



SCALE A3-1:50

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PA Door  
Open In  
**ELEVATION VIEW 1**

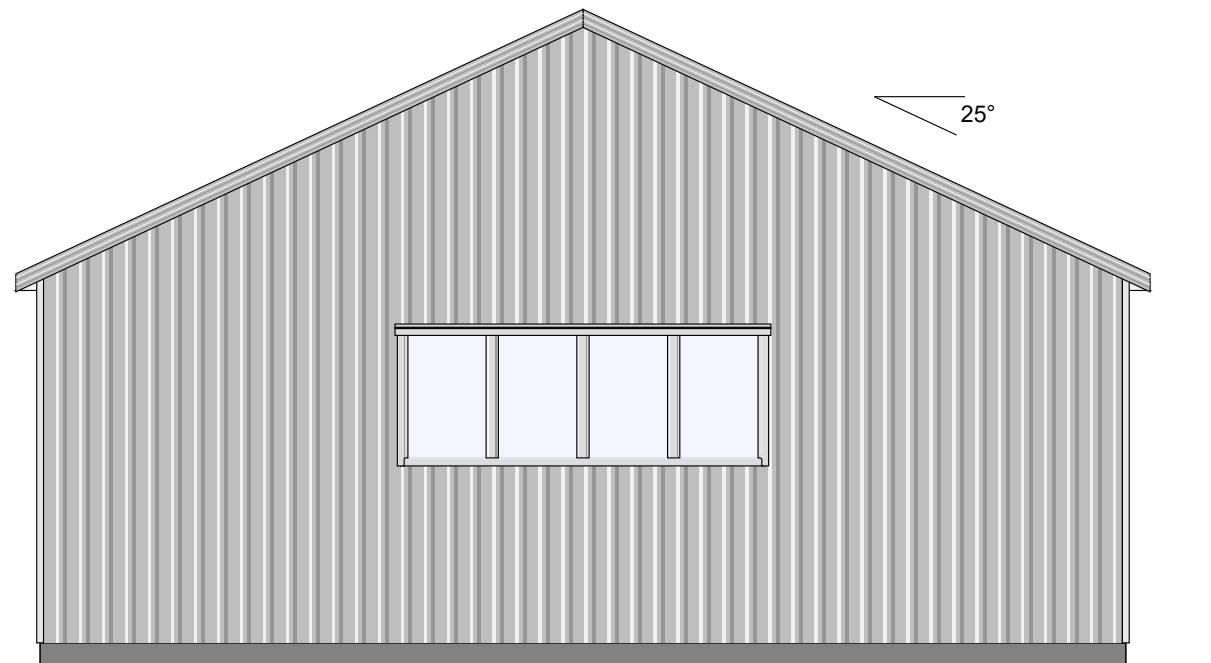
4 Pane  
Window



**ELEVATION VIEW 2**

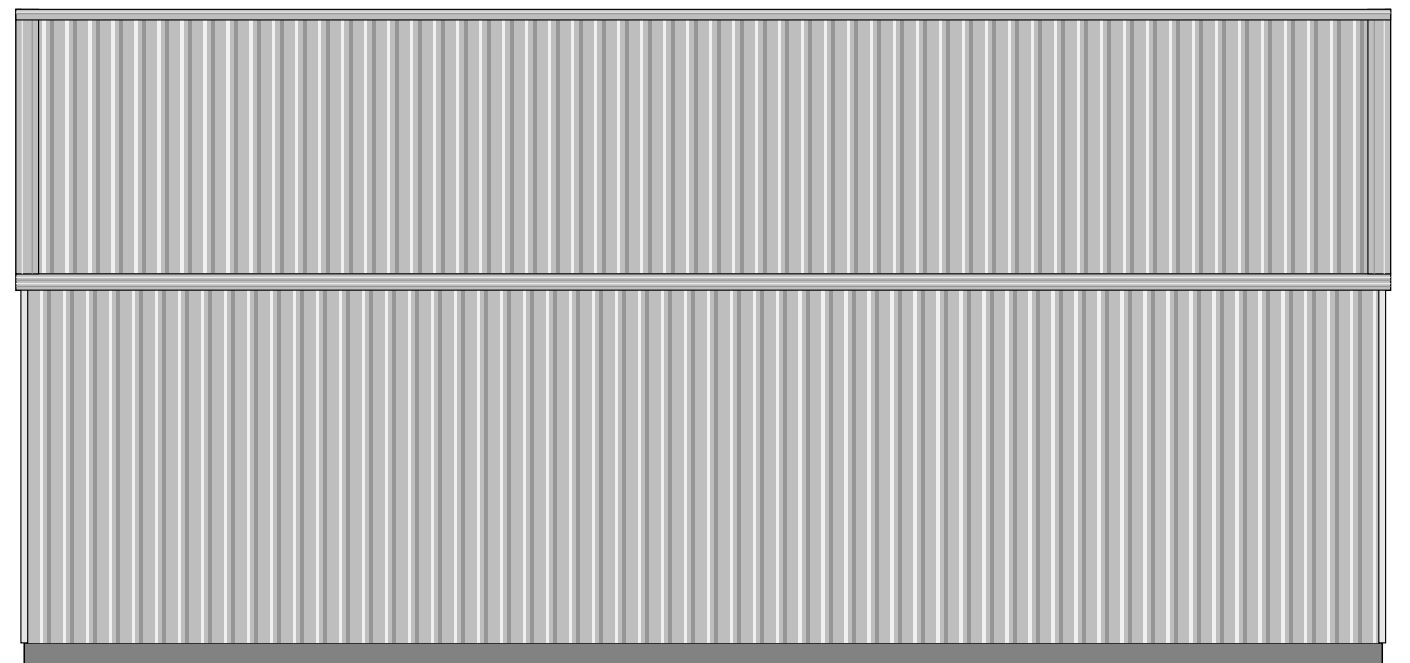
Futura: WG  
2075h x 4500w

Futura: WG  
2075h x 2600w



**ELEVATION VIEW 3**

4 Pane  
Window



**ELEVATION VIEW 4**

SCALE A3-1:50

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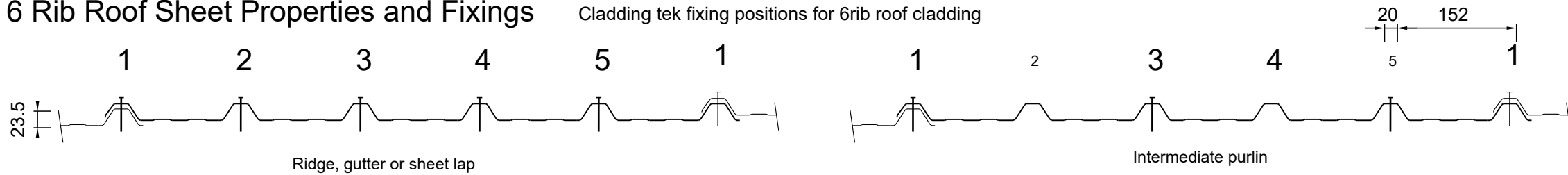
VB2000 - Design

Elevations

Sheet 10 of 26

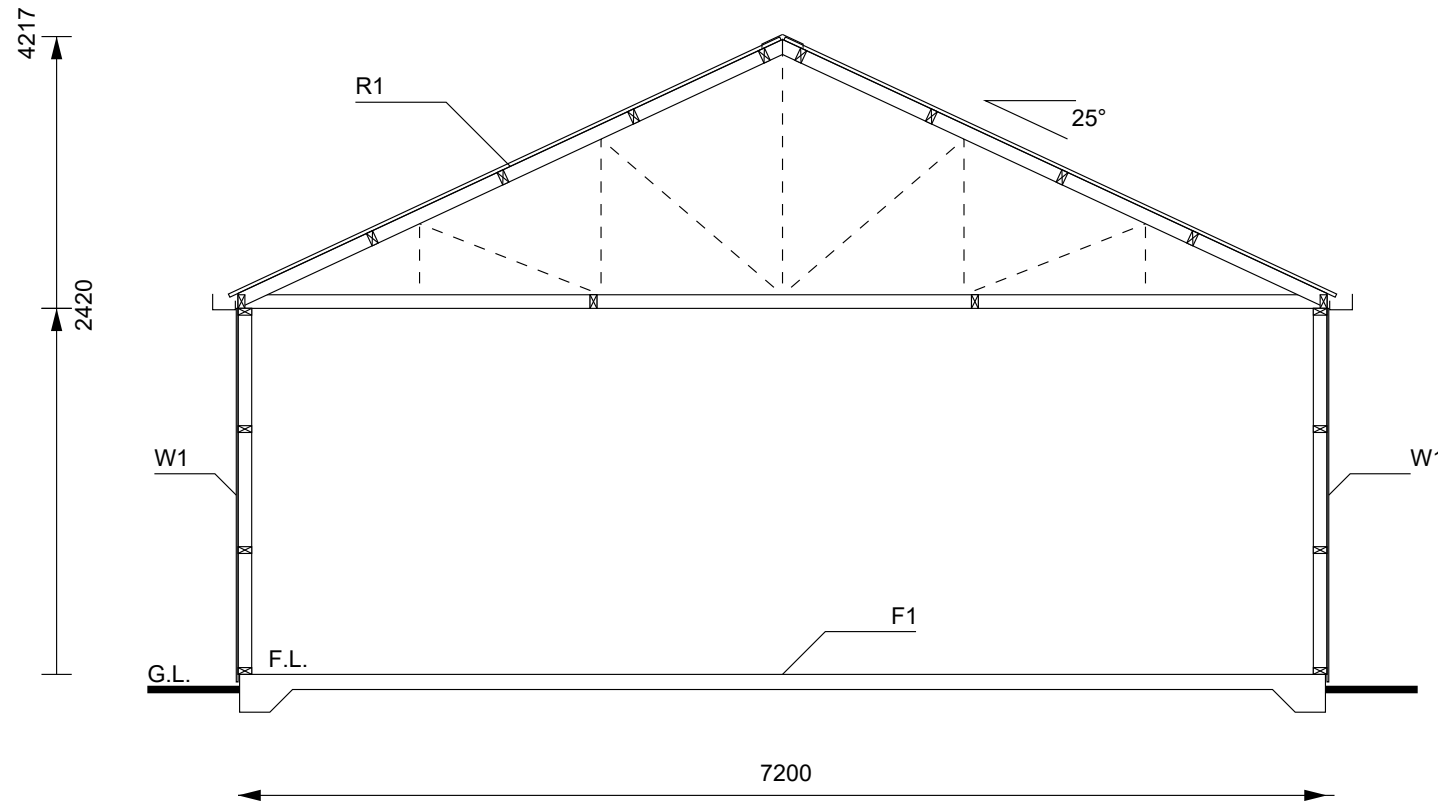
### 6 Rib Roof Sheet Properties and Fixings

Cladding tek fixing positions for 6rib roof cladding



### NOTES

- R1 : ROOF**
- 6 Rib 0.35mm roofing over roofing underlay 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 15 of 26.
  - For truss centres refer to 'Floor Plan General' sheet 8 of 26.
  - For truss design and fixings refer to 'Truss Design' sheet 16 of 26 and 'Truss Fixing Details' sheets 17-18 of 26.
- W1 : WALLS**
- Colorsteel Endura Vertical 6 Rib 0.35mm cladding over building wrap 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 26.
  - 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.



SCALE A3-1:50

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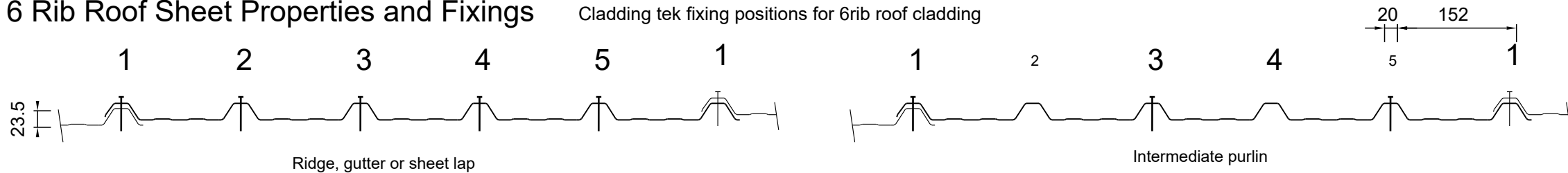
VB2000 - Design

Cross Section

Sheet 11 of 26

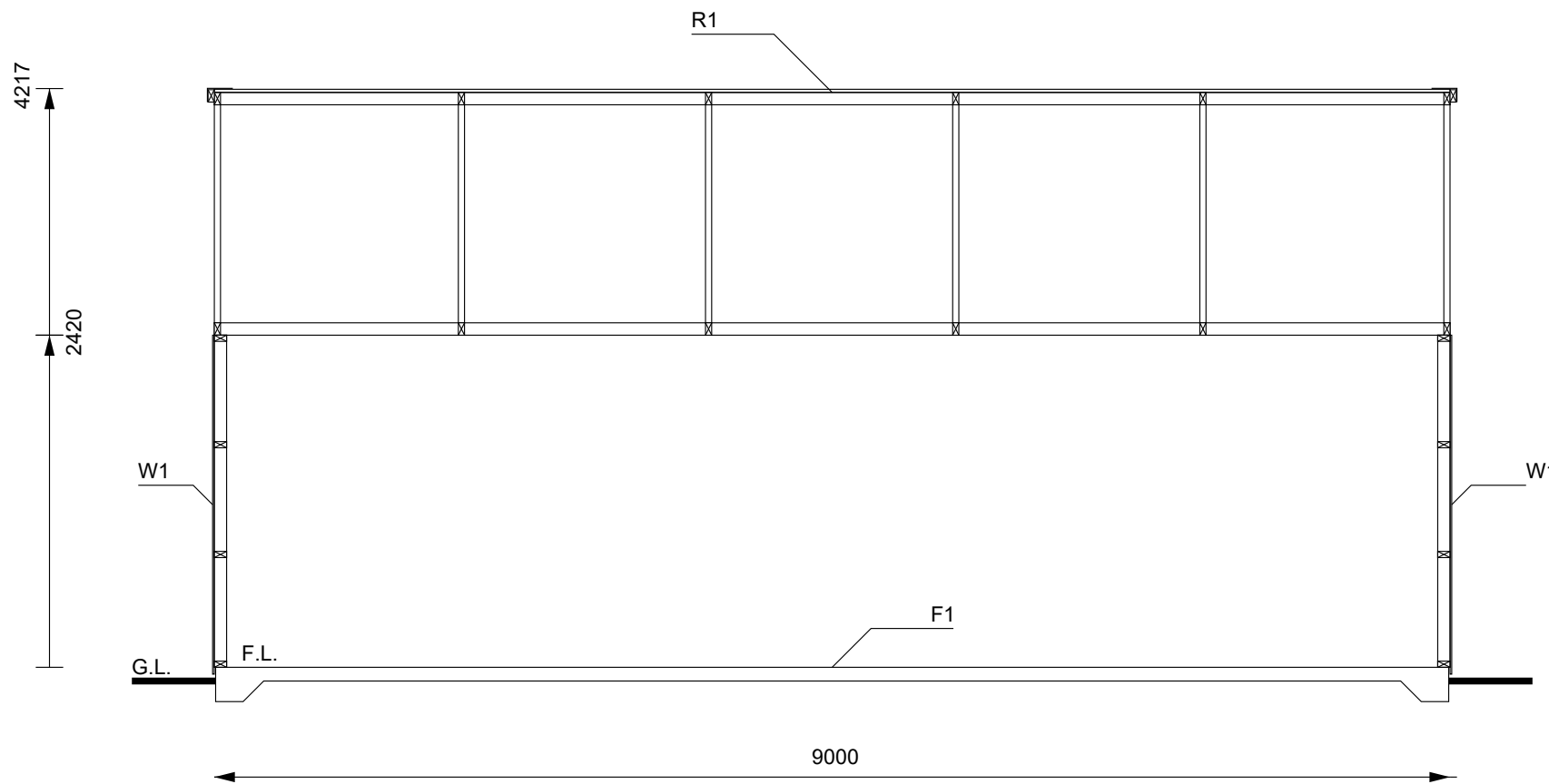
### 6 Rib Roof Sheet Properties and Fixings

Cladding tek fixing positions for 6rib roof cladding



#### NOTES

- R1 : ROOF**
- 6 Rib 0.35mm roofing over roofing underlay over 90x45 SG8 H1.2 purlins @ 1000mm centres max, fixed between trusses.
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- F1 : FLOOR**
- For foundation details refer to 'Foundation Details' sheet 6 of 26.
  - 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.



