

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 [Form 9](#)). 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):

- | | |
|--|---|
| <input type="radio"/> Land Use | <input type="radio"/> Discharge: Total volume = <input type="text" value=""/> m ³
<i>Note; volumes >3m³ requires NRC Consent.</i> |
| <input type="radio"/> Fast Track Land Use* | <input type="radio"/> Subdivision |
| <input type="radio"/> Change of Consent Notice (s.221(3)) | <input type="radio"/> Existing Use Certificate (s.139A) |
| <input type="radio"/> Certificate of Compliance (s.139) | <input type="radio"/> Consent under National Environmental Standard
(e.g. Assessing and Managing Contaminants in Soil) |
| <input type="radio"/> Extension of time (s.125) | |
| <input type="radio"/> Other (please specify) <input type="text" value=""/> | |

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

3. Would you like to opt out of the fast track process?

Yes No

4. Consultation

Have you consulted with Iwi/Hapū? Yes No

If yes, which groups have you consulted with?

Who else have you consulted with?

For any questions or information regarding iwi/hapū consultation, please contact:
The Resource Consents Planning Technicians, planning_technicians@fndc.govt.nz

5. Applicant details

Name/s:

Jake Currin & Ella Harris

Email:

Phone number:

Postal address:

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

Have you been the subject of abatement notices, enforcement orders, infringement notices and/or convictions under the Resource Management Act 1991? Yes No

If yes, please provide details.

6. Address for correspondence

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

Name/s:

KPN Consultants Ltd - Kim Nathan

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.

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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:

Property address/
location:

8. Application site details

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

Name/s:

Site address/
location:

 Postcode

Legal description:

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.

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.

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.

The proposal has been prepared in accordance with the following version of the FNDC Engineering Standards:

2009 2023

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

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

Disturbing, removing or sampling soil

Changing the use of a piece of land

Removing or replacing a fuel storage system

13. Natural hazards (National Policy Statement for Natural Hazards 2025)

Is the site subject to known or potential natural hazards (for example, flooding, coastal inundation, erosion, or unstable land), as contemplated by the National Policy Statement for Natural Hazards 2025? Yes No

If yes, please identify the relevant natural hazard(s) by ticking the applicable box(es) below:

Flooding

Active Faults

Landslips

Liquefaction

Coastal Erosion

Tsunami

Coastal Inundation

Please ensure all relevant technical reports are submitted with the application.

14. 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

15. Draft conditions:

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

If yes, please be advised that the timeframe will be suspended for 5 working days as per s107G of the RMA to enable consideration for the draft conditions.

16. 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)	Jake Currin & Ella Harris
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)	Jake Currin	
Signature: (signature of bill payer)		Date 25/06/2026

MANDATORY

17. Important Information:

Note to applicant

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

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

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

Fast-track application

Under the fast-track resource consent process, notice of the decision must be given within 10 working days after the date the application was first lodged with the authority, unless the applicant opts out of that process at the time of lodgement.

A fast-track application may cease to be a fast-track application under section 87AAC(2) of the RMA.

Privacy Information:

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

18. Declaration

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

Name (please write in full)	Kim Nathan	
Signature		Date 25/06/2026

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

See overleaf for a checklist of your information...

Checklist of your information

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.*

Resource Consent Application

Jake Currin & Ella Harris

Lot 10, Wagener Grove

Pukenui

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June 2026



Application and Property Details

Applicant:	Jake Currin & Ella Harris
Site Address:	Lot 10 Wagener Grove, Pukenui
Agents Details:	KPN Consultants Limited PO Box 836 Whangarei 0140
Submission Date:	
Legal Description and C/T:	Lot 10 DP 323666 and 1/11 share in Lot 13 DP 323666 (95372)
Site Area:	1.0052ha + 1/11 share of 6224m ²
Operative Plans Applying:	Far North District Plan
Zoning:	Coastal Living
Proposed Plans Applying:	Proposed District Plan
Zoning:	Rural Lifestyle
Controls/Overlays:	Treaty Settlement Area of Interest (Ngati Takoto, Ngati Kuri & Te Aupouri)
Other Applications Required:	-

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1.0 Introduction

The proposal is a land use consent to construct a new residential dwelling on the application site.

2.0 Site and Locality Description

2.1 Site Description

The application site is Lot 10 on Wagener Grove, Pukenui. The lot was created as part of a recent 11 lot subdivision which was completed in 2005 under RC2010082.

The application site is just over 1 hectare in area and is of relatively flat topography.

The application site largely remains undeveloped and is maintained in grass. A minor cabin placed on above-ground skids, water tank, and two shipping containers are situated near the south-western boundary corner. There are existing vegetation and landscape planting within the site, the majority along the boundaries of the allotment as can be seen in the photo (Figure 1) below.

The application site is not located within the coastal environment, nor is it visible from the Houhora Harbour, which is located over 850 metres east from the site. The township of Pukenui is located approximately 2 kilometres south-east of the subject site.



Figure 1: Aerial Photograph of the application site and surrounds (FNDC GIS)

2.2 Locality Description

The surrounding environment is made up of similar sized allotments, some of which have been developed and contain single residential dwellings, while others remain vacant.

3.0 Proposal / Background

3.1 Relevant Background

The application site is held in record of title 95372 (**Appendix B**) and was created under a recent subdivision proposal RC2010082.

The subject site is 1.0052 hectares in area and has a 1/11th share of Lot 13 (Wagener Grove).

Consent Notice 6290071.3 is registered on the property's Title. The consent notice is attached to this application (**Appendix B**). The conditions are in relation to the following summations:

- i. Maintain the trees and/or shrubs comprised in the approved landscaping.
- ii. Comply on an on-going basis with the duties and obligations imposed by way of the provisions of the document prepared in compliance with Condition (3)(j) of RC2010082 dated 9 July 2001.
- iii. Lots 1 and 11 are to form access only off Lot 13.
- iv. Undertake any maintenance by the stormwater management plan as prepared and implemented under Condition (3)(b) of RC2010082 dated 9 July 2001.
- v. Any subsequent re-subdivision of the allotments will be assessed for its contribution toward providing an urban solution to the stormwater control within the area of the original subdivision.

The approved landscaping was established under RC2010082 and is maintained along the boundaries.

Conditions (ii) and (iv) relate to the stormwater management of Lots 12 and 13 (Wagener Grove – private accessway). The stormwater management was implemented as part of the subdivision works for RC2010082 and is being complied with.

Conditions (iii) and (v) are not applicable.

The applicants will comply with the relevant consent notice conditions on an on-going basis.

3.2 The Proposal

The proposal is to construct a new residential dwelling on the application site, the plans of which are included in **Appendix A**.

The dwelling is single storey in nature and modern in design, consisting of 3-bedrooms, two bathrooms and an open plan living/kitchen/dining area, having a total floor area of 240m², including an internal double garage, plus two covered areas at each end of the building.

The dwelling will gain access via an existing JOAL (Lot 13 DP 323666 'Wagener Grove') and there is plenty of room within the site for parking and vehicle manoeuvring.

On-site servicing is proposed as described in **Appendices D and F**. Wastewater will be disposed of on-site via a secondary treatment system. Impervious surfaces will be tank attenuated before discharge via spreader.

2 x 25,000 litre water tanks will provide adequate water supply.

4.0 Reasons for the Application

4.1 Far North District Plan (Operative)

The site is zoned within the Coastal Living Zone within the Operative District Plan.

Rule 10.7.5.1.1 Visual Amenity requires that the gross floor area of any new building(s) does not exceed 50m². The proposed building has a total area of 337.4m², therefore not complying with this requirement.

There is no approved building envelope on the application site, therefore the proposed development does not comply with the controlled activity standard either.

Rule 10.7.5.1.6 Stormwater Management requires that the maximum proportion or amount of the gross floor area which may be covered by buildings and other impermeable surfaces shall be 10% or 600m² whichever is lesser.

The total impermeable surfaces within Lot 10 is 1121.8m², consisting of House (including carports) of 337.4m² and Gravel Drive of 784.4m² (being approximately 11%).

This increases further once the shares in the JOAL Lot 13 (Wagener Grove – private accessway) is also included to approximately 16%. However, it is noted that the stormwater management for Lot 13 for the impermeable surfaces was implemented as part of the approved subdivision consent (RC2010082).

The proposed development meets all other relevant rules regarding development under the District Plan.

A full assessment of the relevant District Plan rules is included in **Appendix C**.

4.2 Proposed District Plan (PDP)

The proposed development/activity is subject to the PDP provisions.

The PDP was publicly notified on the 27th of July 2022. The submissions and further submission periods have now closed.

PDP hearings have been underway since May 2024, however no decision on the submissions has been notified as yet.

As no decisions on the submissions have yet been made, little weight is attributed to the proposed provisions at this time.

The proposed zoning for the application site is Coastal Living.

The site also identified as a Treaty Settlement Area of Interest.

An assessment of the proposed development/activity against the PDP rules that have immediate legal effects are set out below:

<u>RULE</u>	<u>COMPLIANCE</u>
Hazardous Substances	
The following rules have immediate legal effect: 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. Rules HS-R5, HS-R6, HS-R9	Not applicable.
Heritage Area Overlays	
All rules have immediate legal effect (HA-R1 to HA-R14) All standards have immediate legal effect (HA-S1 to HA-S3)	Not applicable.
Historic Heritage	
All rules have immediate legal effect (HH-R1 to HH-R10). Schedule 2 has immediate legal effect.	Not applicable

Notable Trees	
All rules have immediate legal effect (NT-R1 to NT-R9)	The proposal will comply with these requirements; no pruning or removal is proposed. No works will be undertaken within the rootzone of the notable tree.
Sites and Areas of Significance to Maori	
All rules have immediate legal effect (SASM-R1 to SASM-R7) Schedule 3 has immediate legal effect.	Not applicable. The site does not contain any scheduled sites or areas of significance to Māori.
Ecosystems and Indigenous Biodiversity	
All rules have immediate legal effect (IB-R1 to IB-R5)	Not applicable. The site does not contain any known ecosystems or indigenous biodiversity to which these rules would apply.
Subdivision	
The following rules have immediate legal effect: SUB-R6, SUB-R13, SUB-R14, SUBR15, SUB-R17.	Not applicable.
Activities on the Surface of Water	
All rules have immediate legal effect (ASW-R1 to ASW-R4).	Not applicable
Earthworks	
The following rules have immediate legal effect: EW-R12, EW-R13 The following standards have immediate legal effect: EW-S3, EW-S5.	All earthworks in all zones are subject to Accidental Discovery Protocol standards EW-S3 and sediment control standards EW-S5. Any earthworks will be undertaken in accordance with these standards.
Signs	
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	Not applicable – no signage is proposed
Orongo Bay Zone	
Rule OBZ-R14 has partial immediate legal effect because RD1(5) relates to water	Not applicable

4.3 Overall Status of the Application

Overall, the status of the application is considered to be a Discretionary Activity.

5.0 Application Assessment

5.1 Statutory Considerations

5.1.1 Relevant Section of the RMA

When considering an application for a Discretionary activity the Council as consent authority must have regard to Part 2 of the RMA (“Purposes and Principles” – sections 5 to 8), and sections 104, 104B and 108 of the RMA.

Subject to Part 2 of the RMA, when considering an application for resource consent and any submissions received the Council must, in accordance with section 104(1) of the RMA have regard to the matters addressed in 5.2 – 5.7 below.

5.2 Section 104(1)(a) Actual and Potential Effects on the Environment

Section 104(1)(a) of the RMA requires that a council have regard to any actual and potential effects on the environment of allowing the activity.

5.2.1 Permitted Baseline / Existing Environment

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

The permitted baseline refers to activities permitted on the subject site including activities that could be conducted on the site without resource consent. The existing environment includes activities that could be carried out under a granted but unexercised resource consent. Application of the permitted baseline test is discretionary and allows adverse effects arising from these activities to be disregarded and only adverse effects arising from the proposal over and above the permitted baseline are to be assessed. The existing environment is not discretionary; and it forms the backdrop for assessing the effects of the proposal on the environment; the only exception being if it was unlikely that an unimplemented consent would be implemented.

With respect to the application site, there is no permitted baseline, as even a building with a gross floor area less than 50m² would not comply with the stormwater management rule (Rule 10.7.5.1.6) as a result of the JOAL’s Lot 13 (Wagener Grove – private accessway) being included.

A resource consent (Council’s reference: 2260185-RMALUC) has previously been granted for the site (**Appendix G**) to construct a residential unit breaching visual amenity and stormwater management in the coastal living zone as a discretionary activity. However, the applicant has changed the plans of the dwelling, therefore consent 2260185-RMALUC can be surrendered at the time this application is approved.

Visual, Amenity and Character values

The subject site is located within an area that is predominantly used for residential activities on larger allotments. The site is not located within an outstanding landscape and does not contain any outstanding landscape features.

All of the adjoining lots are of a similar size, some have been developed with residential dwellings and others are vacant lots. The sites have retained the natural vegetation on all boundaries.

The proposed dwelling is of an average size and scale, being modest in design. It is therefore considered that the proposal is not visually obtrusive and is considered consistent with the character of the buildings within the locality.

The building has been located in the most suitable location within the allotment and is over 18 metres from every boundary. The proposal complies with the setback and sunlight provisions for the zone.

The proposed dwelling will be set back over 130 metres from the State Highway, being accessed via a private access way (JOAL) and over 540 metres from Houhora Harbour. Due to the significant distance from the subject site to the Houhora Harbour as well as the State Highway, and with the existing vegetation and buildings, the subject site is unlikely to be visible from either the Houhora Harbour or the State Highway.

Due to the subject site being over 1 hectare in area, there is ample area for open space for the applicants to enjoy and which will also provide visual and noise mitigation for/from neighbouring properties.

The topography of the site is relatively flat, and therefore minimal earthworks are required to establish the building platform and associated access/driveway.

The existing vegetation acts as a visual barrier between the proposed dwelling location and neighbouring properties as well as the coastal environment.

The applicant is aware that the colour scheme is to be within the BS 5252 colour range, with a LVR of 30% or less and it is the intention of the applicant to provide this natural recessive colour scheme to council. It is anticipated the following condition of consent will be imposed:

'The dwelling is to be finished according to the approved colour scheme within the BS 5252 Colour Range with a LRV of 30% or less. The building is to be finished in accordance with the approved schedule within six months of completion of the exterior of the building and maintained for the duration of the consent.'

The use of recessive colours for the dwelling, which will have an LRV of less than 30%, and existing vegetation will blend the proposed dwelling into the background, providing further mitigation of any visual effects.

The nearest neighbouring dwelling is over 100 metres away, with existing vegetation combined with the physical separation distance from the proposed dwelling acting as a visual buffer from neighbouring properties. The proposed dwelling is orientated towards the north and it is considered that this proposal will not affect the privacy, outlook or enjoyment of private open space for any of the adjacent sites.

Overall, the proposal is considered to have less than minor effects on the visual amenity and character of the surrounding environment.

Stormwater

The impermeable surfaces are predominantly made up of the access to the site via JOAL (Lot 13) and the internal driveway, which will be metalled.

The stormwater management for Lot 13 (JOAL) was implemented as part of the approved subdivision consent RC2010082, hence stormwater from the private accessway has already been adequately dealt with. The drainage patterns of the impermeable surfaces within Lot 13 will remain unchanged.

The application site is over 1 hectare in area and is considered to have ample availability for stormwater on site.

The site is not located near any water bodies and any runoff will not be directed towards adjacent sites.

Two water tanks are proposed which will be used to collect water and provide retention/attenuation of stormwater. The site also contains existing drains and overland flow paths that can adequately deal with stormwater. There are existing natural water course drains along each of the site boundaries which collect and direct stormwater, eventually into the Raio Creek. These drains were part of the stormwater management approved under RC2010082.

The water tanks and existing drains are considered to be of a low impact design.

Minimal earthworks are required and therefore the proposal will retain the natural contours over the majority of the site.

The soils have been classified as predominantly Tangatiki sand and Houhora sand which is considered to be moderately to well drained. The physical qualities of the soil type will also remain unchanged as a result of this proposal as what is currently in existence will remain unchanged.

It is considered that there will be no effect on the life supporting capacity of soils.

Stormwater retention/attenuation within Lot 10 will be achieved by way of the two proposed water tanks, and the use of a spreader bar, existing natural overland flowpaths, and water course drains. It is considered that these measures will adequately and effectively mitigate any potential adverse stormwater effects – see **Appendix F**).

Natural Hazards and Open Space

There are no other known natural hazards identified on this site.

Cumulative Effects

Over time cumulative effects can arise. These effects can be created through incremental changes that are created by activities. Overall, it is considered that potential cumulative effects of the development are less than minor.

Physical works

The proposal requires minimal earthworks to be undertaken to establish the building foundations. The development will result in minimal physical works on the property.

Effects on the neighbourhood and the wider community (social, economic or cultural effects)

The proposal will result in a residential dwelling being constructed on the site. The proposed dwelling is considered to be consistent with the character of the locality. The subject site does not contain any known sites of cultural significance. Overall, it is considered that the proposal will result in positive effects on the wider community. The proposal will not result in any adverse social, economic or cultural effects.

Effects on Ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity.

The application is not considered to affect any such ecosystems.

Any effect on Natural and Physical Resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present and future generations.

No effects on these values are considered to be generated by the proposal.

Any Discharge of Contaminants into the Environment; including any unreasonable emission of noise, and options for the treatment and disposal of contaminants.

No discharge of contaminants is proposed.

Any risk to the Neighbourhood, the Wider Community, or the environment through natural hazards or the use of any hazardous substances or hazardous installations.

There are no known hazards or hazardous substances that will arise as a result of this proposal.

5.2.2 Adverse Effects Conclusion

In summary, it is considered that subject to compliance with conditions, the adverse effects of the activity on the environment would be no more than minor.

5.3 Section 104(1)(b)(vi) Relevant Provisions of the District Plan - Objectives and Policies

Proposed District Plan

The relevant objectives and policies of the Plan are those related to the Coastal Environment and the Coastal Living Zone.

The proposal is considered to create no more than minor adverse effects on the coastal environment. The proposal is considered to be consistent with the coastal character of the surrounding area and is considered to have negligible effects on the coastal amenity value of the area. It is also considered that the size and scale of the dwelling is not visually obtrusive.

In addition to this the building will be finished in natural and recessive colours.

The proposal is considered to be consistent with the objectives and policies of the Plan.

5.3.2.1 Assessment of the objectives and policies within the Coastal Living Zone

Objectives

10.7.3.1 To provide for the well-being of people by enabling low density residential development to locate in coastal areas where any adverse effects on the environment of such development are able to be avoided, remedied or mitigated.

The subject site is over one hectare in area. The proposal is for a 337.4m² residential dwelling building which includes two carports. It is considered that the design of the building is average in scale and of modest design which is not objectionable to the existing development in the locality. There is adequate area on the site which can be utilised as open space. The proposal is considered to be of low density and to not create any adverse visual effects. It is considered that there are no adverse effects as a result of the proposal.

10.7.3.2 To preserve the overall natural character of the coastal environment by providing for an appropriate level of subdivision and development in this zone.

The subdivision that created the application site has been recently completed and it is considered that the subject site was created with the intention of a residential dwelling being located on the site. The proposal is average in scale and is not considered objectionable to the surrounding development. It is considered that the proposal will not have any adverse effects on the natural character of the coastal environment.

Policies

10.7.4.1 That the adverse effects of subdivision, use, and development on the coastal environment are avoided, remedied or mitigated.

Due to the scale and design of the building, in addition to of the location in regard to the site boundaries, it is considered that any visual effects will be less than minor.

The subject site is located over 540 metres from the Houhora Harbour and it is therefore considered that the development will have less than minor effects on the coastal environment.

10.7.4.2 That standards be set to ensure that subdivision, use or development provides adequate infrastructure and services and maintains and enhances amenity values and the quality of the environment.

The subject site does not benefit from Council's reticulated services and an on-site system and methods will be required. The onsite effluent system will utilise secondary treatment as per the recommendations in **Appendix D**. It is considered that the proposal will maintain and enhance the amenity values and quality of the environment.

10.7.4.3 Subdivision, use and development shall preserve and where possible enhance, restore and rehabilitate the character of the zone in regards to s6 matters, and shall avoid adverse effects as far as practicable by using techniques including: (b) minimising the visual impact of buildings, development, and associated vegetation clearance and earthworks, particularly as seen from public land and the coastal marine area;

The design of the dwelling is modest in design and scale and with the use of a natural, recessive colour scheme, will not create any adverse visual effects or be objectionable in the locality. Existing vegetation will also further mitigate any visual effects as well as the flat topography of the site and significant distance from neighbouring properties, the coastal environment and the State Highway. It is therefore considered that the proposal enhances and restores the character of the zone and any visual effects are mitigated through the existing vegetation and the natural recessive colour scheme.

Overall, the proposal is considered to be consistent with the objectives and policies of the Plan.

Proposed District Plan

The following objectives and policies of the Proposed District Plan are considered relevant:

RLZ-01 The Rural Lifestyle zone is used predominantly for low density residential activities and small scale farming activities that are compatible with the rural character and amenity of the zone.

RLZ-02 The predominant character and amenity of the Rural Lifestyle zone is characterised by:

- a) *low density residential activities;*

- b) *small scale farming activities with limited buildings and structures;*
- c) *smaller lot sizes than anticipated in the Rural Production Zone;*
- d) *a general absence of urban infrastructure;*
- e) *rural roads with low traffic volumes;*
- f) *areas of vegetation, natural features and open space.*

RLZ-O3 The role, function and predominant character and amenity of the Rural Lifestyle zone is not compromised by incompatible activities.

RLZ-O4 Land use and subdivision in the Rural Lifestyle zone does not compromise the effective and efficient operation of primary production activities in the adjacent Rural Production Zones.

RLZ-P1 Enable activities that will not compromise the role, function and predominant character and amenity of the Rural Lifestyle zone, while ensuring their design, scale and intensity is appropriate to manage adverse effects in the zone, including:

- a) *low density residential activities;*
- b) *small scale farming activities;*
- c) *home business activities;*
- d) *visitor accommodation; and*
- e) *small scale education facilities.*

RLZ-P2 Avoid activities that are incompatible with the role, function and predominant character and amenity of the Rural Lifestyle zone because they are:

- a) *contrary to the density anticipated for the Rural Lifestyle zone;*
- b) *predominately of an urban form or character;*
- c) *primary production activities, such as intensive indoor primary production, that generate adverse amenity effects that are incompatible with rural lifestyle living; or*
- d) *commercial, rural industry or industrial activities that are more appropriately located in a Settlement zone or an urban zone.*

RLZ-P3 Avoid where possible, or otherwise mitigate, reverse sensitivity effects from sensitive and other non-productive activities on primary production activities in the adjacent Rural Production zone.

RLZ-P4 Manage land use and subdivision to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:

- a) *consistency with the scale and character of the rural lifestyle environment;*
- b) *location, scale and design of buildings or structures;*
- c) *at zone interfaces:*
- d) *any setbacks, fencing, screening or landscaping required to address potential conflicts;*
- e) *the extent to which adverse effects on adjoining or surrounding sites are mitigated and internalised within the site as far as practicable;*
- f) *the capacity of the site to cater for on-site infrastructure associated with the proposed activity;*
- g) *the adequacy of roading infrastructure to service the proposed activity;*

- h) *managing natural hazards;*
- i) *any adverse effects on historic heritage and cultural values, natural features and landscapes or indigenous biodiversity; and*
- j) *any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.*

Discussion

The role of the Rural Lifestyle zone is to provide an area specifically for rural lifestyle living. Accommodating the demand for rural lifestyle living in appropriate areas of the district, close to transport routes with good access to services in urban areas and settlements, is intended to reduce ad-hoc or sporadic rural lifestyle development throughout the Rural Production zone that adversely impacts on primary production activities.

This zone also enables people to undertake primary production activities, or primarily undertake a residential activity while having the option of growing their own food, or having horses or other livestock at a domestic scale.

This zone is characterised by open space and vegetated landscapes, interspersed by farm buildings, structures and residential units.

The zone is expected to provide an appropriate transition from rural residential areas to the Rural Production zone, while retaining a sense of spaciousness and rural character. For this reason, rural lifestyle character and amenity are managed through density rules and the consideration of building locations at the time of subdivision, in addition to the use of building setback controls from boundaries.

The proposal would result in a new dwelling being constructed on a vacant rural-lifestyle allotment. It is considered that the design and scale of the proposed dwelling is appropriate such that any adverse effects can be managed such that existing character and amenity values will be maintained.

5.4 Section 104(1)(b)(v) Relevant Provisions of the Regional Policy Statement

The Operative Regional Policy Statement (“RPS”) for Northland contains high level policy guidance for development. The subject site does not contain any significant features as defined by the RPS and therefore consideration of the RPS provisions is limited to matters under the following objectives:

- Objective 3.11 Regional Form

Several underpinning policies are also relevant to this application, including:

Policy 5.1.1 - Planned and coordinated development

Subdivision, use and development should be located, designed and built in a planned and co-ordinated manner which:

- (a) Is guided by the ‘Regional Form and Development Guidelines’ in Appendix 2;*
- (b) Is guided by the ‘Regional Urban Design Guidelines’ in Appendix 2 when it is urban in nature;*
- (c) Recognises and addresses potential cumulative effects of subdivision, use, and development, and is based on sufficient information to allow assessment of the potential long-term effects;*
- (d) Is integrated with the development, funding, implementation, and operation of transport, energy, water, waste, and other infrastructure;*
- (e) Should not result in incompatible land uses in close proximity and avoids the potential for reverse sensitivity;*
- (f) Ensures that plan changes and subdivision to / in a primary production zone, do not materially reduce the potential for soil-based primary production on land with highly versatile soils¹⁰, or if they do, the net public benefit exceeds the reduced potential for soil-based primary production activities; and*

(g) Maintains or enhances the sense of place and character of the surrounding environment except where changes are anticipated by approved regional or district council growth strategies and / or district or regional plan provisions.

(h) Is or will be serviced by necessary infrastructure.

Note: in determining the appropriateness of subdivision, use and development (including development in the coastal environment – see next policy), all policies and methods in the Regional Policy Statement must be considered, particularly policies relating to natural character, features and landscapes, heritage, natural hazards, indigenous ecosystems and fresh and coastal water quality.

Policy 5.1.3 - Avoiding the adverse effects of new use(s) and development

Avoid the adverse effects, including reverse sensitivity effects of new subdivision, use and development, particularly residential development on the following:

- (a) Primary production activities in primary production zones (including within the coastal marine area);*
- (b) Commercial and industrial activities in commercial and industrial zones;*
- (c) The operation, maintenance or upgrading of existing or planned regionally significant infrastructure; and*
- (d) The use and development of regionally significant mineral resources*

The application site is located within a rural context and is in close proximity to the Pukenui township with the surrounding area being characterised by a mixture of both rural-residential lots and larger rural landholdings, as noted in earlier parts of this report. Given that this proposal is for residential use, there are no adverse effects on the viability of adjoining rural landholdings and activities, which already function well with several other 'lifestyle' allotments in close proximity. As a result, it is considered that the proposal is consistent with the RPS.

No other Regional Policy Statements are relevant to this proposal.

The proposal does not require any consent under the Proposed Regional Plan for Northland.

5.5 Section 104(1)(b)(i) and (ii) Relevant provisions of National Environmental Standards and other regulations, Section 104(1)(b)(iii) Relevant provisions of National Policy Statements, Section 104(1)(b)(iv) Relevant provisions of the New Zealand Coastal Policy Statement (NZCPS)

No National Environmental Standards are considered relevant to the proposal.

The New Zealand Coastal Policy Statement (NZCPS) is not considered to be relevant in this instance. The application site is not located within the immediate coastal environment under the Regional Policy Statement (RPS).

5.6 Section 104(1)(c) Any other matters considered relevant and reasonably necessary to determine the application

There are no matters that are considered necessary to determine the application.

6.0 Notification

Public Notification

Having undertaken the s95A public notification tests, the following conclusions are reached:

- Public notification is not mandatory as the applicant has not requested it, there are no outstanding or refused requests for further information, and the application does not involve any exchange of recreation reserve land under s15AA of the Reserves Act 1977.
- Public notification is not precluded due to certain circumstances.
- Public notification is not required as the proposed development will have no more than minor adverse effects on the environment.
- Under step 4, there are no special circumstances that warrant the application being publicly notified because there is nothing unique or unusual about the proposal or subject site that gives rise to special circumstances.

Limited Notification

Having undertaken the s95B limited notification tests, the following conclusions are reached:

- Limited notification is not mandatory.
- There is no rule of NES that specifically precludes limited notification of the activities, and the application is for an activity other than those specified in s95B(6)(b).
- Limited notification is not required as it is considered that the activity will not result in any adversely affected persons.
- There are no special circumstances that warrant the application being limited notified to any other persons.

It is therefore considered that this application can be processed without notification.

7.0 Consideration of Part 2 (Purpose and Principles) of the RMA

Section 5 in Part 2 identifies the purpose of the RMA as being the sustainable management of natural and physical resources. This means managing the use of natural and physical resources in a way that enables people and communities to provide for their social, cultural and economic well-being while sustaining those resources for future generations, protecting the life supporting capacity of ecosystems, and avoiding, remedying or mitigating adverse effects on the environment.

In considering the provisions of Section 5, the proposed development is consistent with the character of the surrounding area, and with the topography and character of the site. The proposal would therefore use and develop the physical resources of the site in a manner that would continue to enable the applicant to provide for their future social and economic wellbeing. At the same time the proposal sufficiently avoids, remedies or mitigates adverse effects on the roading network, sensitive receiving environments, amenity and character of the surrounding environment.

Section 6 of the Act sets out a number of matters of national importance which need to be recognised and provided for and includes among other things and in no order of priority, the protection of outstanding natural features and landscapes, the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna, and the protection of historic heritage.

As discussed previously in this report, the proposed development does not detract from the natural character of the coastal environment and is not located within any outstanding natural landscape. The proposal does not restrict access to the coastal environment.

Section 7 identifies a number of “other matters” to be given particular regard by a council in the consideration of any assessment for resource consent and includes the efficient use of natural and physical resources, and the maintenance and enhancement of amenity values.

Pursuant to Section 7(b) particular regard shall be had to the efficient use and development of natural and physical resources. In this case, the proposed development of the application site and would not compromise the environment or generate any adverse effects, allowing for the efficient use of the physical resources of the site while avoiding adverse effects on the environment.

Pursuant to 7(c) particular regard shall be had to the maintenance and enhancement of amenity values. In this case, the proposal is consistent with, and would maintain the character and amenity values of the surrounding environment.

Pursuant to 7(g) particular regard shall be had to maintenance and enhancement of the environment. In this case, the stormwater and wastewater will be treated and managed within the site boundaries and suitable erosion and sediment control measures will remain in place during any site works, therefore maintaining the health of the surrounding environment.

Section 8 requires a council to take into account the principles of the Treaty of Waitangi. The proposed development does not raise any Treaty of Waitangi issues.

The proposal is considered to be an efficient use of resources, providing further upgraded residential living opportunities. Overall, it is considered that the application meets the relevant provisions of Part 2 of the RMA, achieving the purpose of the RMA being sustainable management of natural and physical resources.

8.0 Lapsing of Consent

Section 125 of the RMA provides that if a resource consent is not given effect to within five years of the date of the commencement (or any other time as specified) it automatically lapses unless the consent authority has granted an extension. In this case, it is considered five years is an appropriate period.

9.0 Conclusion

The proposal is a land use consent to construct new residential dwelling on the application site.

It is concluded that any actual or potential effects on the surrounding environment will be no more than minor; and that the proposed development would be consistent with the relevant objectives and policies of the District Plan.

Overall, it is considered that the proposed development achieves the purpose and principles of the RMA and that the consent sought should be granted.

Prepared by:



Kim Nathan
SENIOR PLANNER

Appendix A: Plans

Appendix B: Record of Title

Appendix C: Full District Plan Assessment

Rule 10.7.5.1.1 Visual Amenity	Status
<p>The following are permitted activities in the Coastal Living Zone:</p> <p>(a) any new building(s), provided that the gross floor area of any new building(s) permitted under this rule does not exceed 50m²; or</p> <p>(b) any alteration/addition to an existing building which does not exceed 30% of the gross floor area of the building which is being altered or added to, provided that any alteration/addition does not exceed the height of the existing building and that any alteration/addition is to a building that existed at 28 April 2000.</p> <p>(c) replacement of any building so long as the replacement does not exceed the building envelope occupied by the previous building; or</p> <p>(d) renovation or maintenance of any building.</p>	<p>Does not Comply - The proposed new building has a gross floor area greater than 50m².</p>
Rule 10.7.5.1.2 Residential Intensity	Status
<p>Residential development shall be limited to one unit per 4ha of land. In all cases the land shall be developed in such a way that each unit shall have at least 3,000m² for its exclusive use surrounding the unit plus a minimum of 3.7ha elsewhere on the property. Except that this rule shall not limit the use of an existing site or a site created pursuant to Rule 13.7.2.1 (Table 13.7.2.1) for a single residential unit for a single household.</p>	<p>Complies – The proposed dwelling will be the first on the application site.</p>
Rule 10.7.5.1.3 Scale of Activities	Status
<p>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 2,000m² of net site area. Provided that:</p> <p>(a) this number may be exceeded for a period totalling not more than 60 days in any 12 month period where the increased number of persons is a direct result of activities ancillary to the primary activity on the site; and</p> <p>(b) this number may be exceeded where persons are engaged in constructing or establishing an activity (including environmental enhancement) on the site; and</p> <p>(c) this number may be exceeded where persons are visiting marae. In determining the total number of people engaged at any one period of time, the Council will consider the maximum capacity of the facility (for instance, the number of beds in visitors accommodation, the number of seats in a restaurant or theatre), the number of staff</p>	<p>N/A</p>

needed to cater for the maximum number of guests, and the number and nature of the vehicles that are to be accommodated on site to cater for those engaged in the activity.	
Rule 10.7.5.1.4 Building Height	Status
The maximum height of any building shall be 8m	Complies – see plans (Appendix A)
Rule 10.7.5.1.5 Sunlight	Status
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 (refer to definition of Recession Plane in Chapter 3 - Definitions), except where a site boundary adjoins a legally established entrance strip, private way, access lot, or access way serving a rear site, the measurement shall be taken from the farthest boundary of the entrance strip, private way, access lot, or access way.	Complies – see plans (Appendix A)
Rule 10.7.5.1.6 Stormwater Management	Status
The maximum proportion or amount of the gross site area which may be covered by buildings and other impermeable surfaces shall be 10% or 600m ² whichever is the lesser.	Does not comply – The proposed development will exceed maximum impermeable surfaces.
Rule 10.7.5.1.7 Setbacks from Boundaries	Status
Buildings shall be set back a minimum 10m from any site boundary, except that on any site with an area less than 5,000m ² this set back shall be 3m from any site boundary.	Complies – see plans (Appendix A)
Rule 10.7.5.1.8 Screening for neighbours non-residential activities	Status
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
Rule 10.7.5.1.9 Transportation	Status
Refer to Chapter 15 – Transportation for Traffic, Parking and Access rules.	Complies
Rule 10.7.5.1.10 Hours of operation non-residential activities	Status

<p>(a) The maximum number of hours the activity shall be open to visitors, clients or deliveries shall be 50 hours per week; and</p> <p>(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:</p> <p>(i) where the entire activity is located within a building; and</p> <p>(ii) where each person engaged in the activity outside the above hours resides permanently on the site; and</p> <p>(iii) where there are no visitors, clients or deliveries to or from the site outside the above hours.</p>	N/A
Rule 10.7.5.11 Keeping of animals	Status
Any building, compound, or part of a site used for factory farming, boarding kennels or a cattery, shall be located no closer than 50m from any site boundary, except for a boundary which adjoins the Residential, Coastal Residential or Russell Township Zones, where the distance shall be a minimum of 600m.	N/A
Rule 10.7.5.1.12 Noise	Status
All activities shall be so conducted as to ensure that noise from the site shall not exceed the following noise limits as measured at or within the boundary of any other site in this zone, or at any site in the Residential, Russell Township or Coastal Residential Zones, or at or within the notional boundary at any dwelling in any other rural or coastal zone: 0700 to 2200 hours 55 dBA L10 2200 to 0700 hours 45 dBA L10 and 70 dBA Lmax.	Complies
Rule 10.7.5.1.13 Helicopter Landing area	Status
A helicopter landing area shall be at least 200m from the nearest boundary of any of the Residential, Coastal Residential, Russell Township or Point Veronica Zones.	N/A

Appendix D: On-site Wastewater Assessment

Appendix E: Geotechnical Report

Appendix F: Stormwater Assessment Report

Appendix G: Resource Consent 2260185

DRAWING INDEX

L100	COVER SHEET
L101	SITE PLAN
L102	FLOOR PLAN
L103	CEILING JOIST & RAFTER PLAN
L104	CROSS SECTION
L105	ELEVATIONS
L106	ELEVATIONS
L107	DRAINAGE PLAN
L108	INSULATION PLAN
A101	DETAILS
A102	DETAILS
A103	DETAILS
A104	DETAILS
A105	DETAILS
A106	DETAILS
A107	DETAILS
	STRUCTURAL DRAWING (ENGINEER & SMARTSTEEL)



Client :
 Project : Proposed Shed for Lot 10 DP323666
 Lot 10 Wagener Grove, Pukenui, Northland

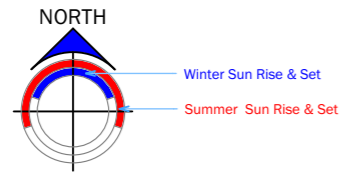
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 Checked:

Wind Zone: High
 E/Quake Zone: C

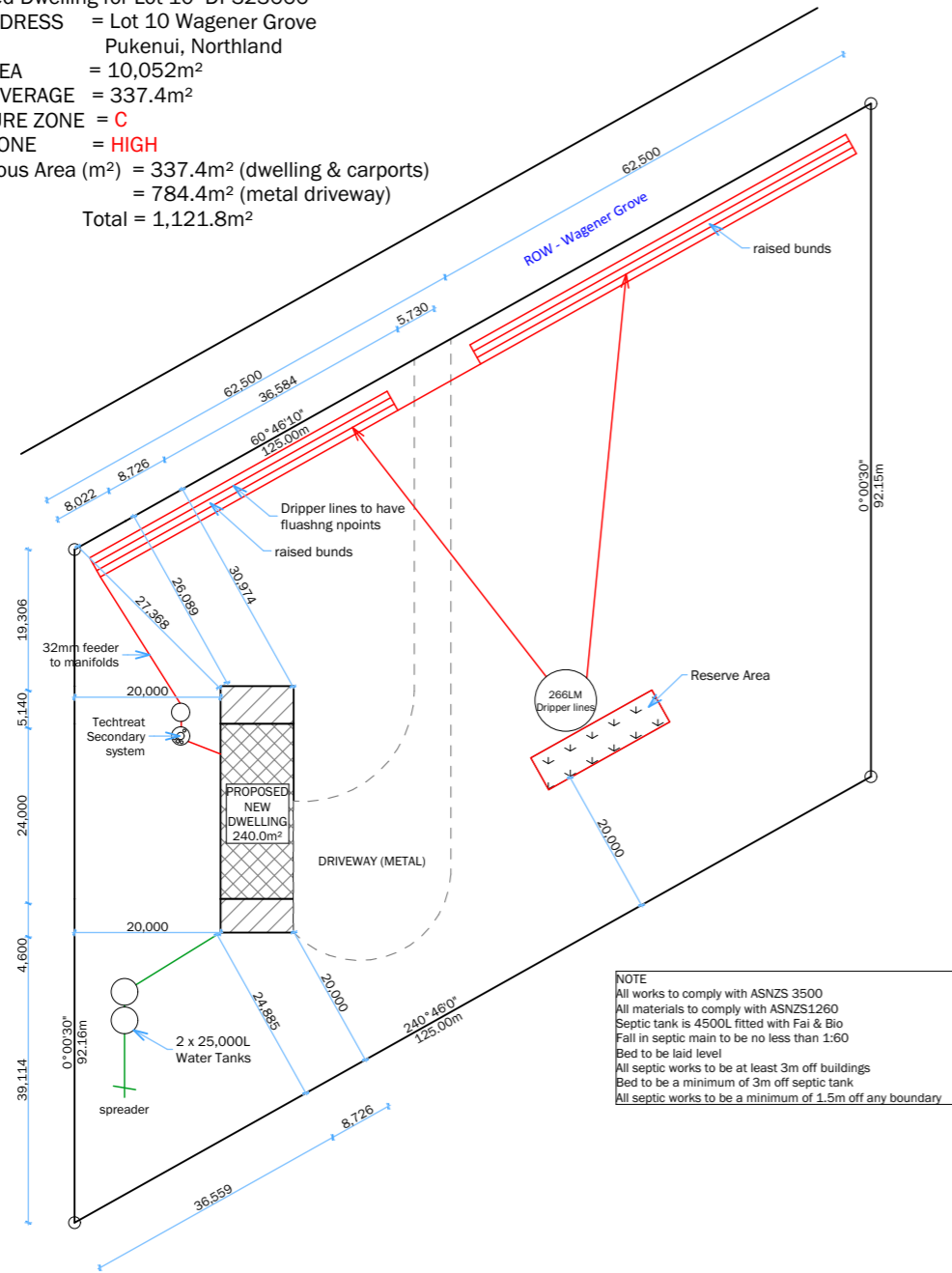
Sheet : COVER SHEET

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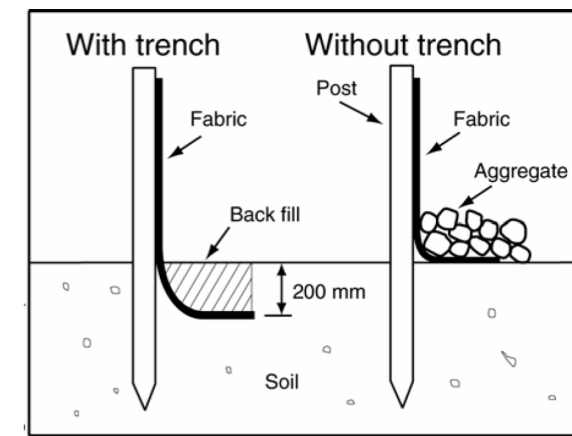
Date : 2,06,26
 Scale :
 Revision :
 Job no :
 Sheet no : L100



Proposed Dwelling for Lot 10 DP323666
 SITE ADDRESS = Lot 10 Wagener Grove
 Pukenui, Northland
 SITE AREA = 10,052m²
 SITE COVERAGE = 337.4m²
 EXPOSURE ZONE = **C**
 WIND ZONE = **HIGH**
 Impervious Area (m²) = 337.4m² (dwelling & carports)
 = 784.4m² (metal driveway)
 Total = 1,121.8m²



Driveways & Paths comply with NZBC D1/AS1
 Surface water to comply with NZBC E1/AS1.
 Surface water from all new impermeable surface
 to be collected and piped away from building.
 The building site is to comply with NZBC F5 Construction
 and Demolition Hazards. Provide 2.0m high site barrier
 to prevent unauthorized access.



SEDIMENT CONTROL SYSTEM







FNDC AERIAL MAP

****H1 window requirements****
 - all double glazed
 - Low E clear glass
 - Argon gas

ROOM	Airflow Rate (min.)
Toilet	25 l/s
bathroom/shower	25 l/s
Kitchen	50 l/s

***** NOTE *****

All construction shall be carried out in accordance with NZBC, and NZS 3604 : 2011
 As well to comply with any Local Authority by laws Use SG8 Structural Timber throughout

-  BATHROOM HEATER/LIGHT/ FAN
-  Interconnected smoke alarm
-  BELGOTEX VINYL PLANK FLOORING
-  TILE FLOOR



PLPH5 125x125 post in Ø450x900mm 20MPa concrete footing refer to engineers' design

SHED AREA	240.0m ²
CARPORT AREA	97.4m ²
TOTAL AREA	337.4m²



Client :
 Project : Proposed Shed for Lot 10 DP323666 Lot 10 Wagener Grove, Pukenui, Northland

Drawn: Caleb
 Checked:

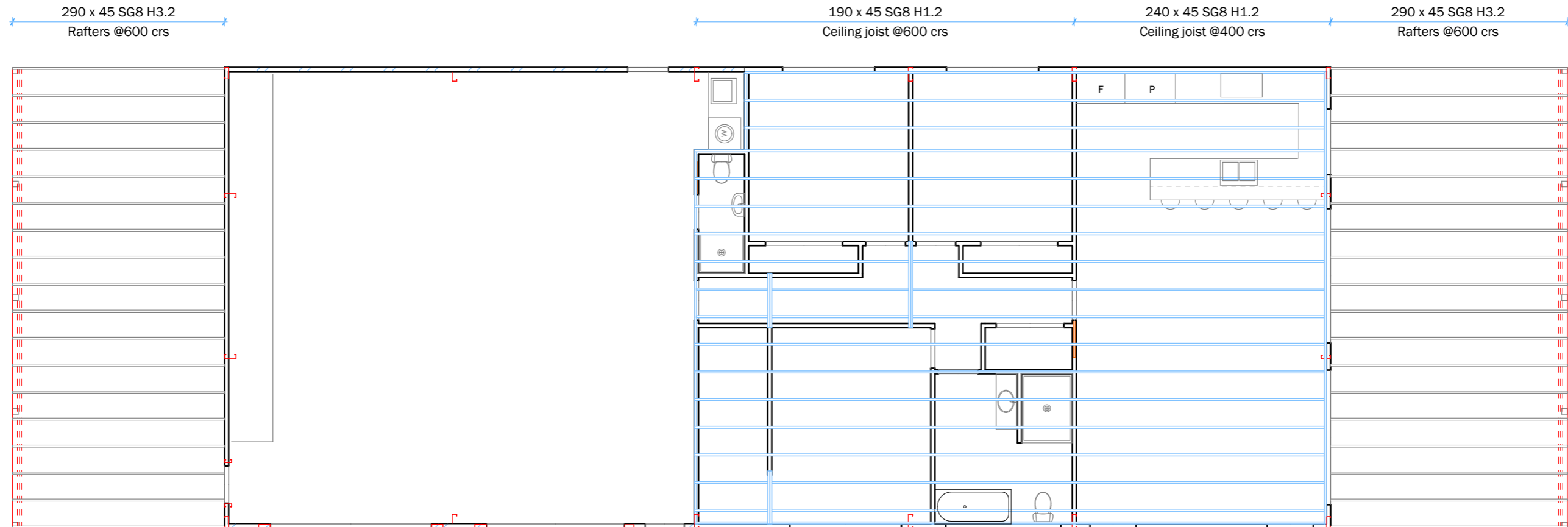
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 E/Quake Zone: C

Sheet :
FLOOR PLAN

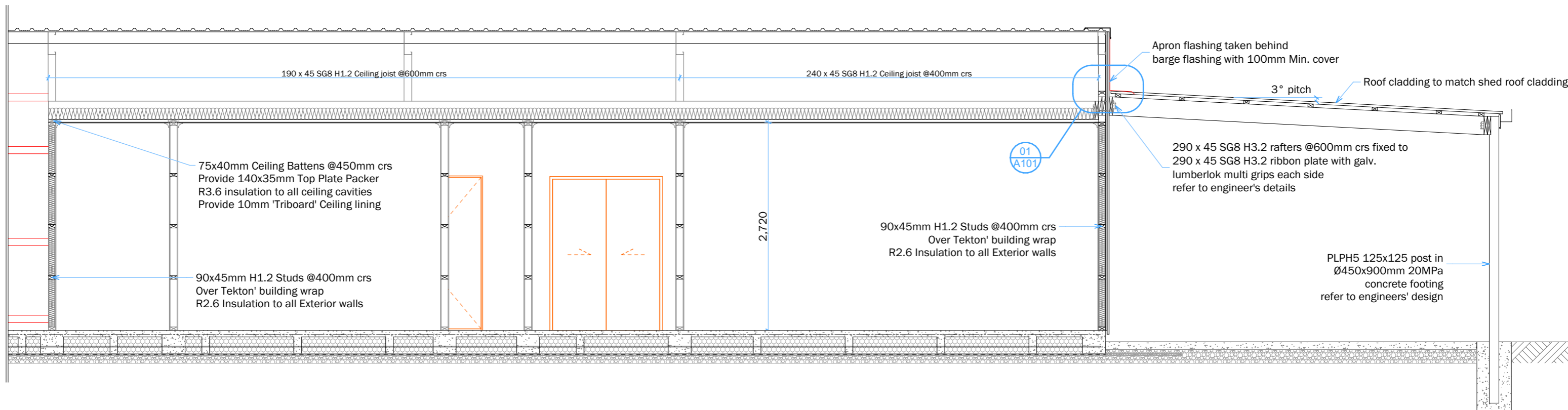
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Date : 2,06,26
 Scale : 1:100
 Revision :
 Job no :
 Sheet no : L102

*** NOTE ***
 All construction shall be carried out in accordance with NZBC, and NZS 3604 : 2011
 As well to comply with any Local Authority by laws
 Use SG8 Structural Timber throughout



*** NOTE ***
 All construction shall be carried out in accordance with NZBC, and NZS 3604 : 2011
 As well to comply with any Local Authority by laws
 Use SG8 Structural Timber throughout



Client :
 Project : Proposed Shed for Lot 10 DP323666
 Lot 10 Wagener Grove, Pukenui, Northland

Drawn:
Caleb
 Checked:

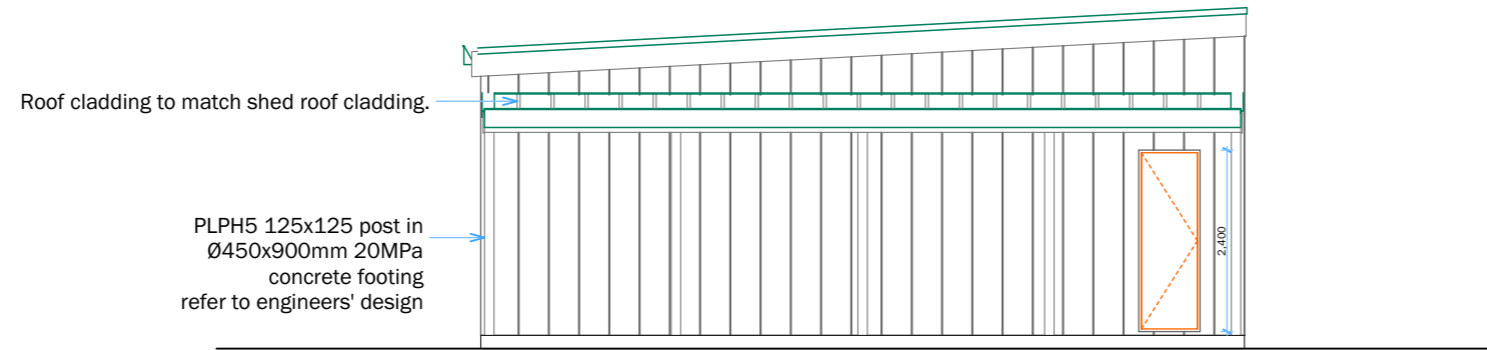
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High
 E/Quake Zone:
C

Sheet :
CROSS SECTION "A"

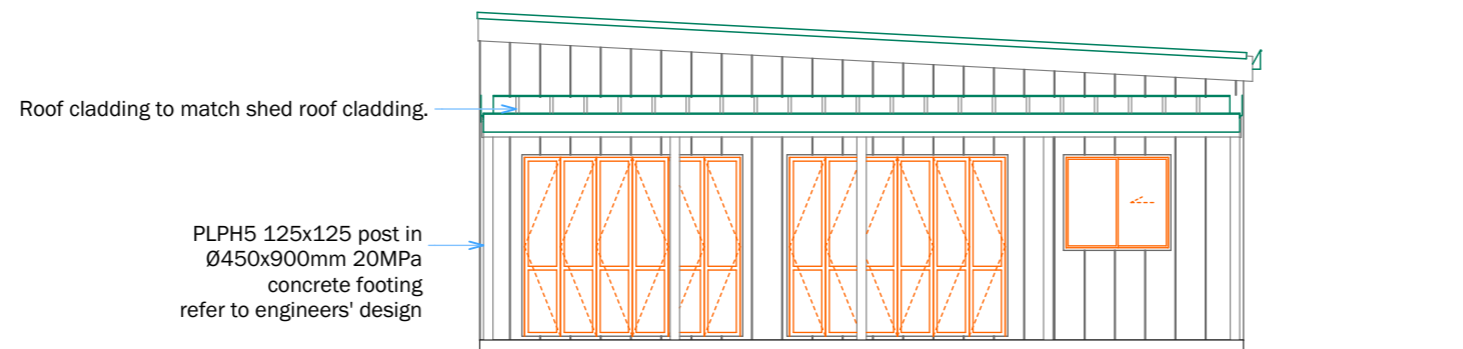
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Date :	2,06,26	Job no :	
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Revision :			

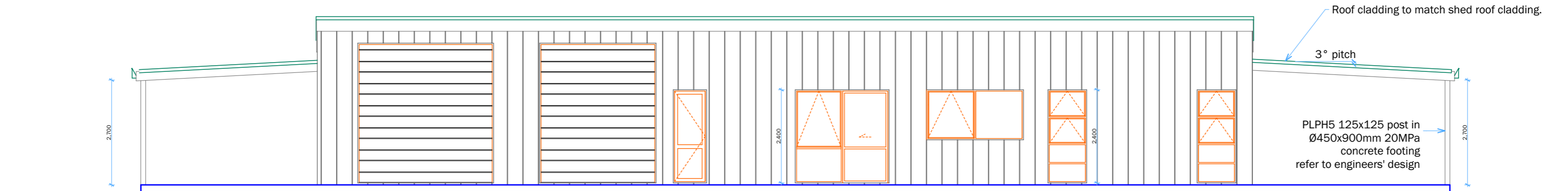
*** NOTE ***
 All construction shall be carried out in accordance with NZBC, and NZS 3604 : 2011
 As well to comply with any Local Authority by laws
 Use SG8 Structural Timber throughout



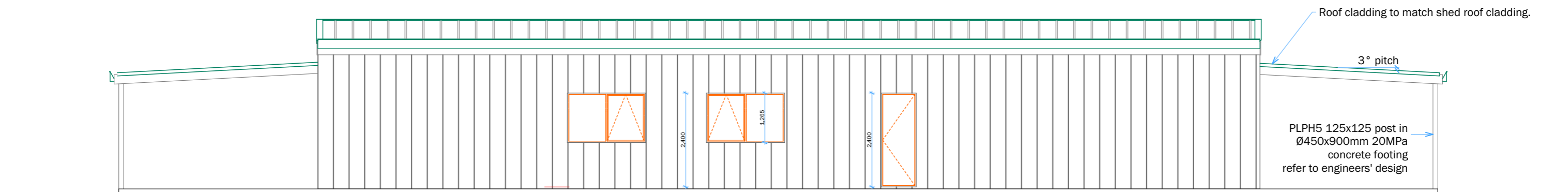
South Elevation



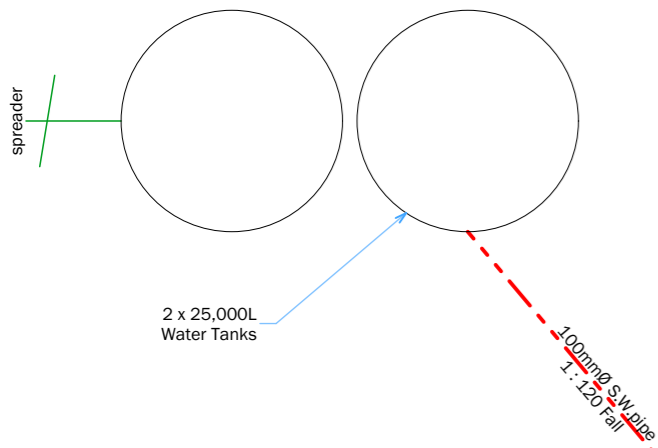
North Elevation



East Elevation

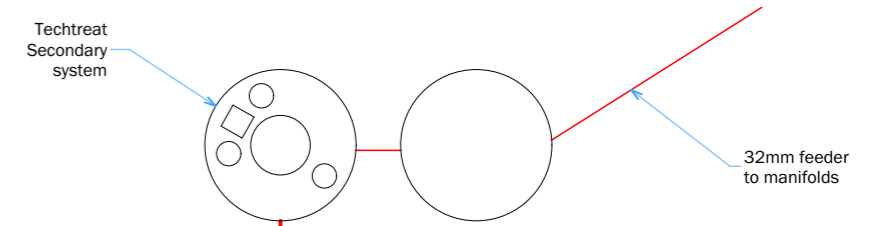


West Elevation



*** NOTE ***
 All construction shall be carried out in accordance with NZBC, and NZS 3500.2
 As well to comply with any Local Authority by laws
 Use SGB Structural Timber throughout

** PIPE GRADIENT **	
SEWER PIPE	Ø65mm = 1 : 40 FALL Ø100mm = 1 : 60 FALL
STORMWATER PIPE	Ø100mm = 1 : 120 FALL



Notes:
 Water heaters shall be installed in accordance with the manufacturer's instructions. Safe tray to be directed to ground as per the requirements of NZBC G12/AS1.

6.14 Safe water temperatures

6.14.1 Maximum temperatures

The delivered hot water temperature at the outlet of any sanitary fixture used for personal hygiene shall not exceed:

- a) 45°C for early childhood education and care centres, schools, old people's homes, institutions for people with psychiatric or physical disabilities, hospitals, and
- b) 50°C for all other buildings.

COMMENT:

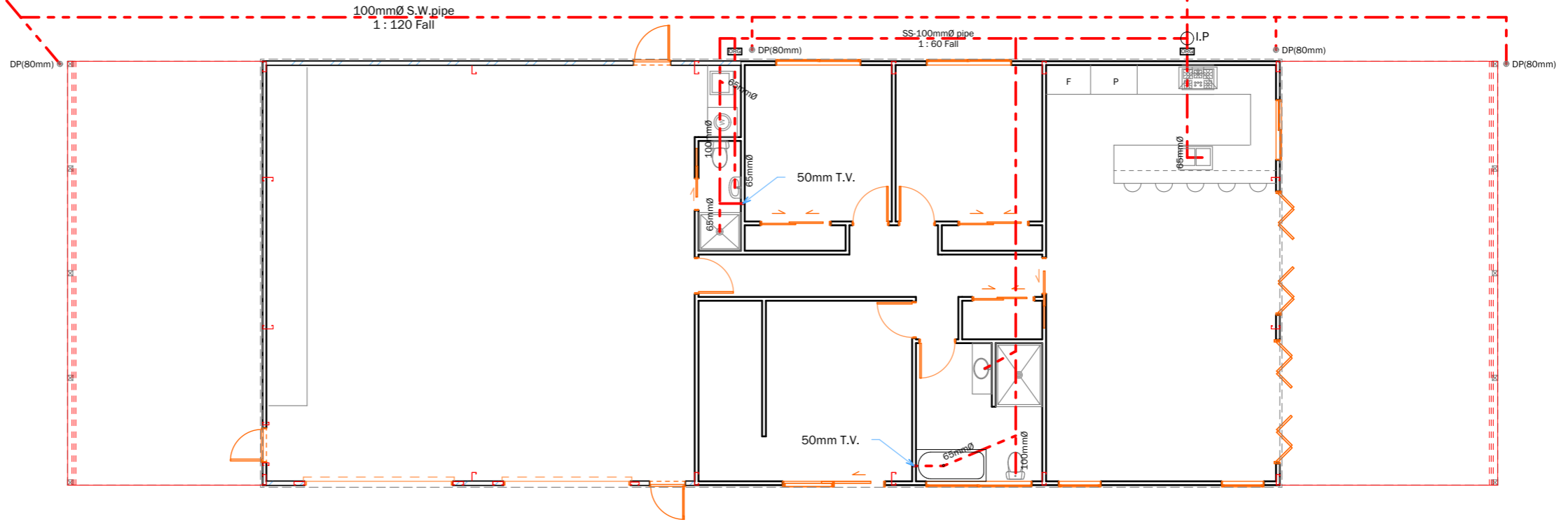
- 1. At greatest risk from scalding are children, the elderly, and people with physical or intellectual disabilities, particularly those in institutional care.
- 2. Sanitary fixtures used for personal hygiene includes showers, baths, hand basins and bidets.
- 3. For licensing purposes for early childhood education and care centres, the Ministry of Education requires the temperature of water delivered from taps that are accessible to children does not exceed 40°C.

6.14.2 Delivery temperature control devices

Devices for limiting the hot water temperature delivered to sanitary fixtures used for personal hygiene shall comply with Table 8A and Table 8B.

6.14.3 Legionella bacteria

Irrespective of whether a delivery temperature control device is installed, the storage water heater control thermostat shall be set at a temperature of not less than 60°C to prevent the growth of Legionella bacteria.



Downpipe size (mm) (minimum internal sizes)	Roof pitch			
	0-25°	25-35°	35-45°	45-55°
Plan area of roof served by the downpipe (m²)				
63 mm diameter	60	50	40	35
74 mm diameter	85	70	60	50
100 mm diameter	155	130	110	90
150 mm diameter	350	290	250	200
65 x 50 rectangular	60	50	40	35
100 x 50 rectangular	100	80	70	60
75 x 75 rectangular	110	90	80	65
100 x 75 rectangular	150	120	105	90

Material	Relevant Standard
Hot and Cold	
Copper	NZS 3501
Galvanised steel	NZS/BS 1387
Polybutylene	AS/NZS 2642: Parts 1, 2 and 3
Cold Only	
PVC-U	AS/NZS 1477
Polyethylene	NZS 7601 for pressures up to 0.9 MPa (Type 3) NZS 7602 for pressures up to 1.2 MPa (Type 5) NZS 7610 for pressures up to 1.2 MPa AS/NZS 4129 for fittings AS/NZS 4130 for pressures up to 2.5 MPa



Client :
 Project : Proposed Shed for Lot 10 DP323666
 Lot 10 Wagener Grove, Pukenui, Northland

Drawn:
 Caleb
 Checked:

Wind Zone:
 High
 E/Quake Zone:
 C

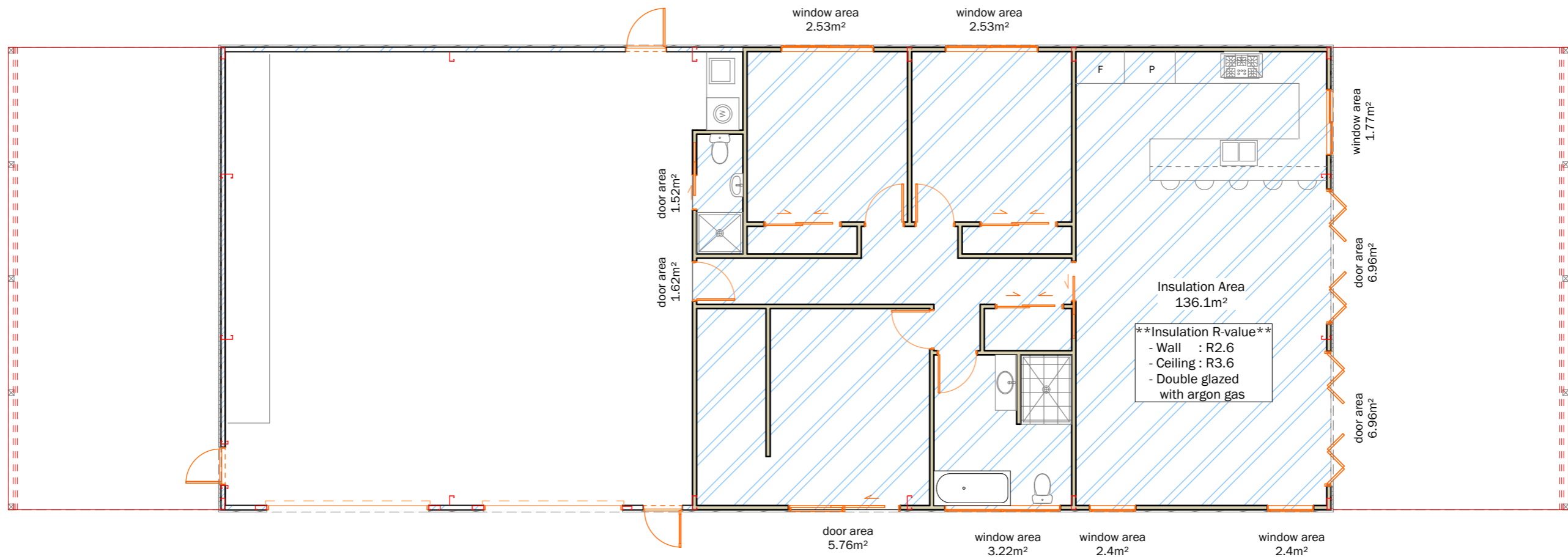
Sheet :
DRAINAGE PLAN

All dimensions & underground service locations to be checked prior to commencement of all works. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies, ask the designer or contractor immediately. COPYRIGHT: These drawings remain the property of Halo Homes Ltd and are provided for use as described above and may not be used or re-produced in whole or part without written permission.

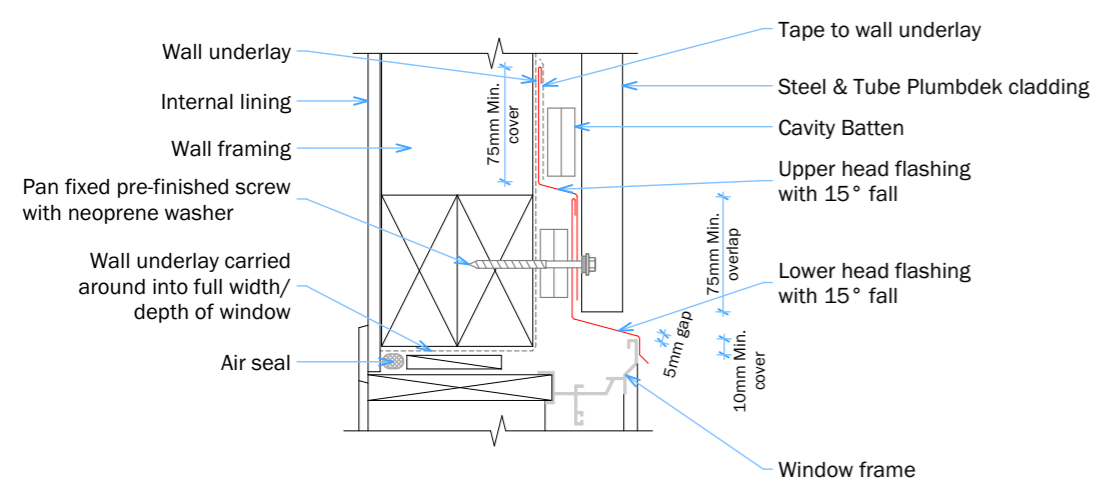
Date : 2,06,26
 Scale :
 Revision :
 Job no :
 Sheet no : L107

*** NOTE ***

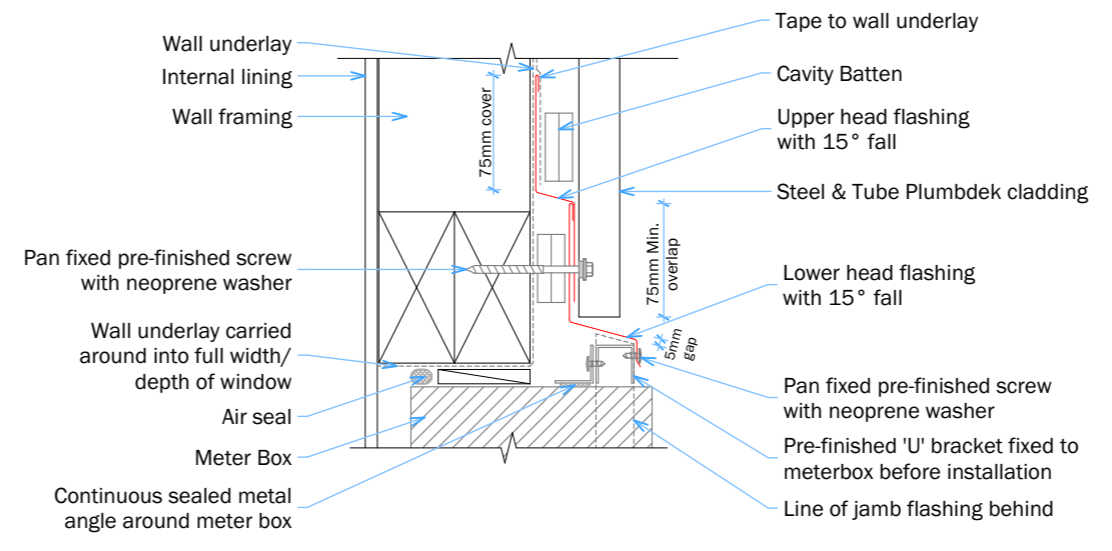
All insulation shall be installed in accordance with NZBC Clause H1 and NZS 4246, and in accordance with manufacturer's specifications. Insulation shall be continuous, correctly fitted, and free of gaps, voids, and thermal bridging.



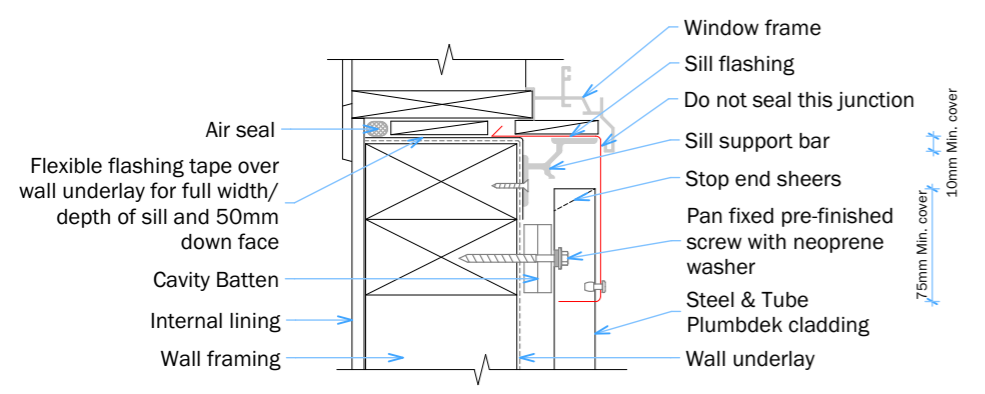
*** NOTE ***
 All construction shall be carried out in accordance with NZBC, and NZS 3604 : 2011
 As well to comply with any Local Authority by laws Use SG8 Structural Timber throughout
 Cavity battens containing copper must be separated from steel cladding by building paper, building wrap, DPC/PVC strips or by painting, otherwise use plastic cavity batten.