SCALE A3-1:50

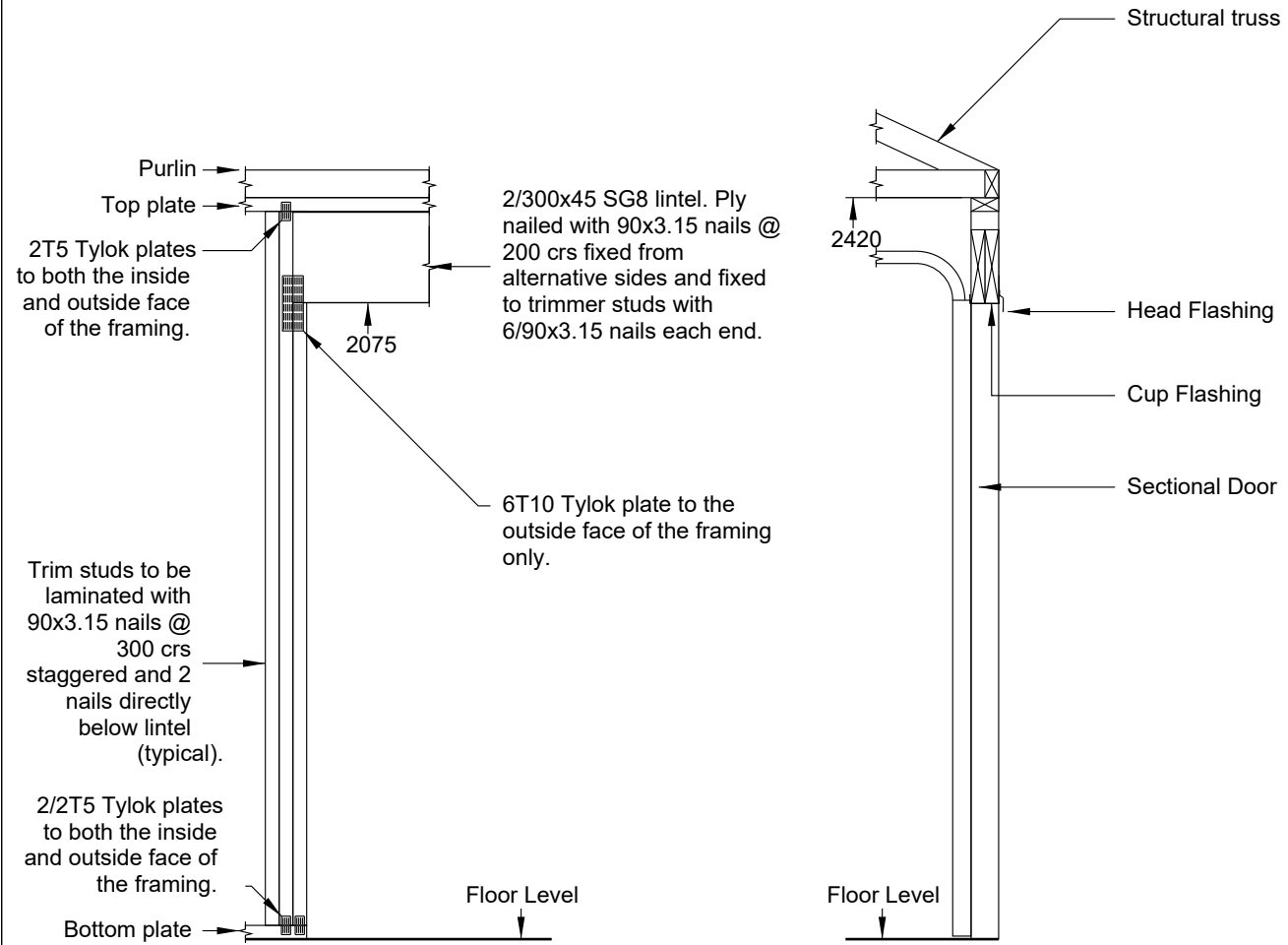
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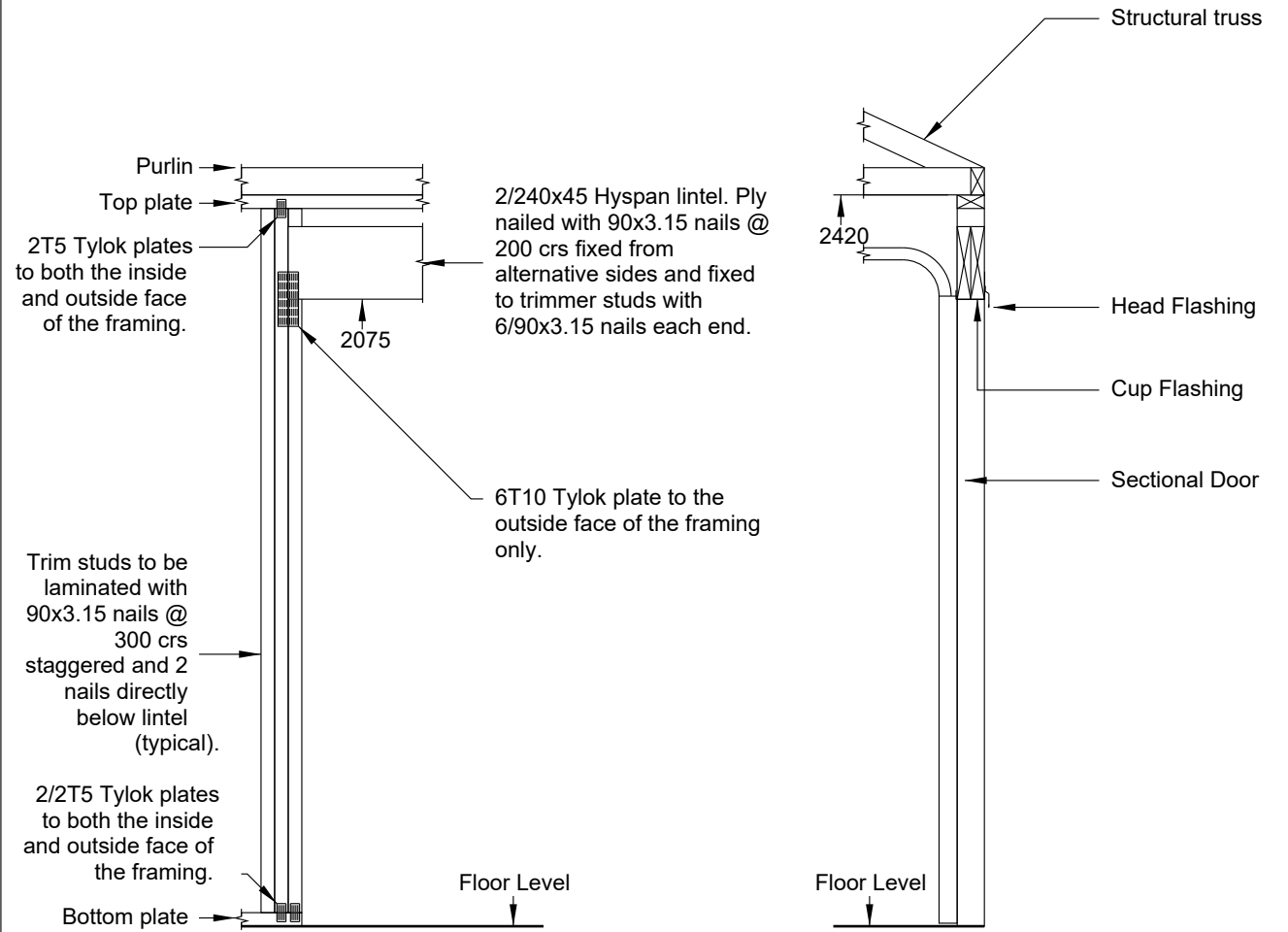
FNDC - Approved Building Consent Document - EBC-2025-45/0 - Pg 13 of 29 - 24/07/2024 - J.O

**SECTIONAL DOOR**



SCALE A3-1:25

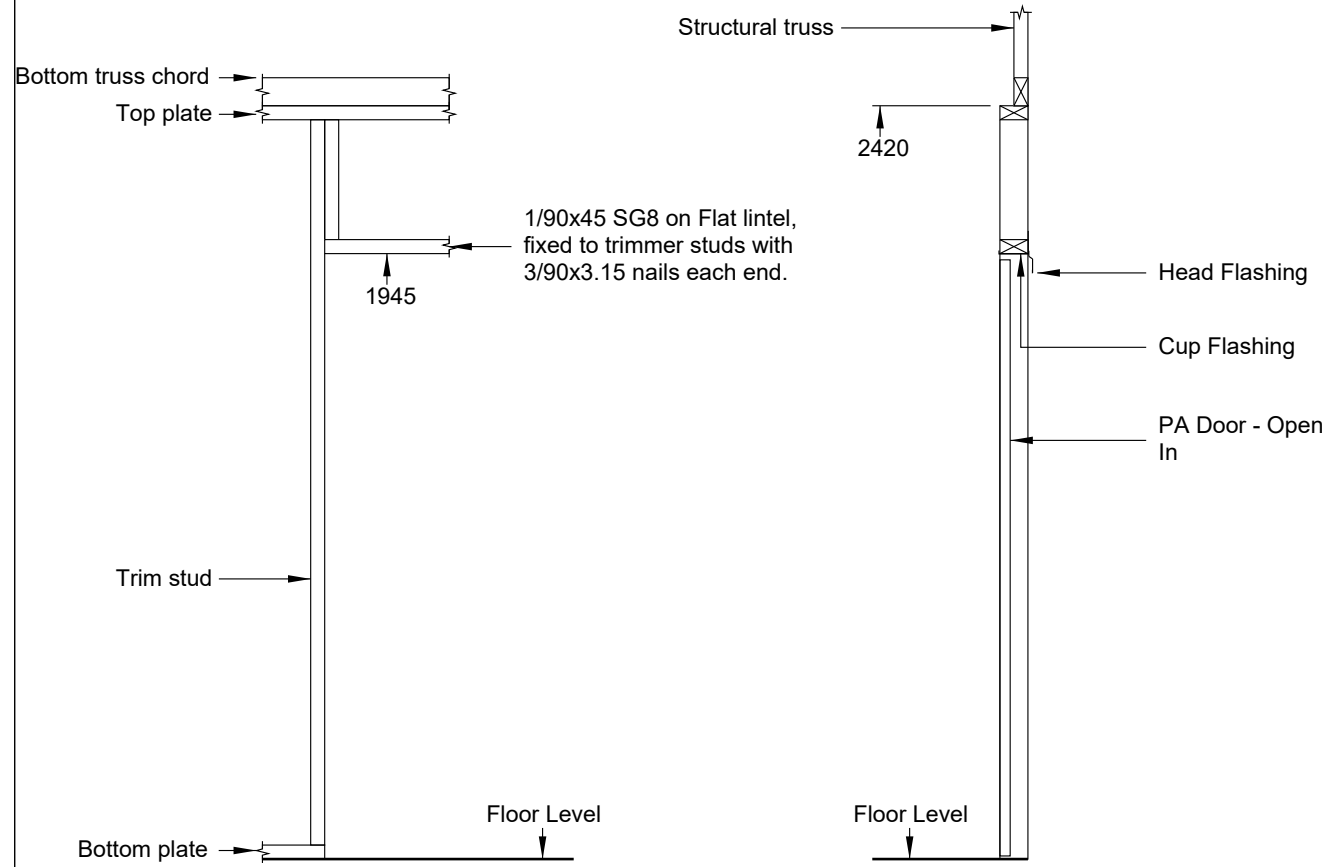
**SECTIONAL DOOR**



SCALE A3-1:25

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PA DOOR



SCALE A3-1:25

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For: Jim Terrell  
114 Waipapa Road  
Kerikeri  
0230

VB2000 - Design

Opening Details

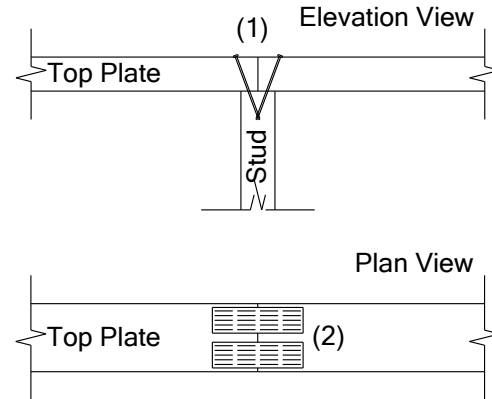
Sheet 14 of 26

## TOP PLATE AND ROOF FRAMING

### TOP PLATE DETAILS

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

#### Load Bearing Walls - Butt Joint Fixing Details

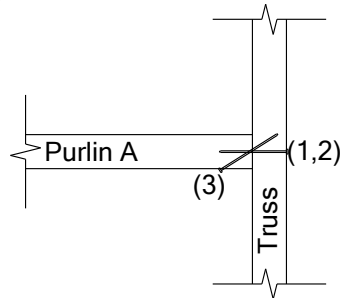


1. Skew nail top plates to stud with 4/90x3.15mm nails
2. Fix 2/4T5 Tylok plates over the joint.

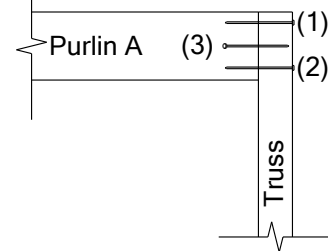
### PURLIN DETAILS

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

#### Plan View

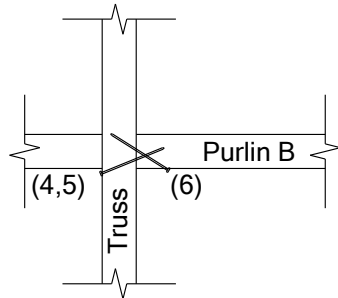


#### Elevation View

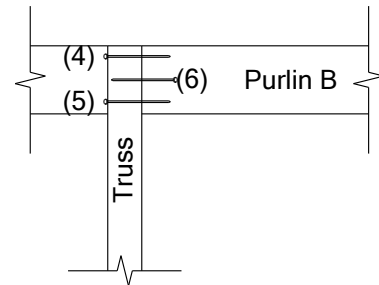


1. Nail 2/90x3.15mm nails (1,2) through the truss chord into the end of purlin A.
2. Skew nail 1/90x3.15mm nail (3) from purlin A into the truss chord.

#### Plan View



#### Elevation View

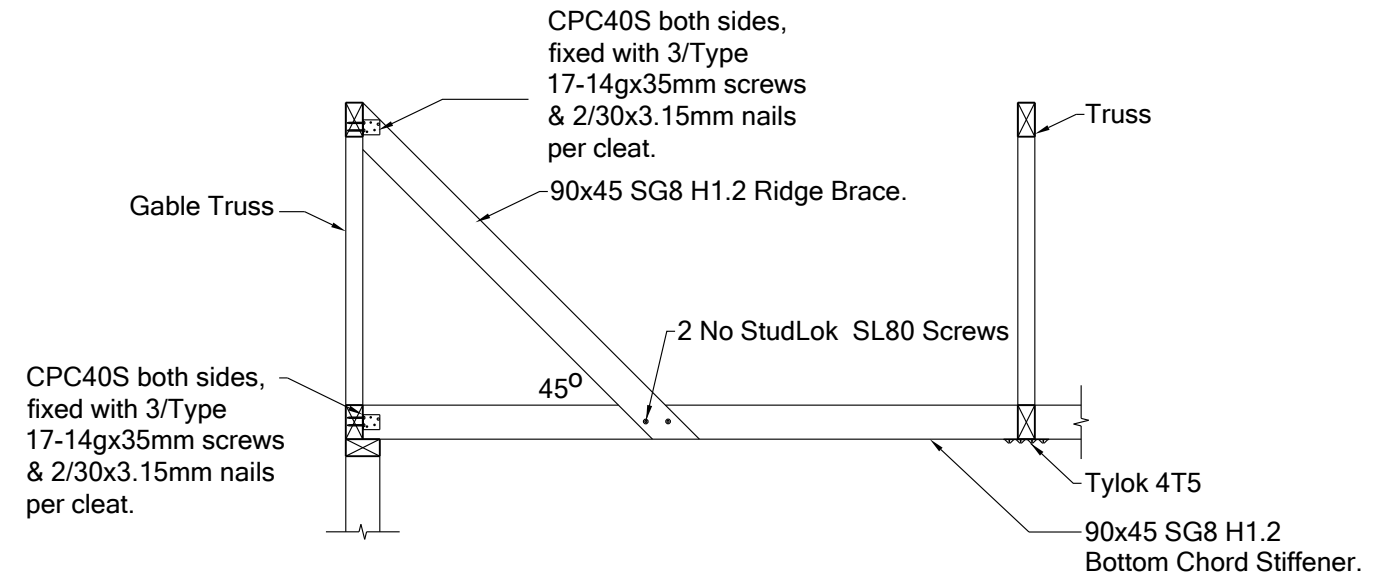


1. Skew nail 2/90x3.15mm nails (4,5) through the truss chord into the end of purlin B.
2. Skew nail 1/90x3.15mm nail (6) from purlin B into the truss chord.

SCALE: A3-1:10

### STANDARD TRUSS STIFFENER

All truss stiffeners 90x45 SG8 H1.2. Refer to Truss Design (sheet 16 of 26) for centres



SCALE: A3-1:20

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## 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.

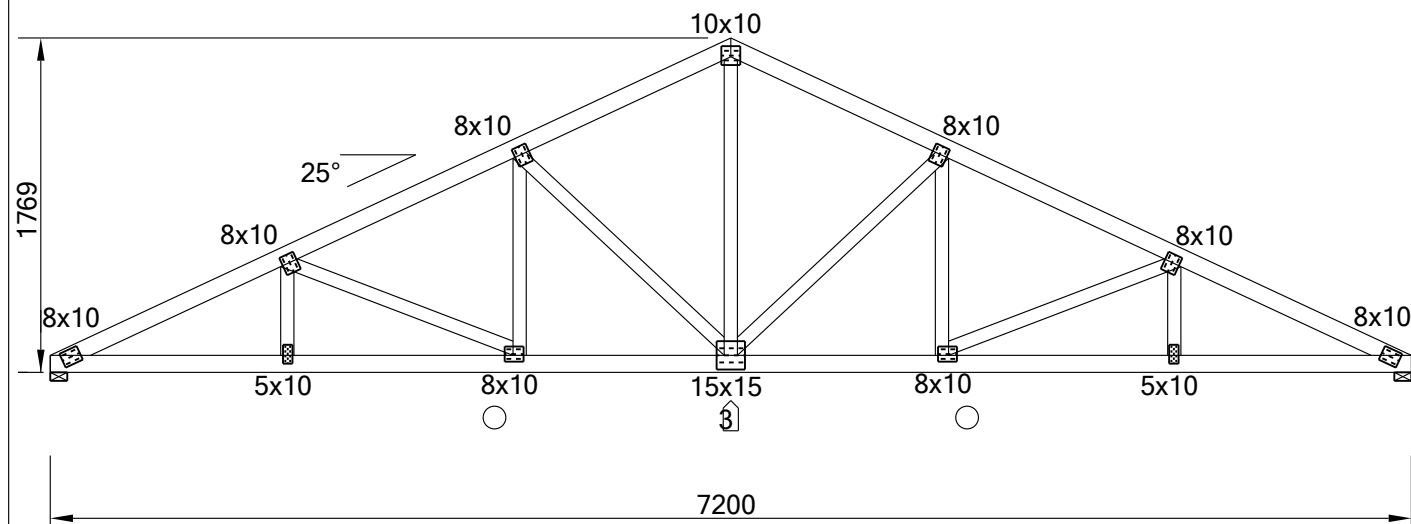
Truss Bottom Chord=0.9kN concentrated load below 1200mm head height and

1.4kN concentrated load above 1200mm head height.

Wind Loads:

Roof= Cfig = -1.1

### TRUSS DESIGN

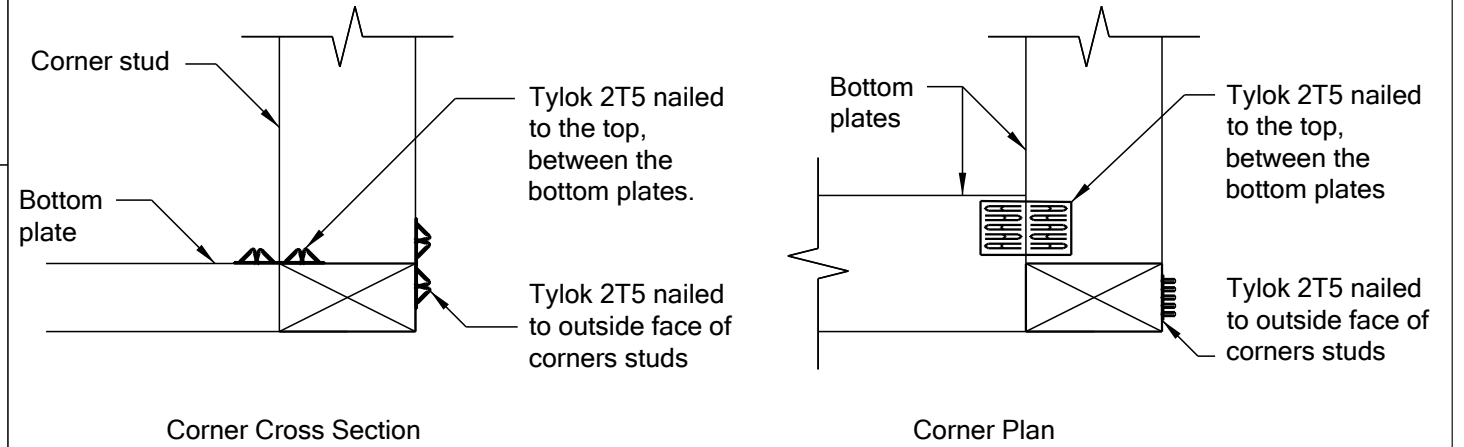


SCALE: A3-1:40

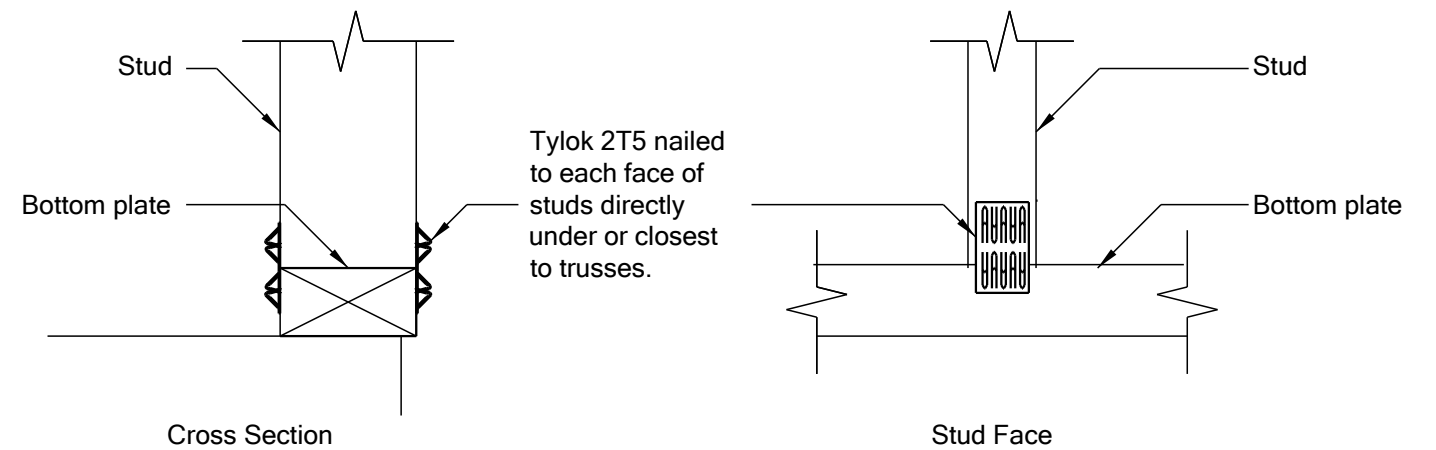
### NOTE:

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

### GABLE TRUSS CORNER STUD / BOTTOM PLATE FIXING



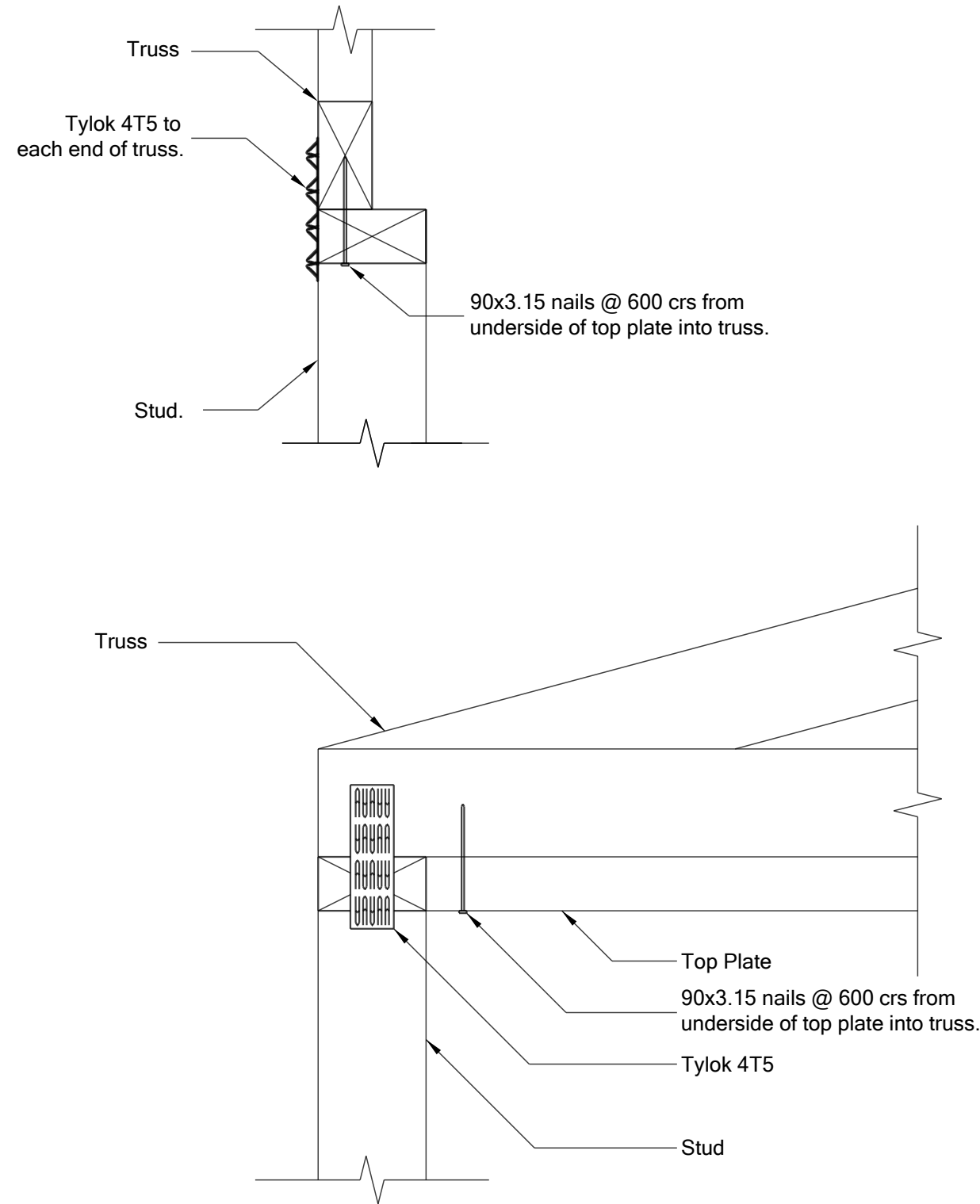
### TRUSS STUD / BOTTOM PLATE FIXING



SCALE: A3-1:5

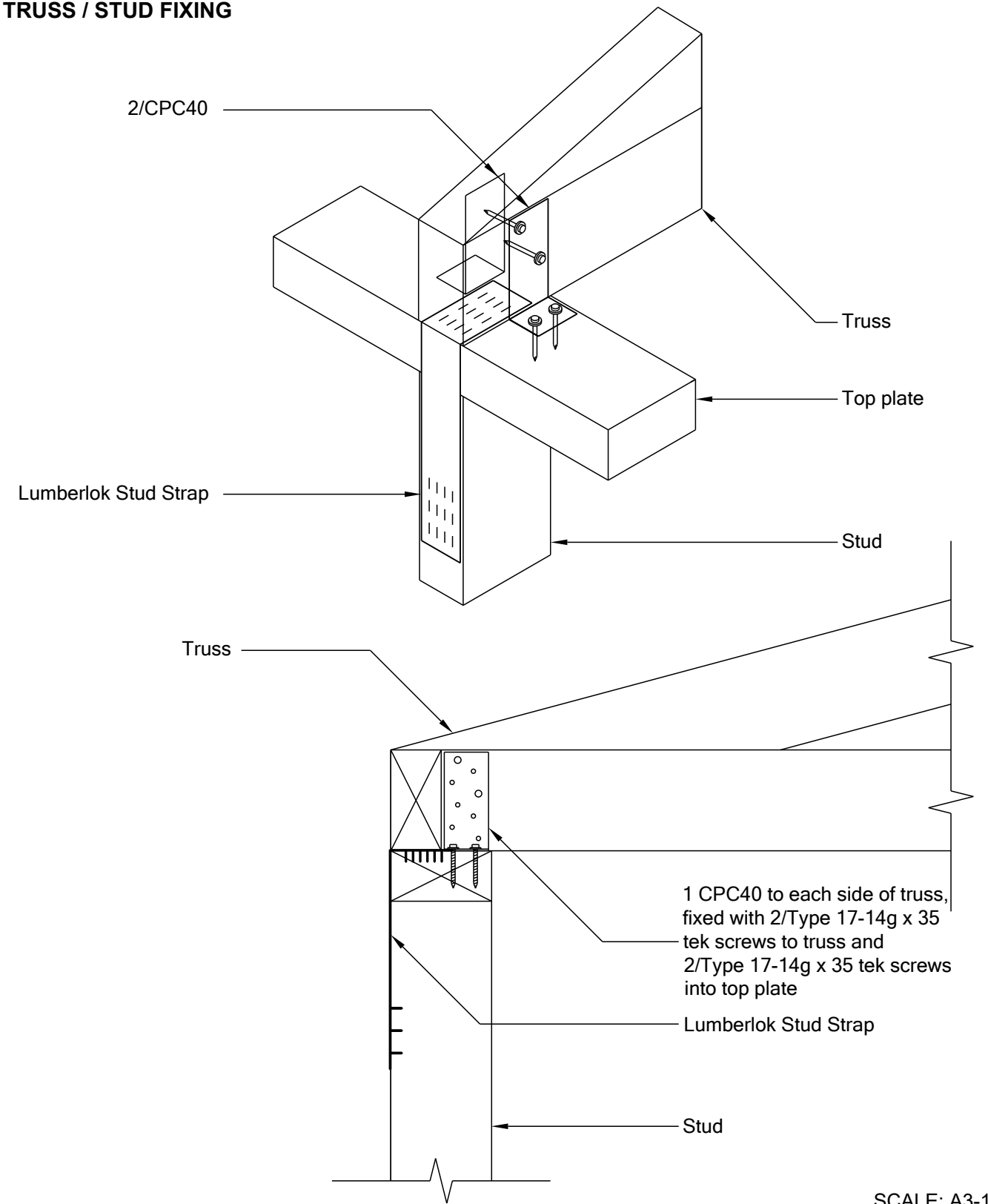
## TRUSS FIXING DETAILS

### GABLE TRUSS / CORNER STUD FIXING



SCALE: A3-1:5

### TRUSS / STUD FIXING



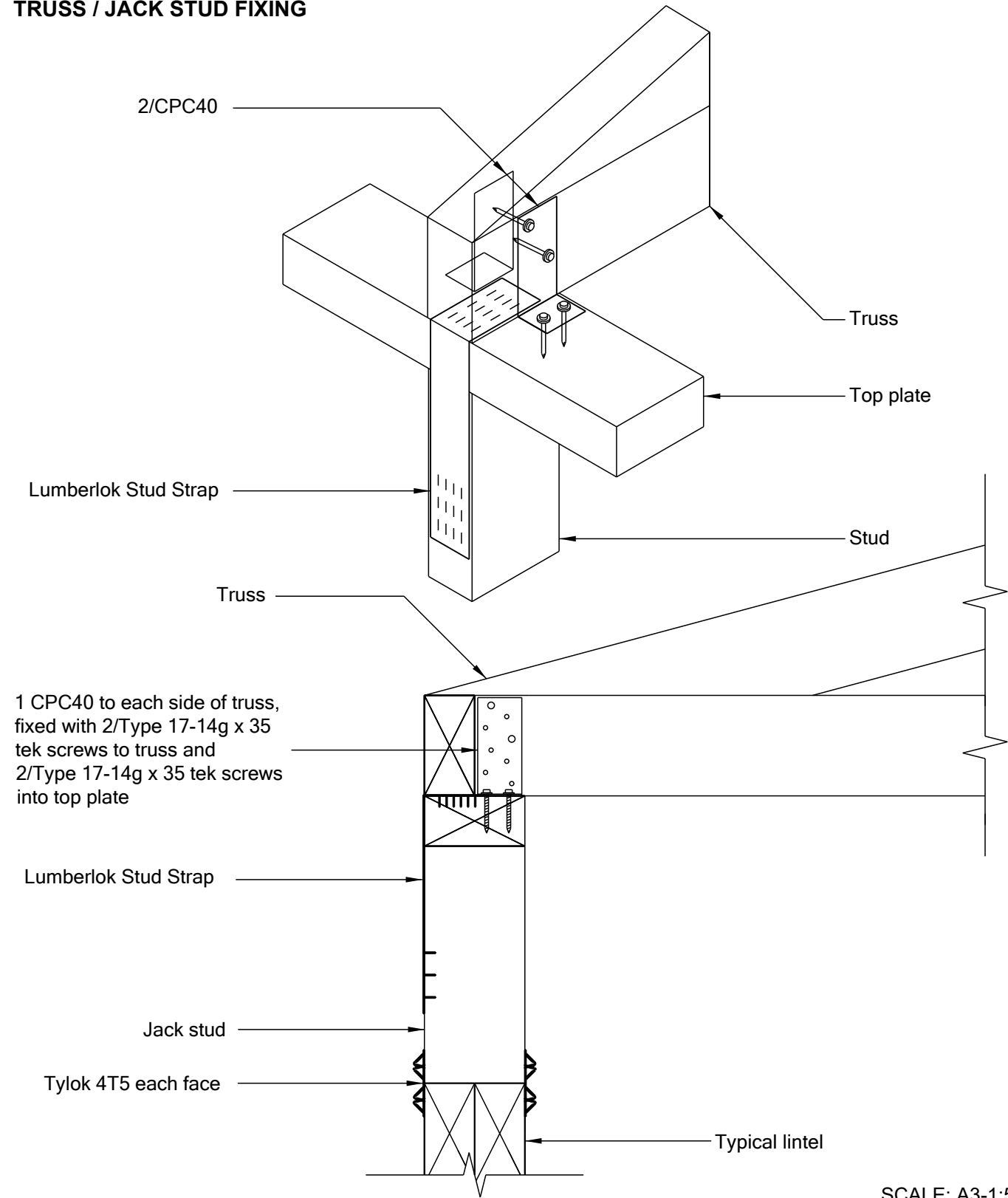
SCALE: A3-1:5

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### TRUSS FIXING DETAILS

#### TRUSS / JACK STUD FIXING



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**40** YEARS  
 of Building Better for NZ

For: Jim Terrell  
 114 Waipapa Road  
 Kerikeri  
 0230

VB2000 - Design
Truss Fixing Details
Sheet 18 of 26

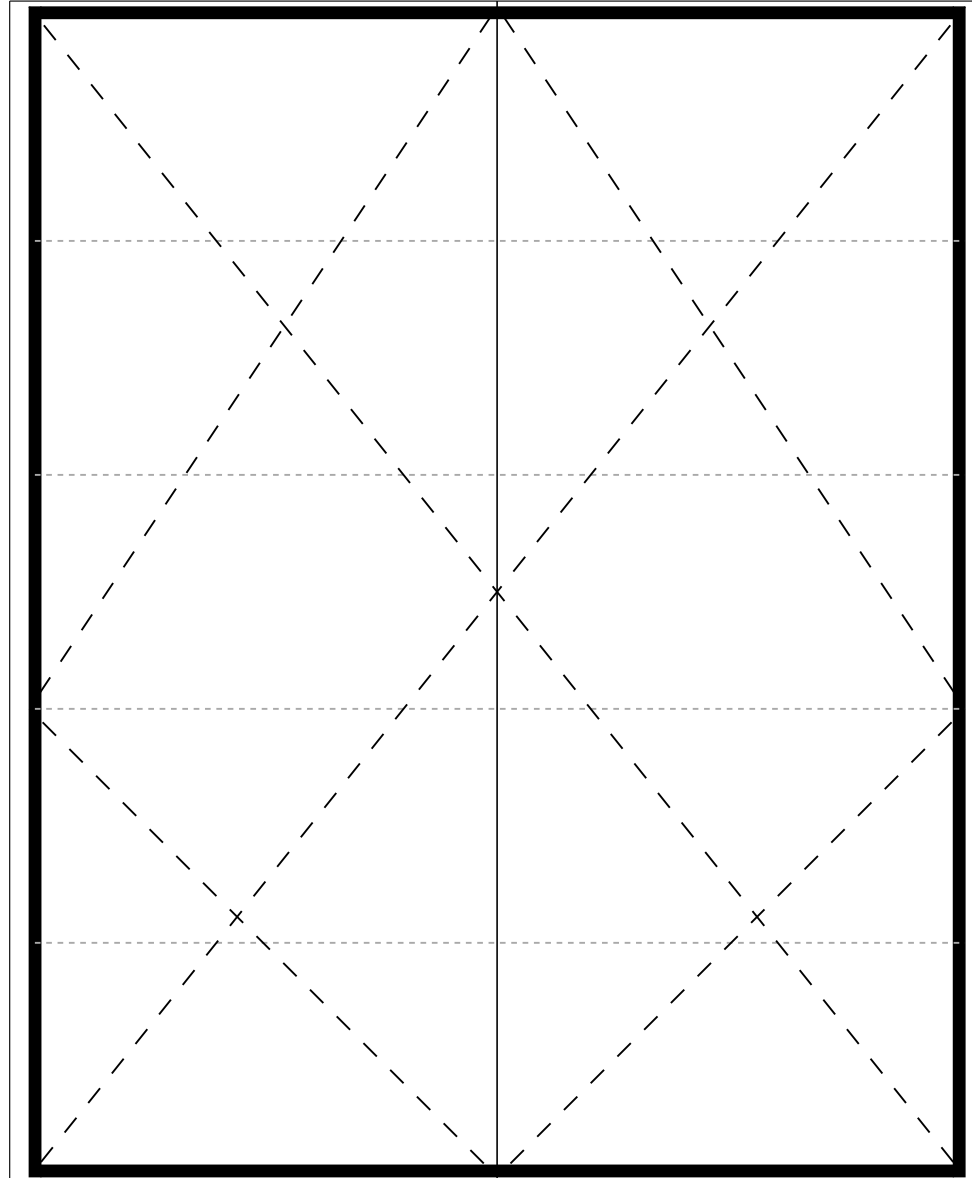


## ROOF BRACING

### EXPLANATION

Using a diaphragm approach, the roof is braced using a series of Lumberlok Strip 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 transferred to the foundation through the wall bracing system.

### ROOF BRACING PATTERN LAYOUT



Scale: NTS

### FIXINGS

Each single row of Lumberlok Strip Brace to be tensioned up and laid over the top of the purlins. Fix each end with 5/30x3.15 nails and fix crossings with 2/30x3.15 nails.