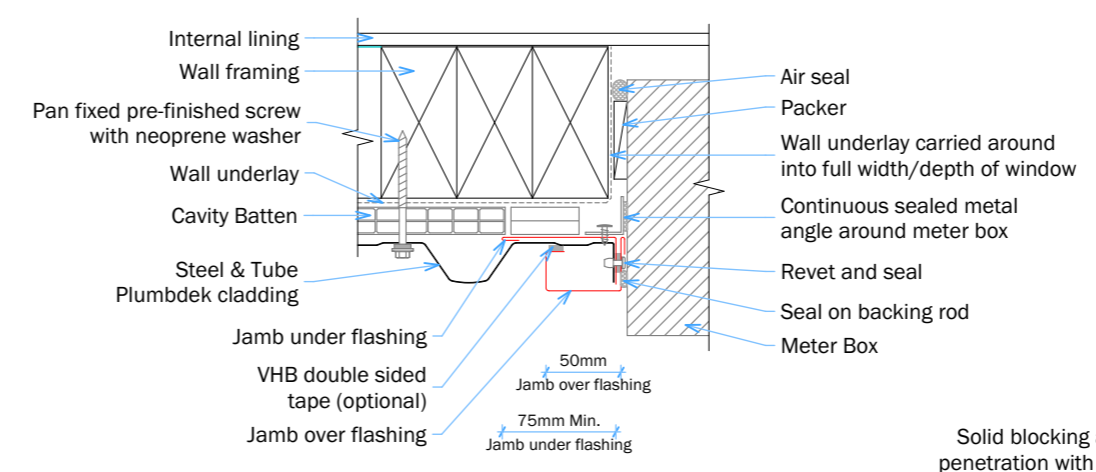
WINDOW HEAD DETAIL 1:5



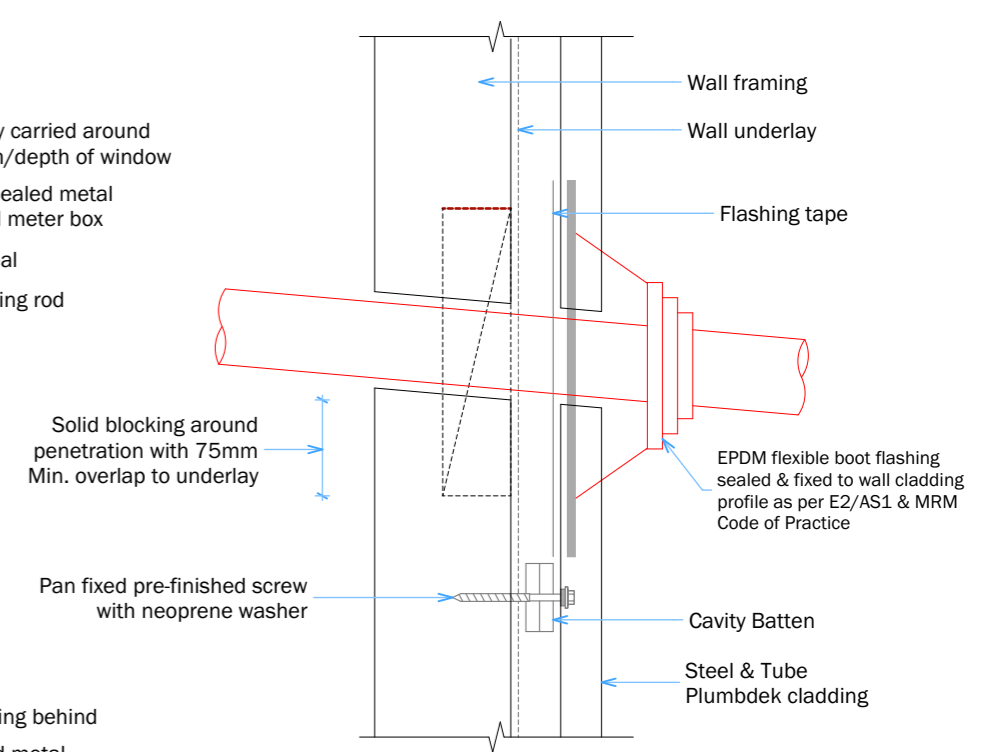
METER BOX HEAD DETAIL 1:5



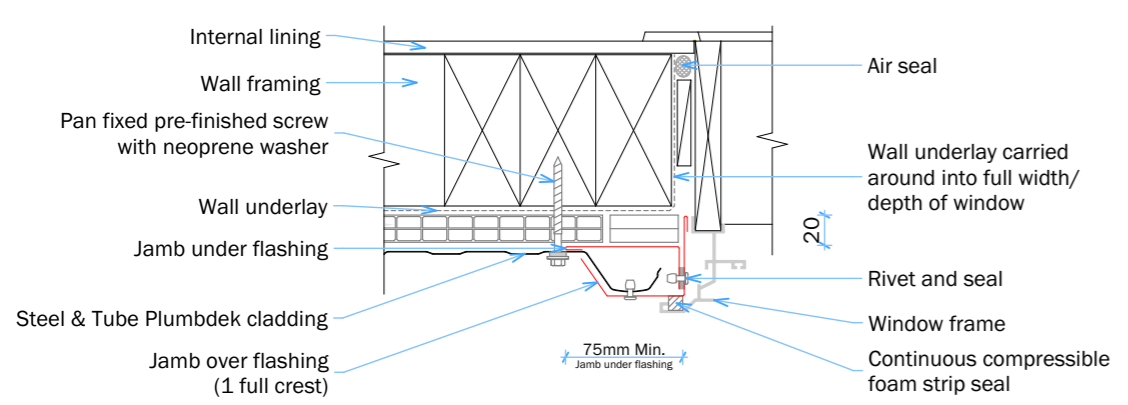
WINDOW SILL DETAIL 1:5



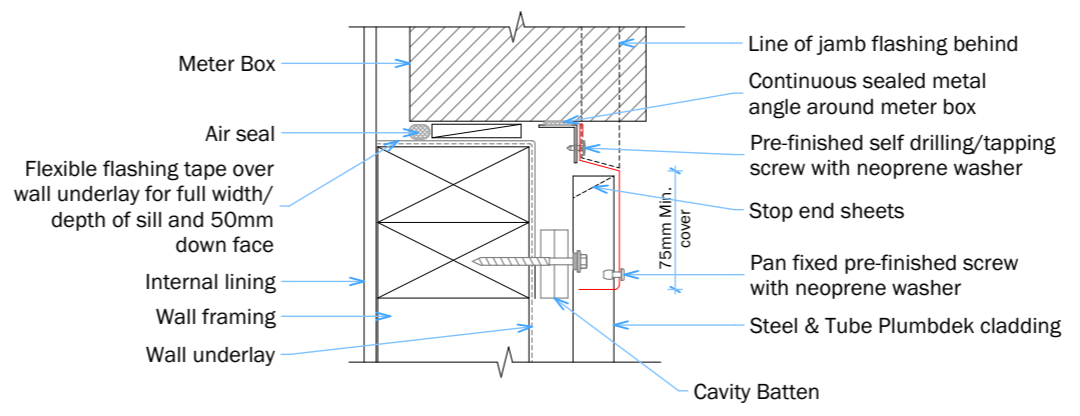
METER BOX JAMB DETAIL 1:5



PIPE PENETRATION DETAIL 1:5



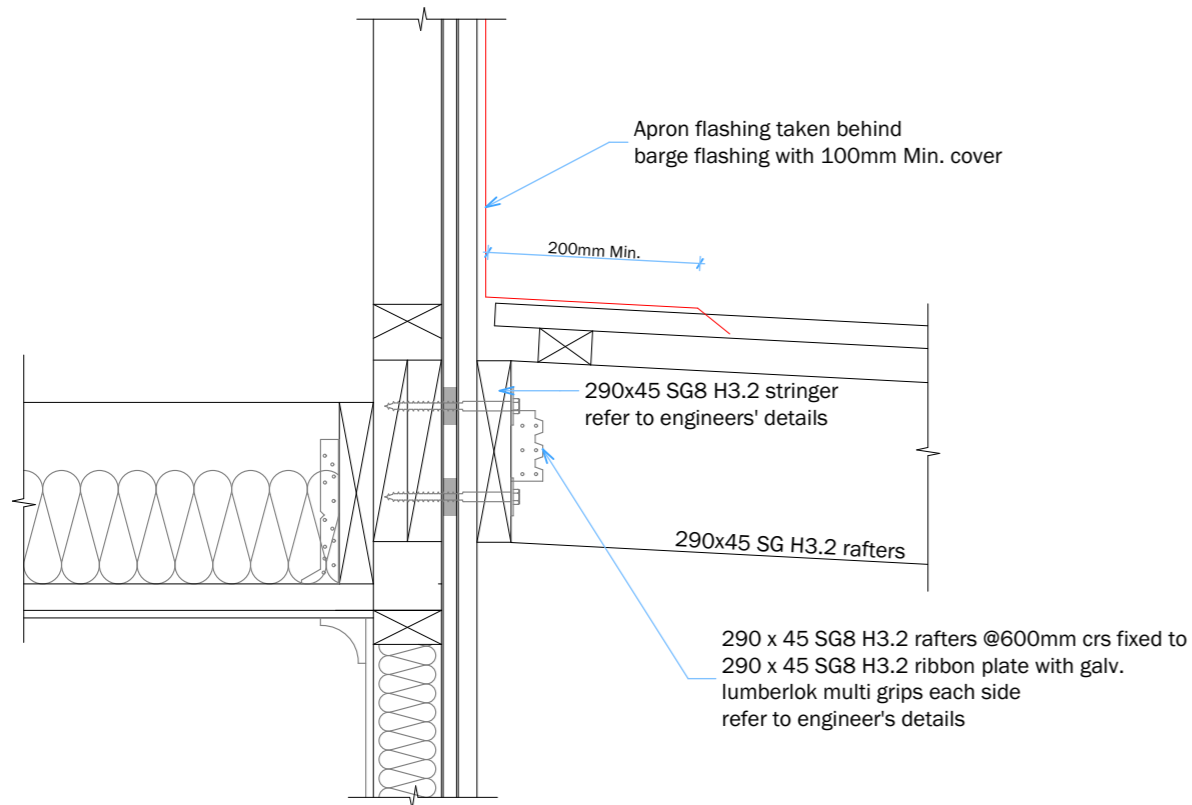
WINDOW JAMB DETAIL 1:5



METER BOX SILL DETAIL 1:5

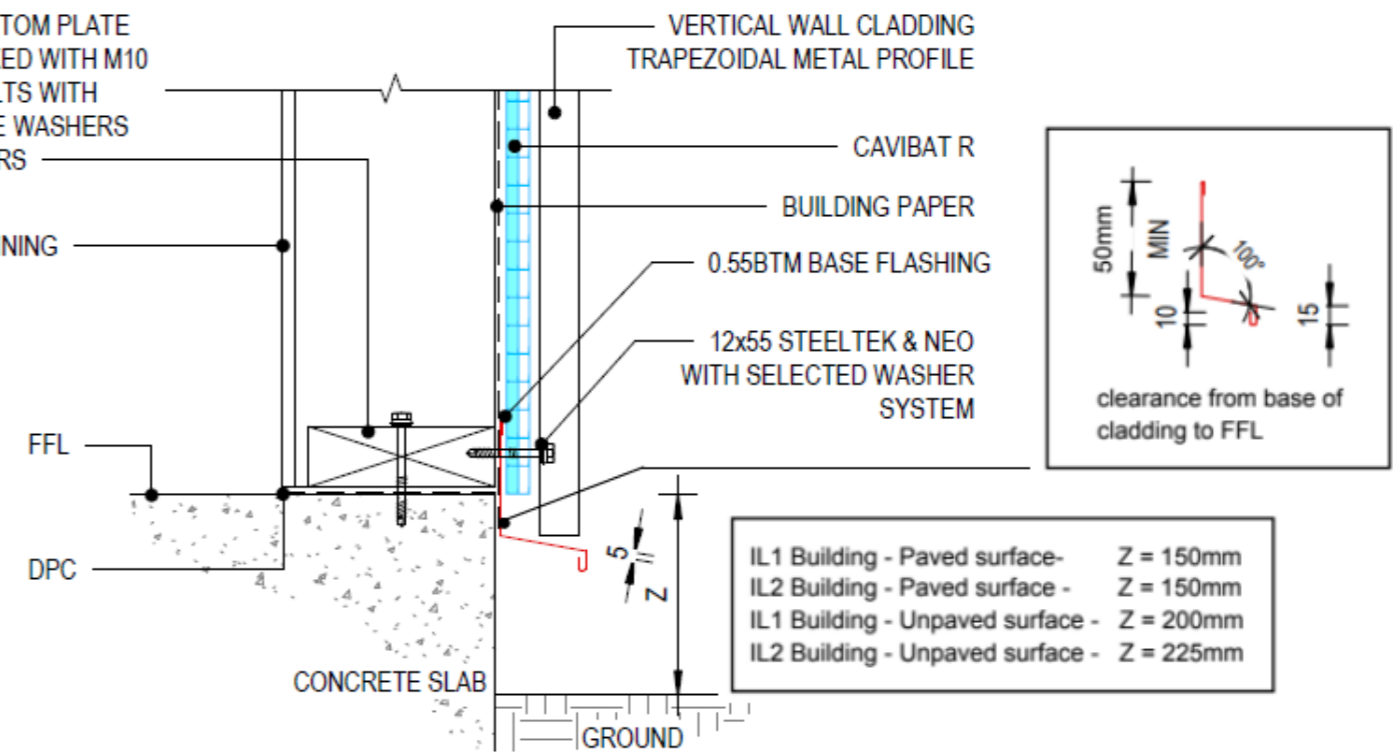
*** NOTE ***

All construction shall be carried out in accordance with NZBC, and NZS 3604 : 2011. As well to comply with any Local Authority by laws Use SG8 Structural Timber throughout



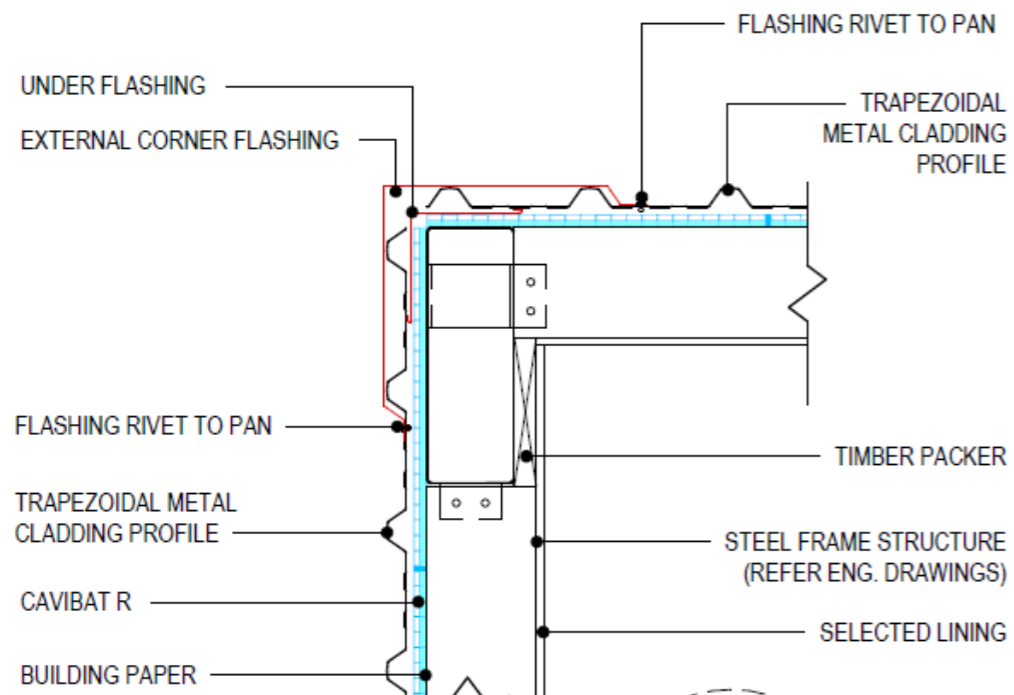
140 X 45 H1.2 BOTTOM PLATE ON MALTHOID FIXED WITH M10 X 140 SCREW BOLTS WITH 50X50MM SQUARE WASHERS AT 800MM CENTERS

SELECTED LINING

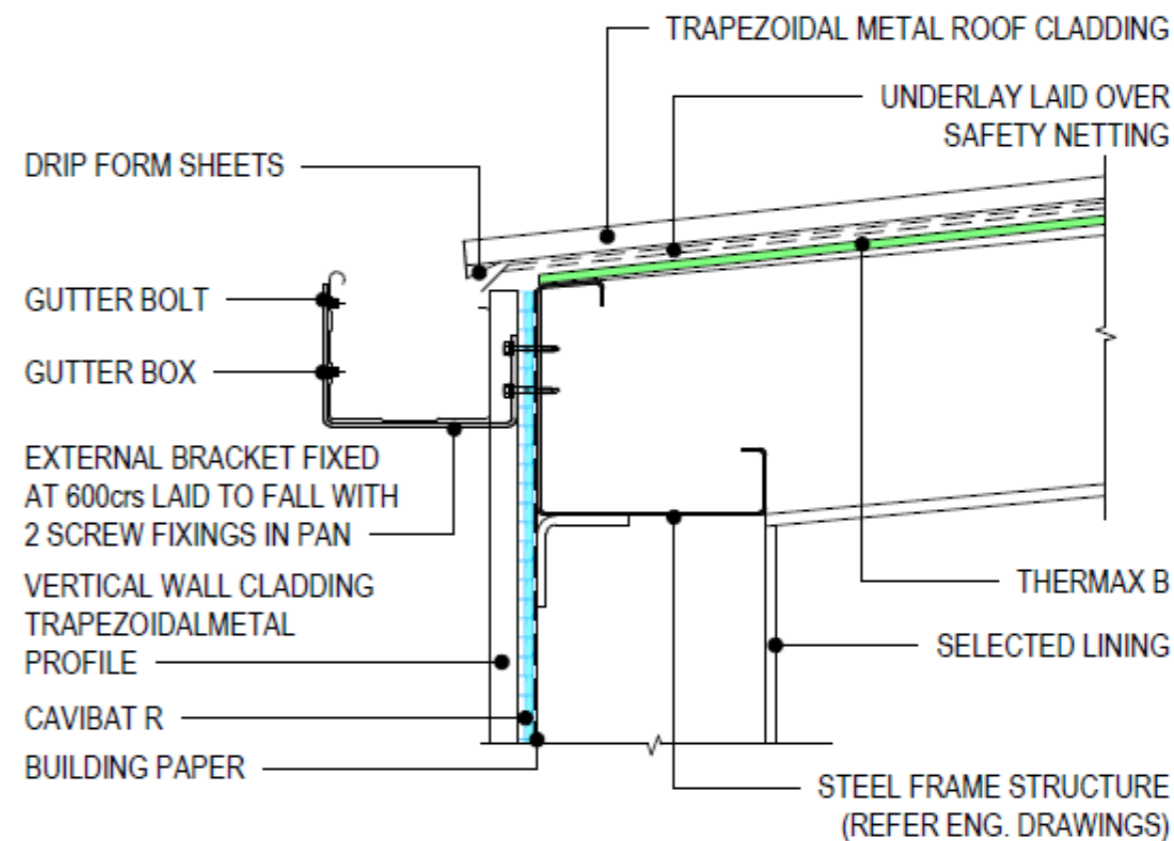
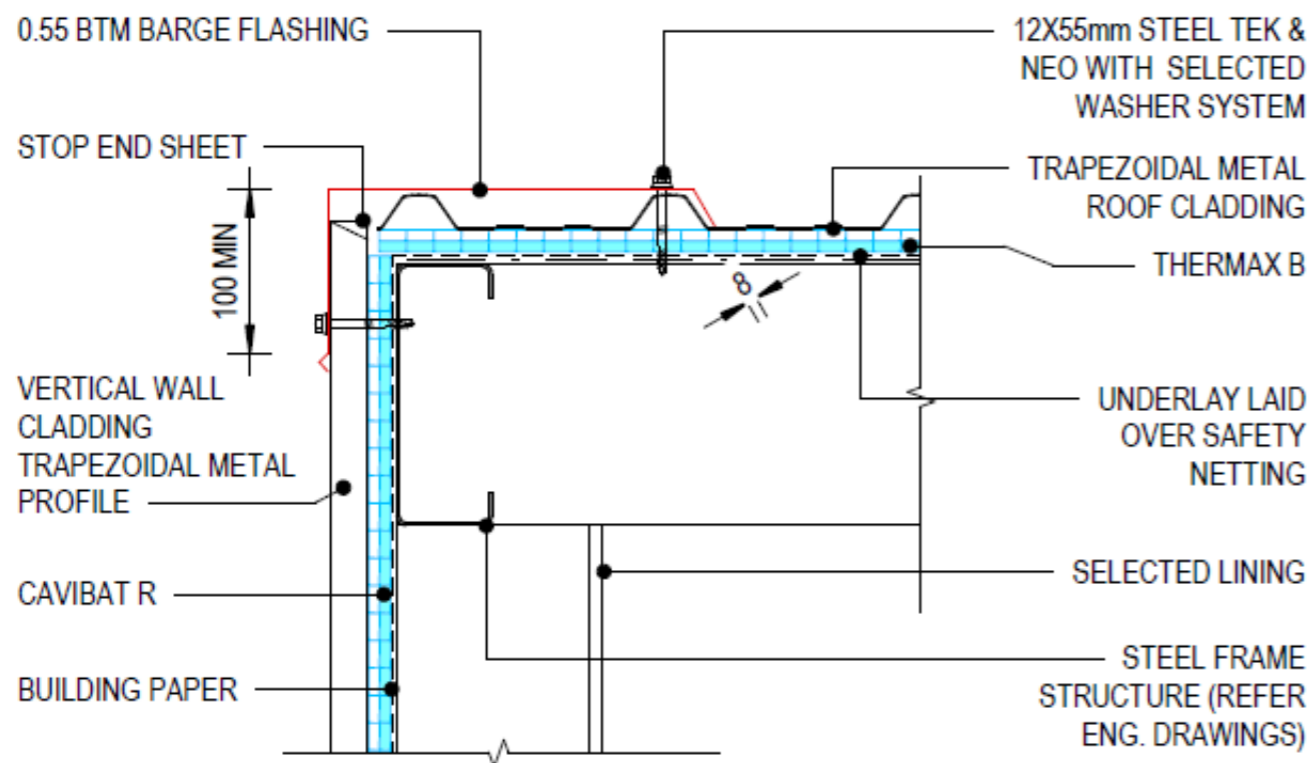
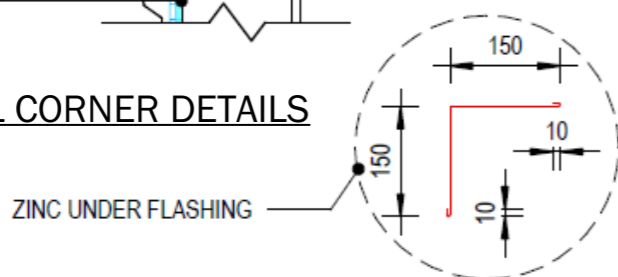


BASE CLADDING DETAILS

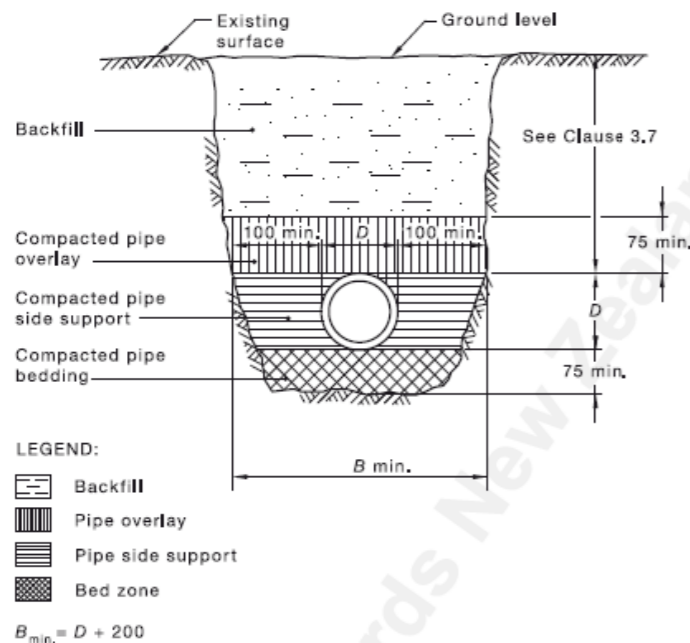
detail 01 APRON FLASHING DETAIL
SCALE 1 : 10



EXTERNAL CORNER DETAILS



EXTERNAL GUTTER DETAILS



DIMENSIONS IN MILLIMETRES

FIGURE 5.4.4 TYPICAL BEDDING OF DRAINS

5.4.5 Minimum cover

The minimum cover requirements for drain shall be in accordance with Clause 3.7.

5.5 INSTALLATION OF BACKFILL MATERIALS

5.5.1 General

Backfill materials shall be compacted to restore the trench as near as practicable to the normal surrounding ground surface level and reduce the likelihood of subsidence.

NOTE: For minimum cover, see Clause 3.7.

5.5.2 Excavated material

Excavated material from the trench may be suitable for final backfill, provided it is free from rock, hard matter and organic material, and broken up so that it does not contain soil lumps larger than 75 mm, which would prevent adequate compaction.

3.7 DEPTH OF COVER FOR BURIED PIPES

3.7.1 General

Drains shall be laid in a manner that provides protection against mechanical damage and deformation due to vehicular loadings.

3.7.2 Depth of cover

Drains shall be installed with a minimum depth of cover, measured from the top of the pipe socket or inspection opening to the finished surface level, as specified in Table 3.7.2.

**TABLE 3.7.2
MINIMUM COVER FOR BURIED PIPES**

Location	Minimum depth of cover mm	
	Cast iron and ductile iron	Other materials
Subject to vehicular traffic	300	500
All other locations	Nil	300*

* Except as provided in Clauses 3.7.3 and 3.7.4.

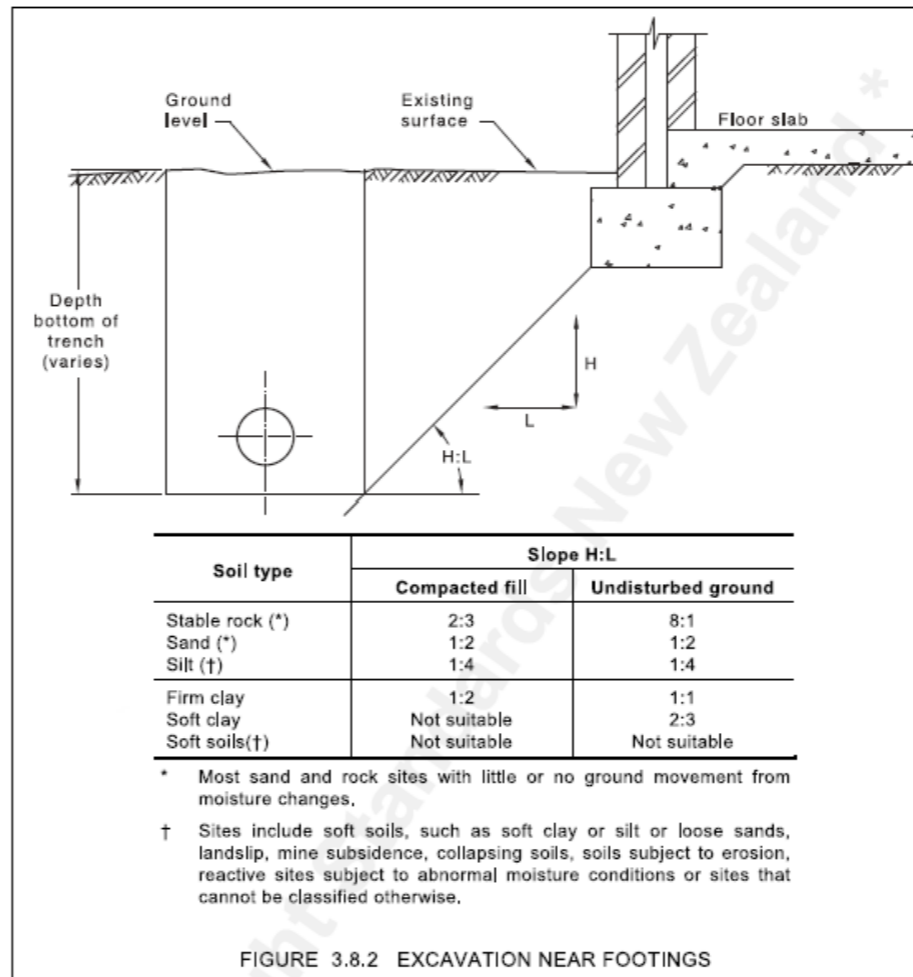
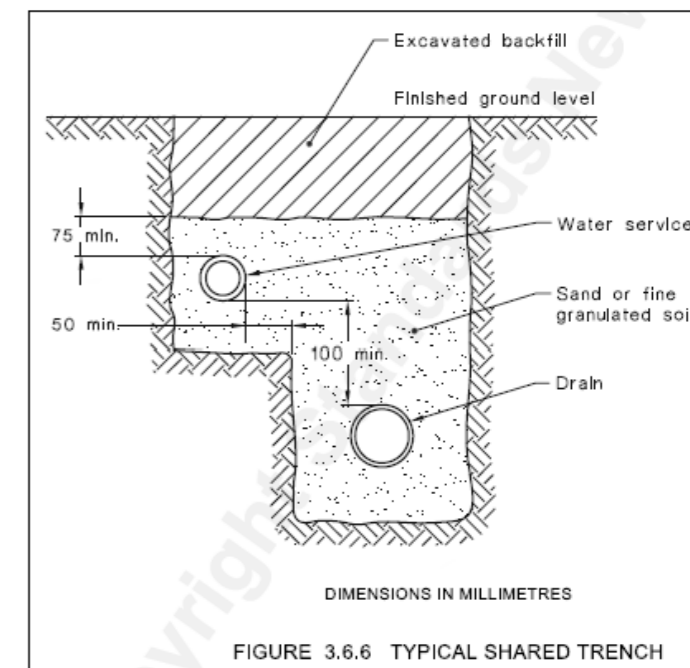
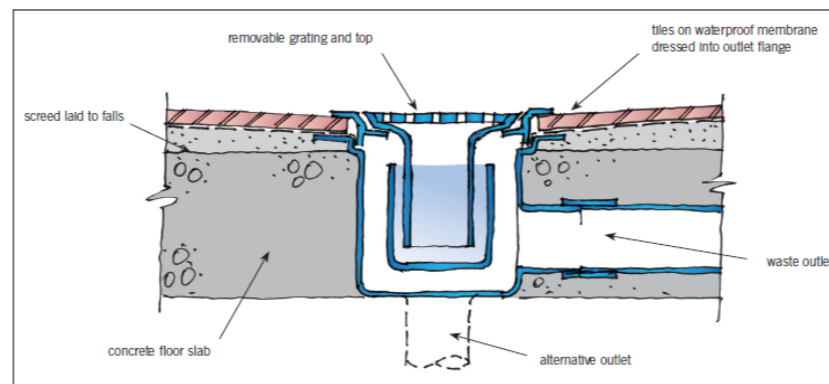
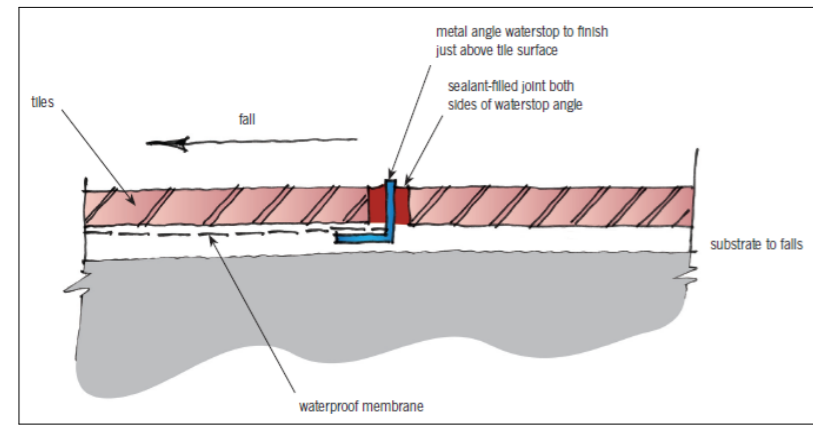
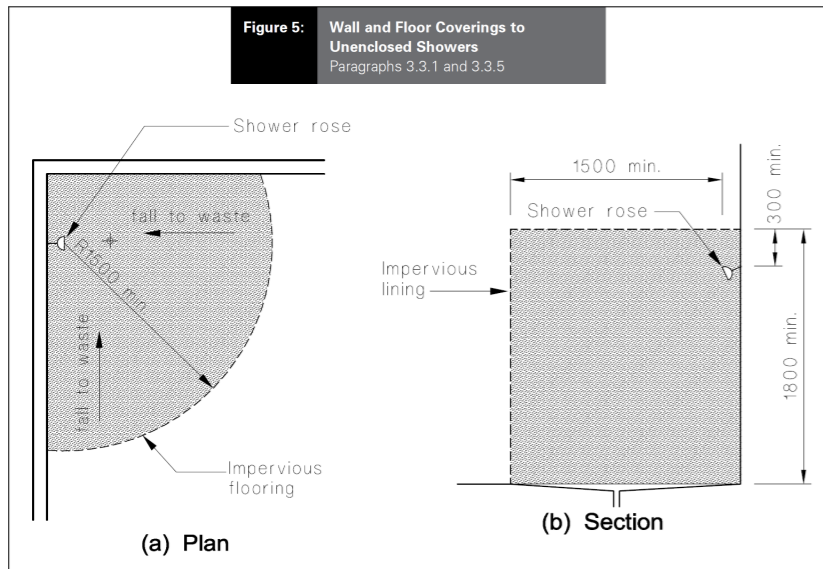
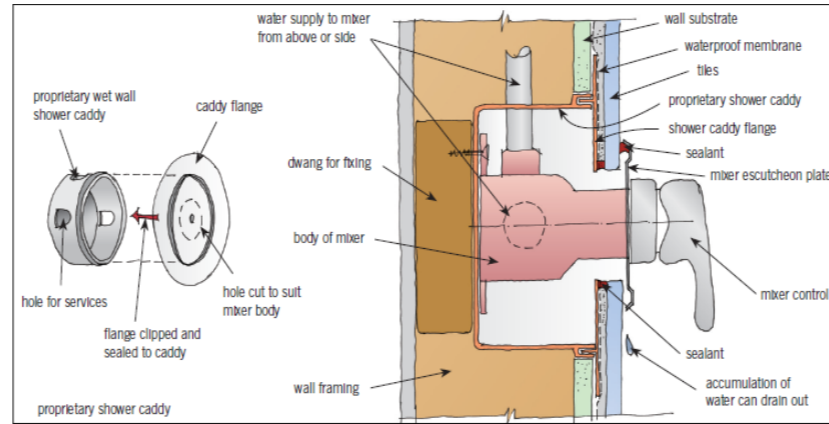
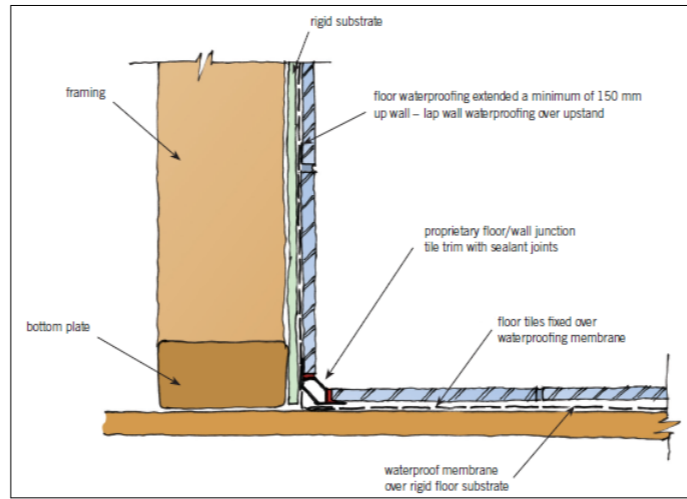
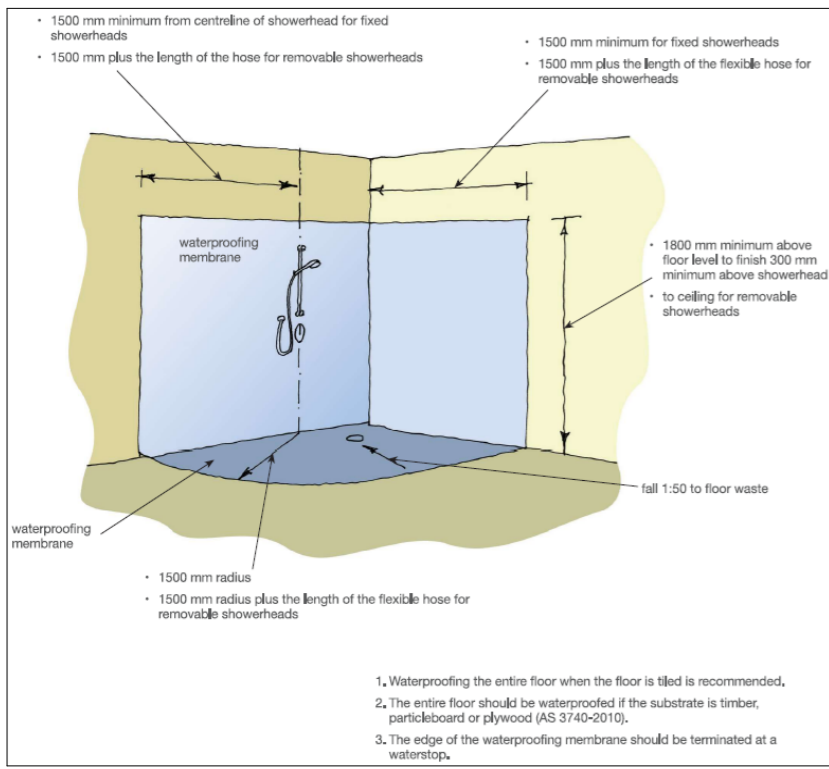


FIGURE 3.8.2 EXCAVATION NEAR FOOTINGS



DIMENSIONS IN MILLIMETRES

FIGURE 3.6.6 TYPICAL SHARED TRENCH



3.2.2 Joints between fixtures and wall linings

Where baths, basins, tubs or sinks abut impervious linings, the joint between fixture and lining shall be sealed to prevent water penetration to concealed spaces or behind linings. (See Figures 3 (a) and (b).)