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## 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	25°	6 BU/m <sup>2</sup>

Multiplication factors	EQ zone = 1 Soil class = D&E Deep to very soft	0.5
Earthquake demand		3 BU/m <sup>2</sup>

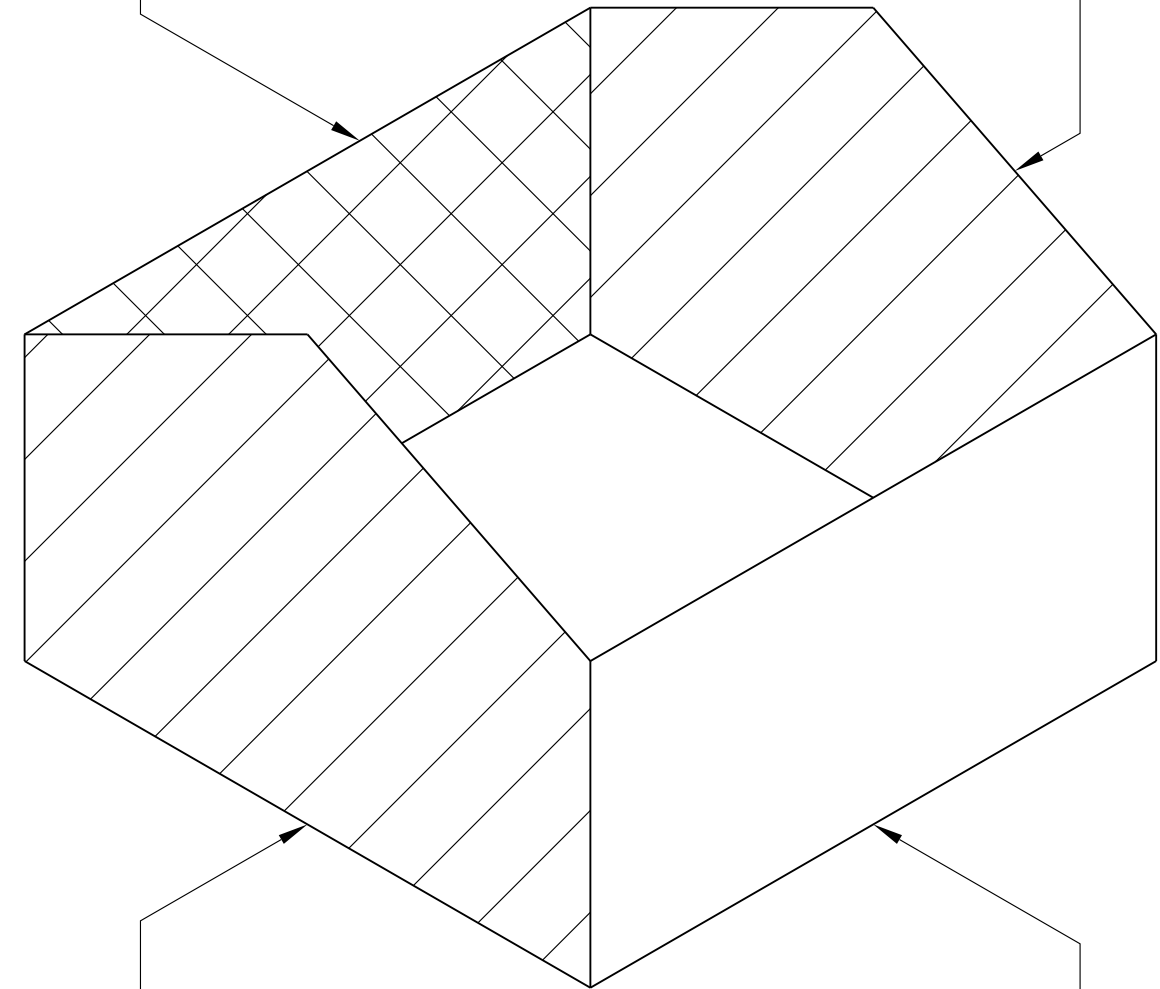
Using factors based on ratios in AS/NZS1170.0:2002, part 5 from BIL2 - 50 years working life to BIL1 - 50 years working life.

Building Importance Level 1 modification factor.	0.5
<b>EARTHQUAKE DEMAND REQUIRED (Along and Across)</b>	1.5 BU/m <sup>2</sup>
BL 9.000m x BW 7.200m = 64.8m <sup>2</sup>	<b>64.8m<sup>2</sup> x 1.5 BU/m<sup>2</sup> 98 BU</b>

### BRACING UNITS DISTRIBUTION

VIEW	100% ALONG (BU)	
	Wind	Earthquake
	4	337

VIEW	50% ACROSS (BU)	
	Wind	Earthquake
	3	191



VIEW	50% ACROSS (BU)	
	Wind	Earthquake
	1	191

VIEW	0% ALONG (BU)	
	Wind	Earthquake
	2	0

### 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.	High = 1	
Wind demand with wind zone factor applied.	Across 50 BU/m	Along 55 BU/m

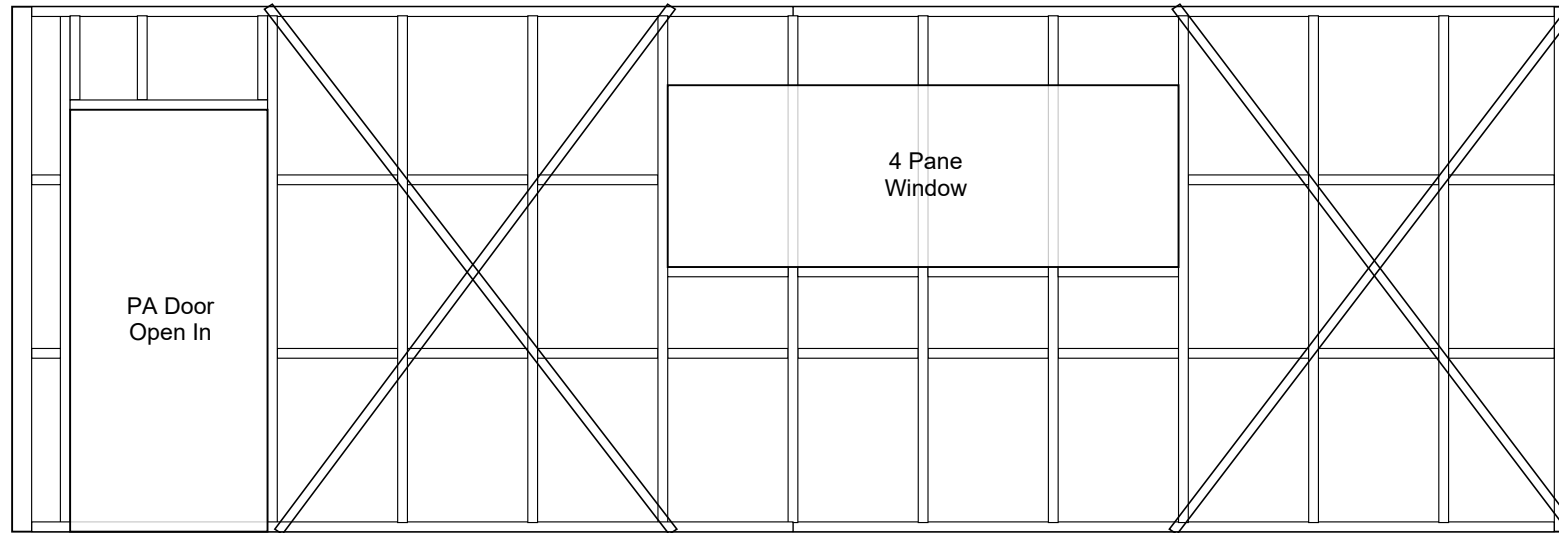
Using factors based on ratios in AS/NZS1170.0:2002, part 2 from BIL2 - 50 years working life to BIL1 - 50 years working life.

Building Importance Level 1 modification factor.	0.849	
<b>WIND DEMAND REQUIRED</b>	Across 42.4 BU/m	Along 46.7 BU/m
	<b>BL 9.000m x 42.4 BU/m 382 BU</b>	<b>BW 7.200m x 46.7 BU/m 337 BU</b>

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**BU ACHIEVED - VIEW 1**

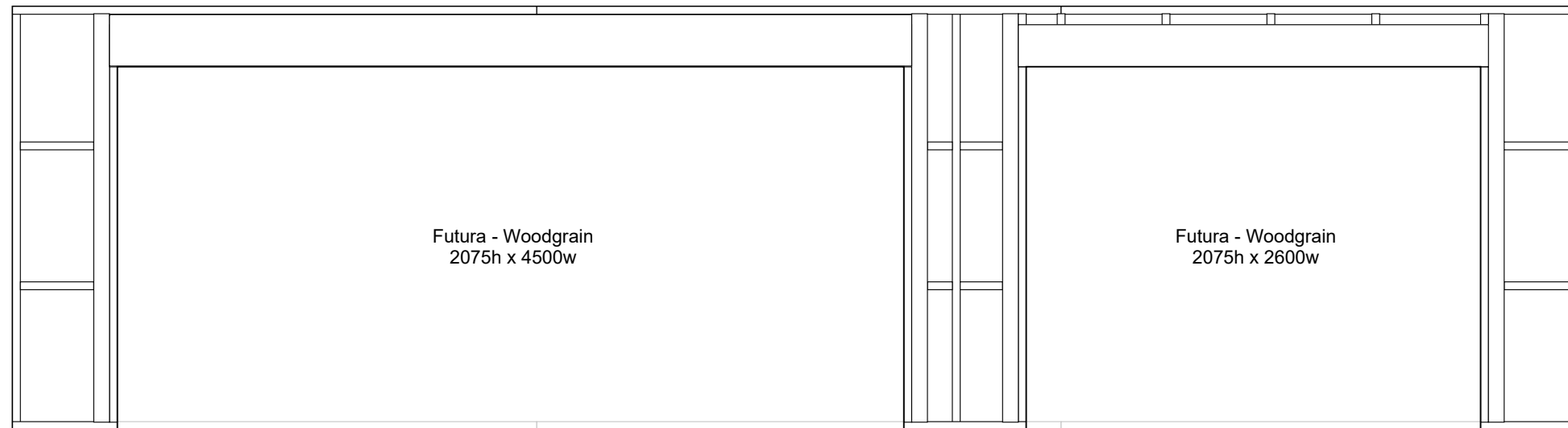


Cladding			
Wind BU			
EQ BU			
Hardware	MBX6-55-24		MBX6-55-24
Wind BU	135		135
EQ BU	45		45

SUMMARY - ACROSS (BU)		
	Wind	EQ
Required	191	49
Achieved	270	90

Scale NTS

**BU ACHIEVED - VIEW 2**



Cladding			
Wind BU			
EQ BU			
Hardware			
Wind BU			
EQ BU			

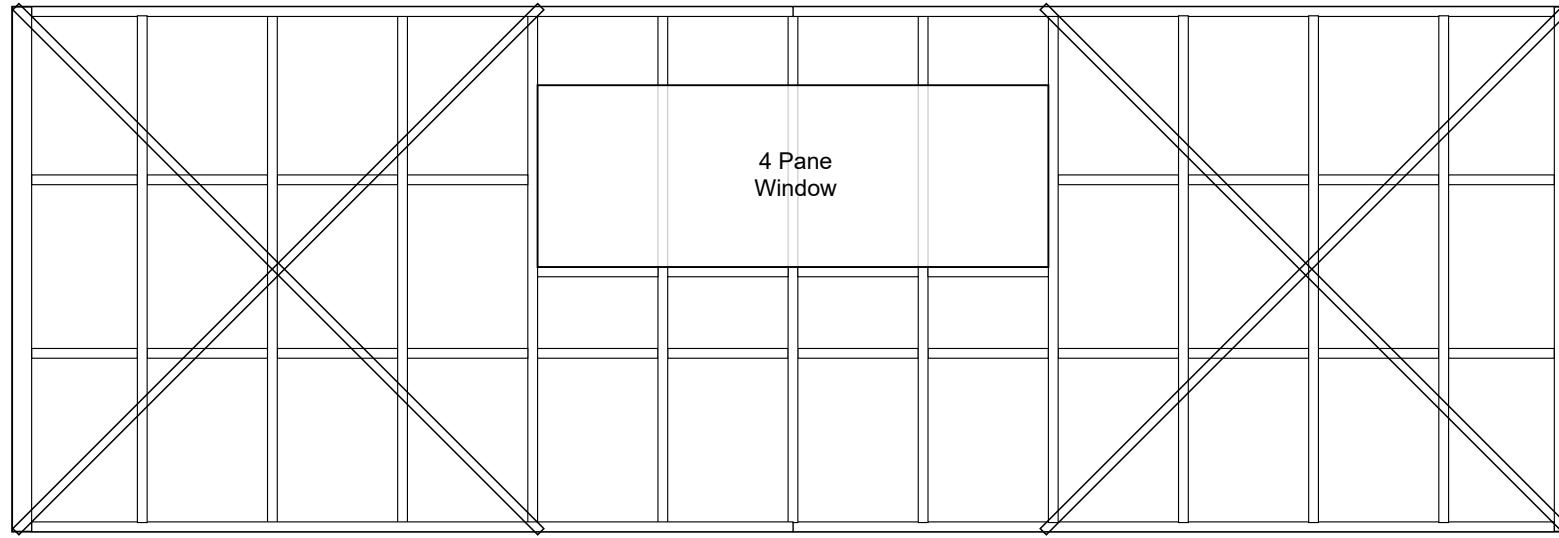
SUMMARY - ALONG (BU)		
	Wind	EQ
Required	0	0
Achieved	0	0

Scale NTS

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**BU ACHIEVED - VIEW 3**

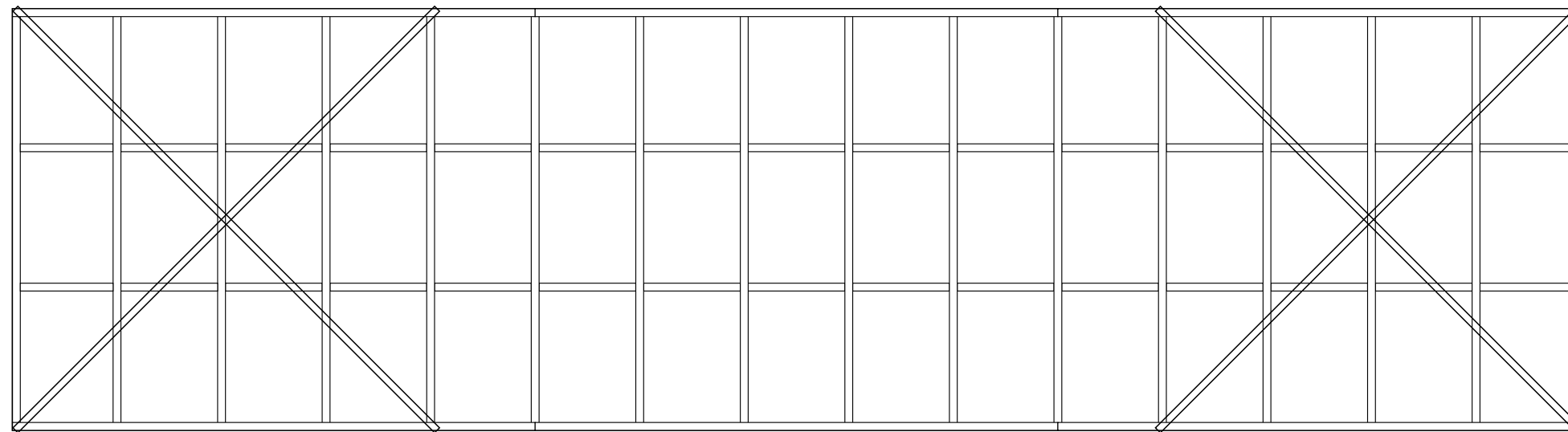


Cladding		
Wind BU		
EQ BU		
Hardware	MBX6-45-24	MBX6-45-24
Wind BU	169	169
EQ BU	56	56

SUMMARY - ACROSS (BU)		
	Wind	EQ
Required	191	49
Achieved	338	112

Scale NTS

**BU ACHIEVED - VIEW 4**



Cladding		
Wind BU		
EQ BU		
Hardware	MBX6-45-24	MBX6-45-24
Wind BU	169	169
EQ BU	56	56

SUMMARY - ALONG (BU)		
	Wind	EQ
Required	337	98
Achieved	338	112

Scale NTS

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For: Jim Terrell  
114 Waipapa Road  
Kerikeri  
0230

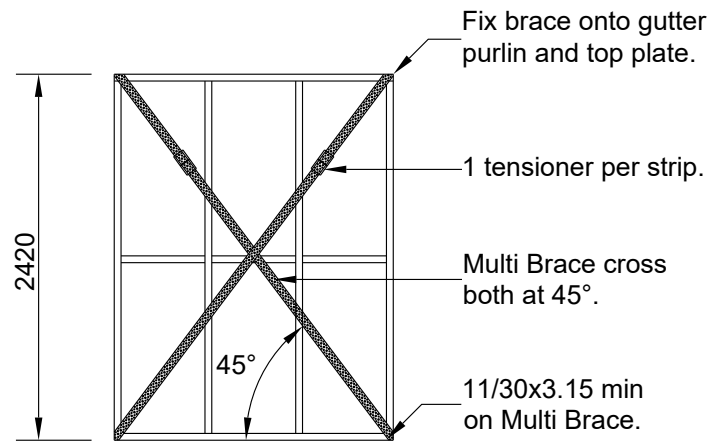
VB2000 - Design

Wall Bracing Achieved

Sheet 22 of 26

**BRACING ELEMENT: MBX6-45-24**

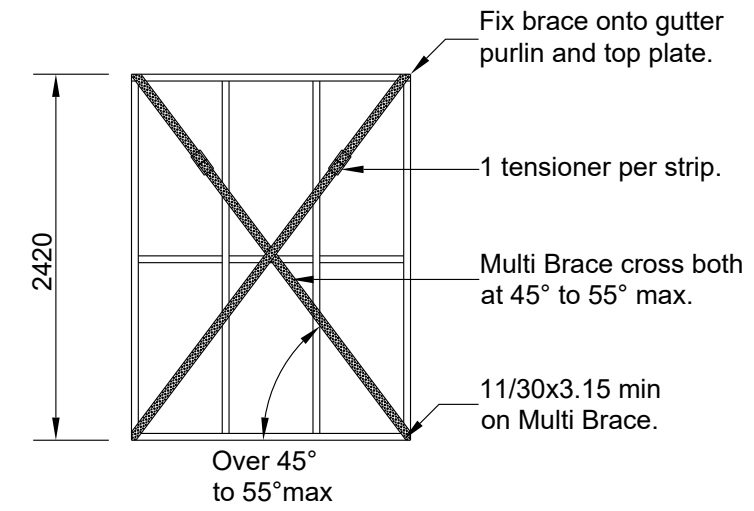
Total BU/m per Cross	Wind	169
	Earthquake	56



Scale A3-1:50

**BRACING ELEMENT: MBX6-55-24**

Total BU/m per Cross	Wind	135
	Earthquake	45

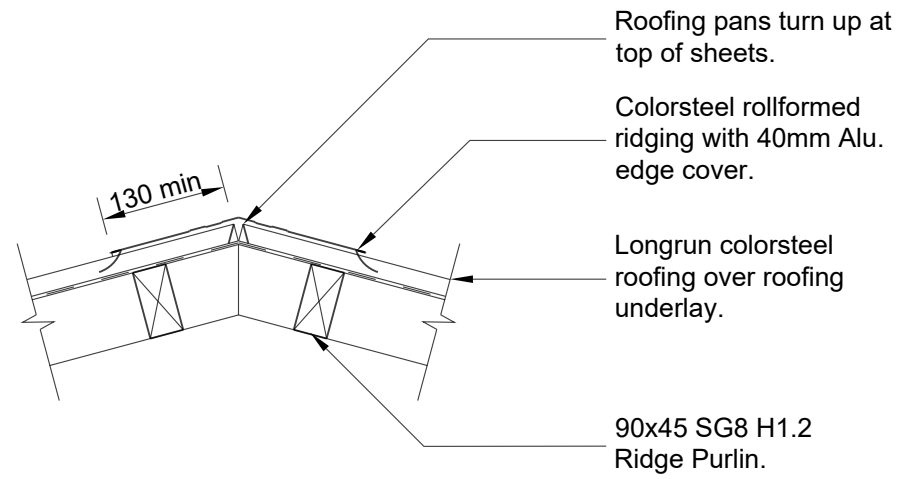


Scale A3-1:50

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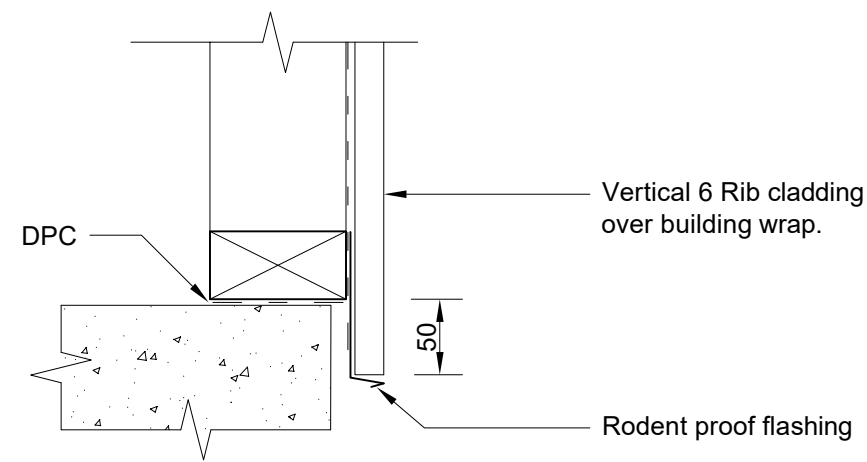
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**RIDGING DETAIL**



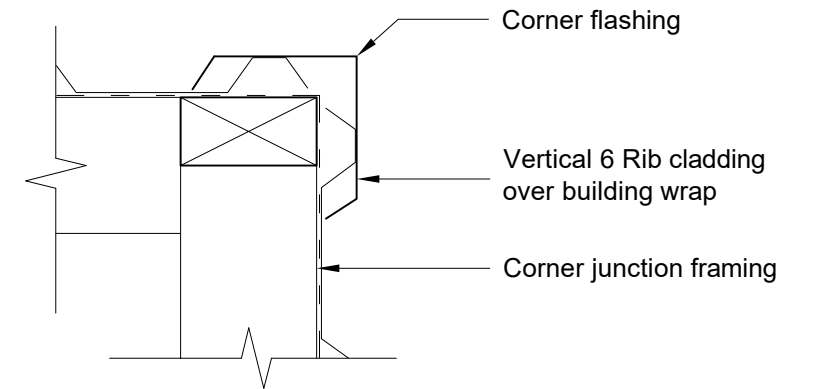
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**BASE FLASHING DETAIL**



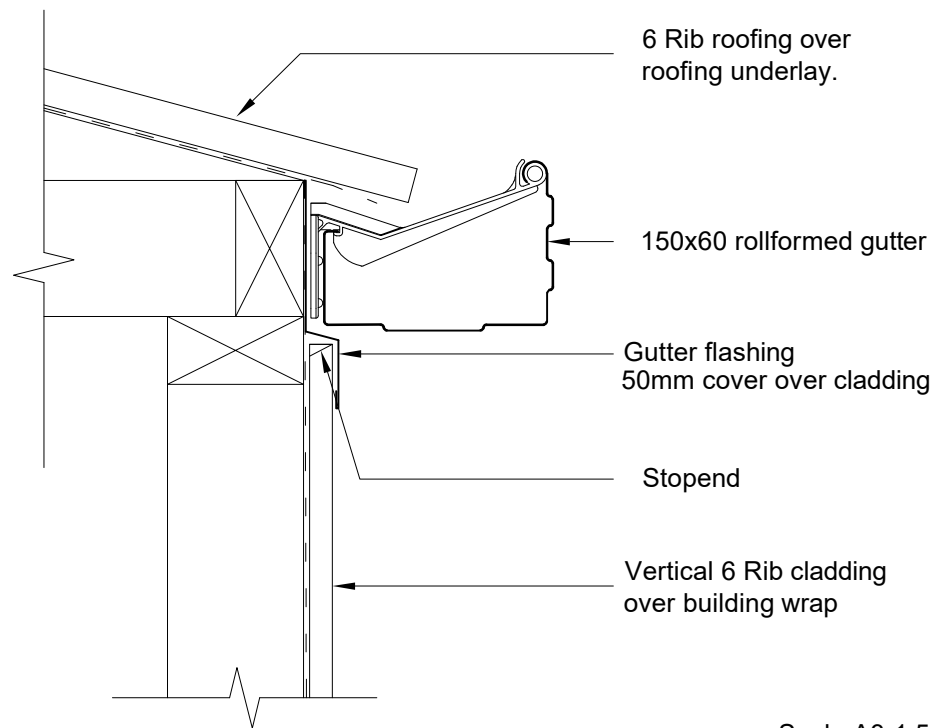
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**CORNER FLASHING DETAIL (NON HABITABLE)**



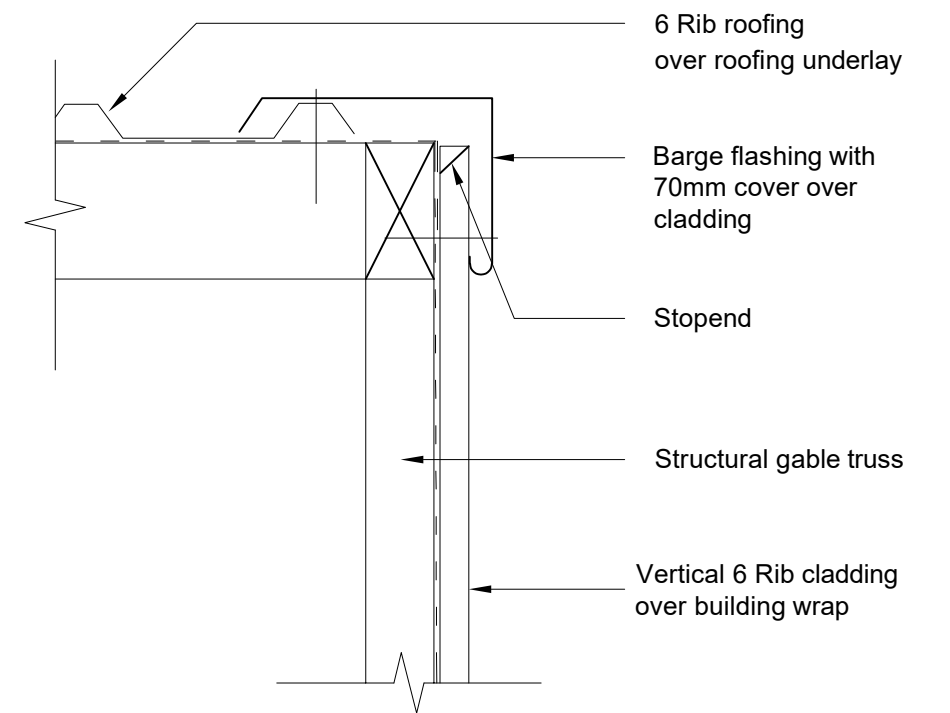
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**GUTTER DETAIL**



Scale A3-1:5

**STANDARD BARGE DETAIL**



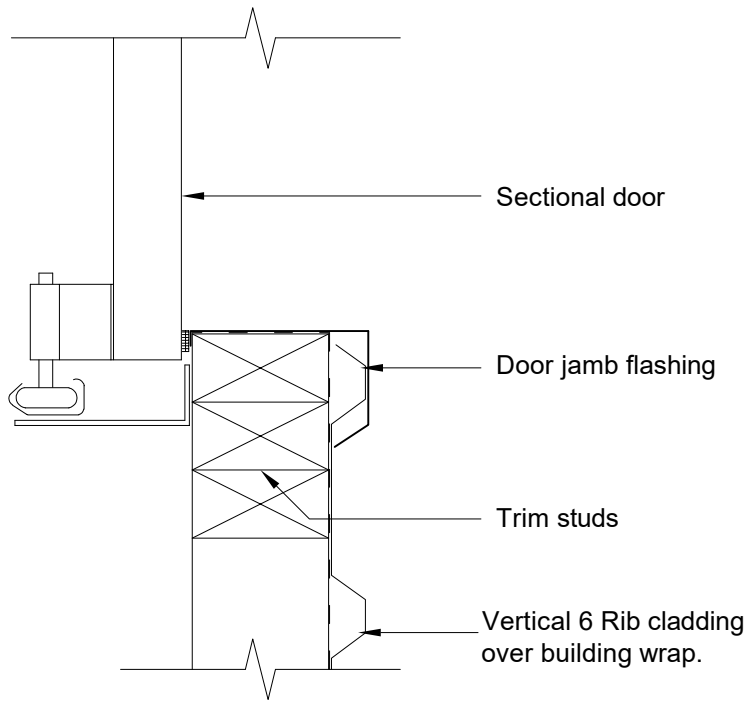
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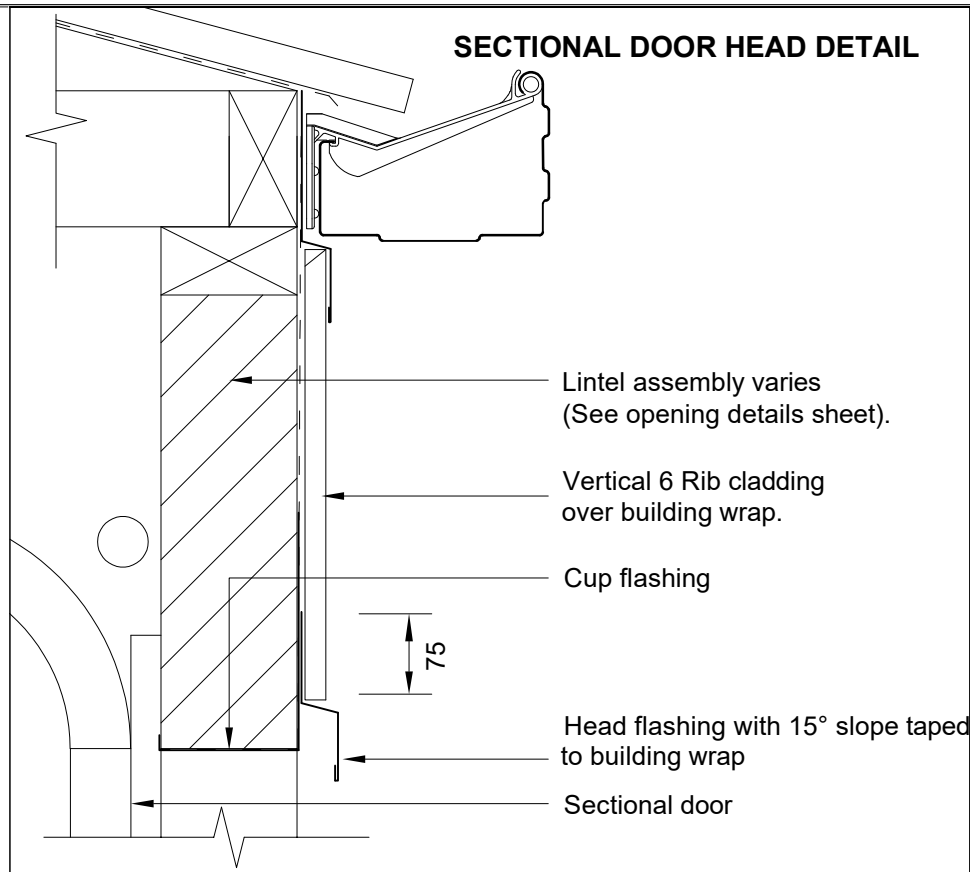


**SECTIONAL DOOR JAMB DETAIL**



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**SECTIONAL DOOR HEAD DETAIL**

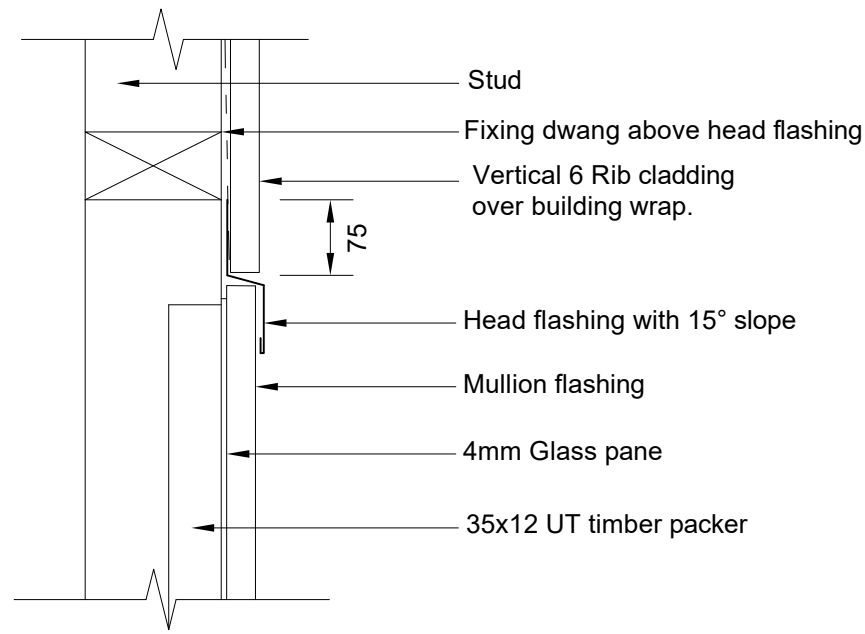


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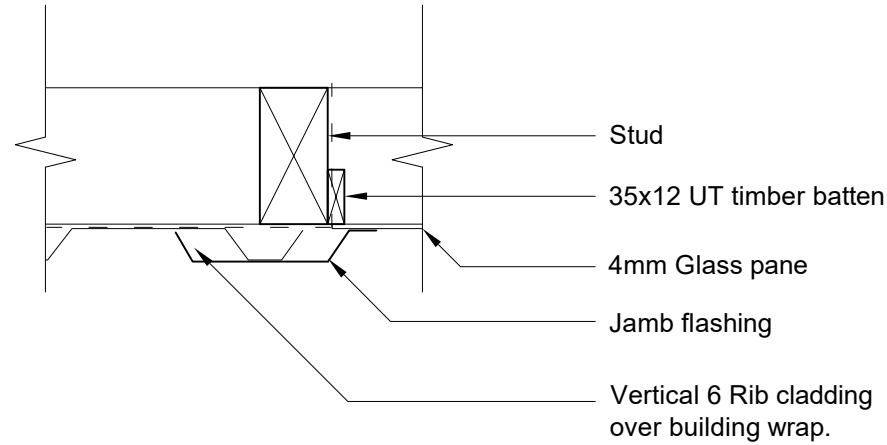
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**STANDARD WINDOW HEAD DETAIL**



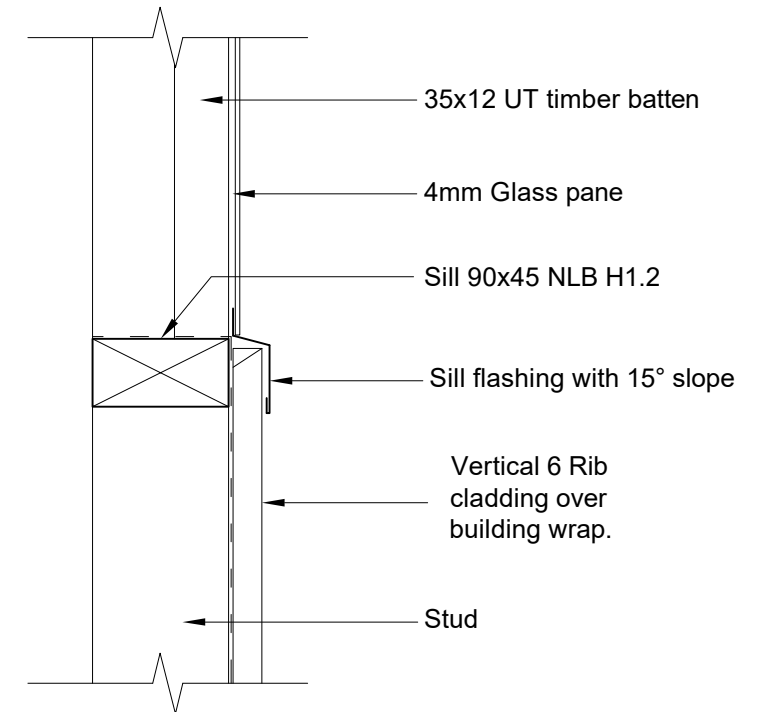
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**STANDARD WINDOW JAMB DETAIL**



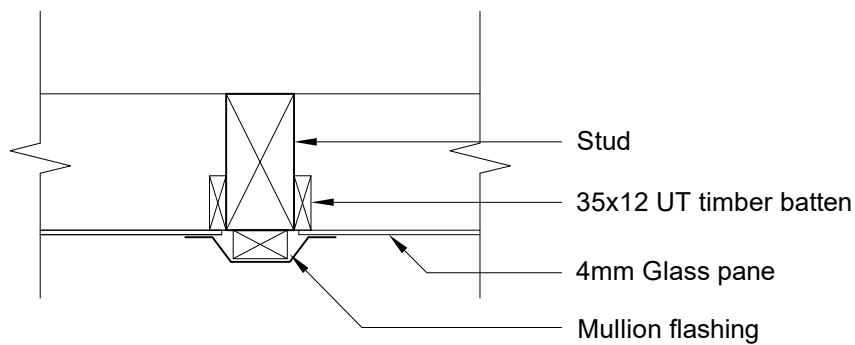
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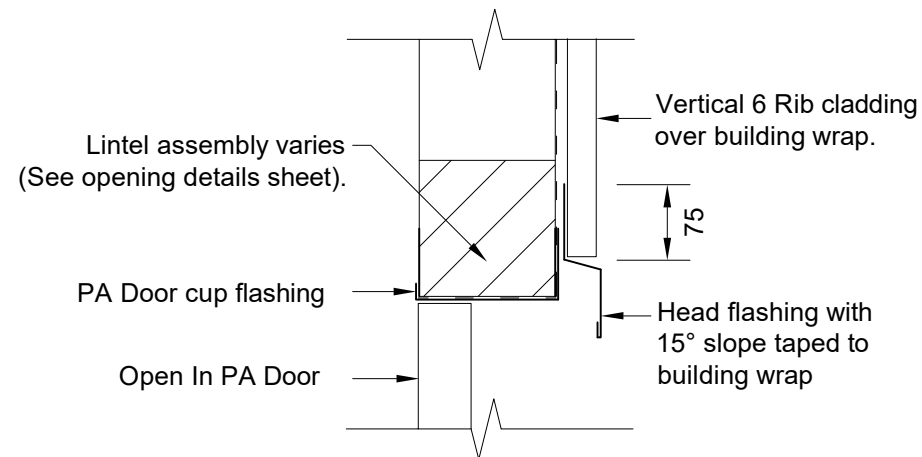
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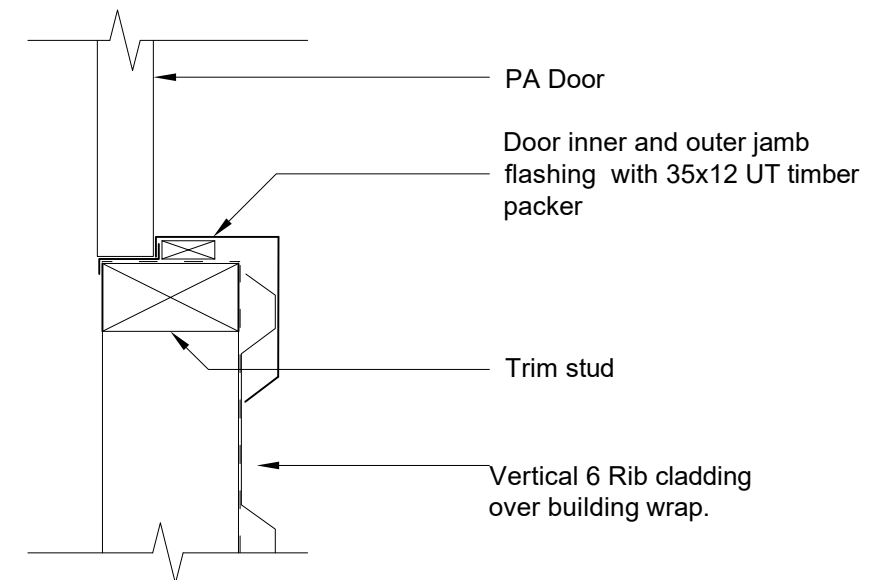
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**PA DOOR HEAD DETAIL**