3.3 Showers and urinals

3.3.1 Showers

All shower spaces shall have impervious floors or floor finishes and impervious wall linings or wall finishes.

The impervious shower wall linings or wall finishes shall extend up the wall to the higher of 1800 mm above the shower floor, or 50 mm above the shower rose.

The top edge of impervious shower wall linings or wall finishes shall be sealed to the wall behind (or to the ceiling if full height) to prevent condensation penetrating behind the shower wall linings or wall finishes.

Penetrations in the shower wall for tapware, mixers, roses etc. shall be waterproofed with a proprietary flange system or with sealant (refer Figure 6), installed in a way that allows easy access when replacing washers, ceramic discs and o-rings.

COMMENT

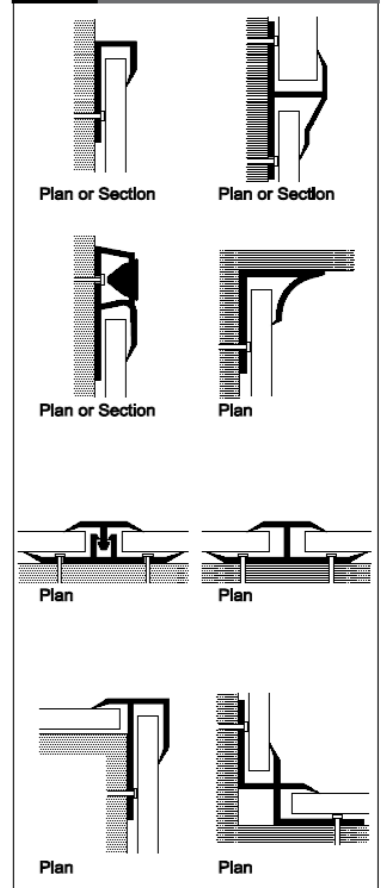
Some tapware manufacturers have specific product installation requirements that are additional to the use of sealant around the tapware penetration.

3.3.1.1 Shower floor materials

Within shower enclosures, or within a 1500 mm horizontal radius from the shower rose where there is no shower enclosure such as a wall, screen, door or curtain (see Figure 5), one of the following materials or finishes to floors shall be used:

- Plastic or stainless steel shower trays
- Integrally waterproof sheet material (e.g. polyvinylchloride) with sealed joints, and covered at edges
- Ceramic or stone tiles having 6% maximum water absorption, waterproof grouted joints, and bedded with an adhesive specified by the tile manufacturer as being suitable

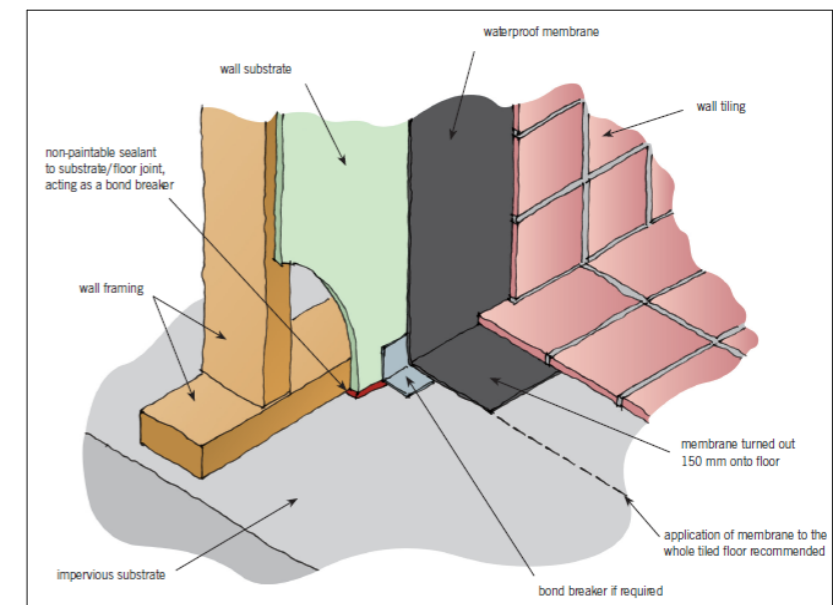
Figure 2: Wall Lining Joints
Paragraph 3.2.1



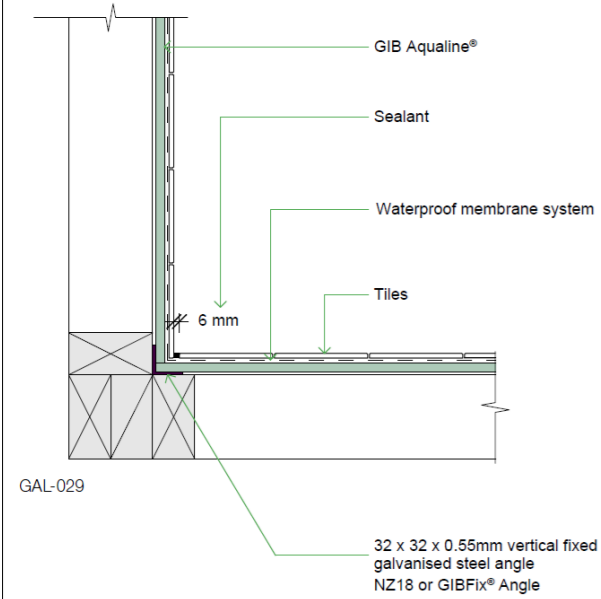
for the tiles, substrate material and the environment of use. The shower must also have tiled walls (see Paragraph 3.3.1.2 c), and tiles must be laid either:

- Within a shower tray specified by the manufacturer as being suitable for the tiles; or

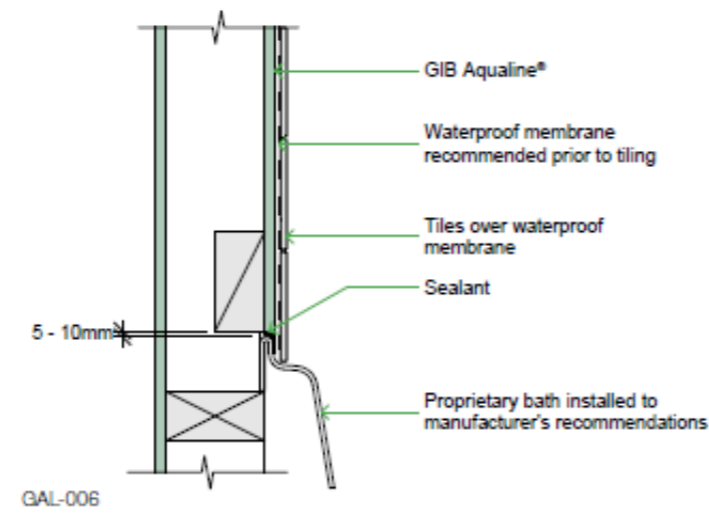
Amend 7
Nov 2020



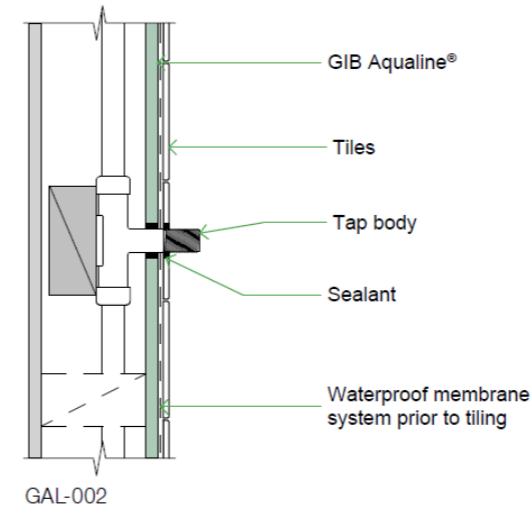
A: TILED INTERNAL CORNER



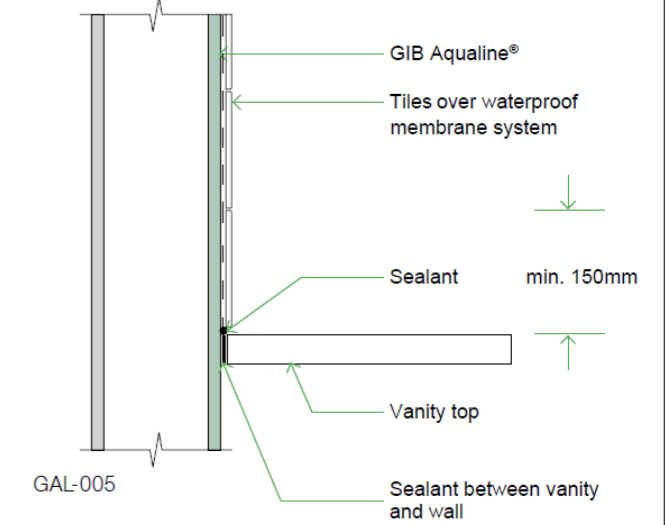
C: BATH LINING JUNCTION



D: SEALING WET AREA PENETRATION



F: VANITY TOP LINING JUNCTION



Leak Control Flange Install Guide

ALLPROOF INDUSTRIES

Step 1
Recess Leak Control Flange into substrate, fixing into place with countersunk fixings or anchors. To ensure strong bonding, apply adhesive compound to underside of the flange before fixing in place.

Step 2
Screed fall in accordance with all relevant AS/NZ standards towards outlet. Apply the waterproof membrane onto the flange covering the wet area.

Step 3
Tile up to grate location. Trim spigot to set height and install locating on flange lugs. Do not seal gaps between spigot and flange as these are designed to allow subsurface moisture to drain.

Step 4
Install grate applying sealant around edges.

Note:
If using the LC flange in conjunction with an Allproof Elegance, Invisidrain, Kaiteri or Wakatipu grate take note of your tile depth as the flange may need to be rebated to allow for the deeper grate.

3.0 Watersplash

3.1 Lining materials

3.1.1 Floors

The following finishes to floors satisfy the performance for *impervious* and easily cleaned surfaces in spaces containing *sanitary fixtures* or *sanitary appliances*. In open plan spaces this surface shall extend at least 1.5 m from all *sanitary fixtures* and *sanitary appliances*:

COMMENT

The requirement for *impervious* and easily cleaned floor surfaces applies to spaces such as kitchens, bathrooms, laundries and toilet facilities. This requirement applies regardless of whether containment is required by Paragraph 2.0.

- a) Integrally waterproof sheet material (e.g. polyvinylchloride) with sealed joints and sealed or coved at edges where watersplash may occur.
- b) Ceramic or stone tiles having 6% maximum water absorption, waterproof grouted joints, and bedded with an adhesive specified by the tile manufacturer as being suitable for the tiles, substrate material and the environment of use. Edges of the tiled area where watersplash may occur must be sealed or coved, and tiles must be laid on a continuous impervious substrate or a membrane specified by the manufacturer as being suitable for the tiles, substrate material and the environment of use.
- c) A slab-on-grade concrete floor having a steel trowel or polished finish, sealed at edges where watersplash may occur, when used in a domestic laundry within a garage, or in a *building* that contains only sanitary facilities.

COMMENT:

Other floor finishes may also be capable of satisfying the performance for *impervious* and easily cleaned, if installed in a manner that prevents gaps or cracks within the finish and at any parts of its perimeter that are exposed to watersplash, and/or if the surface is sealed with a suitable durable coating. However such other finishes are outside the scope of this Acceptable Solution.

Water can penetrate behind or under floor finishes in situations where watersplash occurs regularly (such as around shower enclosures or the fronts of built-in baths), unless these edges are sealed or coved.

Domestic laundries in garages, and *buildings* containing only sanitary facilities, are spaces where the consequences of any small imperfections (such as microcracking) in the imperviousness of a concrete floor are minimal and compliance with NZBC Clause E3 Internal moisture can still be demonstrated.

3.1.2 Walls

The following linings and finishes to walls satisfy the performance for *impervious* and easily cleaned surfaces in areas adjacent to *sanitary fixtures* or *sanitary appliances*, or otherwise likely to be splashed in the course of the *intended use* of the *building*:

- a) Integrally waterproof sheet material (e.g. polyvinylchloride) with sealed joints.
- b) Ceramic or stone tiles having 6% maximum water absorption, waterproof grouted joints, and bedded with an adhesive specified by the tile manufacturer as being suitable for the tiles, substrate material and the environment of use.
- c) Sheet linings finished with a semi-gloss or gloss coating or a hard-wearing low-sheen latex paint containing mould inhibitors.
- d) Water resistant sheet linings finished with decorative high pressure laminate or factory applied polyurethane or resin, and installed with *impervious* joints (see Figure 2).

COMMENT:

Other wall linings and finishes may also be capable of satisfying the performance for *impervious* and easily cleaned, if installed in a manner that prevents gaps or cracks within the finish and at any parts of its perimeter that are exposed to water splash, and/or if the surface is sealed with a suitable durable coating. However such other finishes are outside the scope of this Acceptable Solution.

3.2 Joints

3.2.1 Joints between sanitary fixtures and impervious floor finishes

Where *sanitary fixtures* abut *impervious* floor finishes, the base of the fixture must be sealed to the *impervious* floor finish.

- ii) On a membrane specified by the manufacturer as being suitable for the tiles, substrate material and the environment of use.

3.3.1.2 Shower wall lining and finish materials

Within shower enclosures or within a 1500 mm horizontal radius from the shower rose where there is no shower enclosure such as a wall, screen, door or curtain (see Figure 5), one of the following linings and finishes to walls shall be used:

- a) Plastic shower wall liners, either as a single component without joints, or installed with waterproof joints
- b) Integrally waterproof sheet material (e.g. polyvinylchloride) with sealed joints.
- c) Ceramic or stone tiles having 6% maximum water absorption, waterproof grouted joints, and bedded with an adhesive specified by the tile manufacturer as being suitable for the tiles, substrate material and the environment of use. Tiles must be laid on a membrane specified by the manufacturer as being suitable for the tiles, substrate material and the environment of use.
- d) Water resistant sheet linings finished with decorative high pressure laminate or factory applied polyurethane or resin, and installed with *impervious* joints (see Figure 2).

3.3.1.3 Showers over baths

For showers over baths, the bath rim must have a minimum height of 15 mm, and the shower wall lining shall lap over and be sealed to the rim of the bath. Either the bath rim must be recessed into the wall framing, or the shower lining must be packed out to suit the rim. A bath mould or flashing shall not be used for showers over baths.

COMMENT

Notches to recess the rim of a bath into the wall framing may require the use of over-sized framing members to ensure that the notches do not detrimentally affect structural performance of the wall.

3.3.2 Shower enclosures

Shower floors and bases may be constructed with or without upstands, and where installed for use by *people with disabilities* shall have level thresholds.

3.3.2.1 When enclosures, such as walls, screens, doors or curtains are used they shall be continuous from floor level or top of upstand to 1800 mm minimum above floor level and not less than 50 mm above the shower rose.

3.3.2.2 Where shower trays are used, the junction between tray and wall linings shall be constructed in accordance with Figure 4 (a) or (b).

3.3.2.3 Where the shower floor has no upstand or where a wall, screen, door or curtain is omitted, the floor shall have a fall of no less than 1:50 towards the *floor waste*. The fall shall apply to the floor area within a radius of 1500 mm taken from a point vertically below the shower rose, or from any wall within that radius. (See Figure 5.)

3.3.3 Urinals

Impervious wall shall extend horizontally at least 300 mm beyond each side of the urinal and vertically from floor level to a height of 1500 mm.

LINTEL FIXING SCHEDULE

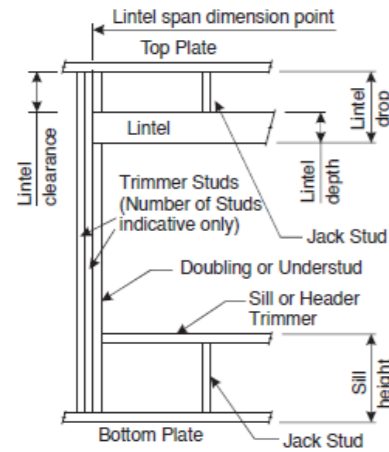
ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12

NZS 3604:2011

NOTE:

- All fixings are designed for vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20kPa
- Refer to Table 8.19 NZS 3604:2011 for nailing schedule to resist horizontal loads
- These fixings assume the correct choice of rafter/truss to top plate connections have been made
- All fixings assume bottom plate thickness of 45mm maximum
- Note: TYLOK options on timber species
- Wall framing arrangements under girder trusses are not covered in this schedule
- All timber selections are as per NZS 3604:2011

DEFINITIONS



Roof Tributary Area	Light Roof Wind Zone				Heavy Roof Wind Zone			
	L, M, H		VH, EH		L, M, H		VH, EH	
	L	M	H	VH	L	M	H	VH
8.6m²	G	G	H	H	G	G	H	H
11.6m²	G	H	H	H	G	G	H	H
12.1m²	G	H	H	H	G	H	H	H
15.3m²	H	H	-	-	G	H	H	-
19.1m²	H	-	-	-	G	H	-	-
20.9m²	H	-	-	-	H	H	-	-
21.8m²	H	-	-	-	H	-	-	-
34.3m²	-	-	-	-	H	-	-	-

NOTES:

- Roof Tributary Area = approx. 1/2 x (Total roof area on girder and rafter trusses supported by lintel)
- Assumed girder truss is at mid-span or middle third span of lintel
- Use similar fixings for both ends of lintel
- All other cases require specific engineering design

Lintel Span (m)	Loaded Dimension (m) (See Fig. 1.3 NZS 3604:2011)	Selection Chart for Lintel Fixing									
		Light Roof Wind Zone					Heavy Roof Wind Zone				
		L	M	H	VH	EH	L	M	H	VH	EH
1.0	2.0	E	E	E	F	F	E	E	E	E	F
	3.0	E	E	F	F	F	E	E	E	F	F
	4.0	E	F	F	F	G	E	E	F	F	F
	5.0	E	F	F	G	G	E	E	F	F	G
	6.0	E	F	F	G	G	E	E	F	F	G
1.2	2.0	E	E	F	F	F	E	E	E	F	F
	3.0	E	E	F	F	F	E	E	E	F	F
	4.0	F	F	F	G	G	E	E	F	F	G
	5.0	F	F	F	G	G	E	E	F	F	G
	6.0	F	F	G	G	H	E	E	F	G	G
1.5	2.0	E	E	F	F	F	E	E	E	F	F
	3.0	E	F	F	F	G	E	E	F	F	F
	4.0	F	F	F	G	G	E	E	F	F	G
	5.0	F	F	G	G	H	E	E	F	G	G
	6.0	F	F	G	H	H	E	E	F	G	H
2.0	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	G	H	E	E	F	G	G
	4.0	F	F	G	H	H	E	E	F	G	H
	5.0	F	F	G	H	H	E	E	F	G	H
	6.0	F	G	H	H	-	E	F	G	H	H
2.4	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	G	H	E	E	F	G	G
	4.0	F	F	G	H	H	E	E	F	G	H
	5.0	F	G	H	H	-	E	F	G	H	H
	6.0	F	G	H	H	-	E	F	G	H	H
3.0	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	H	H	E	E	F	G	H
	4.0	F	F	G	H	H	E	E	F	G	H
	5.0	F	G	H	H	-	E	F	G	H	H
	6.0	F	G	H	-	-	E	F	G	H	-
3.6	2.0	F	F	G	H	H	E	E	F	G	G
	3.0	F	F	G	H	H	E	E	F	G	H
	4.0	F	G	H	H	-	E	F	G	H	H
	5.0	F	G	H	-	-	E	F	G	H	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.2	2.0	F	F	G	H	H	E	E	F	G	G
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.5	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.8	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
5.1	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
5.4	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-

LINTEL FIXING OPTIONS

(Characteristic Uplift)

TYPE E 1.4kN

TYPE F 4.0kN

TYPE G 7.5kN

TYPE H 13.5kN

8. WALLS

8. WALLS

PROPOSED RESIDENTIAL DEVELOPMENT

LOT 10 WAGENER GROVE

PUKENUI, FAR NORTH DISTRICT

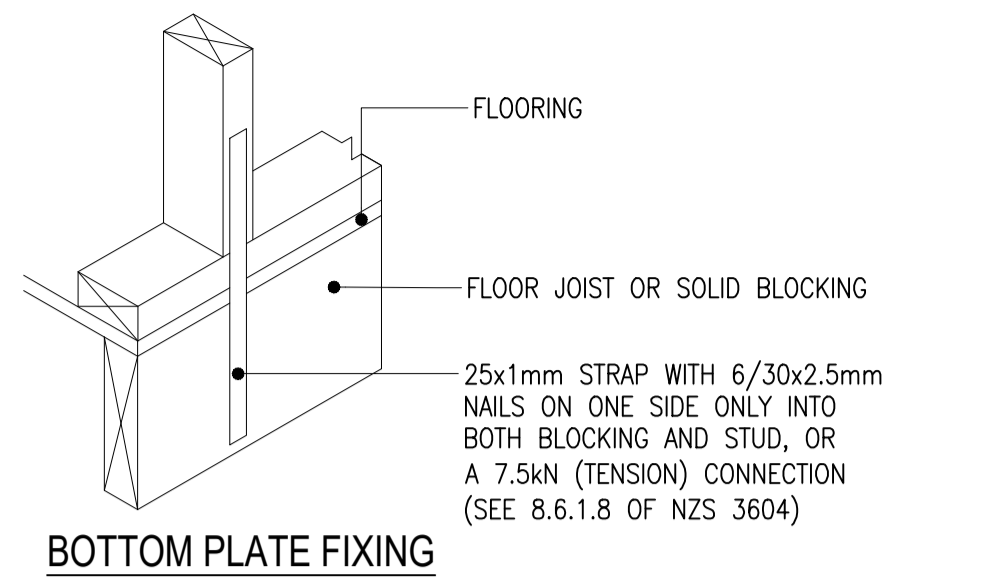
STRUCTURAL DRAWINGS

STRUCTURAL DRAWINGS INDEX

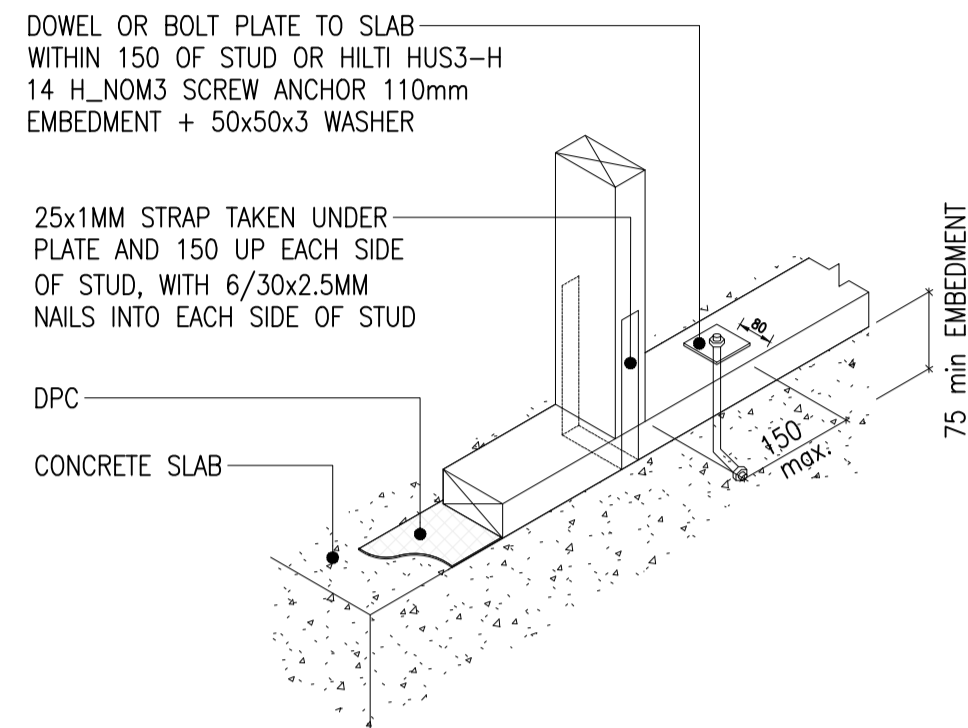
S001	GENERAL TIMBER NOTES
S002	GENERAL CONCRETE NOTES
S101	FOUNDATION PLAN
S102	BRACING PLAN
S103	CEILING & RAFTER FRAMING AND LINTEL PLAN
S201	FOUNDATION DETAILS 1
S202	FOUNDATION DETAILS 2
S301	CONNECTION DETAILS 1
S302	CONNECTION DETAILS 2
S303	NAILING SCHEDULE
S304	NZS3604 DETAILS

SMARTSTEEL DRAWINGS ATTACHED

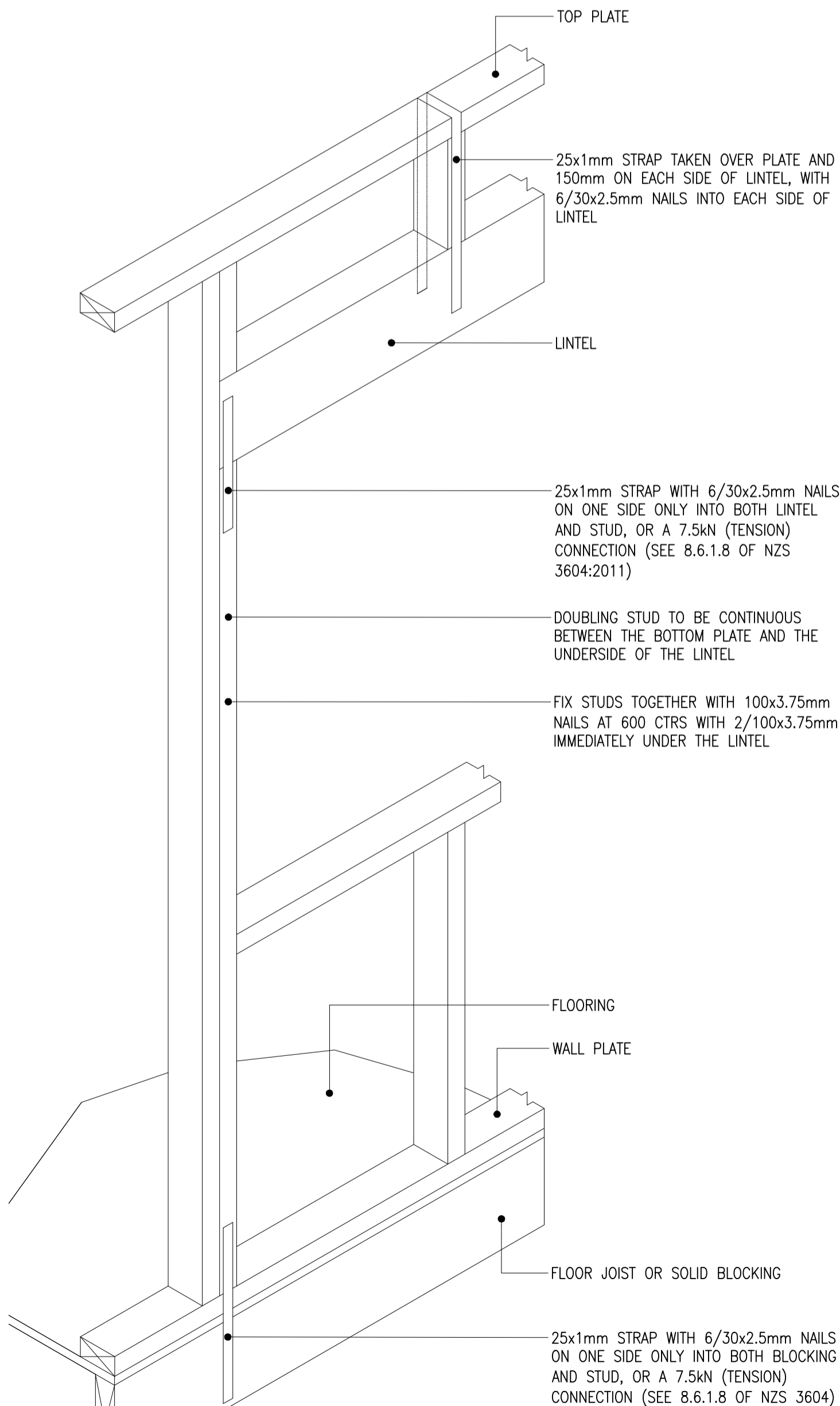




BOTTOM PLATE FIXING



BOTTOM PLATE FIXING TO PREVENT UPLIFT
REFER TO FIGURE 8.12 NZS 3604:2011



FIXING OF LINTELS TO PREVENT UPLIFT
REFER TO FIGURE 8.12 NZS 3604:2011

TIMBER TREATMENT TABLE (ACCEPTABLE SOLUTION B2/AS1)

Requirements for radiata pine and Douglas fir solid timber to achieve a (minimum) 50 year durability performance

WOOD-BASED BUILDING COMPONENTS	SPECIES OR TYPES	LEVEL OF TREATMENT ⁽²⁾ TO NZS 3640
A – Members exposed to the weather and in contact with the ground (see section 106 of NZS 3602)		
Building piles, plywood and timber framing foundations, crib walling, sawn poles, house poles and retaining walls (uprights)	Pinus species	H5
Fence posts, landscape timbers and retaining walls (horizontal members)	Pinus species	H4
C – Members protected from the weather but exposed to ground atmosphere (see section 108 of NZS 3602)		
Jackstuds, subfloor braces, bearers, wall plates, floor joists to the subfloor, blocking, subfloor wall studs, wallings and battens, wall studs and noggs, diagonal boards.	Radiata pine Douglas fir	H1.2
Interior flooring, suspended ground floors	Radiata pine Douglas fir	H1.2
D – Members protected from the weather but with a risk of moisture penetration conducive to decay (see section 109 of NZS 3602)		
Roof members (in or associated with)		
Sarking and framing not protected from solar drive moisture through absorbent cladding materials (8)	Radiata pine Douglas fir	H1.2
Enclosed flat roof framing and associated roof members	Radiata pine Douglas fir	H1.2
Enclosed skillion roof framing and associated roof members	Radiata pine Douglas fir	H1.2
Valley boards and boards supporting flashings or box gutters and flashings to roof penetrations and upstands to roof decks (10)	Radiata pine Douglas fir	H1.2
Wall members (in or associated with)		
Framing and other members within or beneath a parapet	Radiata pine Douglas fir	H1.2
Framing and other members within enclosed decks or balconies	Radiata pine Douglas fir	H1.2
Cantilevered enclosed deck joists and associated framing including joist trimmers, noggs and blocking (5)	Radiata pine Douglas fir	H3.2
Framing and other members supporting enclosed decks (including enclosed cantilevered decks) or balconies	Radiata pine Douglas fir	H1.2
Battens used behind cladding to form a cavity	Radiata pine Douglas fir	H3.1
All other exterior wall framing and other members including exterior and boundary joists (9) (11)	Radiata pine Douglas fir (14)	H1.2
E – Members not exposed to weather or ground atmosphere and in dry conditions (see section 110 of NZS 3602)		
All roof trusses, including gable end trusses, roof framing, ceiling and eaves framing, purlins and battens	Radiata pine Douglas fir (14)	H1.2
All midfloor framing including boundary joists, ceiling framing, ceiling battens, and double top plates	Radiata pine Douglas fir (14)	H1.2
Wall framing and roof framing (including trusses) protected from the weather, in unlined and unoccupied farm building and outbuildings except those not allowed in 110.2(f) or NZS 3602	Radiata pine Douglas fir	None
Internal walls	Radiata pine Douglas fir (14)	H1.2
Interior flooring	Radiata pine Douglas fir (14)	H1.2

- NOTE:
- (2) Timber treated to a higher level than the minimum satisfies the minimum requirements.
 - (5) H3.2 refers to preservative treatment outlined in NZS 3640.
 - (8) Timber shakes and shingles, and similar absorbent claddings, absorb moisture that can be driven in frame cavities by evaporation. Unless the cavities are adequately drained and ventilated, continuing condensation caused by solar driven transfer increases the moisture content in the cavities and timber framing requiring a high level of timber treatment to resist decay.
 - (9) Such as joists, lintels, wall plate and double top plates, studs, together with parapets, enclosed balustrades, boxed columns and chimneys.
 - (10) Any metal flashing shall be separated from the treated timber with building paper.
 - (11) Exposed ends of joists shall be protected by a boundary joist.
 - (14) Exceptions to the levels of treatment for Douglas fir are provided in Paragraph 3.2.2.2 of the Acceptable Solution B2/AS1.