Scale A3-1:5

**PA DOOR JAMB DETAIL (OPEN IN)**



Scale A3-1:5

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**Project Information:**

**Lot 3**  
**DP167464**  
**Area: 1.1067ha**  
**Val'n No. 00213-28800**

**Wind Zone: HIGH**  
*A/Open/Exposed/T1*  
 as per NZS3604:2011 Section 5.2

**As of 27 July 2022 The Proposed District Plan requires that this consent complies with The Auckland Council Guidance Document GD005 for Erosion and Silt Control and Rule EW-S3 Accidental Discovery Protocol**

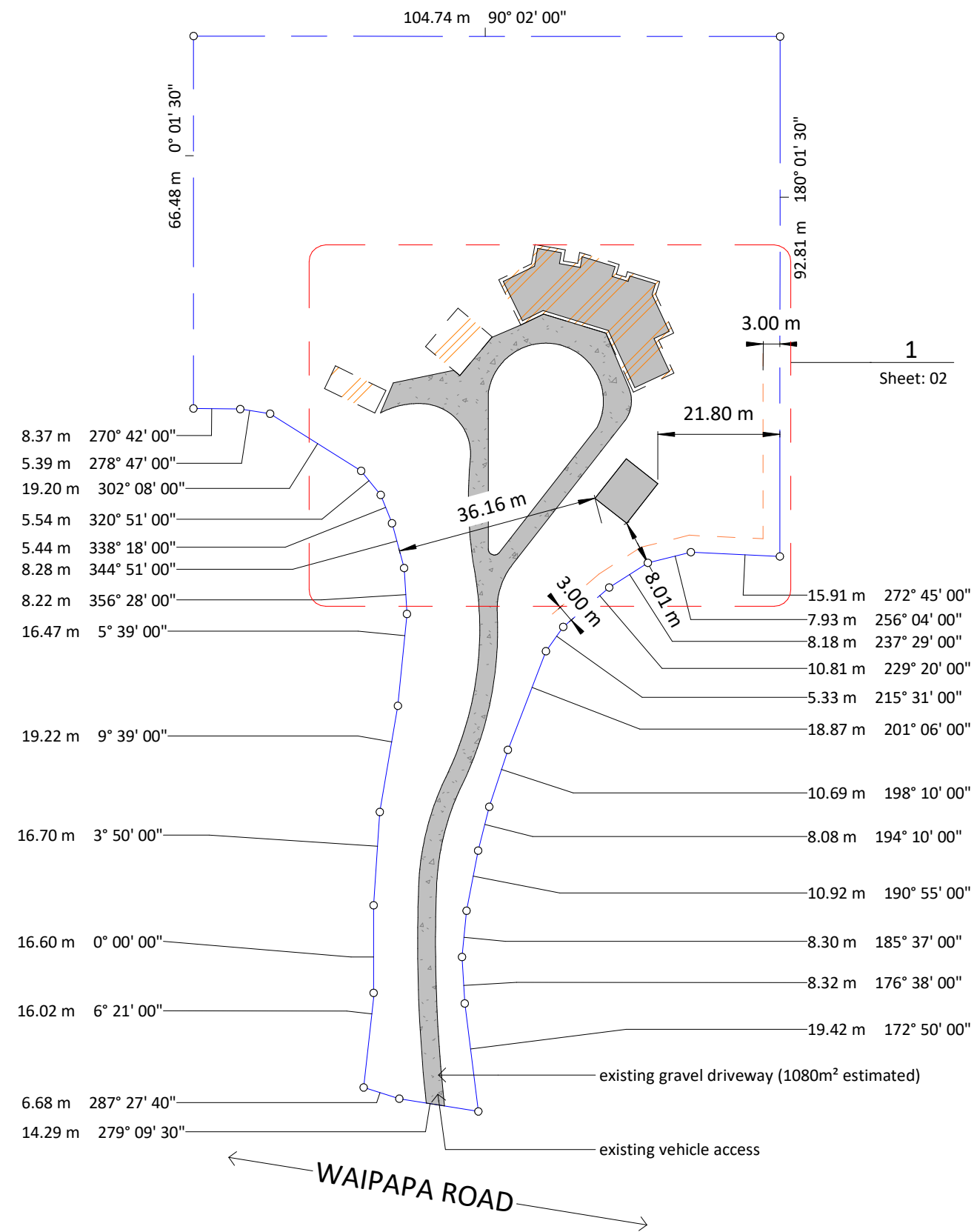
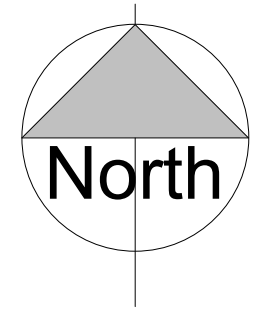
**Exposure Zone: C**  
**District Plan Zone: Rural Living**

**Earthworks: for foundations only**

**STORMWATER MANAGEMENT**

**Impermeable Surfaces:**  
 Existing roof area: **507m<sup>2</sup>**  
 Existing driveway: **810m<sup>2</sup>**  
 Proposed building roof area: **64.8m<sup>2</sup>**  
**Total Impermeable Area: 1381.8m<sup>2</sup>**  
**(12.48%)**  
*Permitted Activity maximum: the lesser of 12.5% or 3000m<sup>2</sup>*  
***(12.5% of 1.1067ha = 1383m<sup>2</sup>)***

**Building Coverage:**  
 Existing Buildings footprint: **447m<sup>2</sup>**  
 Proposed Building footprint: **64.8m<sup>2</sup>**  
**Total Building Coverage: 511.8m<sup>2</sup>**  
**(4.6%)**  
*Permitted Activity maximum: the lesser of 10% or 2400m<sup>2</sup>*  
***(10% of 1.1067ha = 1107m<sup>2</sup>)***



1  
 Sheet: 02

REVISIONS:  
 - date -

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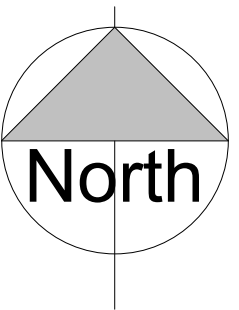


PROPOSED VERSATILE BUILDING FOR:  
**TERRELL**  
 114 WAIPAPA ROAD, KERIKERI

DRAWING TITLE:  
**SITE PLAN**

SCALE @ A3 DATE: JULY 2024  
 1 : 1000  
 C.A.D. PROJECT #: V24639

SHEET No. **01**  
 OF 3



### Project Information:

**Lot 3**  
**DP167464**  
**Area: 1.1067ha**  
**Val'n No. 00213-28800**

**Wind Zone: HIGH**  
*A/Open/Exposed/T1*  
 as per NZS3604:2011 Section 5.2

**Exposure Zone: C**  
**District Plan Zone:**  
 Rural Living

EXISTING HOUSE  
 roof plan area: 390m<sup>2</sup> (estimated)  
 building coverage: 330m<sup>2</sup> (estimated)

EXISTING BUILDING 1  
 roof plan area: 72m<sup>2</sup> (estimated)  
 building coverage: 72m<sup>2</sup> (estimated)

EXISTING BUILDING 2  
 roof plan area: 45m<sup>2</sup> (estimated)  
 building coverage: 45m<sup>2</sup> (estimated)

existing gravel driveway (810m<sup>2</sup> estimated)

PROPOSED VERSATILE BUILDING  
 roof plan area: 64.8m<sup>2</sup>  
 building coverage: 64.8m<sup>2</sup>  
 provide 2\*65Ø downpipes  
 connect to existing collection system  
 at nearest downpipe on house in 100Ø  
 uPVC stormwater pipe

### Earthworks: for foundations only

### STORMWATER MANAGEMENT

#### Impermeable Surfaces:

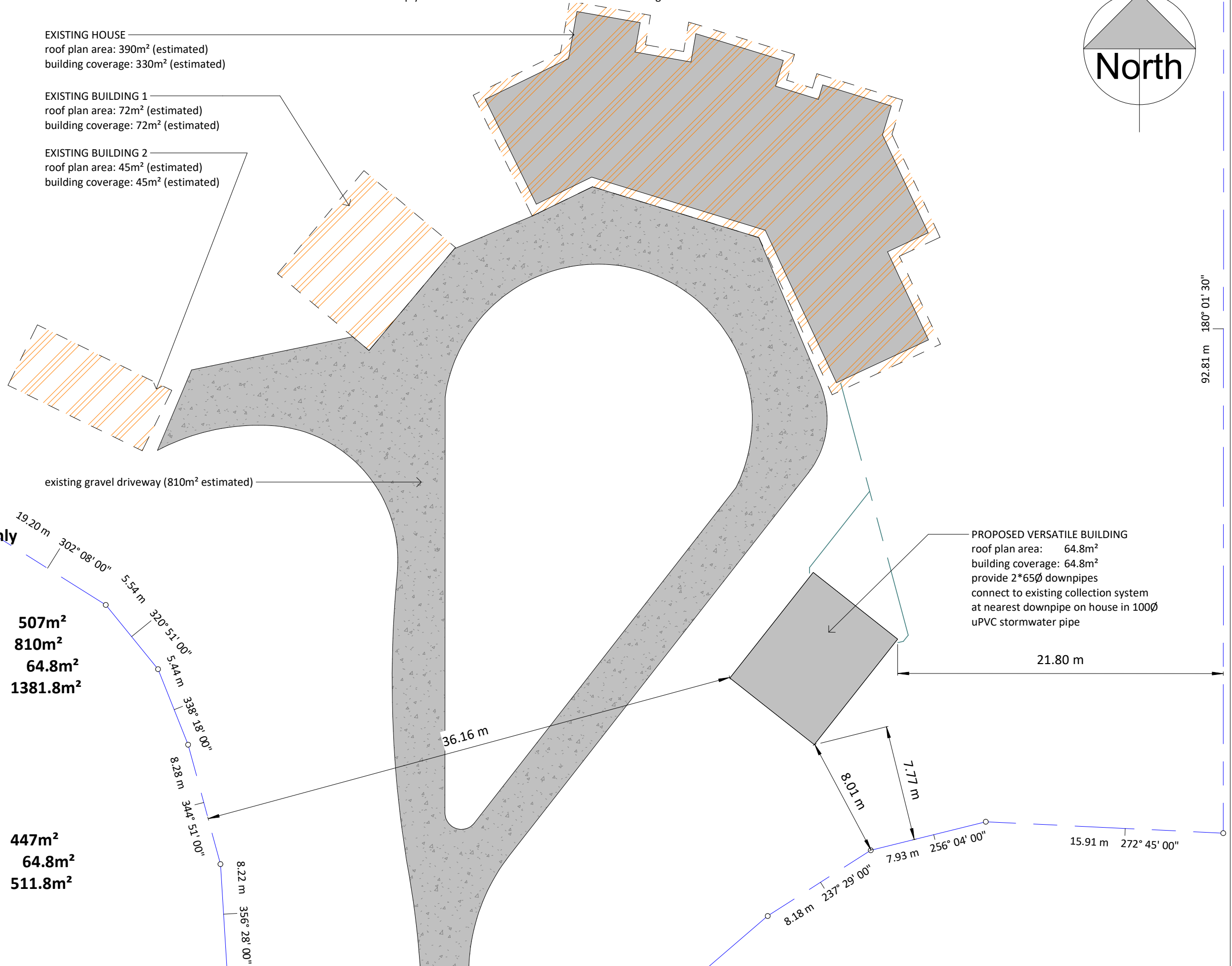
Existing roof area: **507m<sup>2</sup>**  
 Existing driveway: **810m<sup>2</sup>**  
 Proposed building roof area: **64.8m<sup>2</sup>**  
 Total Impermeable Area: **1381.8m<sup>2</sup>**  
 (12.48%)

**Permitted Activity maximum:**  
 the lesser of 12.5% or 3000m<sup>2</sup>  
 (12.5% of 1.1067ha = 1383m<sup>2</sup>)

#### Building Coverage:

Existing Buildings footprint: **447m<sup>2</sup>**  
 Proposed Building footprint: **64.8m<sup>2</sup>**  
 Total Building Coverage: **511.8m<sup>2</sup>**  
 (4.6%)

**Permitted Activity maximum:**  
 the lesser of 10% or 2400m<sup>2</sup>  
 (10% of 1.1067ha = 1107m<sup>2</sup>)



92.81 m 180° 01' 30"

21.80 m

36.16 m

7.77 m

8.01 m

15.91 m 272° 45' 00"

7.93 m

8.18 m

237° 29' 00"

8.22 m 356° 28' 00"

8.22 m 344° 51' 00"

8.22 m 344° 51' 00"

8.22 m 338° 18' 00"

5.44 m 320° 51' 00"

5.54 m 302° 08' 00"

19.20 m



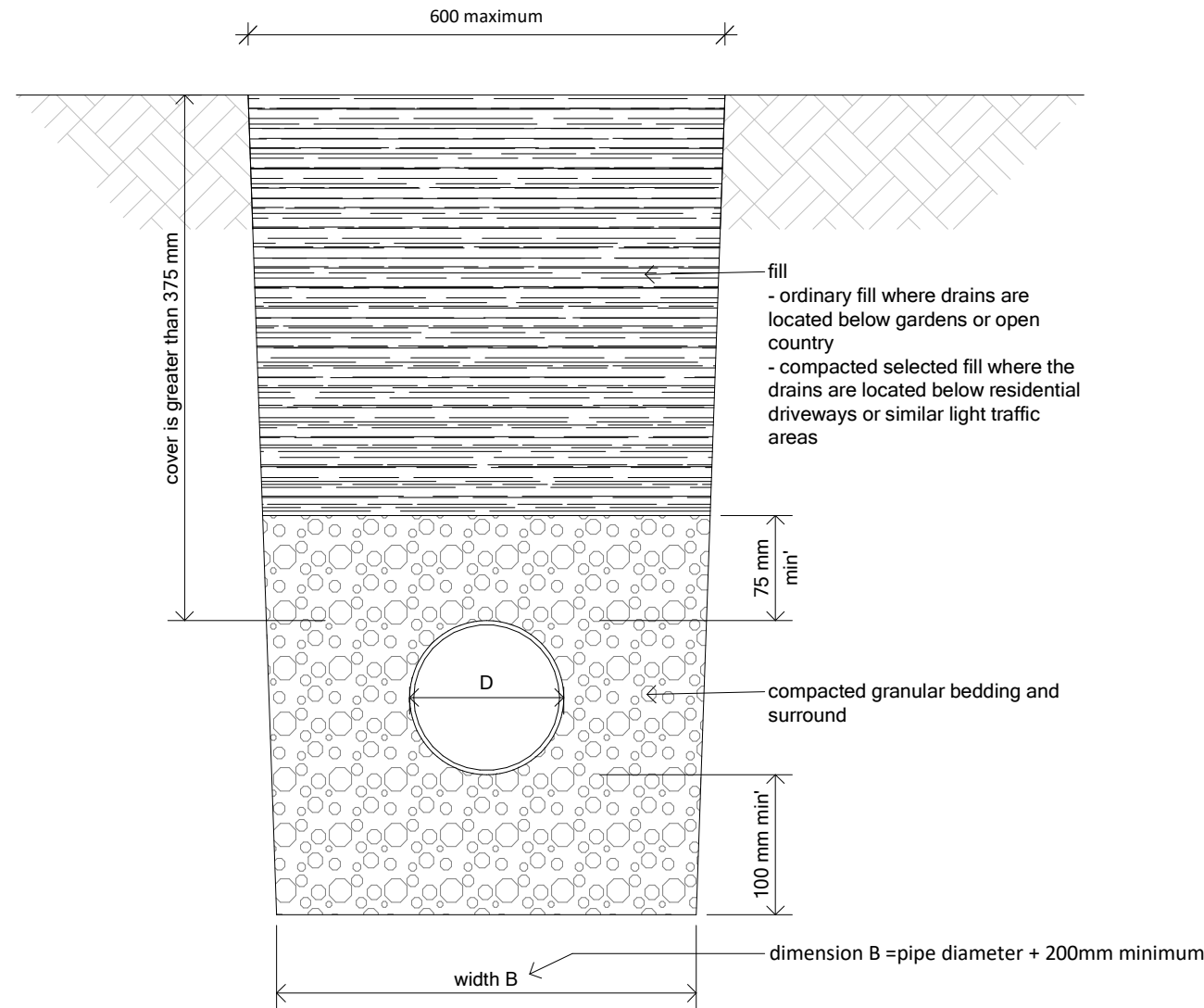
PROPOSED VERSATILE BUILDING FOR:  
**TERRELL**  
 114 WAIPAPA ROAD, KERIKERI

DRAWING TITLE:  
**PART SITE PLAN**

SCALE @ A3 1 : 250  
 DATE: JULY 2024  
 C.A.D. PROJECT #: V24639

SHEET No. **02**  
 OF 3

FNDC - Approved Building Consent Document - EBC-2025-45/0 - Pg 28 of 29 - 24/07/2024 - J.O



STORMWATER DRAIN GRADIENTS:  
 80Ø - 1:100 minimum  
 100Ø - 1:120 minimum  
 150Ø - 1:200 minimum  
 (all as per Table 2 E1/AS1)

**(b) Cover greater than 375mm**  
 Bedding type "D" of NZS 4452

where cover depth is less than 375mm but greater than 125mm  
 provide 75mm minimum of concrete instead of fill  
 depth of compacted granular bedding over pipe may then be  
 reduced to 50mm minimum

for trench width at top greater than 600mm provide 75mm  
 concrete instead of fill

Acceptable fill materials:

- bedding material of clean granular non-cohesive material with a maximum particle size of 20mm (eg pea gravel)
- selected compacted fill of any fine-grained soil or granular material which is free from topsoil and rubbish and has a maximum particle size of 20mm
- Ordinary fill which may comprise any fill or excavated material

refer also NZBC E1/AS1

REVISIONS:  
 -

## Stormwater Management Report

For proposed building

114 Waipapa Road

Lot 3 DP 167464

for

Jim Terrell

*Haigh Workman reference 24 165*

**28 August 2024 - Final**



**(a) Revision History**

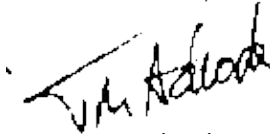
Revision N <sup>o</sup>	Issued By	Description	Date
	Alan Collins	Final	28 August 2024

Prepared by




Alan Collins  
Senior Civil Engineer  
MEngSt, BE (Hons)

Reviewed by



Tom Adcock  
Senior Civil Engineer  
BE (Civil), MEngNZ

Approved by



John Papesch  
Senior Civil Engineer  
CPEng, IntPE (NZ)

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## **1** *Executive Summary*

Haigh Workman Ltd was commissioned by Jim Terrell (the Client) to undertake a stormwater management report to support building consent application for a proposed building for 114 Waipapa Road. The building is to be built by Versatile Buildings.

The impervious surface area calculation shows 15.8% coverage making the proposed development a Controlled Activity.

Downstream stream inundation of certain buildings can be expected in a 1% AEP event. To not exacerbate the flood hazard, the 1% AEP event is to be attenuated.

The 2023 FNDC Engineering Standards were applied to calculated runoff effects for the 50%, 20%, and 1% AEP events. In order to attenuate to 80% predevelopment flowrate, 0.6L/s, 0.7L/s, and 1.3L/s is required to be detained in a 50%, 20%, and 1% AEP event respectively.

The required attenuation is achieved and exceeded with a standard 5000L detention tank collecting roof runoff from the proposed building. A single outlet orifice of 20mm diameter provides the necessary attenuation.

Outflows are to be directed to the northeast, mimicking the pre-development flow path.

## **2 Introduction**

Haigh Workman Ltd was commissioned by Jim Terrell (the Client) to undertake a stormwater management report to support building consent application for a proposed building (roof area 64.8m<sup>2</sup>). The proposed building is to be built by Versatile who have provided a site plan (see Appendix).

The Site as an existing dwelling and ancillary buildings with a total existing roof area of 507m<sup>2</sup>. A gravel culdesac driveway with parking area has an estimated area of 1080m<sup>2</sup>.

The Site is located at 114 Waipapa Road, Kerikeri in the Rural Living Zone. It is understood that the proposed development is a controlled activity in regard to impervious percentage (see Versatile drawing – Part Site Plan V243639 Sheet 02 in the Appendix)

### **2.1 Objective and Scope**

The objectives of this investigation were to:

- Review current regulation and stormwater neutrality requirements.
- Review flood hazard risk to downstream property.
- Conduct attenuation calculations.
- Propose detention tank design dimensions.

### **2.2 Limitations**

This report is intended to support the consent application with the Far North District Council. The information and opinions expressed in this report shall not be used in any other context without prior approval from Haigh Workman Ltd.

If at consent application the proposed development diverges from the provided scheme plan, the report will need to be revisited.

Haigh Workman Ltd does not take responsibility for factors that affect the engineering assessment of the proposed development that are not covered in the agreed brief.

### 3 Site Description

#### 3.1 Site Location

Site Address: 114 Waipapa Road

Legal Description: Lot 3 DP 167464

Total Site Area: 1.1067 ha



Figure 1: Site Plan view

#### 3.2 Site Features

The Site is built on the north side of Waipapa Road on a northeast facing incline (Approx. 4%). Runoff travels as sheet flow towards a swale within the western boundary of 13 Silkwood Lane. No: 13 has a Council 450mm culvert collecting the outfall and discharging into the Silkwood Lane swale. The swale continues along the

Silkwood Lane corridor to a stormwater pond at the end of the Lane. The overflow to this pond is an overland flowpath directly into the Waipapa River.

The soil on the Site is considered good draining and has historically been used for horticulture. The location of the proposed building currently has grass coverage.

Other infrastructure on the Site includes an existing dwelling, two smaller buildings, a gravel driveway and parking bay and a pool with patio area.

### **3.3 District Plan Zoning**

According to the Far North District Plan the Site is zoned as 'Rural Living'.

### **3.4 Proposed Development**

The proposed scheme plan can be found in the Appendix. A proposed building of 64.8m<sup>2</sup> roof coverage is to be built in an area of existing grass coverage.

No other alterations to the existing site layout are understood.



## 4 Stormwater Management

### 4.1 Impervious Surface Area

The proposed development will see the existing roof area and concrete access and parking area increased.

The Post Development impervious percentage is determined below:

Existing Roof Cover	507m <sup>2</sup>
Existing Pool Area	100m <sup>2</sup>
Existing Gravel Driveway and Parking	1080m <sup>2</sup>
Proposed Roof Cover	64.8m <sup>2</sup>
<b>Total Impervious</b>	<b>1715.8m<sup>2</sup></b>
<b>Total Site Area</b>	<b>11067m<sup>2</sup></b>
<b>Impervious Percentage</b>	<b>15.8%</b>

Under Rule 8.7.5.1.5 of the Far North Operative Plan, to be a Permitted Activity the maximum proportion of a gross site area in the Rural Living Zone that can be impermeable is 12.5%. The proposed development exceeds this provision.

Under Rule 8.7.5.2.2, to be a Controlled Activity the maximum proportion or amount of the gross site area covered by buildings and other impermeable surfaces shall be 20% or 3300m<sup>2</sup>, whichever is the lesser. The proposed development meets this provision.

The proposed development is considered a **Controlled Activity**. Rule 8.7.5.2.2 states that stormwater mitigation is required. While the Operative District Plan references the Verification Method E1/VM1 in the NZ Building Code as the design standard, it is understood that the FNDC Engineering Standards are now preferred.

### 4.2 Stormwater Quantity Control

#### 4.2.1 Regulative Framework

The 2023 Far North Engineering Standards allows for the Rational Method for assessing runoff effects, with C values that are more suited for Far North Conditions detailed in Table 4-3. Table 4-1 stipulates that the 50% and 20% AEP event is to be attenuated to 80% predevelopment flowrate. It is understood from previous Haigh Workman projects that this refers only to the land being developed and not to the entire lot area.

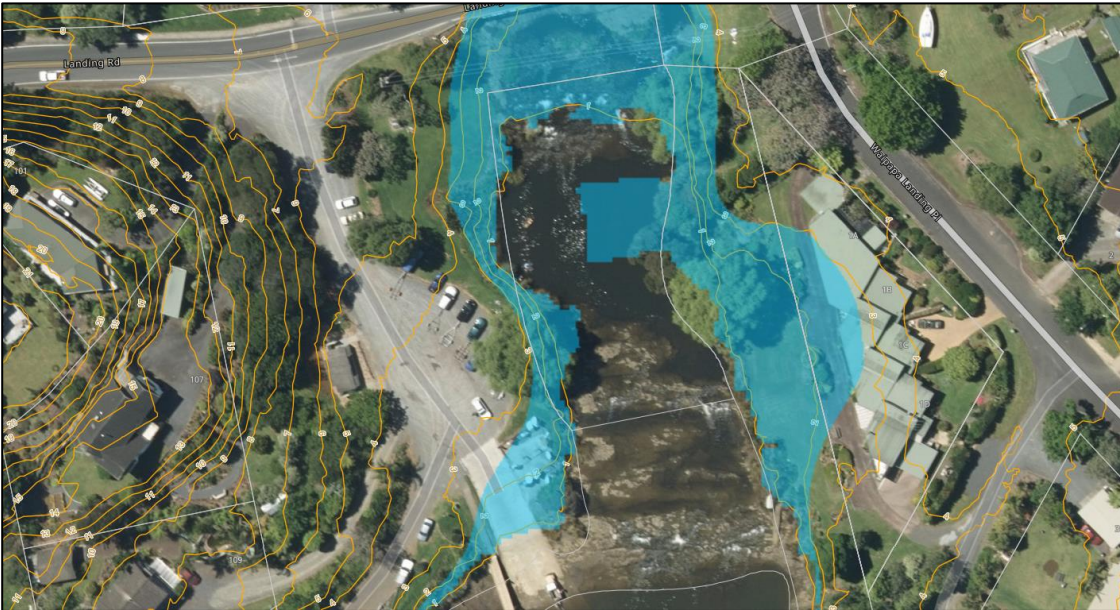
Where flood is required, the 1% AEP event is to be detained to the 80% pre-development flowrate.

The historical flood data can be used. The 80% pre-development flowrate requirement is adequate allowance for climate change.

Rule C.6.4.2 of the Northland Regional Plan provides for the diversion and discharge of stormwater from outside a public stormwater network provided (amongst other conditions) the diversion and discharge does not cause or increase flooding of land on another property in a storm event of up to and including a 10 percent annual exceedance probability or flooding of buildings on another property in a storm event of up to and including a one percent annual exceedance probability.

#### 4.2.2 Downstream Flooding Risk

Stormwater from the Site traverses as sheet flow in the northeast direction towards the Waipapa River. The NRC Priority River Model for the Waipapa River shows inundation for several bankside dwellings in a 1% AEP flood event (with climate change allowance). For example, 1 Waipapa Landing Place (see Figure 2). Because of the downstream flood risk, and because of the long time of concentration in comparison with the catchment length, it is necessary to provide attenuation to 80% pre-development flowrates in a 1% AEP + CC event to comply with Table 4-1 in the 2023 FNDC Engineering Standards



**Figure 2: Downstream Flooding Risk to buildings in a 1% AEP event.**

#### 4.2.3 Runoff Effects

Runoff effects for the 50%, 20% and 1% AEP events (10 min intensity) were assessed for changes in flowrate. Rainfall intensities are taken from the NIWA HIRDS database using the historical data. Runoff Coefficients were taken from Table 4-3 in FNDC Engineering Standards.

### Post-Development Runoff

	Area m <sup>2</sup>	C	I5 mm/hr	Q5 L/s	I <sub>100</sub> mm/hr	Q <sub>100</sub> L/s	I <sub>2</sub> mm/hr	Q <sub>2</sub> L/s
Proposed Roof Area	64.8	0.96	84.6	1.5	147	2.5	65.4	1.1
Existing Roof Area	507	0.96	84.6	11.4	147	19.9	65.4	8.8
Existing Gravel Driveway	1080	0.74	84.6	18.8	147	32.6	65.4	14.5
Open Space (75%+ grass coverage), Type C soil	9415.2	0.59	84.6	130.5	147	226.8	65.4	100.9
<b>Total</b>	<b>11067</b>			<b>162.2</b>		<b>281.9</b>		<b>125.4</b>

### Pre-Development Runoff

	Area m <sup>2</sup>	C	I5 mm/hr	Q5 L/s	I <sub>100</sub> mm/hr	Q <sub>100</sub> L/s	I <sub>2</sub> mm/hr	Q <sub>2</sub> L/s
Roof Area	507	0.96	84.6	11.4	147	19.9	65.4	8.8
Gravel Pavement	1080	0.74	84.6	18.8	147	32.6	65.4	14.5
Open Space (75%+ grass coverage), Type C soil	9480	0.59	84.6	131.4	147	228.4	65.4	101.6
<b>Total</b>	<b>11067</b>			<b>161.7</b>		<b>280.9</b>		<b>125.0</b>
Excess run-off				<b>0.6</b>		<b>1.0</b>		<b>0.4</b>
<b>Required Attenuation (to 80% predevelopment)</b>				<b>0.7</b>		<b>1.3</b>		<b>0.6</b>

In order to detain flowrate in accordance with Table 4-1 of the FNDC Engineering Standards 2023, 0.6L/s, 0.7L/s, and 1.3L/s needs to be attenuated in a 50%, 20%, and 1% AEP respectively.

#### 4.2.4 Stormwater Detention Tank Details

The detention calculation was conducted using a 6-hour nested design storm for the historic rainfall intensities for the 50%, 20%, and 1% AEP events.

It is proposed that a standard 5000L HDPE tank (with standard 1.9m diameter) be utilised for the detention tank. The intake of the detention tank is to be the roof water collection of the proposed building (64.8m<sup>2</sup> roof area). With a 20mm internal diameter outlet orifice set 100mm above the invert of the tank. The achieved attenuation is 0.7L/s, 0.7L/s, and 1.8L/s for the 50%, 20%, and 1% AEP events respectively.

The maximum storage expected in the tank is 2.433m<sup>3</sup> in a 1% AEP event. An emergency overflow (100mm diameter) is to be positioned at the top of the tank in case of blockage. An access hatch is required for inspecting and cleaning the outlet orifice.

Outflows are to be directed in the northeast direction and dispersed with a T bar disperser laid parallel with the contours.

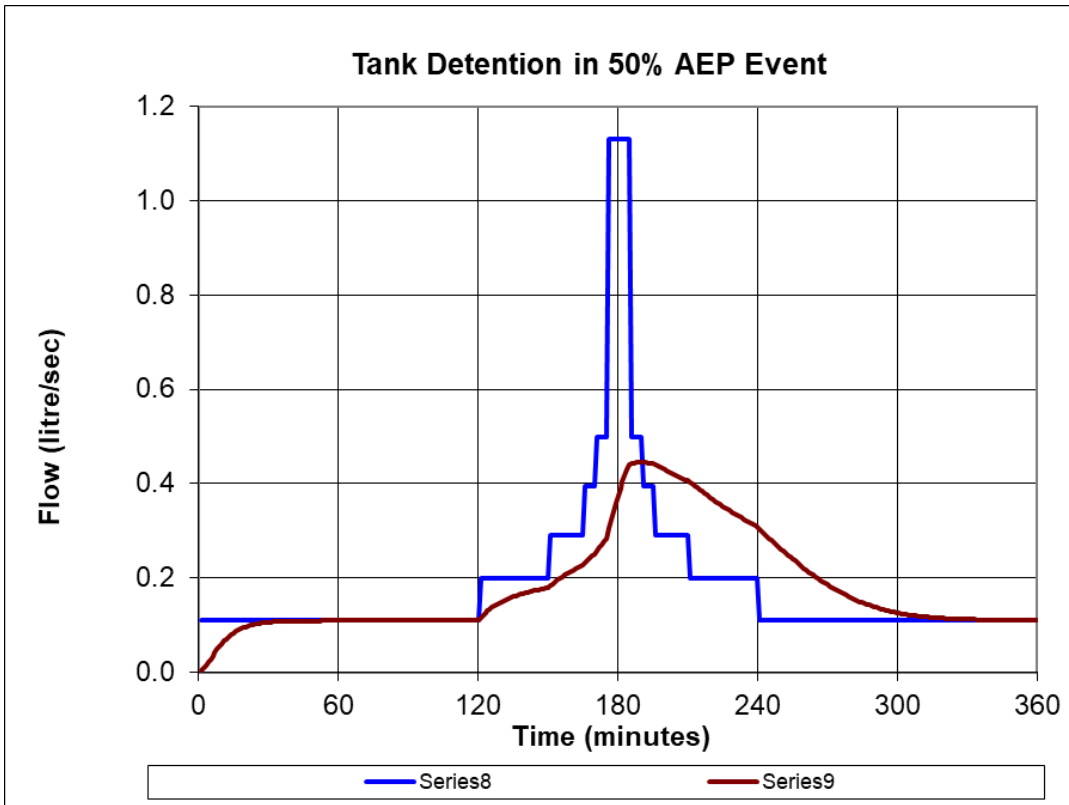


Figure 3: Attenuation in 50% AEP event.

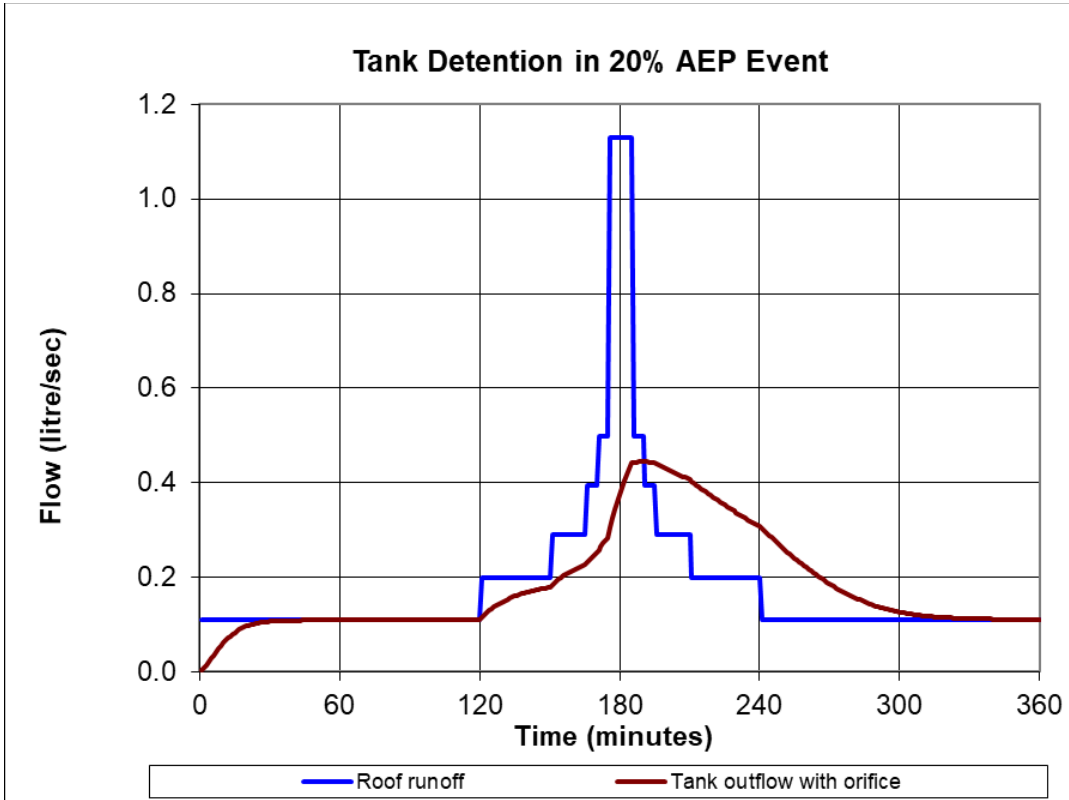


Figure 4: Attenuation in a 20% AEP event.

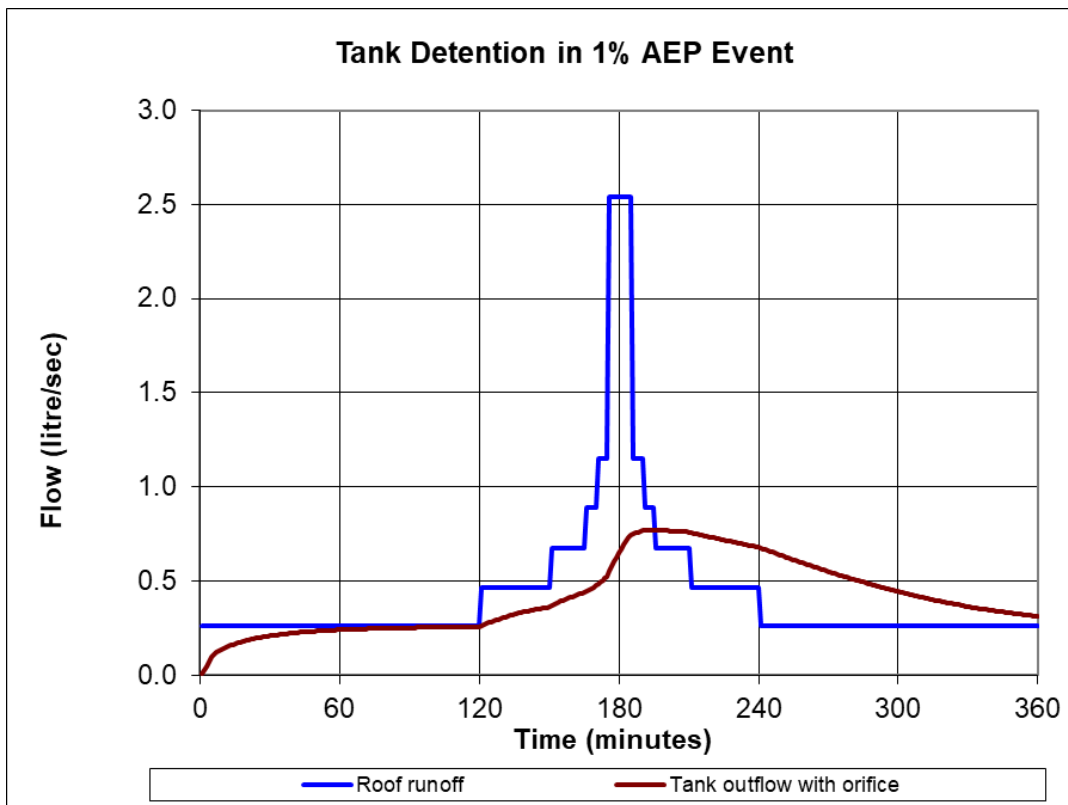


Figure 5: Attenuation in a 1% AEP event.

#### 4.2.5 Consideration for the 10% AEP event

Standard 4.1.3(e) in the 2023 Engineering Standards states that primary stormwater systems shall be capable of conveying a 10% AEP event without surcharge. Stormwater is discharged into a swale on the Silkwood Lane corridor. The swale is of a good size and is judged to have capacity for a 10% AEP event.