NZS 3604:2011 - TABLE 8.18 - FIXING OF TOP PLATE OF WALL TO SUPPORTING MEMBERS SUCH AS STUDS AND LINTELS AT 600mm CRS (SEE 8.7.6 AND FIGURE 8.12)

LOADED DIMENSION OF WALL (m)	LIGHT ROOFS					HEAVY ROOFS									
	ROOF MEMBER SPACING (mm)														
	900					1200									
	WIND ZONE					WIND ZONE									
	L	M	H	VH	EH	L	M	H	VH	EH	L	M	H	VH	EH
FIXING TYPE (SEE BELOW)															
2.0	A	A	B	B	B	A	A	B	B	B	A	A	A	B	B
3.0	A	B	B	B	B	A	B	B	B	B	A	A	B	B	B
4.0	A	B	B	B	B	A	B	B	B	B	A	A	B	B	B
5.0	B	B	B	B	B	B	B	B	B	B	A	A	B	B	B
6.0	B	B	B	B	B	B	B	B	B	B	A	A	B	B	B
FIXING TYPE															
FIXING TO RESIST UPLIFT															
A	2/90x3.75 END NAILS										CAPACITY OF ALTERNATIVE FIXING (kN)				
B	2/90x3.75 END NAILS + 2 WIRE DOGS										2.7				

B – CRITICAL VALUE

NZS 3604:2011 - TABLE 10.10 - PURLINS ON FLAT IN ALL WIND ZONES - SG 8 (SEE 10.2.1.16.1)

PURLIN SIZE	MAX SPAN	ROOF MEMBER SPACING (mm)											
		LOW		MEDIUM		HIGH		VERY HIGH		EXTRA HIGH			
		SPACING	FIXING	SPACING	FIXING	SPACING	FIXING	SPACING	FIXING	SPACING	FIXING		
(mm)	(mm)	(mm)	(TYPE)	(mm)	(TYPE)	(mm)	(TYPE)	(mm)	(TYPE)	(mm)	(TYPE)	(mm)	(TYPE)
70x45	900	900	S	900	T	900	T	900	T	900	U	900	U
70x45	900	1200	T	1200	T	1200	T	1050	U	900	U	900	U
70x45	900	1800	T	1800	U	1400	U	1050	U	900	U	900	U
70x45	1200	1200	T	1150	T	800	T	600	T	500	T	500	T
70x45	1200	1300	T	1150	T	800	T	600	T	500	T	500	T
90x45	1200	1700	T	1450	U	1000	U	750	U	650	U	650	U
FIXING TYPE		DESCRIPTION					ALTERNATIVE FIXING CAPACITY (kN)						
S		2/90x3.15 GUN NAILS					0.8						
T		1/10g SELF DRILLING SCREW, 80mm LONG					2.4						
U		1/14g SELF DRILLING TYPE 17 SCREW, 100mm LONG					5.5						

NOTE: ALL FIXING TYPES ARE DETERMINED AS REQUIRED FOR THE HIGHER UPLIFT LOADS AT THE PERIPHERY OF THE ROOF (BASED ON LOCAL PRESSURE FACTORS IN AS/NZS 1170.2).

FIXING TYPES AND CAPACITY FOR RAFTERS

FIXING TYPE	FIXING TO RESIST UPLIFT	ALTERNATIVE FIXING CAPACITY (kN)
E	2/90x3.15 SKEW NAILS + 2 WIRE DOGS	4.7

NOTES:

4			
3			
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JOB TITLE
**LOT 10 WAGENER GROVE
PUKENUI
FAR NORTH DISTRICT**

DRAWING TITLE
GENERAL TIMBER NOTES

DRAWING STATUS
ISSUED FOR CONSENT

SCALE	CLIENT REF No:	JOB No:
NTS	TEC	260041.1
DRAWN	DM	SHEET No:
DESIGNED	DM	REVISION:
CHECKED	TE	S001
		1

General Notes:

1. Foundation drawings shall be read in conjunction with the geotechnical report and the building consent drawings and specifications by any other consultants involved in the building consent.
2. Unless otherwise noted, all levels are in meters, and all dimensions are in millimeters, and shall be checked by contractor prior to construction.
3. Dimensions shall not be obtained by scaling from drawings. Refer to architects drawings for all setout dimensions, recesses and service positions. Internal slab thickenings and pad foundations to be accurately set out using the Architects drawings
4. All discrepancies shall be referred to the architect or engineer for resolution before proceeding with the work.
5. The stability of the structure during construction is the responsibility of the builder.
6. All materials and workmanship shall be in accordance with the current codes of practice except where varied by the specification and/or drawings.
7. Where proprietary products are specified in the documents the contractor may submit an alternative product for approval.
8. Temporary work and propping is the responsibility of the builder.
9. Concrete slabs should be cured for 7 days in accordance with NZS3109. Saw cuts are recommended to mitigate shrinkage cracking. Saw cuts can be omitted providing the contractor takes appropriate measures and is responsible for controlling shrinkage.

NOTE 1: Site excavation

900mm topsoil & unsuitable material should be removed from building platform. Certified compacted hard fill (well graded AP40) extending 200mm(or the depth of the hardfill which ever is greater) out from building footprint may be required to bring slab up to level. The prepared building platform should be inspected by a qualified engineer to confirm design conditions.

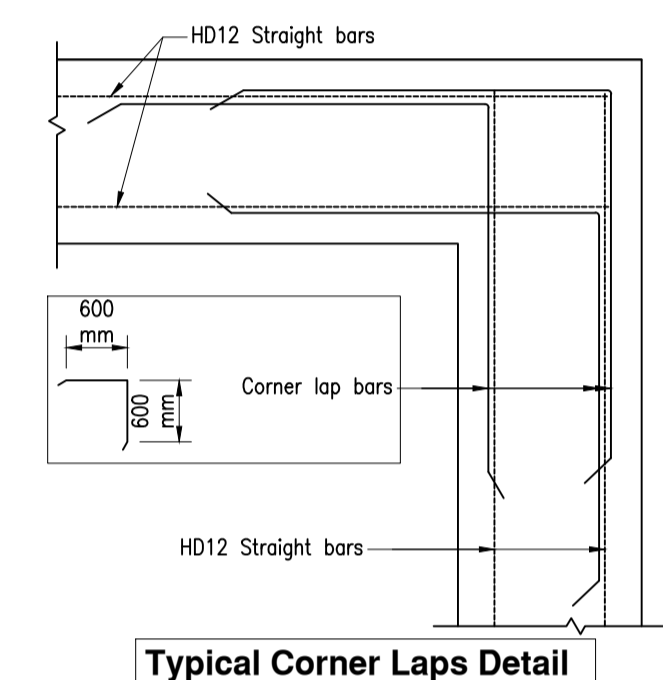
NOTE 2: Inspection Schedule notes

Contact Inspecting Engineer for the following inspections to enable a PS4 to be issued for construction review. Contact TEC (tyron@tecengineers.co.nz) 022 530 2960 for inspections or otherwise specified in the inspection list below.

1. Cut platform inspection
 2. Pre pour inspection and any other structural items if applicable to this consent.
- Please allow 48hr notice to ensure availability of the inspecting engineer.
 TEC Consulting Engineers Ltd can not issue a PS4 without doing the inspections.
 We advise checking the project conditions of consent and discussing the required inspections with the council. Please give us a call if you are unsure.

Reinforcing:

SYMBOL	TYPE
R	Plain bars grade 300E to NZS 4671 (300 MPa)
D	Deformed bars grade 300E to NZS 4671 (300 MPa)
HR	Plain bars grade 500E to NZS 4671 (500 MPa)
HD	Deformed bars grade 500E to NZS 4671 (500 MPa)
BAR SIZE HD	10 12 16
LAP LENGTH (25 mpa)	450 600 900



Site soil conditions:

- A. Allowable bearing pressure = 100kPa
- B. Dependable bearing pressure = 150kPa
- C. Geotechnical ultimate bearing = 300kpa
- D. Subgrade (if required) to be prepared as per geotechnical report or compacted to 95% of maximum dry density determined by test NZS 4402: Test 4.1.1. or equivalent unless noted otherwise.

Cover & Strength:

Cast against DPM = 50mm
 Within Ribs: Side cover = 40mm
 Cast against ground = 75mm
 Foundations and slab to be 25MPa (min)

Surface Finishes: (NZS 3114:1987)

Concealed work = F1
 Exposed edges of foundation = F5
 Floor slab = U3

NOTES:

4			
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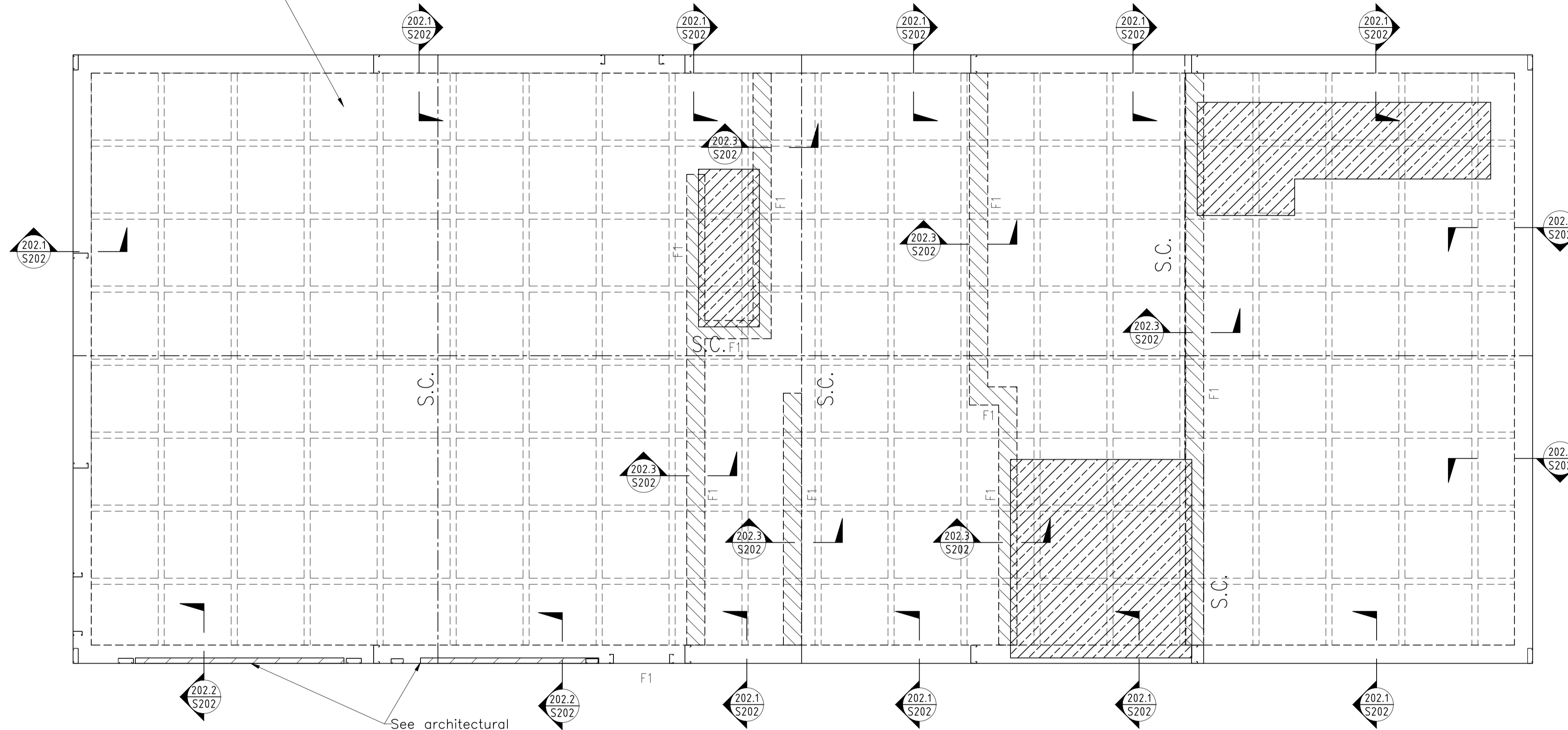
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**LOT 10 WAGENER GROVE
 PUKENUI
 FAR NORTH DISTRICT**

DRAWING TITLE
GENERAL CONCRETE NOTES

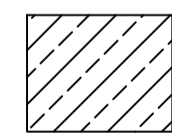
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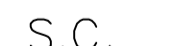
SCALE	CLIENT REF No:	JOB No:
NTS		
DRAWN	DM	TEC 260041.1
DESIGNED	DM	SHEET No: REVISION:
CHECKED	TE	S002 1

85 thick slab (min.) with SE62mesh
 30mm top cover on 1100x1100x220
 thick polystyrene infill panels on DPM,
 on 20mm of sand blinding, on
 minimum 100mm compacted hardfill.



FOUNDATION PLAN

 Tiled area. Any Sawcuts crossing tiled area require a free joint in the tiles above the sawcut.

 S.C. - 25mm deep saw cut within 24 hours. Refer S99 general notes item 9.

- F1 - 300W x 305 DEEP CONCRETE STRIP FOOTING
- P1 - PLPH5 125 POST IN 450ØX900DEEP 20MPA CONCRETE FOOTING

Refer to Architectural drawings for dimensional setout, internal walls, windows & doors, linings, RL's, falls, rebates & finishes.

GEOTECHNICAL NOTE:

REFER TO THE WILTON JOUBERT GEOTECHNICAL REPORT REF 133207, DATED 10/04/2024

Ground improvement in forming the building platform will require an engineered cut/fill earthworks operation, consisting of the removal of organic, loose surficial subsoils to depths of approximately 0.50m to 0.90m below present ground level (hard pan depth) and replacement with engineered fill. Either imported hardfill or clean, inorganic sand fill may be used for filling purposes.

Refer to section 8.3 of the Geotechnical report for further guidance.

NOTES:

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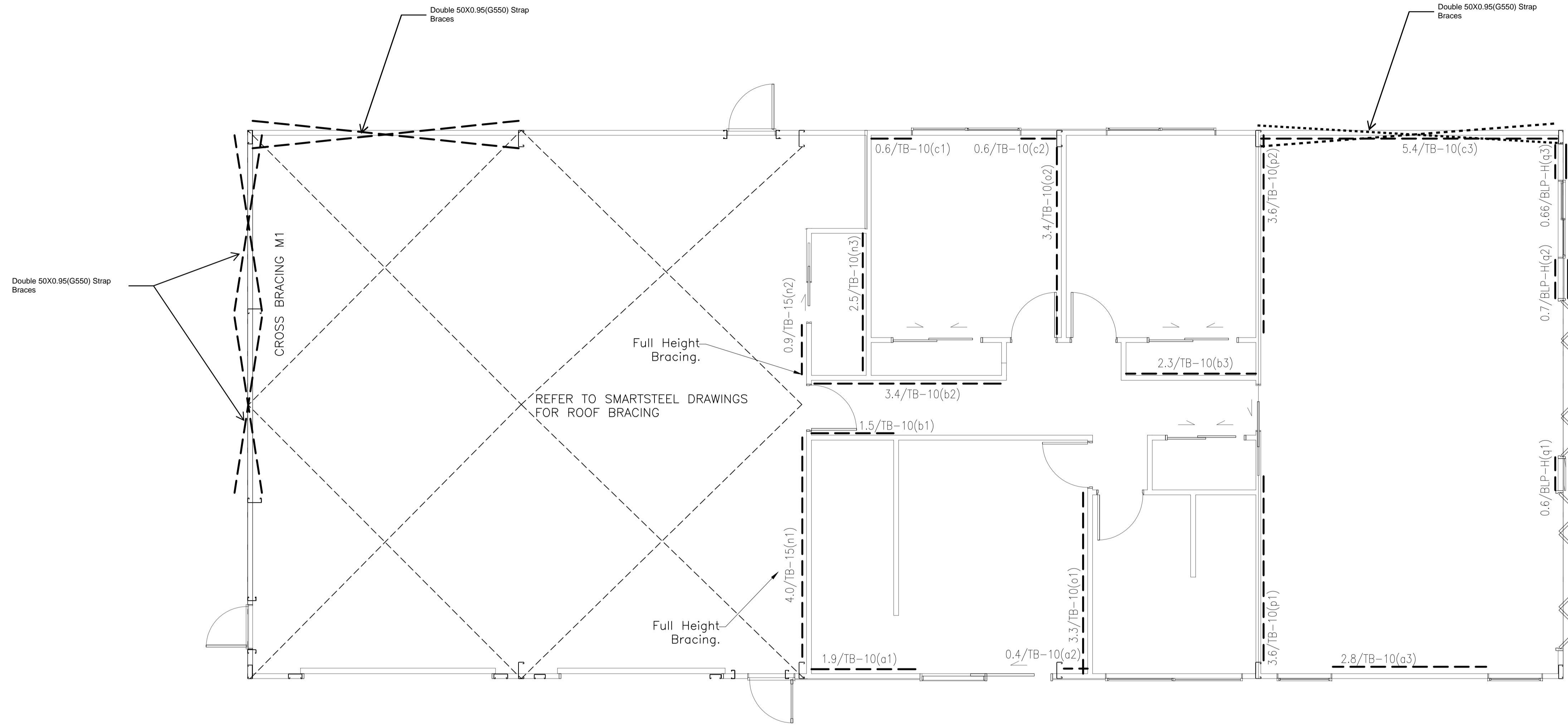
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**LOT 10 WAGENER GROVE
 PUKENUI
 FAR NORTH DISTRICT**

DRAWING TITLE
FOUNDATION PLAN

DRAWING STATUS
ISSUED FOR CONSENT

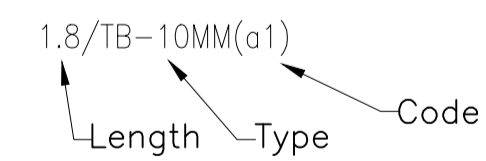
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CHECKED	TE	S101	1

Refer to Architectural drawings for dimensional setout, internal walls, windows & doors, linings, RL's, falls, rebates & finishes.



BRACING PLAN

LEGEND:



TB-10MM – 10mm TRIBOARD engineered panel on one side. Fix in accordance to the TRIBOARD Plasterboard Manual.

BLP-H – GIB Braceline One Side. Structural Plywood the other. Panel hold-down fixings. Fix in accordance to the GIB Plasterboard Manual.

Note: – All bracing lengths are given as a minimum. They can be made longer on site to suit stud spacing or actual wall length.

"High" Wind Zone

NOTES:

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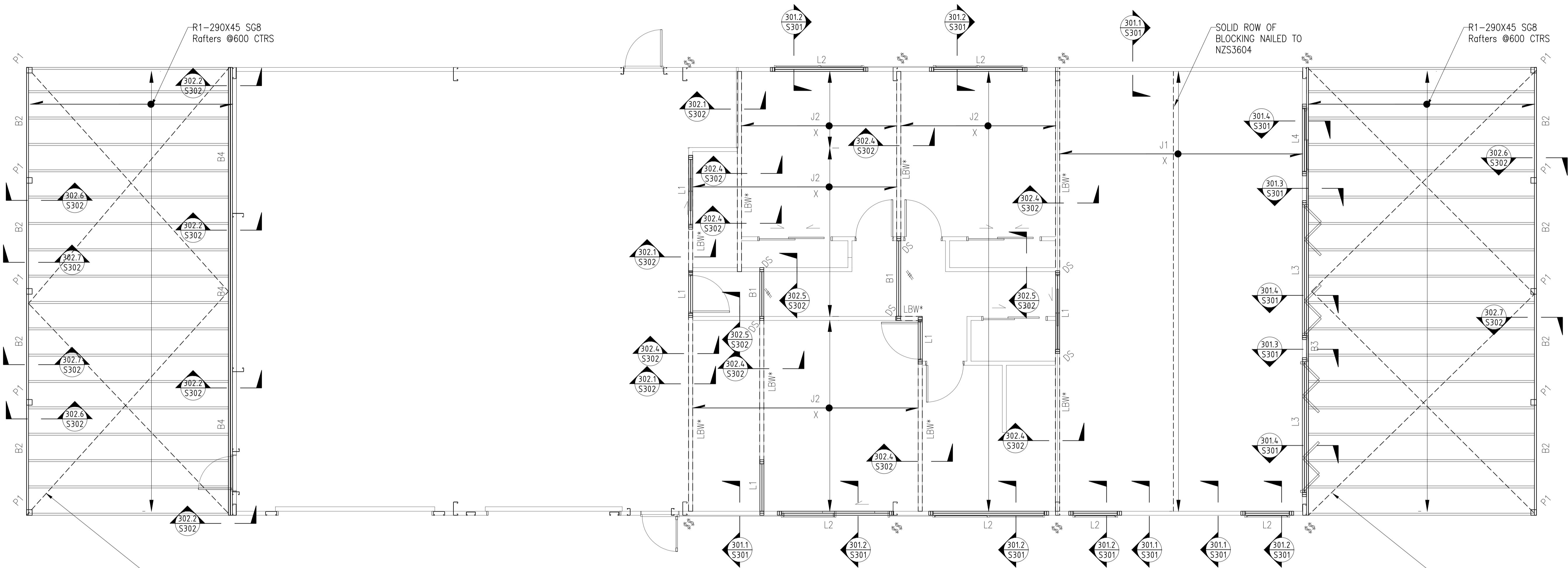
JOB TITLE
**LOT 10 WAGENER GROVE
PUKENUI
FAR NORTH DISTRICT**

DRAWING TITLE
BRACING PLAN

DRAWING STATUS
ISSUED FOR CONSENT

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DRAWN	DM	TEC	260041.1
DESIGNED	DM	SHEET No:	REVISION:
CHECKED	TE	S102	1

Refer to Architectural drawings for dimensional setout, internal walls, windows & doors, linings, RL's, falls, rebates & finishes.



CEILING & RAFTER FRAMING & LINTEL PLAN

CEILING JOISTS

- J1: 240X45 SG8 @ 400 CTRS
- J2: 190X45 SG8 @ 600 CTRS

X-When joist span exceeds 3000mm, install blocking at midspan.

LINTEL SCHEDULE

- L1: 2/140X45 SG8 (Type E Mitek Fixings)
- L2: 2/190X45 SG8 (Type E Mitek Fixings)
- L3: 2/290X45 SG8 (Type G Mitek Fixings)
- L4: 2/190X45 SG8 (Type E Mitek Fixings)

Each Lintel to have Double Studs (DS) at each end U.N.O

BEAMS SCHEDULE

- B1: 2/190X45 SG8 (Type E Mitek Fixings)
- B2: 2/290X45 SG8
- B3: 290X45 SG8 STRINGER
- B4: 2/290X45 SG8 STRINGER

RAFTERS

- R1 - 290X45 SG8 Pergola Rafters @ 600 CTRS

COLUMNS

- DS - Double Stud below - Detail 306.2
- PS1 - PLPH5 125 Post

=====
LBW* - Load Bearing Wall Below

Beam inline with ceiling joists. Fix joists to beam with Joist hangers

REFER TO DETAIL 302.9

NOTES:

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2			
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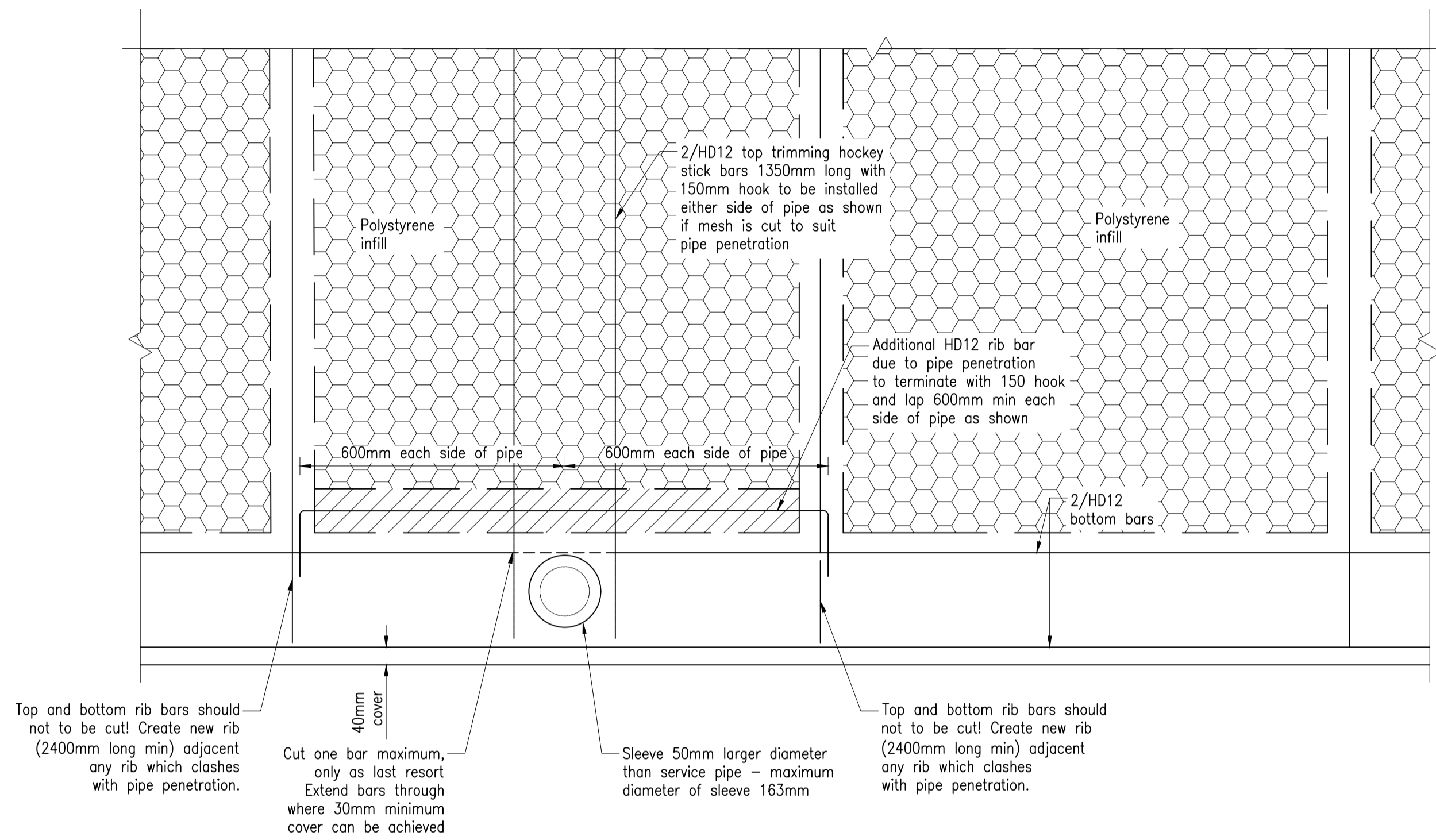
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**LOT 10 WAGENER GROVE
PUKENUI
FAR NORTH DISTRICT**

DRAWING TITLE
**CEILING & RAFTER FRAMING,
& LINTEL PLAN**

DRAWING STATUS
ISSUED FOR CONSENT

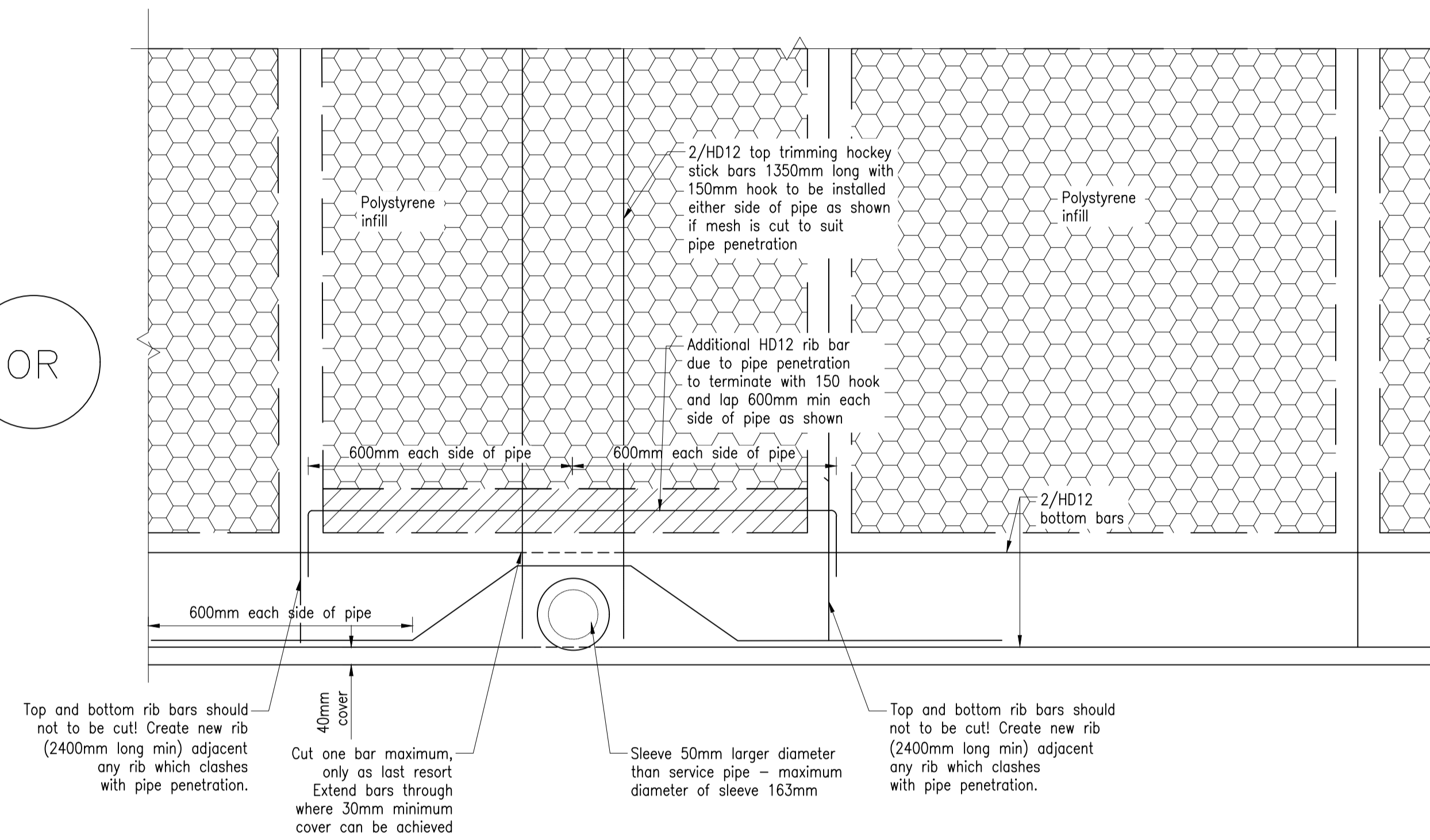
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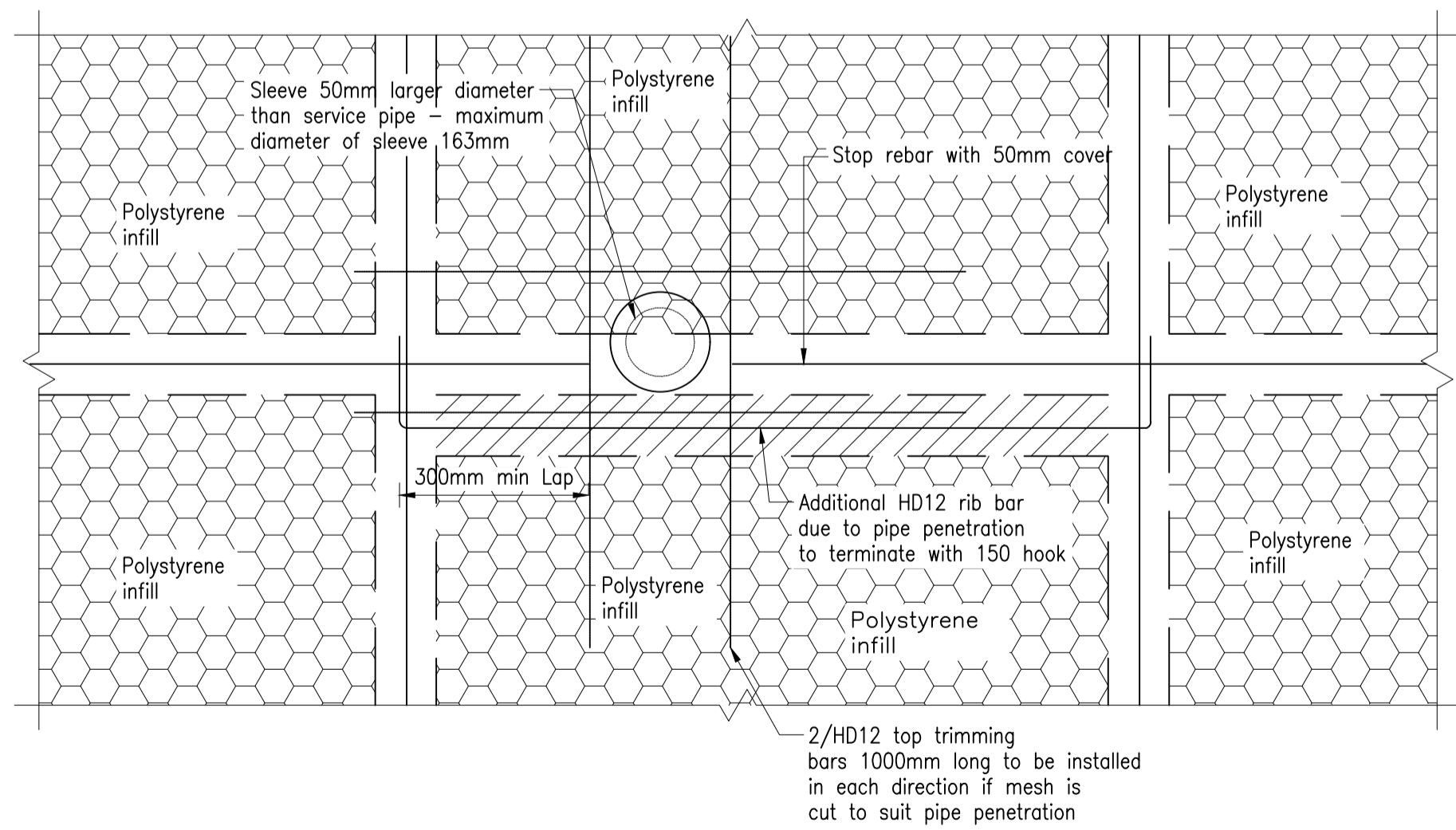


TYPICAL SERVICES THROUGH PERIMETER FOOTING

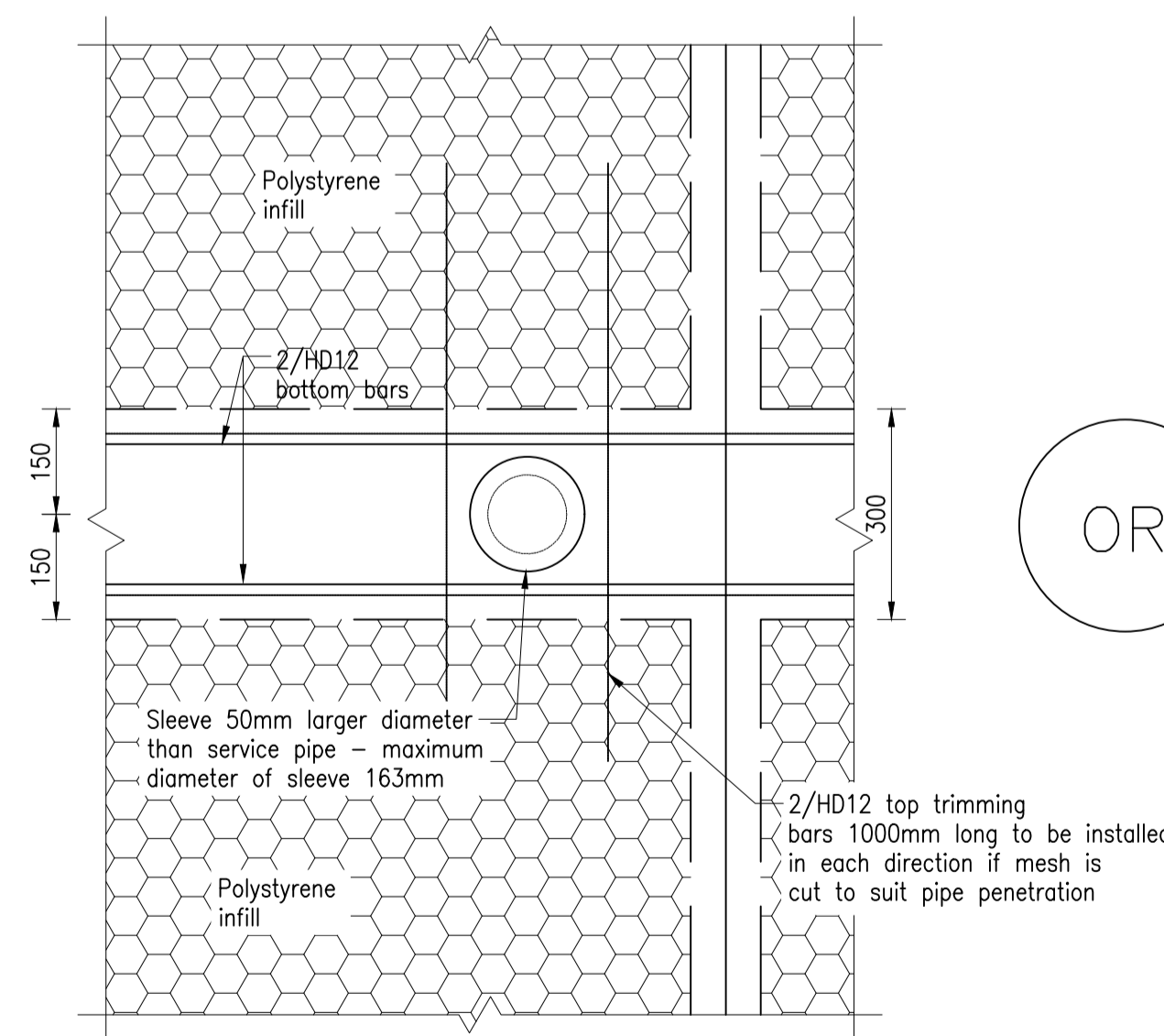
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TYPICAL SERVICES THROUGH PERIMETER FOOTING

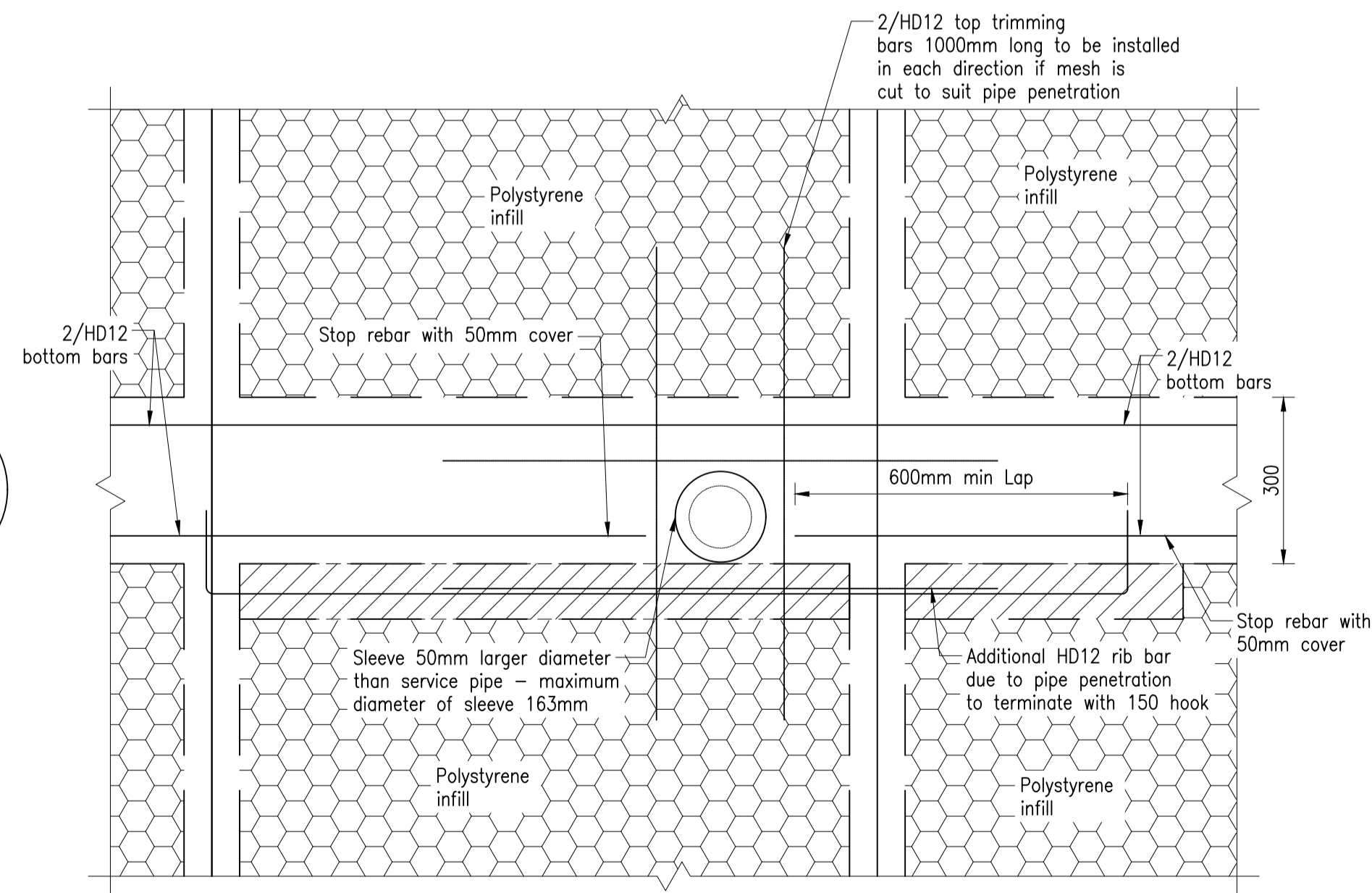


TYPICAL SERVICES THROUGH RIBS



TYPICAL PENETRATION IN LOAD BEARING THICKENING - PIPE CENTRAL

OR



TYPICAL PENETRATION IN LOAD BEARING THICKENING - PIPE NOT CENTRAL

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3		
2		
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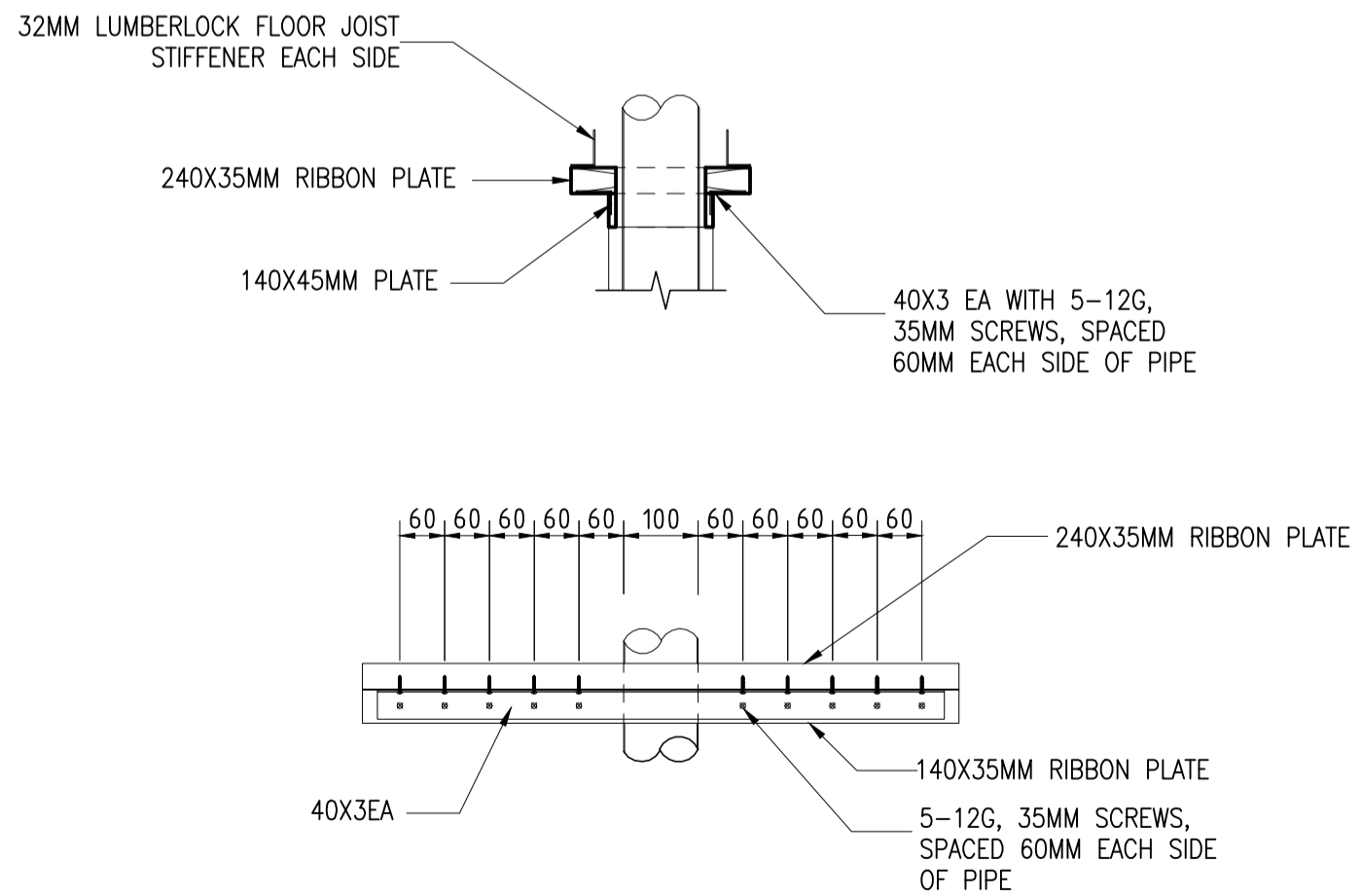
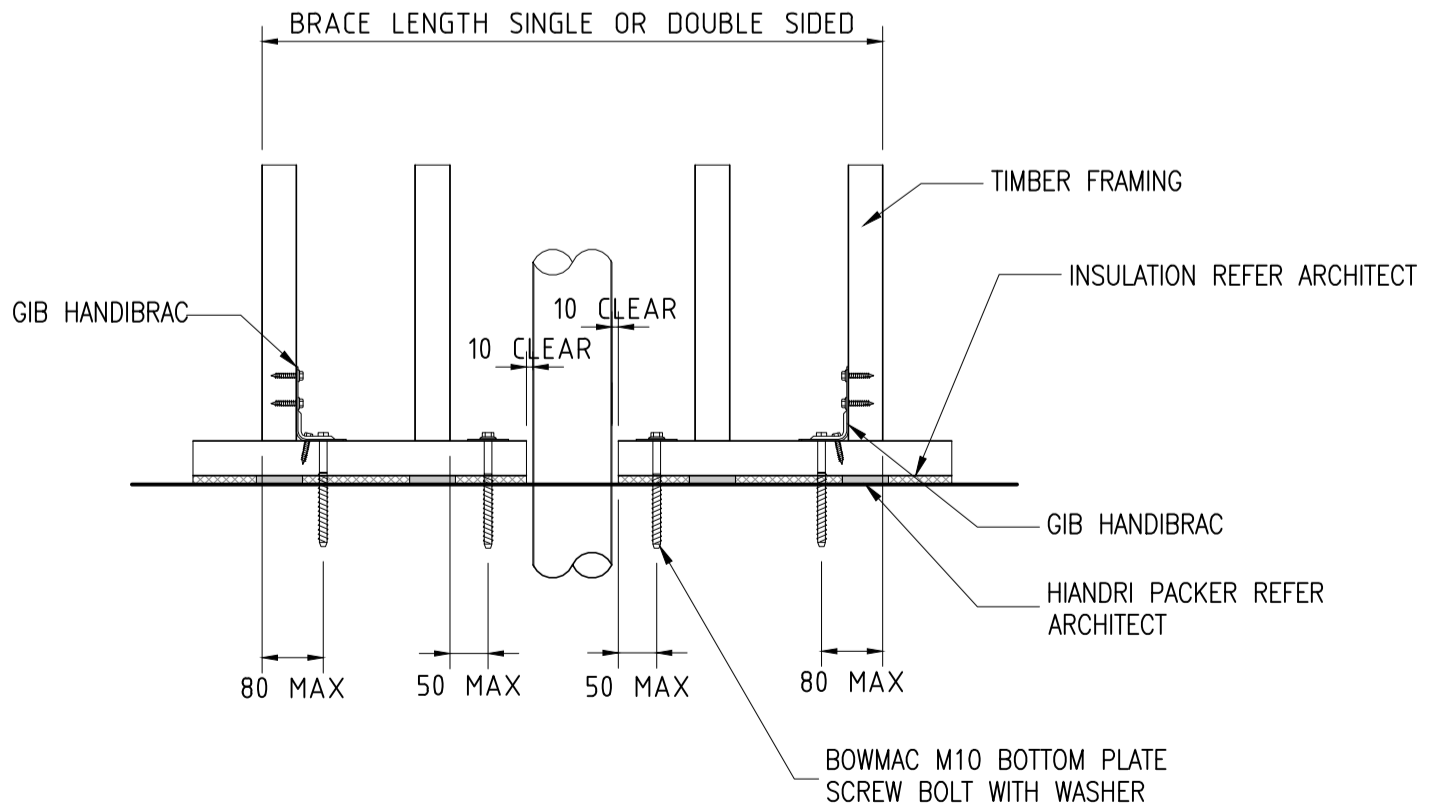
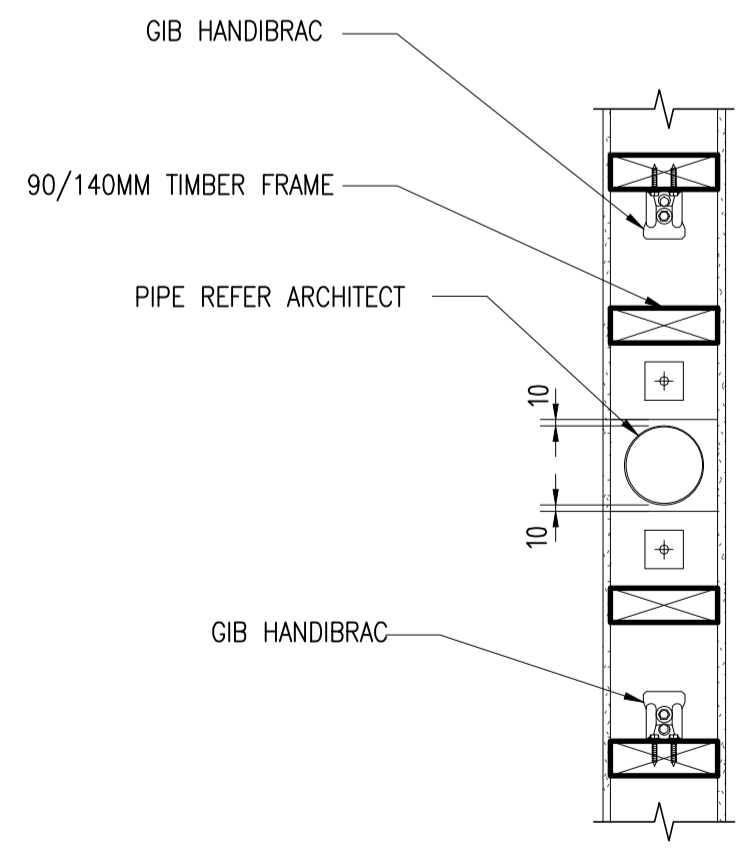
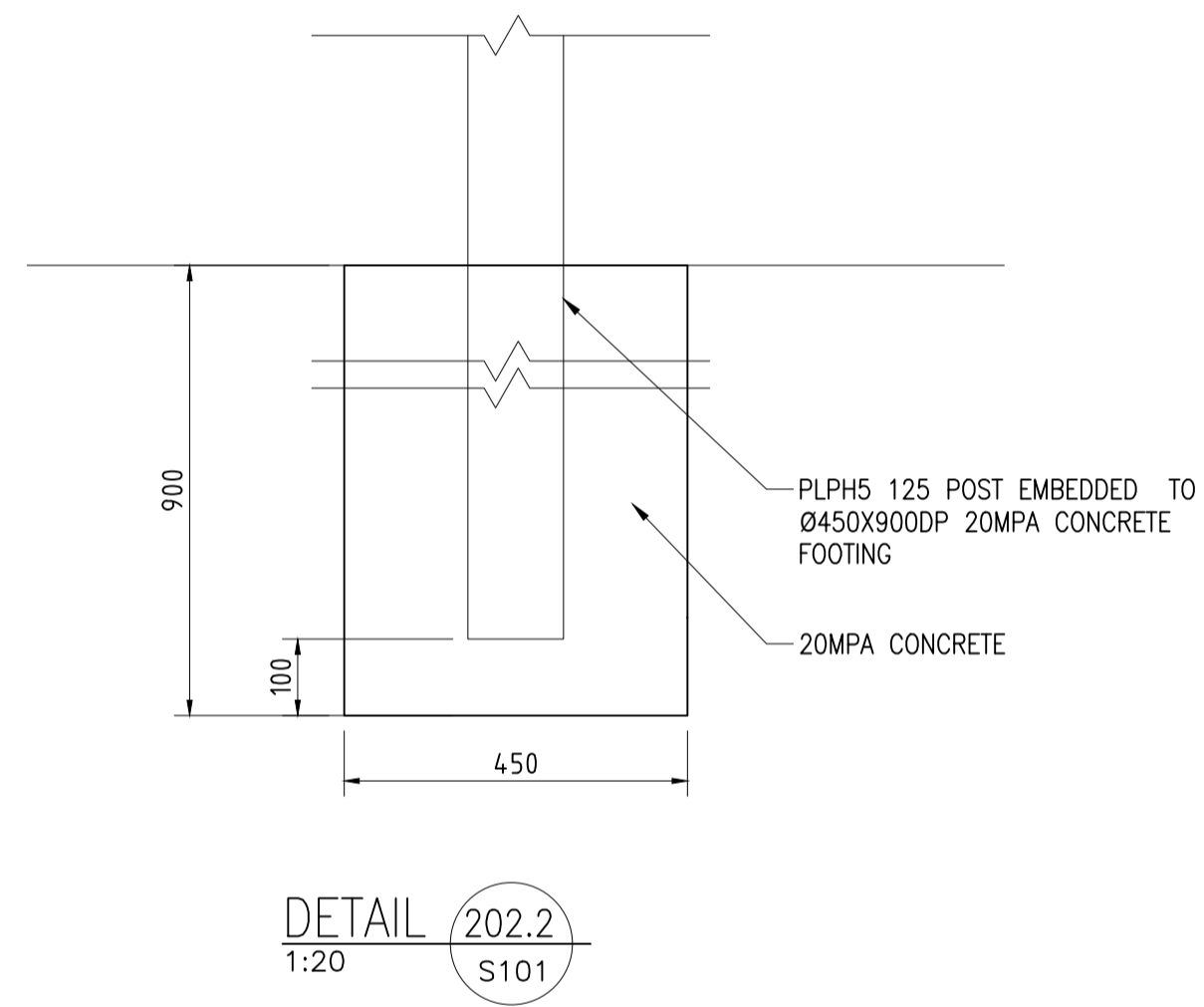
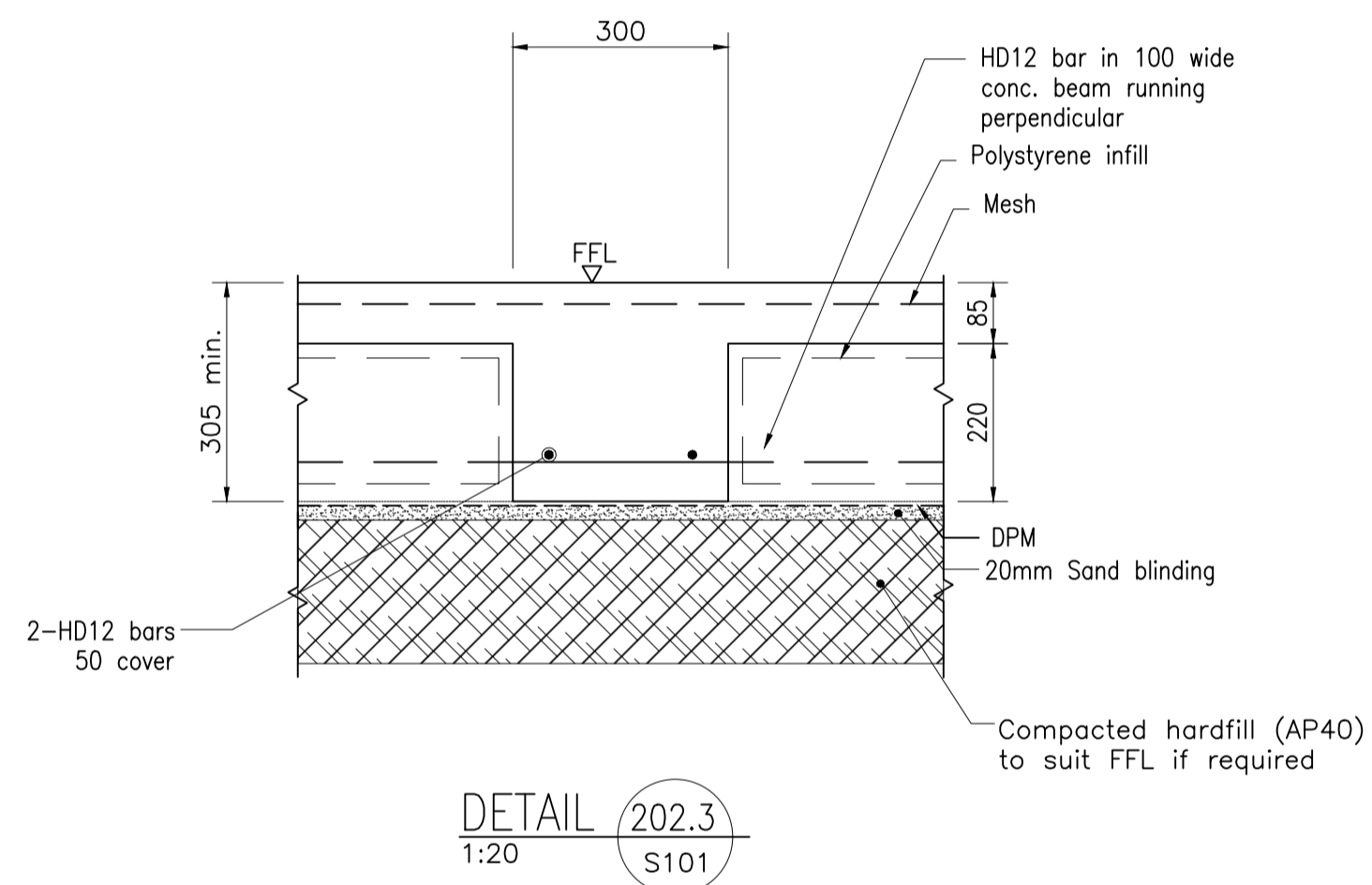
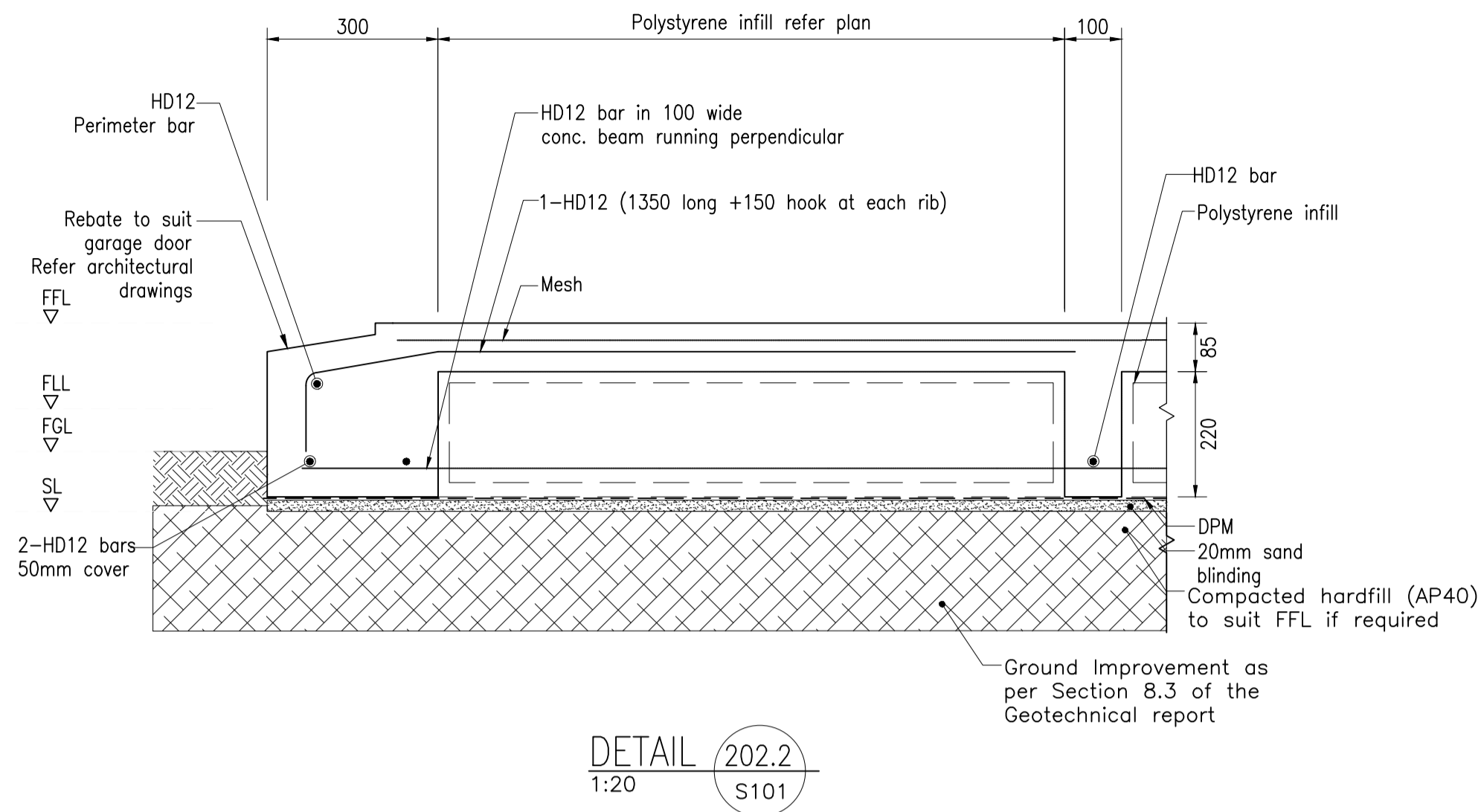
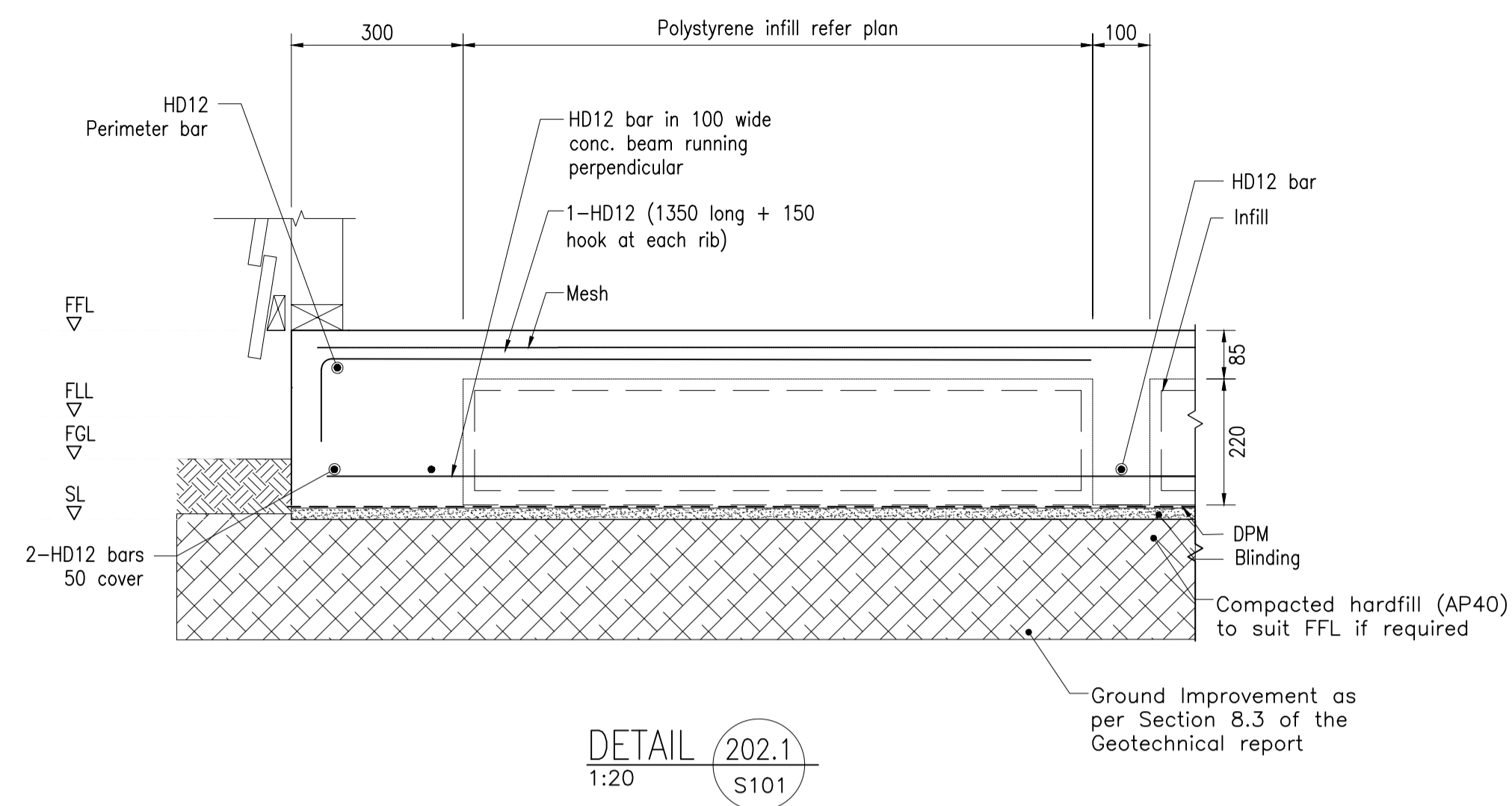
JOB TITLE
**LOT 10 WAGENER GROVE
PUKENUI
FAR NORTH DISTRICT**

DRAWING STATUS
ISSUED FOR CONSENT

SCALE 1:20 @ A3	CLIENT REF No:	JOB No: 260041.1
DRAWN DM	TEC	REVISION:
DESIGNED DM	SHEET No: S201	1
CHECKED TE		

REFER TO EARTHWORKS AND ARCHITECTURAL PLAN FOR ALL SET OUT LEVELS

FFL = Finished Floor Level
 FLL = Finished Landscaping Level
 FGL = Finished Ground Level
 SL = Subgrade Level
 NGL = Natural Ground Level



NOTES:

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3		
2		
1	ISSUED FOR CONSENT	29/05/2026 DM
REV	AMENDMENT	BY

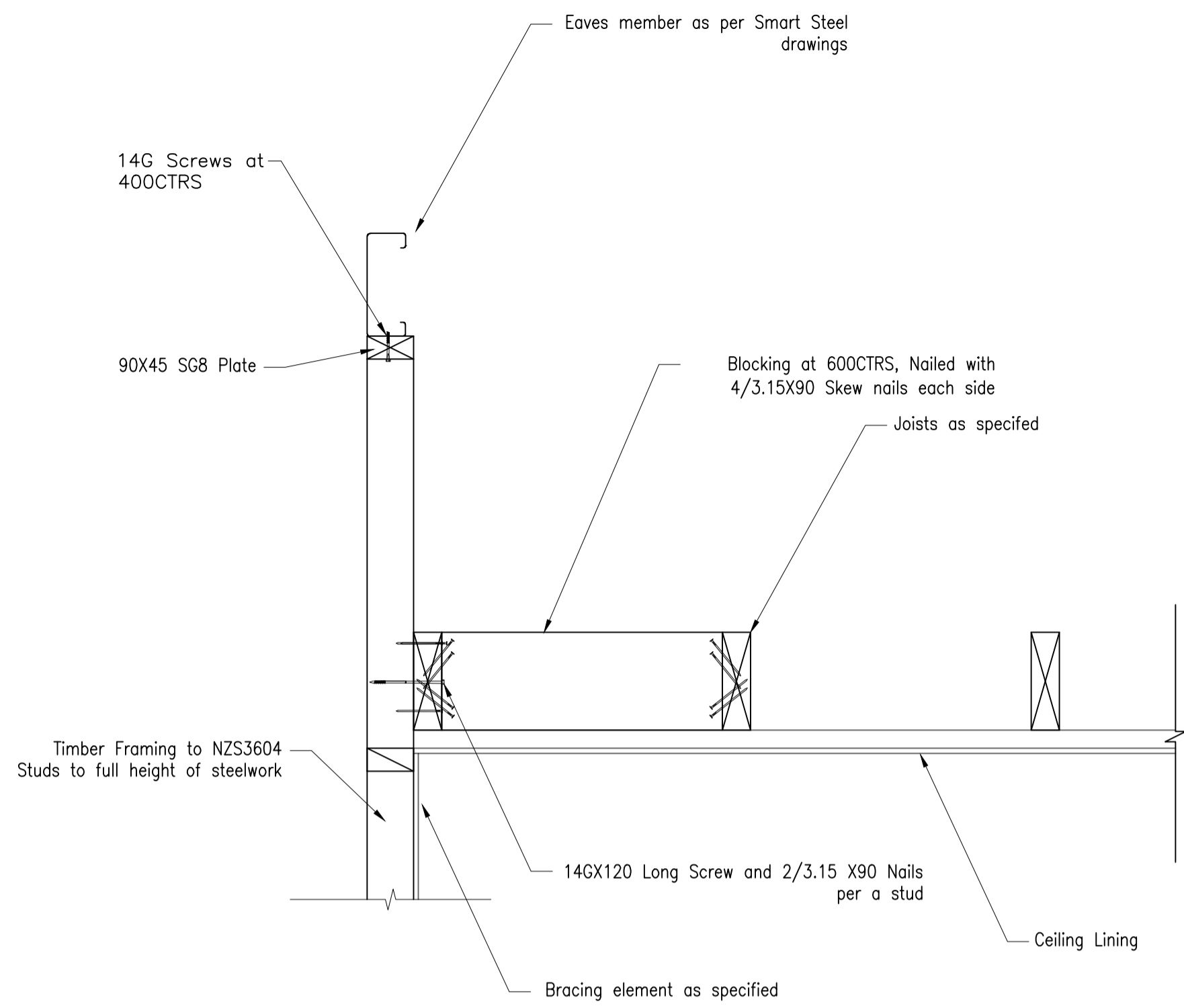


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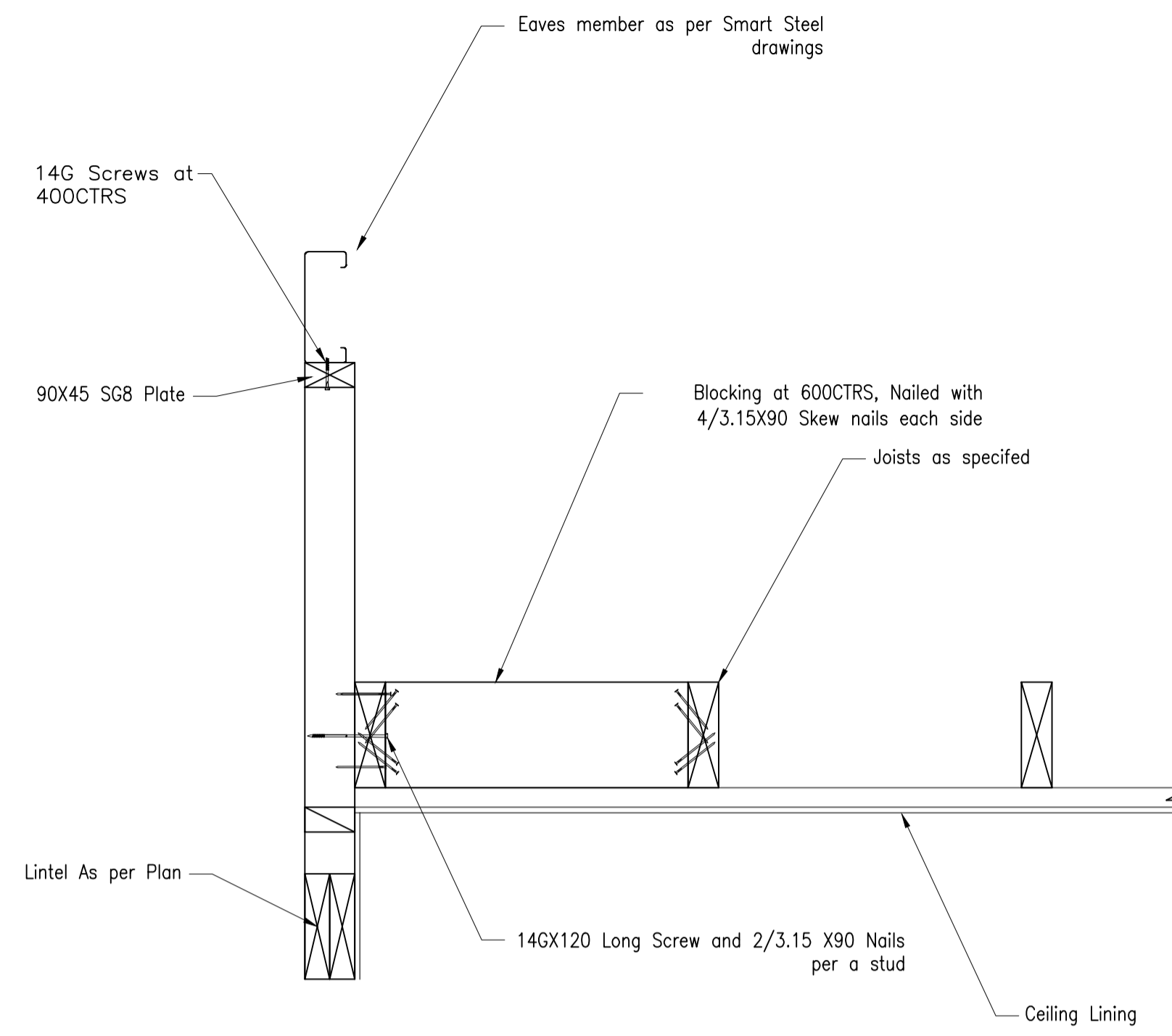
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**LOT 10 WAGENER GROVE
 PUKENUI
 FAR NORTH DISTRICT**