Attenuation calculations of a 10% AEP event was not considered necessary as the required detention is likely to be achieved with attenuating the 20% and 1% AEP events.

### 4.3 Assessment Criteria

Assessment Criteria is taken from 11.3 of the FNDC Operative Plan:

Assessment	Comment	Acceptable
(a) The extent to which building site coverage and impermeable surfaces result in increased stormwater runoff and contribute to total catchment impermeability and the provisions of any catchment or drainage plan for that catchment.	The proposed detention tank system will mitigate any quantity effects.	Y
(b) The extent to which Low Impact Design principles have been used to reduce site impermeability.	The increase in impermeable surface is limited to the roof coverage of the proposed building. The dimensions of the access and parking areas are to remain unchanged.	Y
(c) Any cumulative effects on total catchment impermeability.	Not applicable.	N/A
(d) The extent to which building site coverage and impermeable surfaces will alter the natural contour	The are no changes to the natural contour or drainage patterns proposed.	Y

or drainage patterns of the site or disturb the ground and alter its ability to absorb water.		
(e) The physical qualities of the soil type.	Not applicable.	N/A
(f) Any adverse effects on the life supporting capacity of soils.	Not applicable.	N/A
(g) The availability of land for the disposal of effluent and stormwater on the site without adverse effects on the water quantity and water quality of water bodies (including groundwater and aquifers) or on adjacent sites.	The soil is not considered suitable for a soakage bed. However, some infiltration and evapotranspiration can be expected in the Silkwood Lane swale.	Y
(h) The extent to which paved, impermeable surfaces are necessary for the proposed activity.	The only new impermeable surface proposed is the roof for the proposed dwelling.	Y
(i) The extent to which landscaping may reduce adverse effects of run-off.	A small amount of landscaping is to be expected with residential usage. This has not been factored into the runoff effect calculation for the sake of conservatism.	Y
(j) Any recognised standards promulgated by industry groups	Not applicable.	N/A
(k) The means and effectiveness of mitigating stormwater run-off to that expected by the permitted activity threshold.	The existing infrastructure of the Site already exceeds the Permitted Activity threshold so it is not feasible.	N/A
(l) The extent to which the proposal has considered and provided for climate change.	Attenuation calculations were conducted using the NIWA HIRDS Historical Data. As per the 2023 Engineering Standards, attenuation is required to return flowrates to 80% predevelopment. This 20% discount is adequate allowance for the effects of climate change.	Y
(m) The extent to which stormwater detention ponds and other engineering solutions are used to mitigate any adverse effects.	A 5L detention tank is demonstrated to mitigate all stormwater quantity effects.	Y



## *Appendix A – Scheme Plan*

**Project Information:**

**Lot 3**  
**DP167464**  
**Area: 1.1067ha**  
**Val'n No. 00213-28800**

**Wind Zone: HIGH**  
*A/Open/Exposed/T1*  
 as per NZS3604:2011 Section 5.2

**Exposure Zone: C**  
**District Plan Zone:**  
**Rural Living**

**Earthworks: for foundations only**

**STORMWATER MANAGEMENT**

**Impermeable Surfaces:**

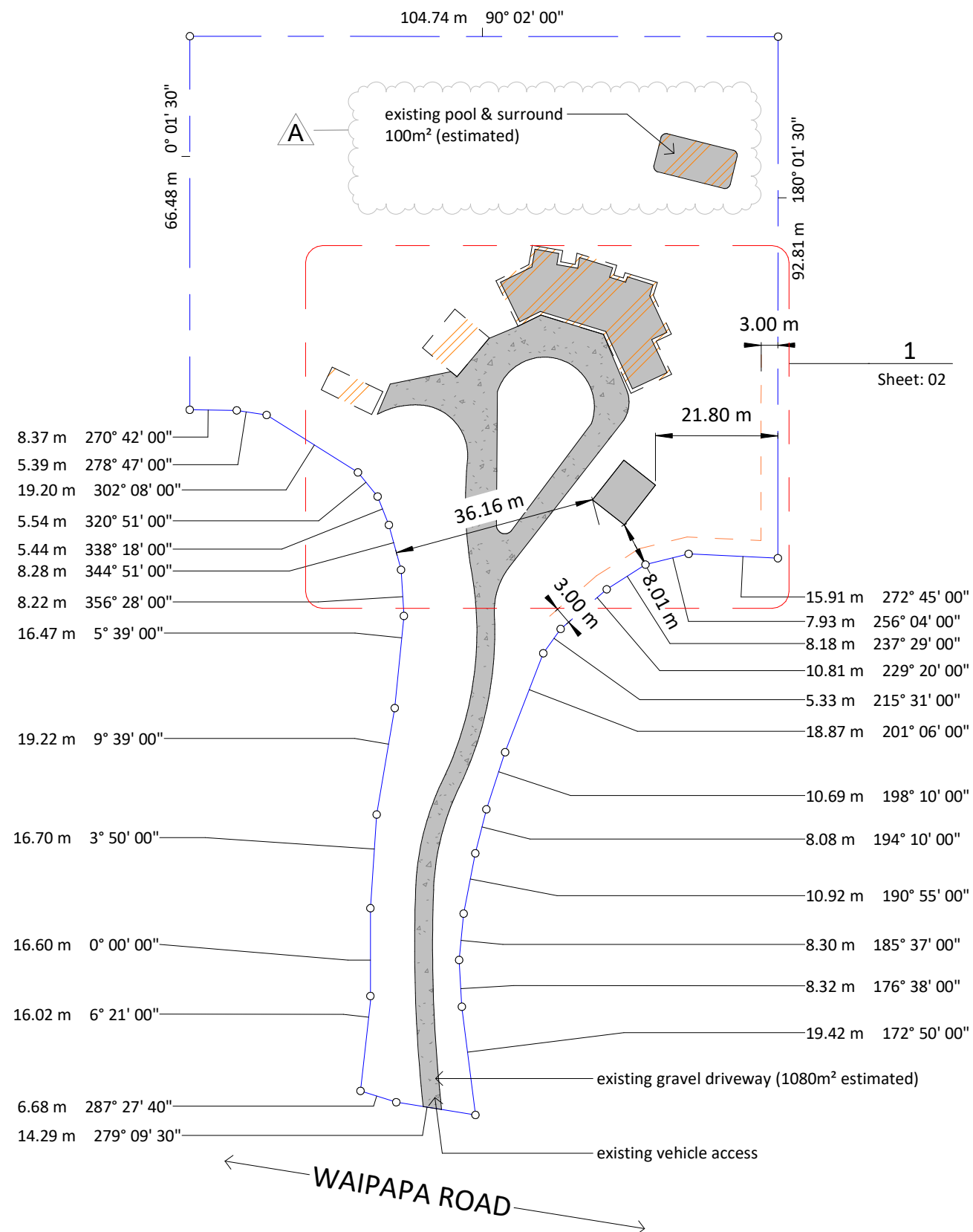
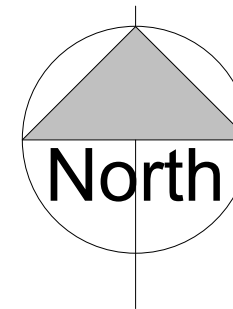
Existing roof area: **507m<sup>2</sup>**  
 Existing driveway: **1080m<sup>2</sup>**  
 Existing pool: **100m<sup>2</sup>**  
 Proposed building roof area: **64.8m<sup>2</sup>**  
 Total Impermeable Area: **1751.8m<sup>2</sup>**  
**(15.8%)**

**Permitted Activity maximum:**  
 the lesser of 12.5% or 3000m<sup>2</sup>  
**(12.5% of 1.1067ha = 1383m<sup>2</sup>)**

**Building Coverage:**

Existing Buildings footprint: **447m<sup>2</sup>**  
 Proposed Building footprint: **64.8m<sup>2</sup>**  
 Total Building Coverage: **511.8m<sup>2</sup>**  
**(4.6%)**

**Permitted Activity maximum:**  
 the lesser of 10% or 2400m<sup>2</sup>  
**(10% of 1.1067ha = 1107m<sup>2</sup>)**



1  
 Sheet: 02

REVISIONS:  
 A 24.07.24 Show existing pool, update Impermeable Surfaces calculation



PROPOSED VERSATILE BUILDING FOR:  
**TERRELL**  
 114 WAIPAPA ROAD, KERIKERI

DRAWING TITLE:  
**SITE PLAN**

SCALE @ A3 DATE: JULY 2024  
 1 : 1000  
 C.A.D. PROJECT #: V24639

SHEET No. **01**  
 OF 3

**Project Information:**

**Lot 3**  
**DP167464**  
**Area: 1.1067ha**  
**Val'n No. 00213-28800**

**Wind Zone: HIGH**  
*A/Open/Exposed/T1*  
 as per NZS3604:2011 Section 5.2

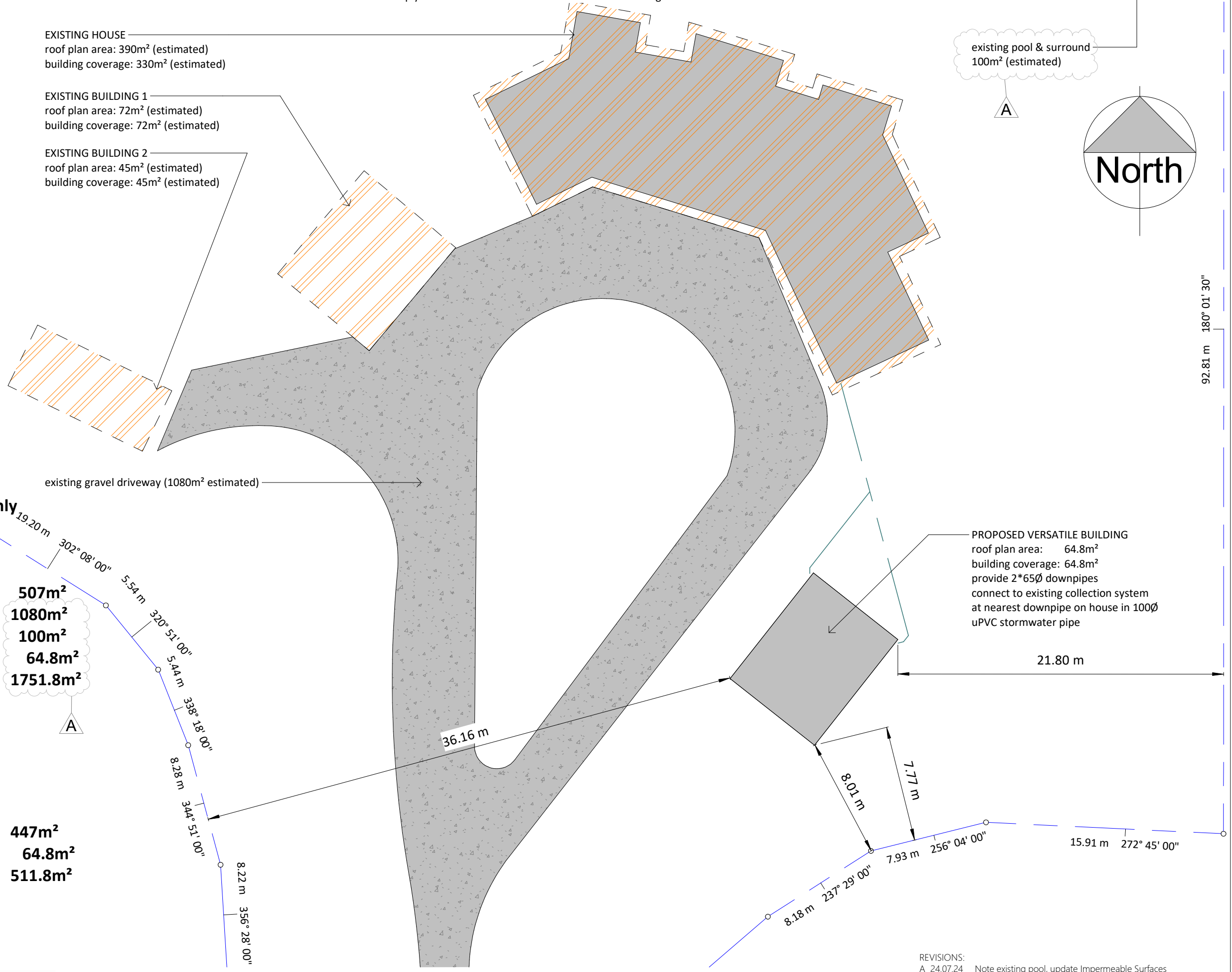
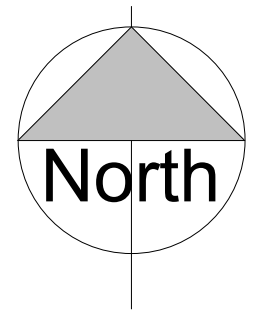
**Exposure Zone: C**  
**District Plan Zone:**  
 Rural Living

**EXISTING HOUSE**  
 roof plan area: 390m<sup>2</sup> (estimated)  
 building coverage: 330m<sup>2</sup> (estimated)

**EXISTING BUILDING 1**  
 roof plan area: 72m<sup>2</sup> (estimated)  
 building coverage: 72m<sup>2</sup> (estimated)

**EXISTING BUILDING 2**  
 roof plan area: 45m<sup>2</sup> (estimated)  
 building coverage: 45m<sup>2</sup> (estimated)

existing pool & surround  
 100m<sup>2</sup> (estimated)



**Earthworks: for foundations only**

**STORMWATER MANAGEMENT**

**Impermeable Surfaces:**  
 Existing roof area: 507m<sup>2</sup>  
 Existing driveway: 1080m<sup>2</sup>  
 Existing pool: 100m<sup>2</sup>  
 Proposed building roof area: 64.8m<sup>2</sup>  
**Total Impermeable Area: 1751.8m<sup>2</sup>**  
 (15.8%)  
**Permitted Activity maximum:**  
 the lesser of 12.5% or 3000m<sup>2</sup>  
 (12.5% of 1.1067ha = 1383m<sup>2</sup>)

**Building Coverage:**  
 Existing Buildings footprint: 447m<sup>2</sup>  
 Proposed Building footprint: 64.8m<sup>2</sup>  
**Total Building Coverage: 511.8m<sup>2</sup>**  
 (4.6%)  
**Permitted Activity maximum:**  
 the lesser of 10% or 2400m<sup>2</sup>  
 (10% of 1.1067ha = 1107m<sup>2</sup>)

REVISIONS:  
 A 24.07.24 Note existing pool, update Impermeable Surfaces calculation

92.81 m 180° 01' 30"

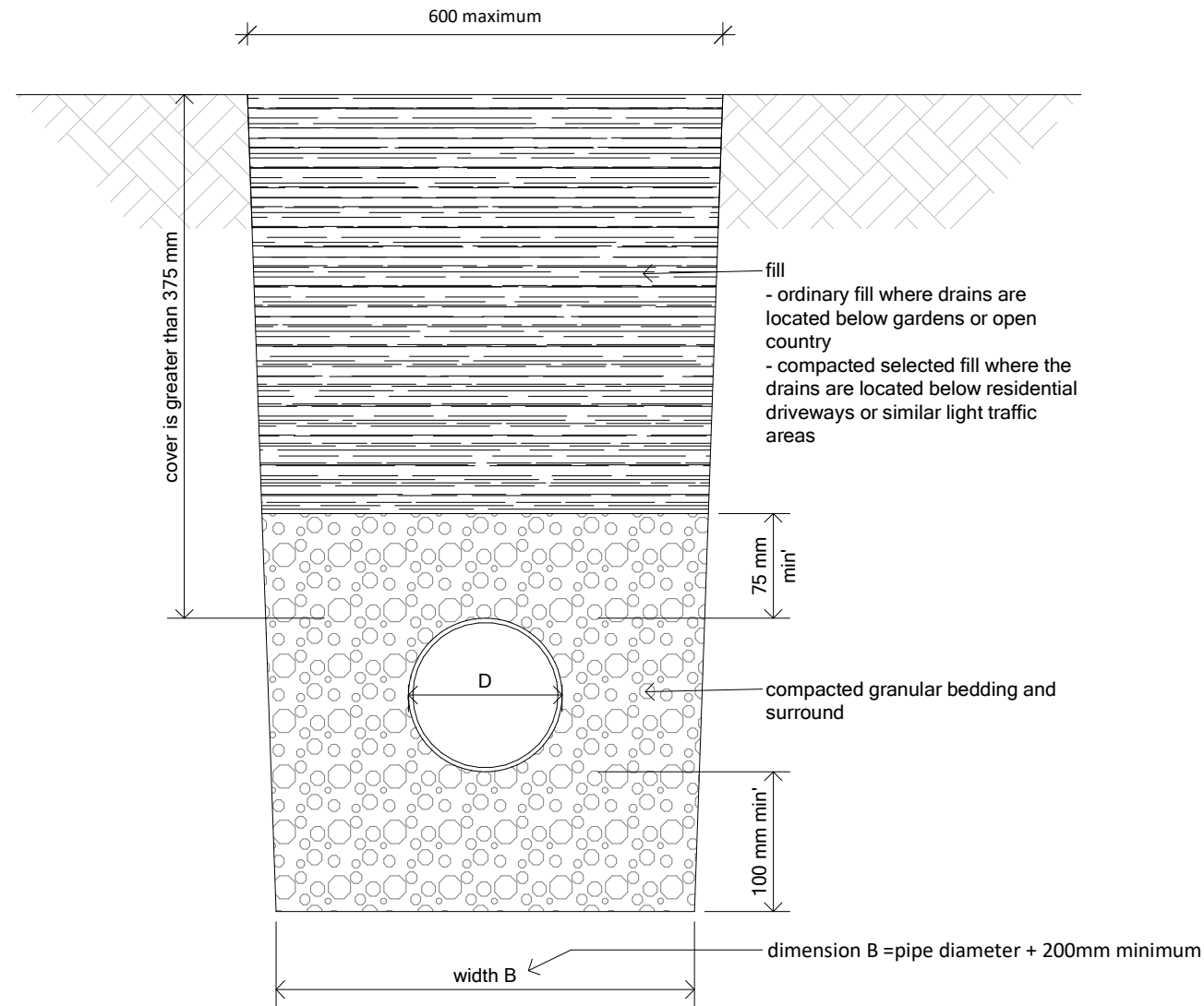


PROPOSED VERSATILE BUILDING FOR:  
**TERRELL**  
 114 WAIPAPA ROAD, KERIKERI

DRAWING TITLE:  
**PART SITE PLAN**

SCALE @ A3  
 1 : 250  
 DATE:  
 JULY 2024  
 C.A.D. PROJECT #:  
**V24639**

SHEET No.  
**02**  
 OF  
 3



STORMWATER DRAIN GRADIENTS:  
 80Ø - 1:100 minimum  
 100Ø - 1:120 minimum  
 150Ø - 1:200 minimum  
 (all as per Table 2 E1/AS1)

**(b) Cover greater than 375mm**  
 Bedding type "D" of NZS 4452

where cover depth is less than 375mm but greater than 125mm  
 provide 75mm minimum of concrete instead of fill  
 depth of compacted granular bedding over pipe may then be  
 reduced to 50mm minimum

for trench width at top greater than 600mm provide 75mm  
 concrete instead of fill

Acceptable fill materials:

- bedding material of clean granular non-cohesive material with a maximum particle size of 20mm (eg pea gravel)
- selected compacted fill of any fine-grained soil or granular material which is free from topsoil and rubbish and has a maximum particle size of 20mm
- Ordinary fill which may comprise any fill or excavated material

refer also NZBC E1/AS1

REVISIONS:  
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