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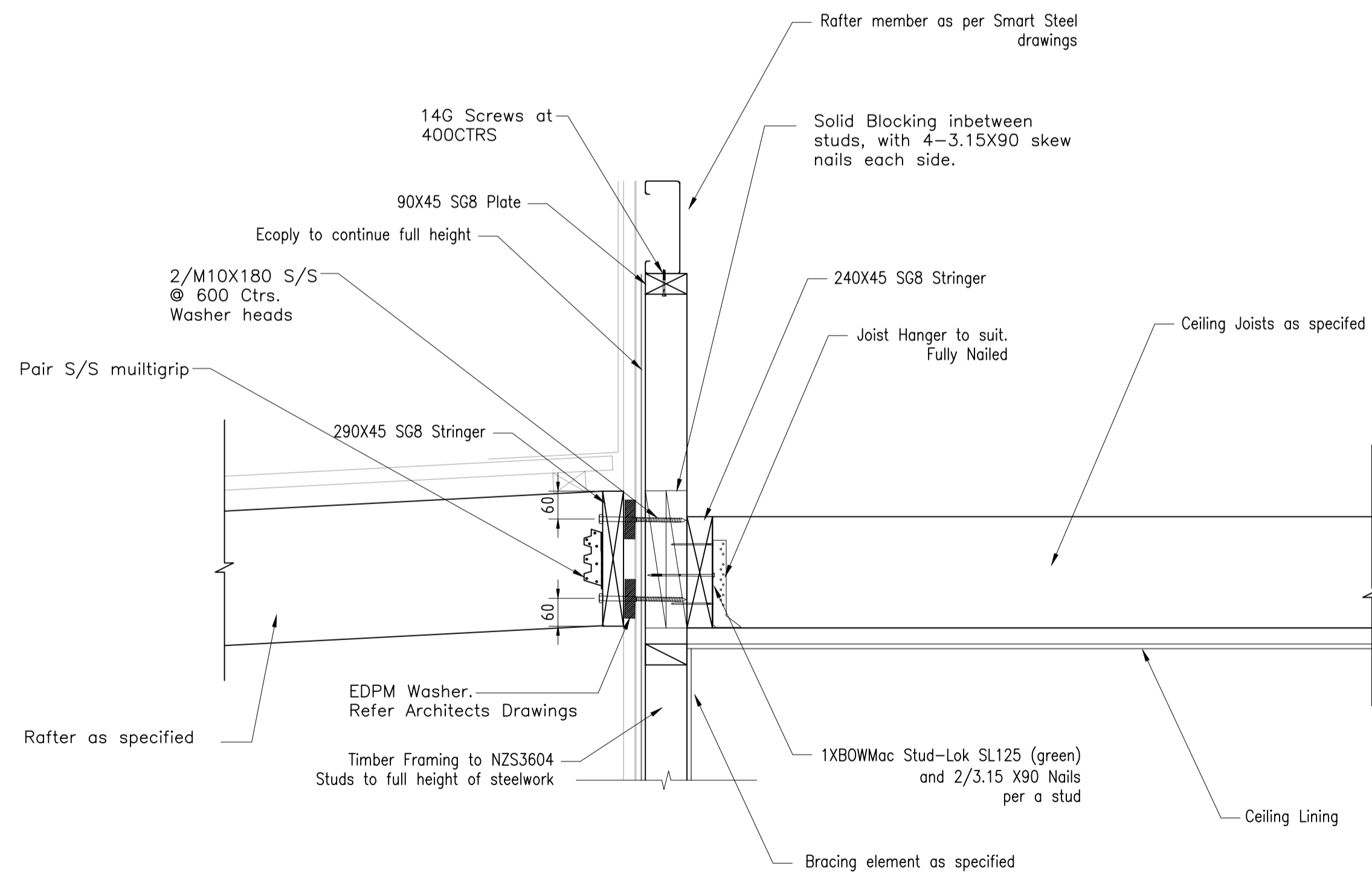
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DESIGNED DM	SHEET No:	REVISION:
CHECKED TE	S202	1



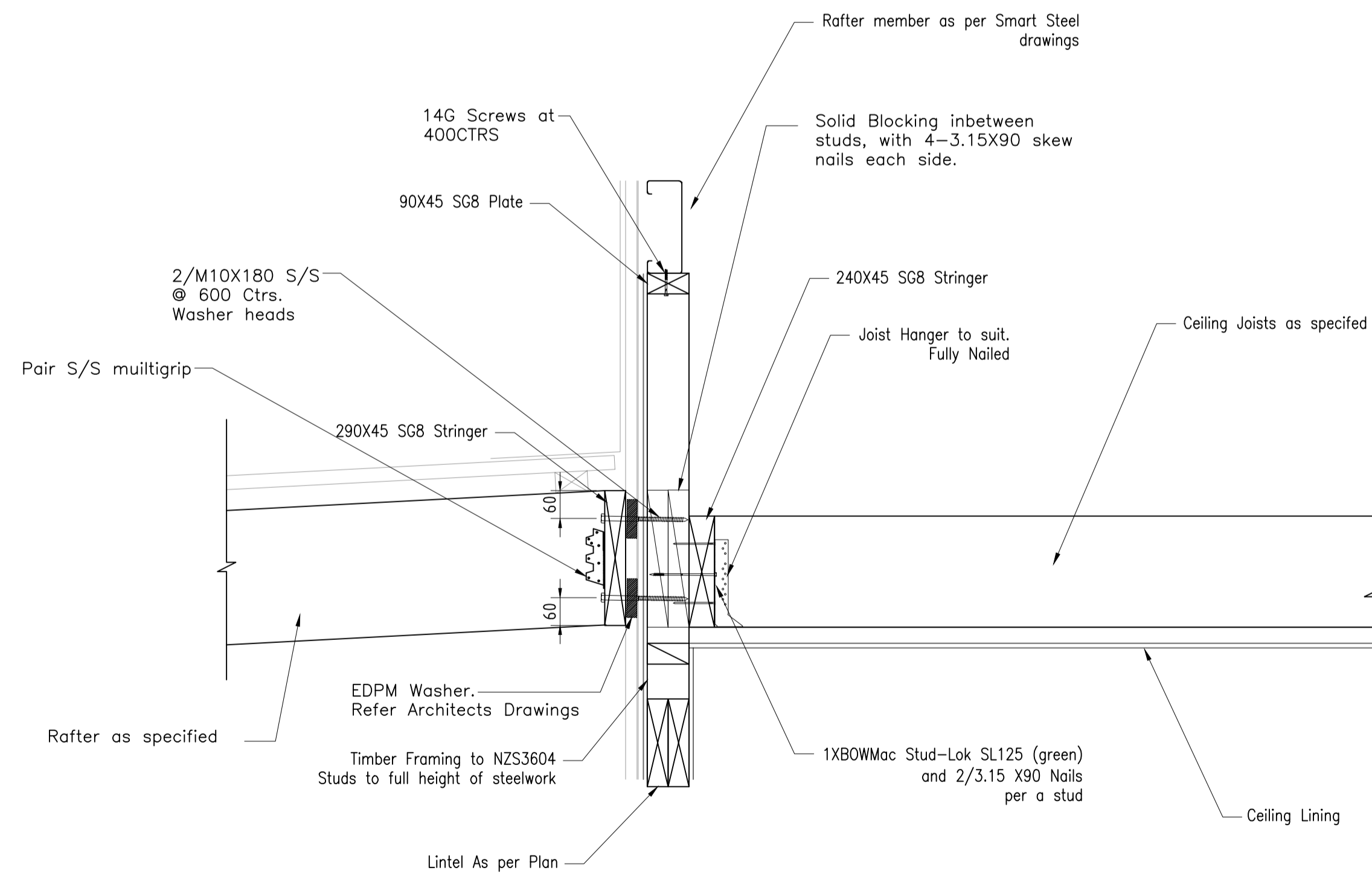
DETAIL 301.1
1:20
S103



DETAIL 301.2
1:20
S103



DETAIL 301.3
1:20
S103



DETAIL 301.4
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S103

NOTES:

4		
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1	ISSUED FOR CONSENT	29/05/2026 DM
REV	AMENDMENT	BY

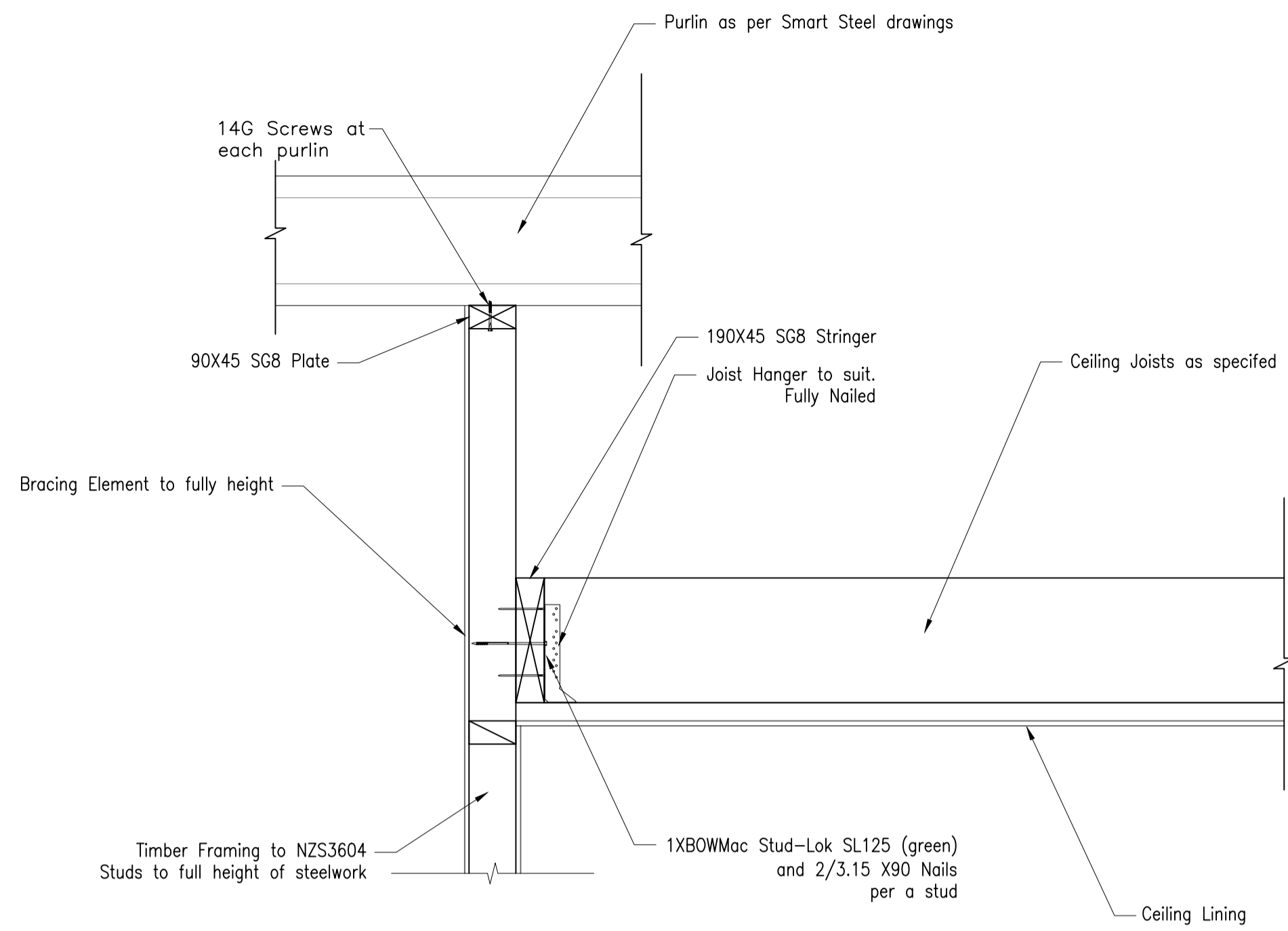


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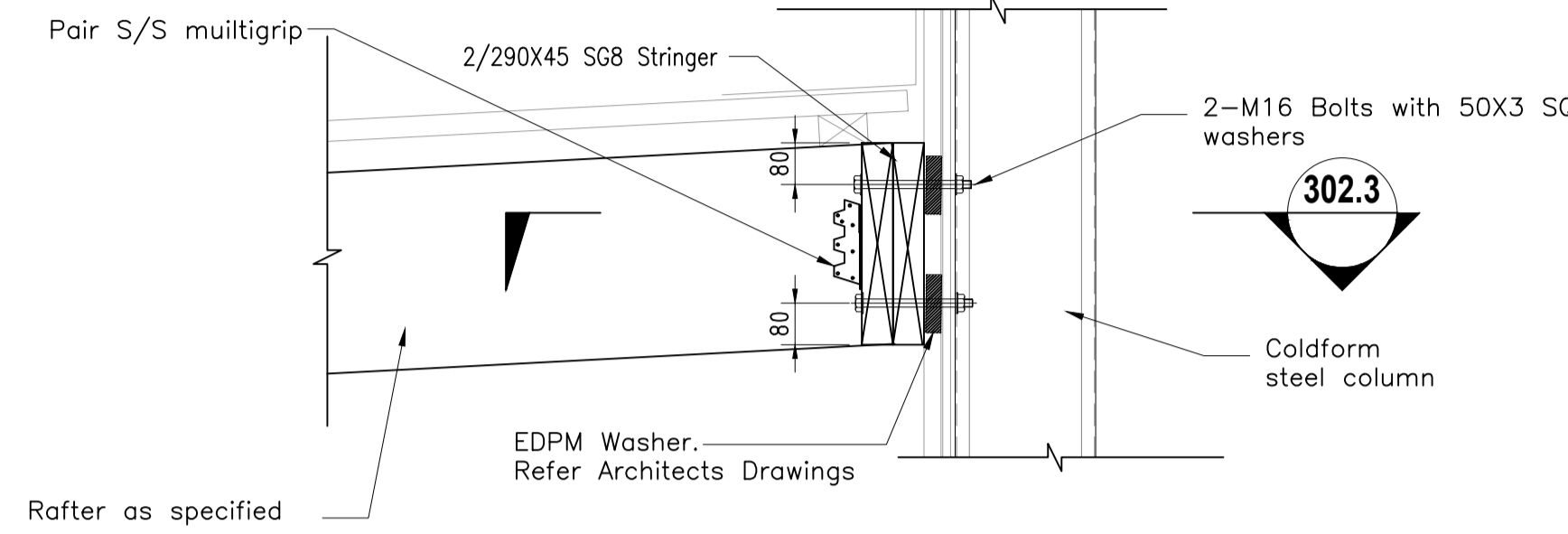
JOB TITLE
**LOT 10 WAGENER GROVE
PUKENUI
FAR NORTH DISTRICT**

DRAWING STATUS
ISSUED FOR CONSENT

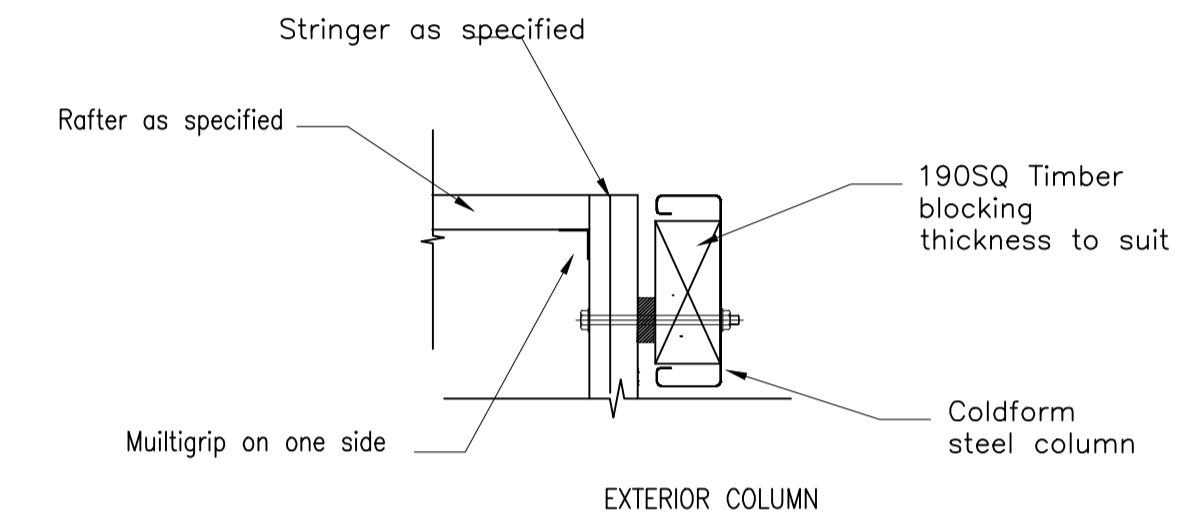
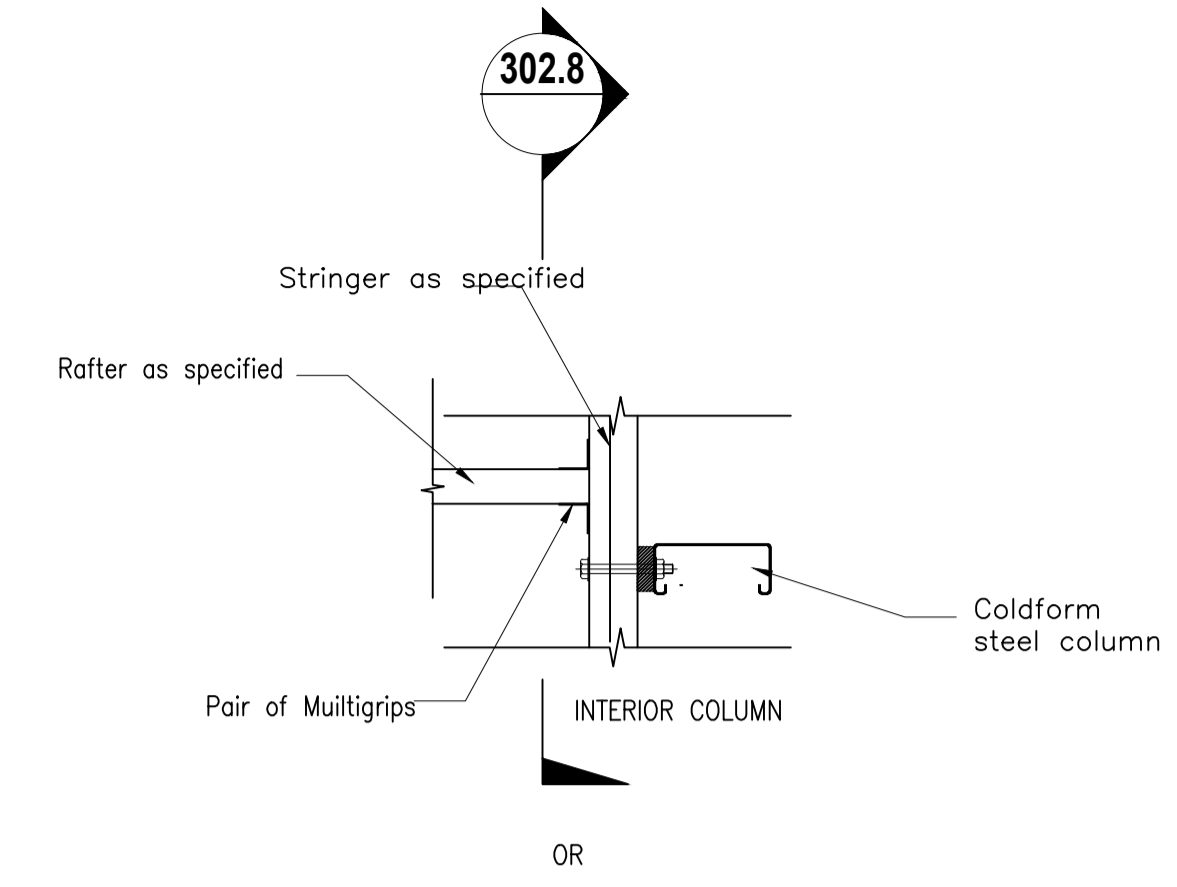
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DRAWN	DM	TEC	260041.1
DESIGNED	DM	SHEET No:	REVISION:
CHECKED	TE	S301	1



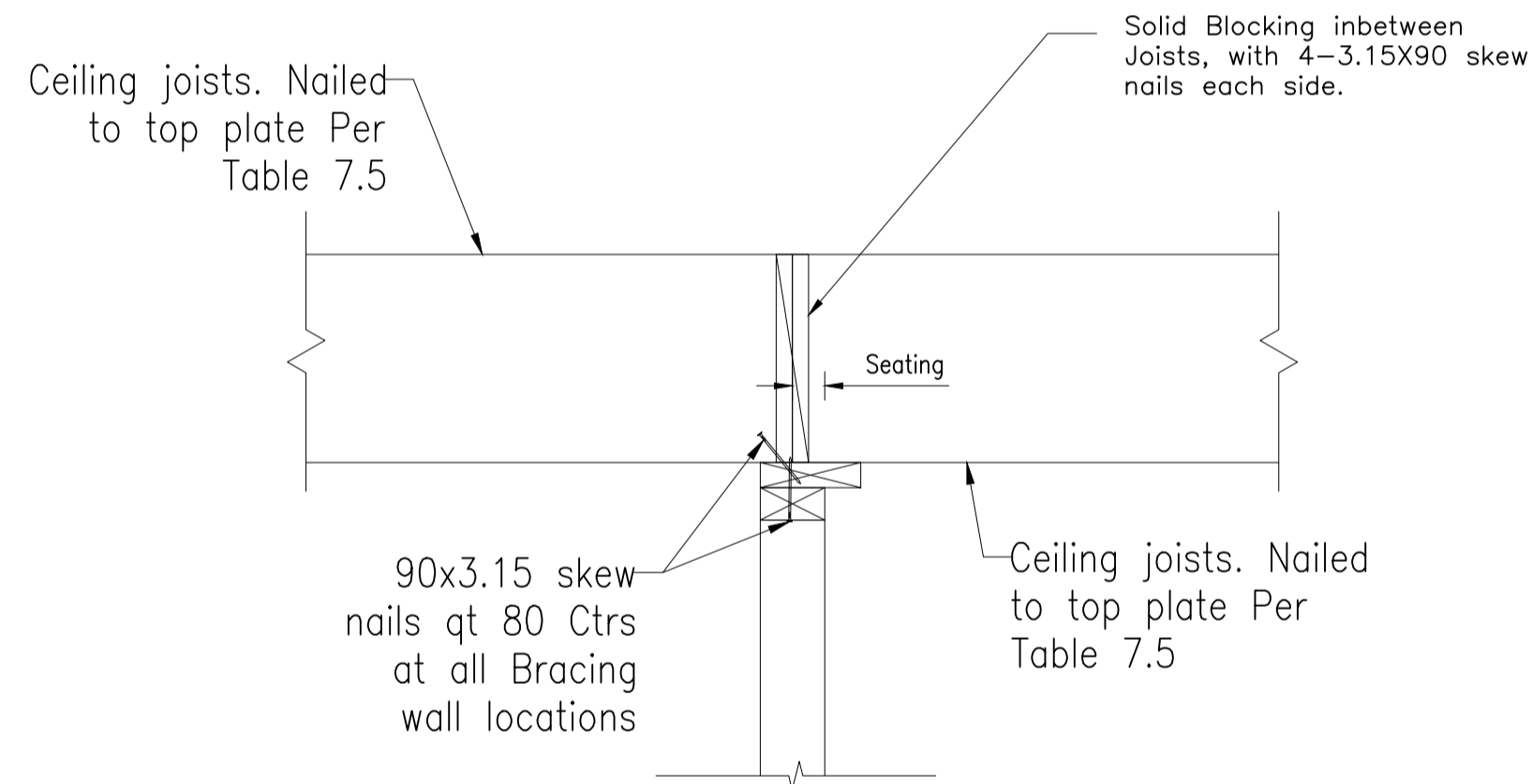
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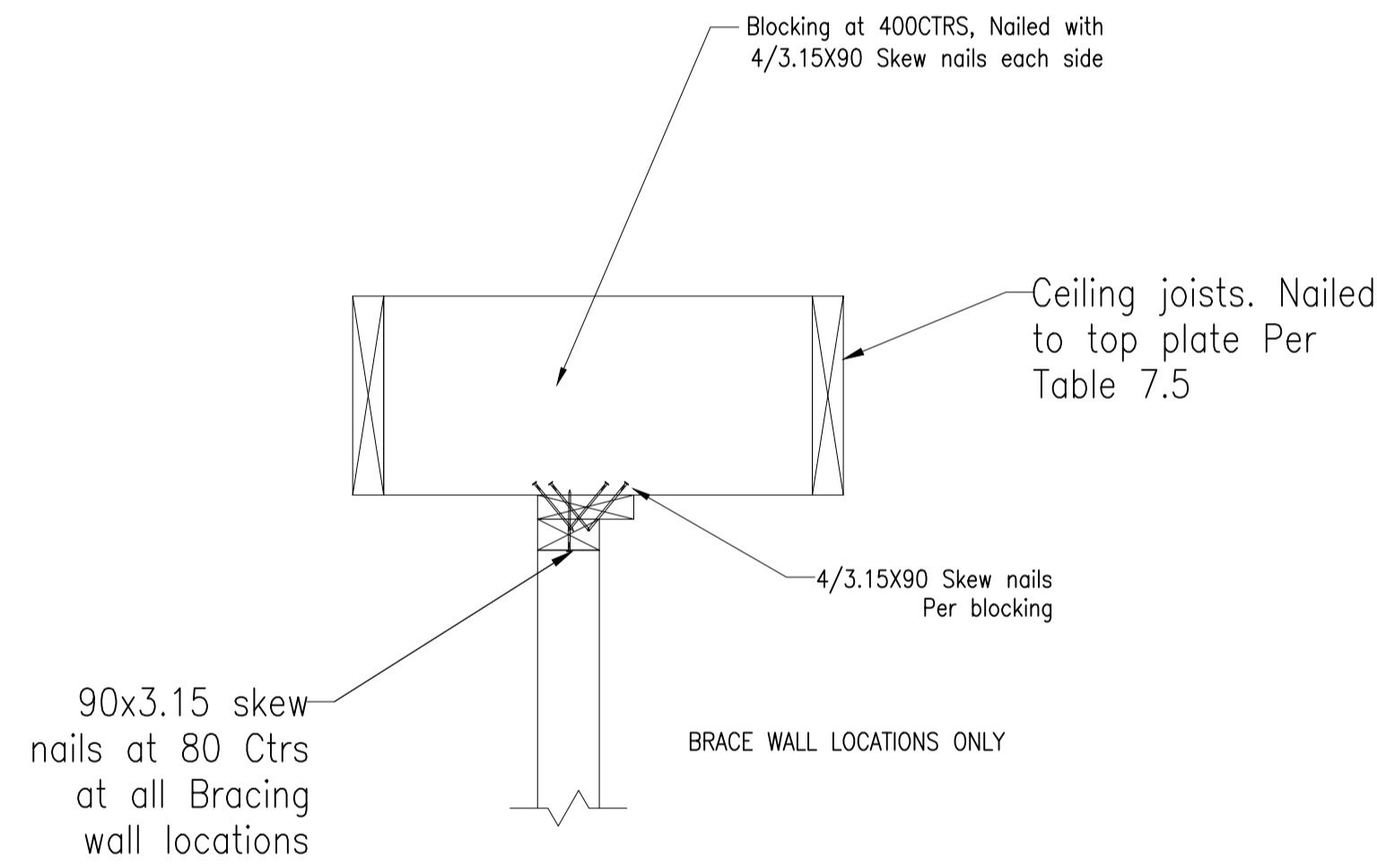
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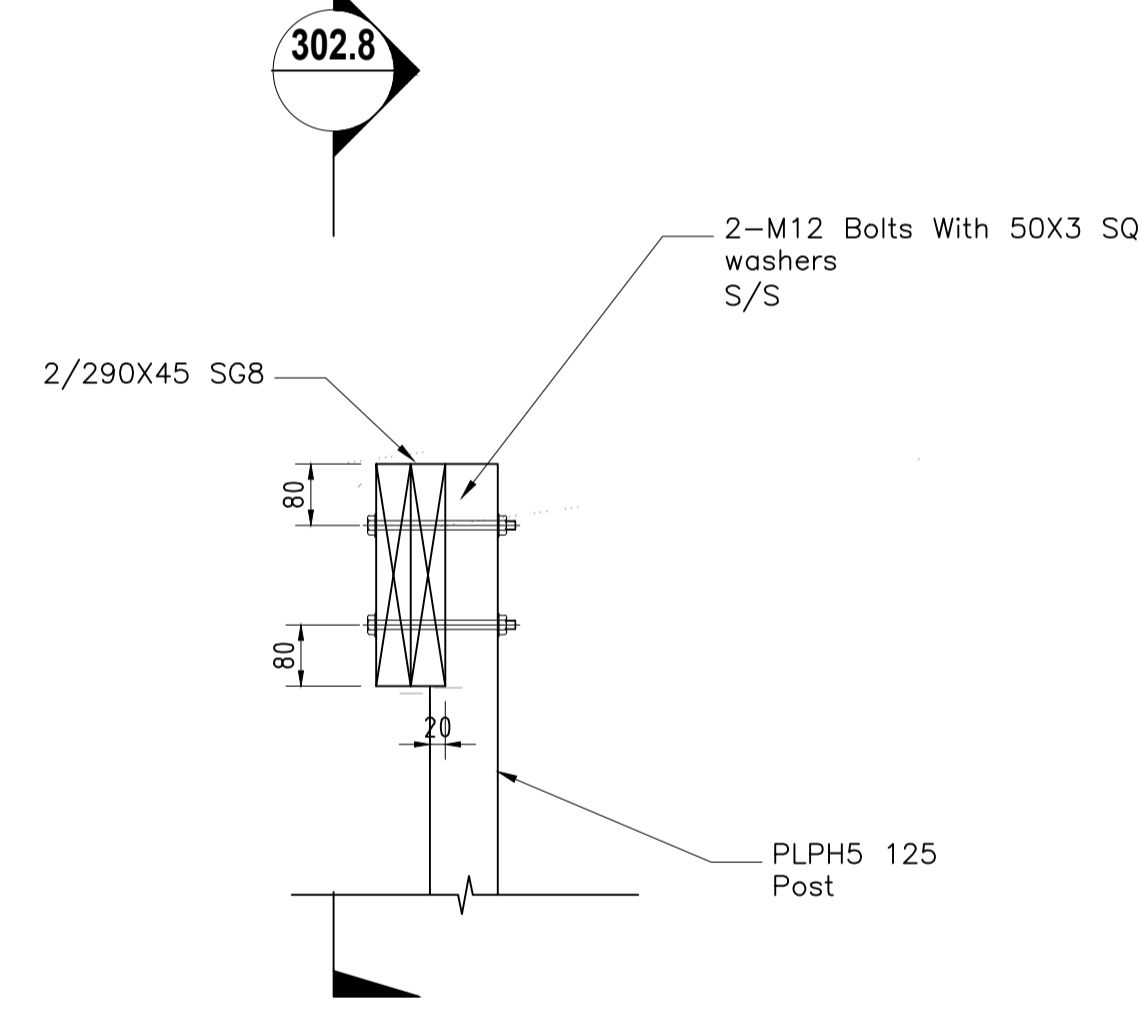
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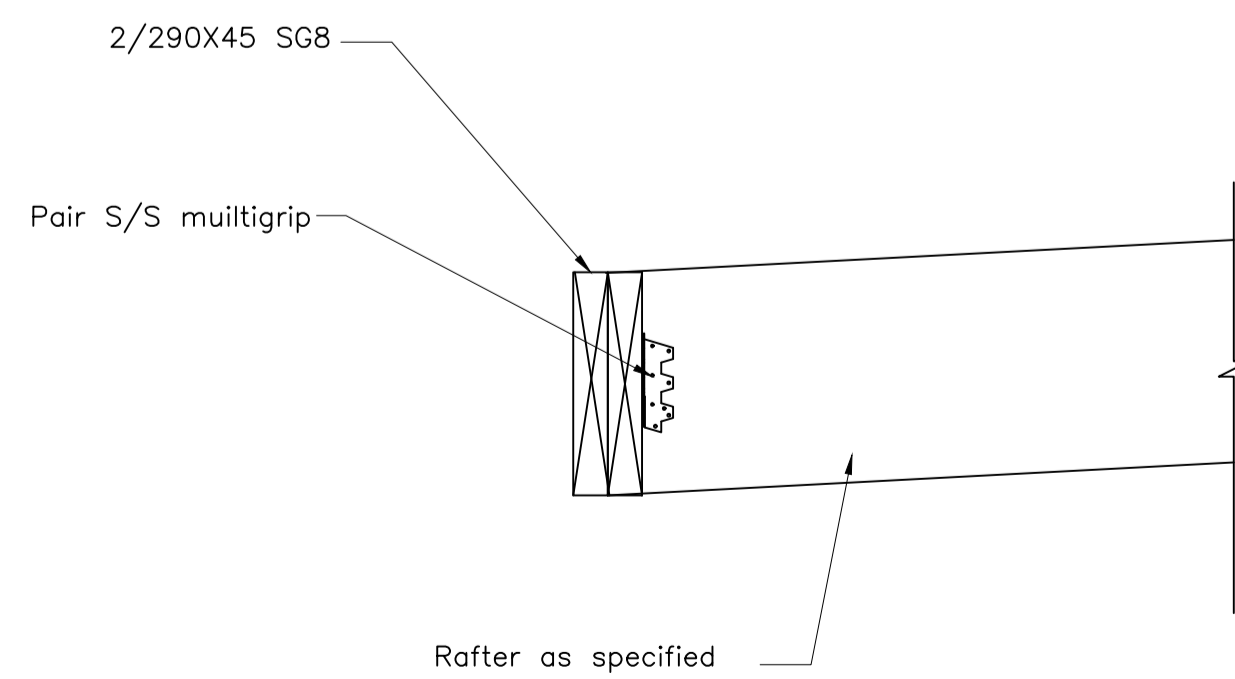
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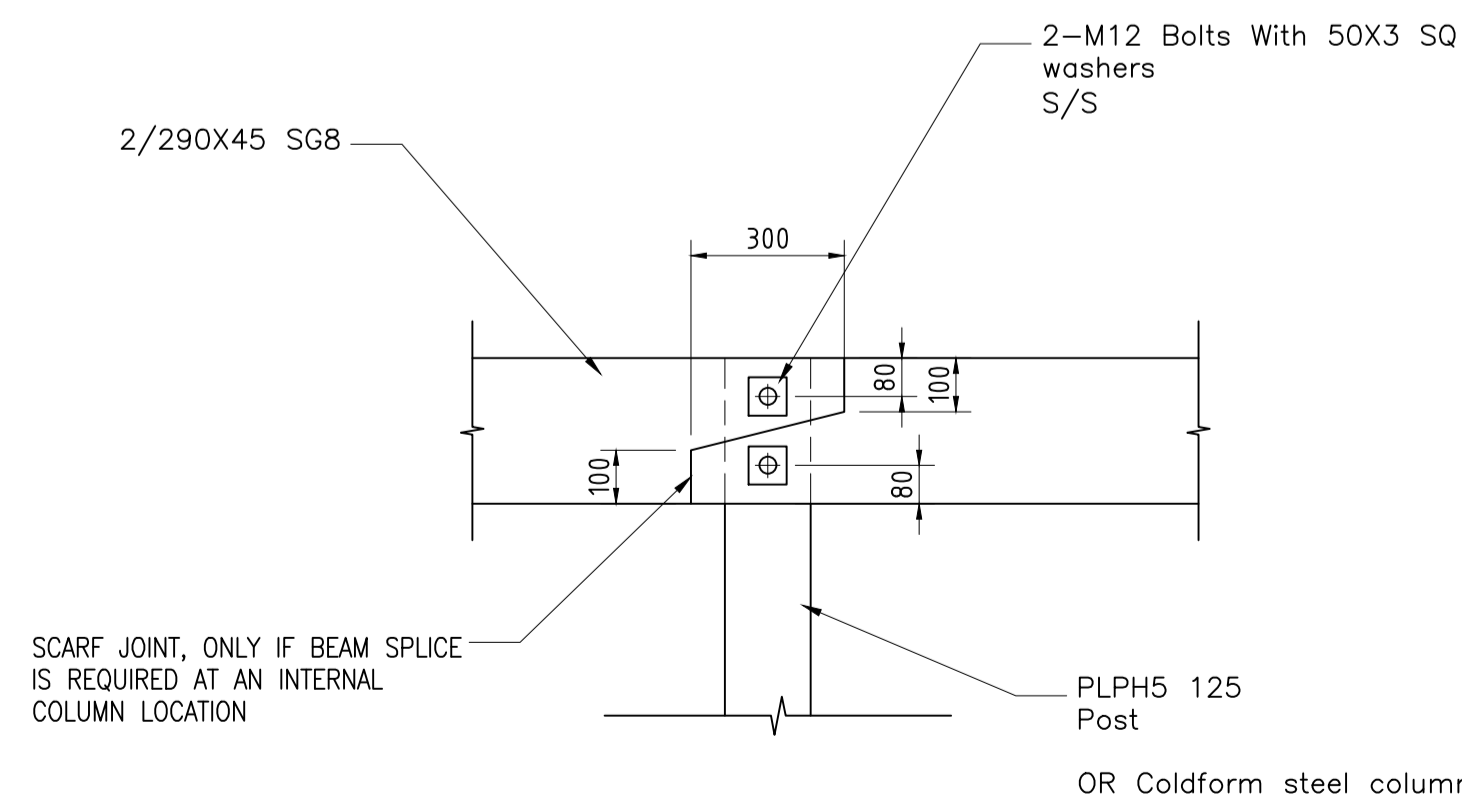
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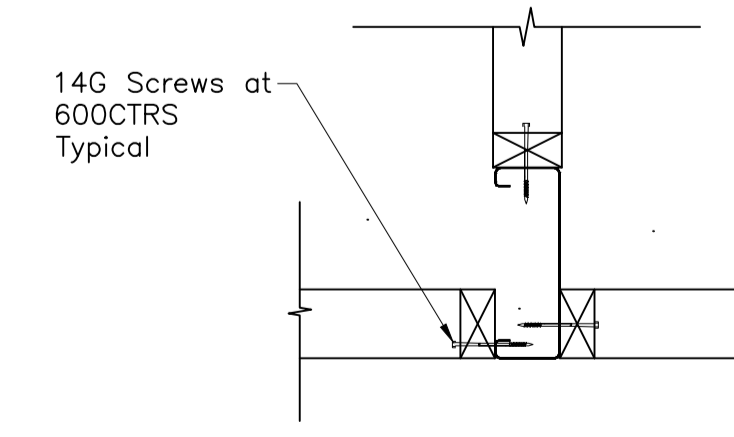
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DETAIL 302.7
1:20 S103



DETAIL 302.8
1:20 S103



DETAIL 302.9
1:20 S103

NOTES:

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JOB TITLE
**LOT 10 WAGENER GROVE
PUKENUI
FAR NORTH DISTRICT**

DRAWING STATUS
ISSUED FOR CONSENT

SCALE 1:20 @ A3		CLIENT REF No:	JOB No:
DRAWN	DM	TEC	260041.1
DESIGNED	DM	SHEET No:	REVISION:
CHECKED	TE	S302	1

NOTES:

Table 7.5 – Nailing schedule for hand-driven and power-driven nails (see 7.6)

Joint	Hand-driven nails		Power-driven nails	
	Length (mm) x diameter (mm) and type	Number/ Location	Length (mm) x diameter (mm) and type	Number/ Location
Floor framing				
Boundary joist to end of each joist	100 x 3.75	2 (end nailed)	90 x 3.15	2 (end nailed)
Curtailed joist not exceeding 3 m long to trimmer	100 x 3.75	3 (end nailed)	90 x 3.15	5 (end nailed)
Curtailed joist to trimmer when half housed	100 x 3.75	2 (end nailed)	90 x 3.15	3 (end nailed)
Flitched joint in joist	100 x 3.75	4 (each end)	90 x 3.15	6 (each end)
Herringbone strutting to joist	60 x 2.8	2 (skewed)	60 x 2.8	2 (skewed)
Joist to plate on foundation walls	100 x 3.75	12 (skewed) per 1.5 m length	90 x 3.15	18 (skewed) per 1.5 m length
Joist to plate or bearer	100 x 3.75	2 (skewed)	90 x 3.15	3 (skewed)
Lapped joint in joist	100 x 3.75	2 (each side)	90 x 3.15	3 (each side)
Solid blocking between joists to plate bearer or stringer	100 x 3.75	4 (skewed)	90 x 3.15	6 (skewed)
Solid blocking to joist	100 x 3.75 or 75 x 3.15	2 (end nailed) 4 (skewed)	90 x 3.15	2 (end nailed)
Flooring				
Sheet decking (not exceeding 21 mm thick): (a) Supports at sheet edges (b) Intermediate supports	60 x 3.06 ring shanked galv. or 60 x 2.8	150 mm centres 300 mm centres	60 x 2.8 ring shanked galv.	150 mm centres 300 mm centres
Strip flooring not exceeding 75 mm wide to floor joist	2½ x finished thickness	1	–	1
Strip flooring not exceeding 100 mm wide to floor joist	2½ x finished thickness	2	–	2
NOTE – (1) Nail lengths and diameters are the minimum required. (2) See 4.4 for required protective coatings for metal fasteners.				

Table 8.19 – Nailing schedule for hand-driven and power-driven nails (see 8.8.6)

Joint	Hand-driven nails		Power-driven nails	
	Length (mm) x diameter (mm) and type	Number/ Location	Length (mm) x diameter (mm) and type	Number/ Location
Bottom plate to floor framing at: (a) External walls and internal wall bracing elements (b) Internal walls (may be nailed to floor decking) (c) Trimmer not exceeding 4.2 m long	100 x 3.75	2 at 600 mm centres	90 x 3.15	3 at 600 mm centres
Dwang to stud	75 x 3.15 or 100 x 3.75	2 (skewed) 2 (end nailed)	75 x 3.06 90 x 3.15	2 (skewed) 2 (end nailed)
Fishplate to straightened stud	60 x 2.8	4 each side of cut	60 x 2.8	4 (each side of cut)
Half joint in top plate	75 x 3.15	3	75 x 3.06	4
Lintel to trimming stud	75 x 3.15 or 100 x 3.75	4 (skewed) 2 (end nailed)	90 x 3.15	3 (end nailed)
Ribbon board to stud	100 x 3.75	2	90 x 3.15	3
Sill or header trimmer to trimming stud for: (a) Trimmer not exceeding 2.4 m long (b) Trimmer not exceeding 3.0 m long (c) Trimmers not exceeding 3.6 m long	100 x 3.75	2 (end nailed)	90 x 3.15	3 (end nailed)
Solid plaster batten to stud	60 x 2.8 (galv.)	500 mm centres	60 x 2.8 (galv.)	500 mm centres
Stud to plate	75 x 3.15 or 100 x 3.75	4 (skewed) 2 (end nailed)	75 x 3.06 90 x 3.15	4 (skewed) 3 (end nailed)
Top plate 140 mm x 35 mm to 90 mm x 45 mm and top plate to lintel	100 x 3.75	2 at 500 mm centres	90 x 3.15	3 at 500 mm centres
Trimming studs at openings, blocking and studs at wall intersections	100 x 3.75	600 mm centres	90 x 3.15	600 mm centres
Trimming stud to doubled stud immediately under lintel	100 x 3.75	2	90 x 3.15	2
Waling to stud	60 x 2.8	2	60 x 2.8	2
NOTE – (1) Nail lengths and diameters are the minimum required. (2) Refer to 4.4 for required protective coatings for metal fasteners. (3) For studs up to 2.7 in length, 2 / 90 x 3.15 power-driven nails (end nailed) are sufficient.				

Table 10.18 – Nailing schedule for hand-driven and power-driven nails (see 10.5.1)

Joint	Hand-driven nails		Power-driven nails	
	Length (mm) x diameter (mm) and type	Number/ Location	Length (mm) x diameter (mm) and type	Number/ Location
Roof framing				
Rafter or jack rafter to ridge board or top plate (except skillion roofs) (see 10.2.1.3.7)	See table 10.1	See table 10.1	See table 10.1	See table 10.1
Truss to top plate of external wall	See tables 10.14 and 10.15	See tables 10.14 and 10.15	See tables 10.14 and 10.15	See tables 10.14 and 10.15
Truss to top plate of internal wall	100 x 3.75	2	90 x 3.15	2
Ceiling batten to parallel top plate of internal wall bracing element	75 x 3.15	2 at 400 mm centres	90 x 3.15	2 at 400 mm centres
Collar tie or cleat to rafter	75 x 3.15	4	75 x 3.06	4
Flitches to ridge board and roof members for each side on both joints	60 x 2.8	3	60 x 2.8	3
Hip rafter to top plate	See table 10.1	See table 10.1	See table 10.1	See table 10.1
Underpurlin strut to underpurlin or top plate or strutting beam	100 x 3.75 together with fixing types as set out in table 10.5	2	90 x 3.15 together with fixing types as set out in table 10.5	3
Strutting beam to top plate	See table 10.7	See table 10.7	See table 10.7	See table 10.7
Roof braces at each connection to a framing member: (a) 90 mm x 19 mm brace (b) 70 mm x 45 mm brace runner (c) 90 mm x 45 mm brace (d) Steel strip brace (i) At ends (ii) Other cases (iii) To ends of braces	75 x 3.15 100 x 3.75 100 x 3.75 60 x 3.15 60 x 3.15 –	3 2 3 3 2 –	75 x 3.15 90 x 3.15 90 x 3.15 – – –	3 3 5 – – –
NOTE – (1) Nail lengths and diameters are the minimum required. (2) Refer to 4.4 for required protective coatings for metal fasteners. (3) Proprietary fixings with the required fixing capacity indicated in the tables may be used.				

THESE DETAILS SHOULD BE READ INCONJUNCTION WITH NZS3604 DOCUMENT

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JOB TITLE
**LOT 10 WAGENER GROVE
PUKENUI
FAR NORTH DISTRICT**

DRAWING TITLE
NAILING SCHEDULE

DRAWING STATUS
ISSUED FOR CONSENT

SCALE 1:20 @ A3	CLIENT REF No:	JOB No:
DRAWN DM	TEC	260041.1
DESIGNED DM	SHEET No:	REVISION:
CHECKED TE	S303	1

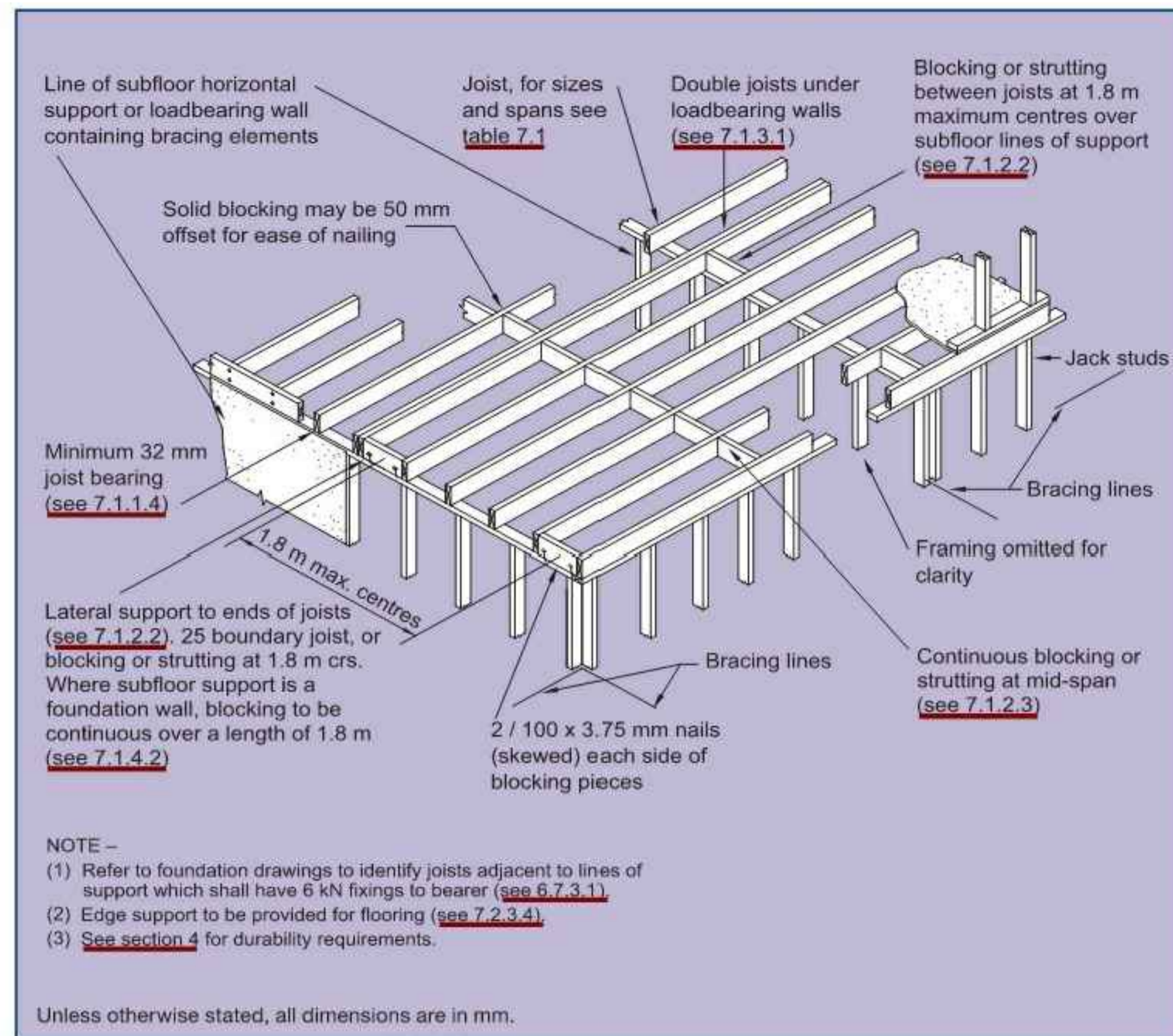


Figure 7.2 – Floor joists layout criteria (see 7.1.2.2)

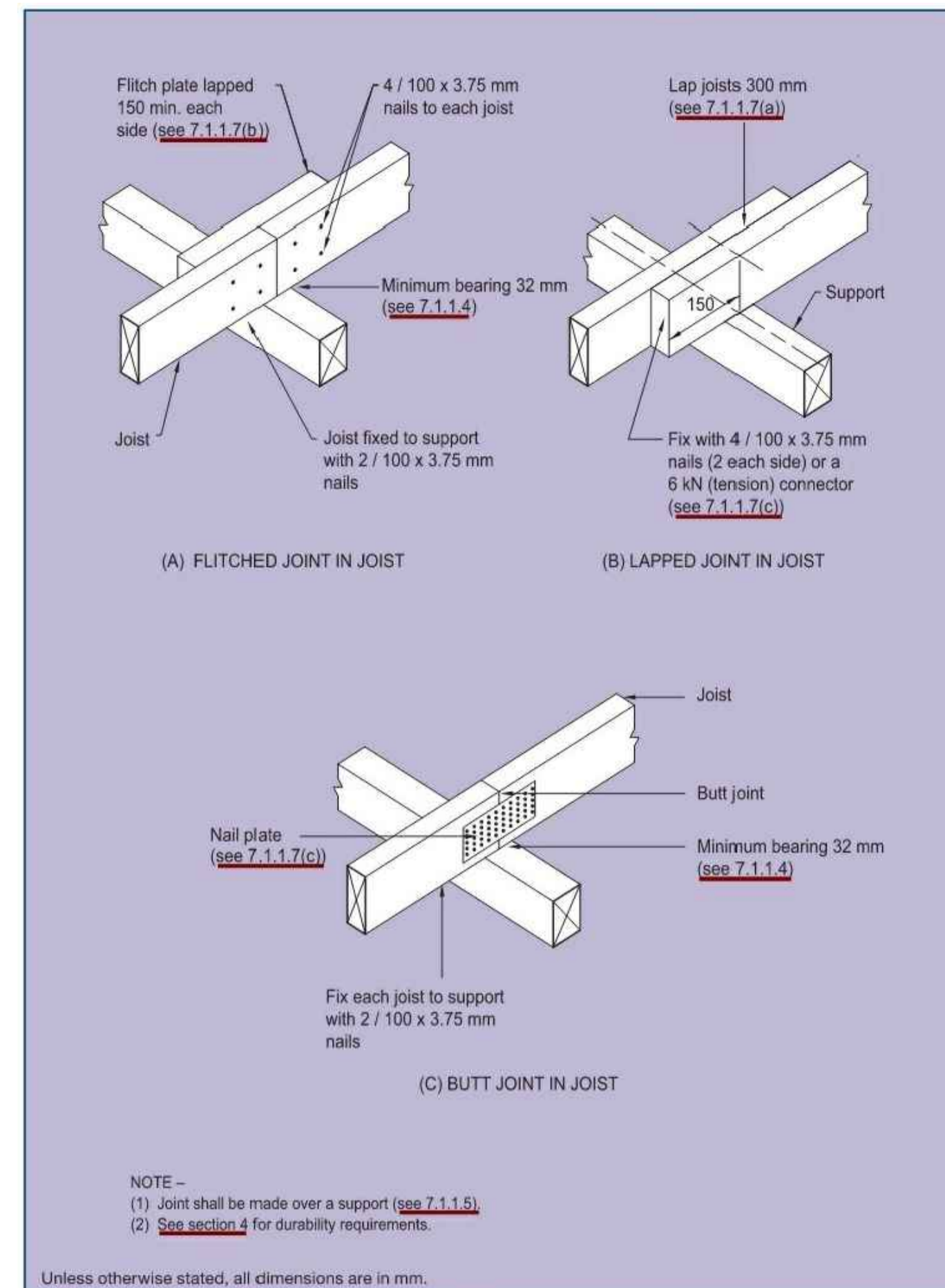


Figure 7.1 – Lapped or butted joints in floor joists (see 7.1.1.7)

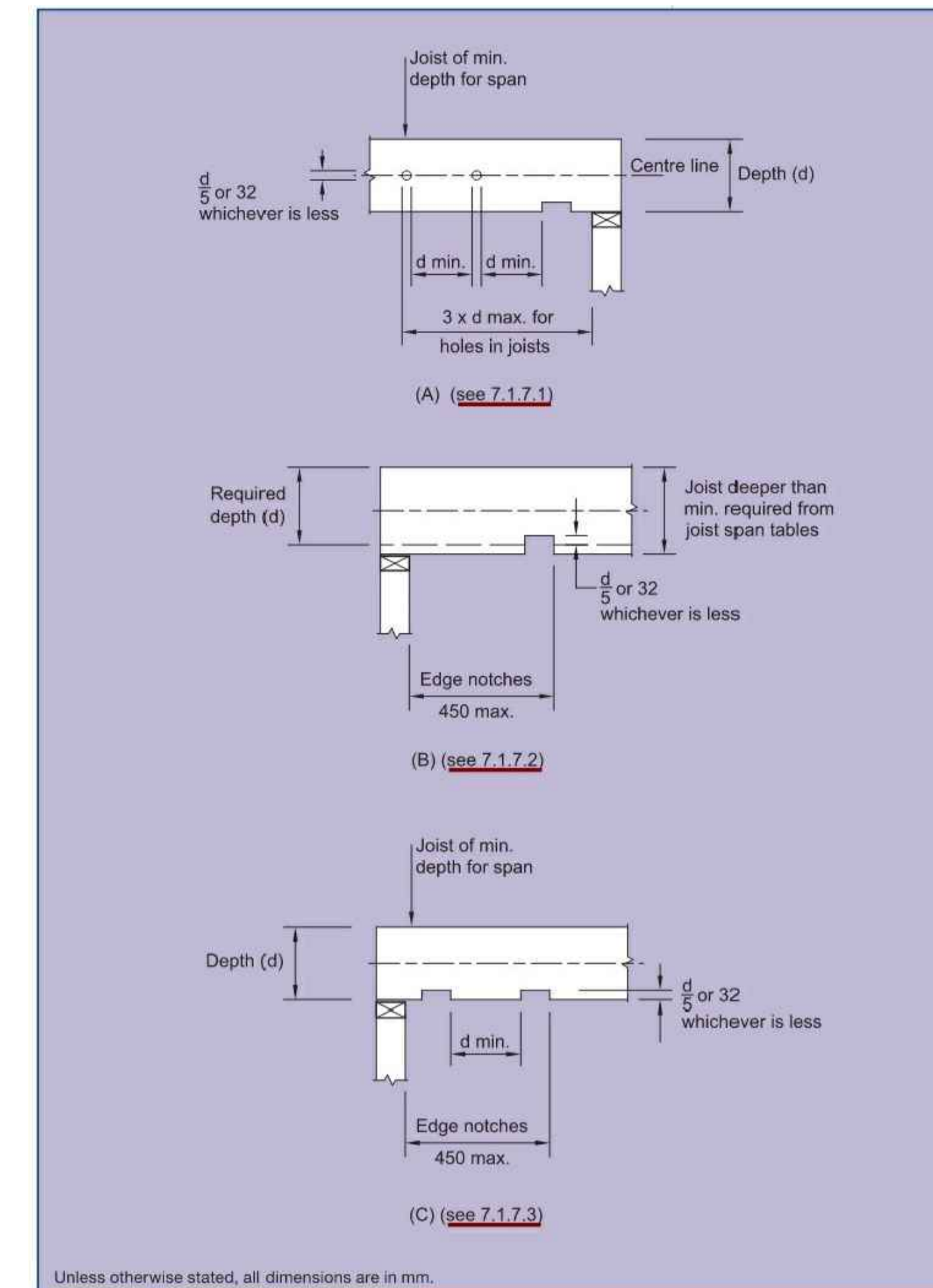


Figure 7.8 – Holes and notches in floor joists other than cantilevered joists (see 7.1.7)

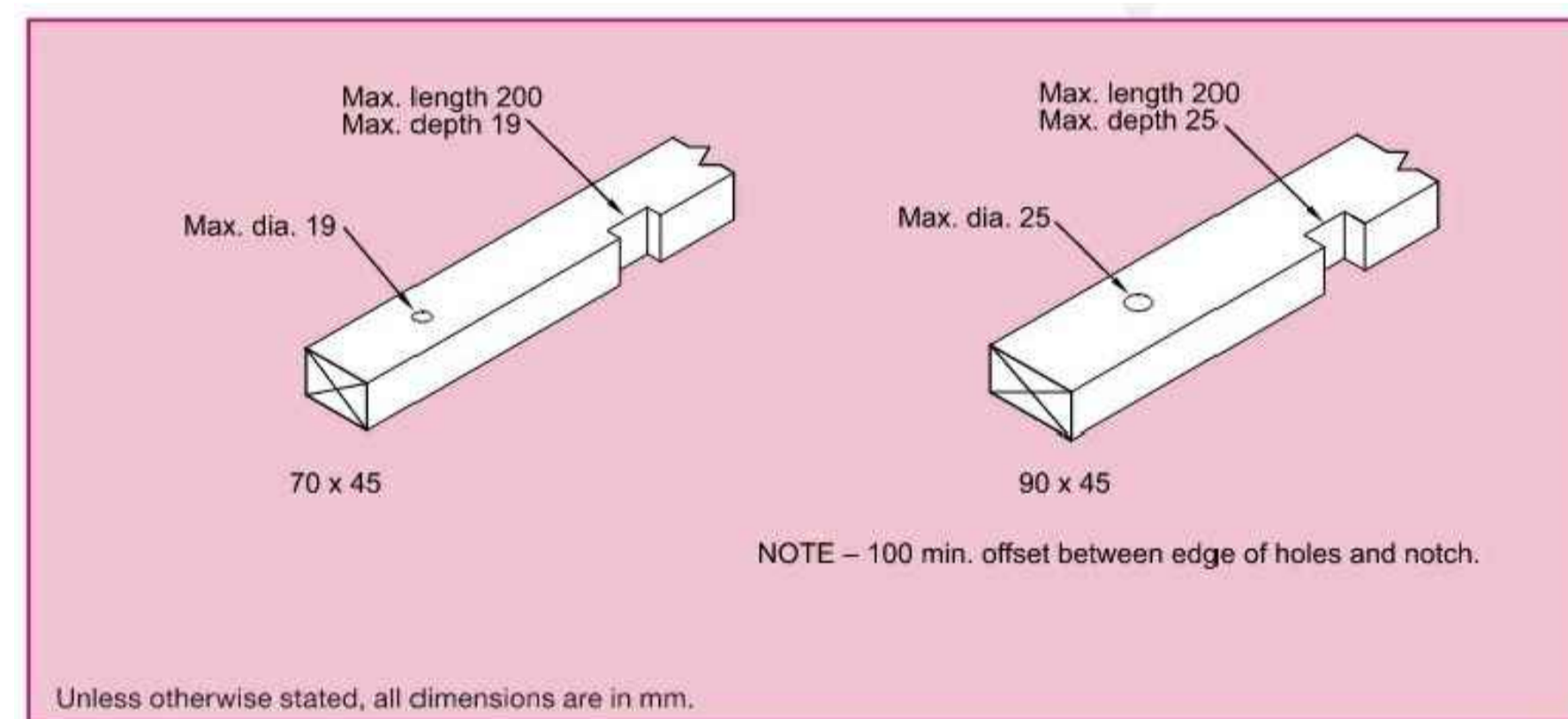


Figure 8.19 – Checking and boring top plates (see 8.7.5.1)

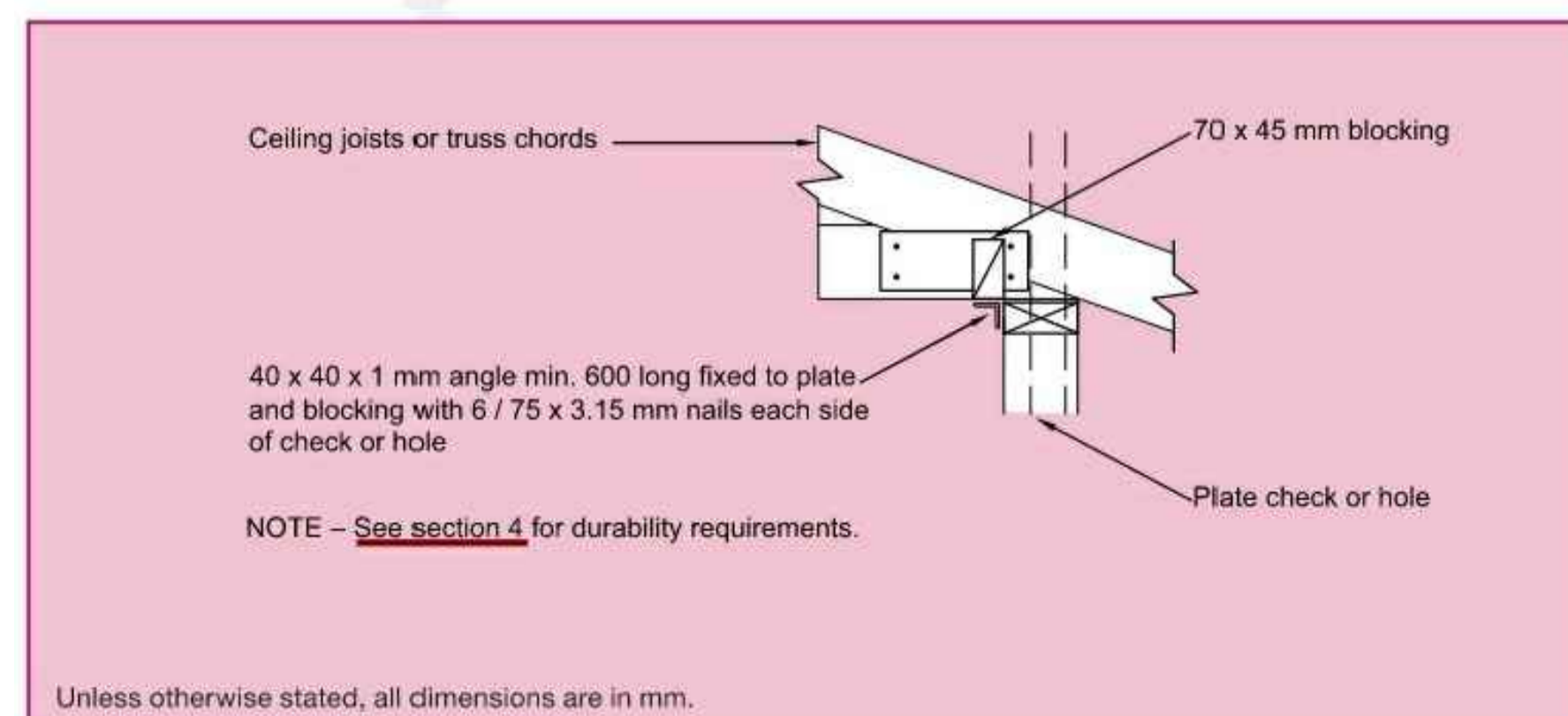


Figure 8.20 – Cut top plate (see 8.7.5.1(c))

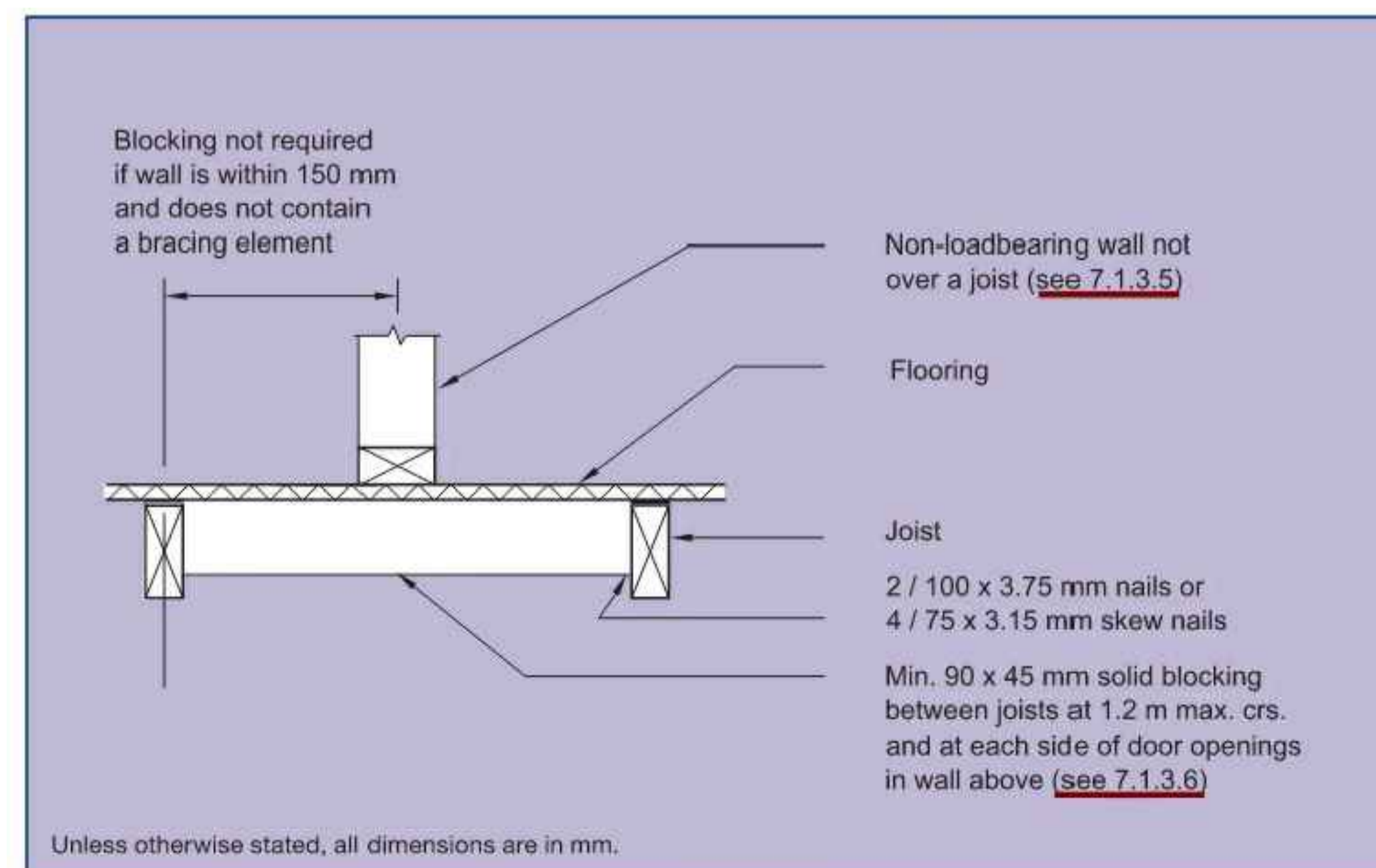


Figure 7.5 – Support to non-loadbearing walls (see 7.1.3.5)

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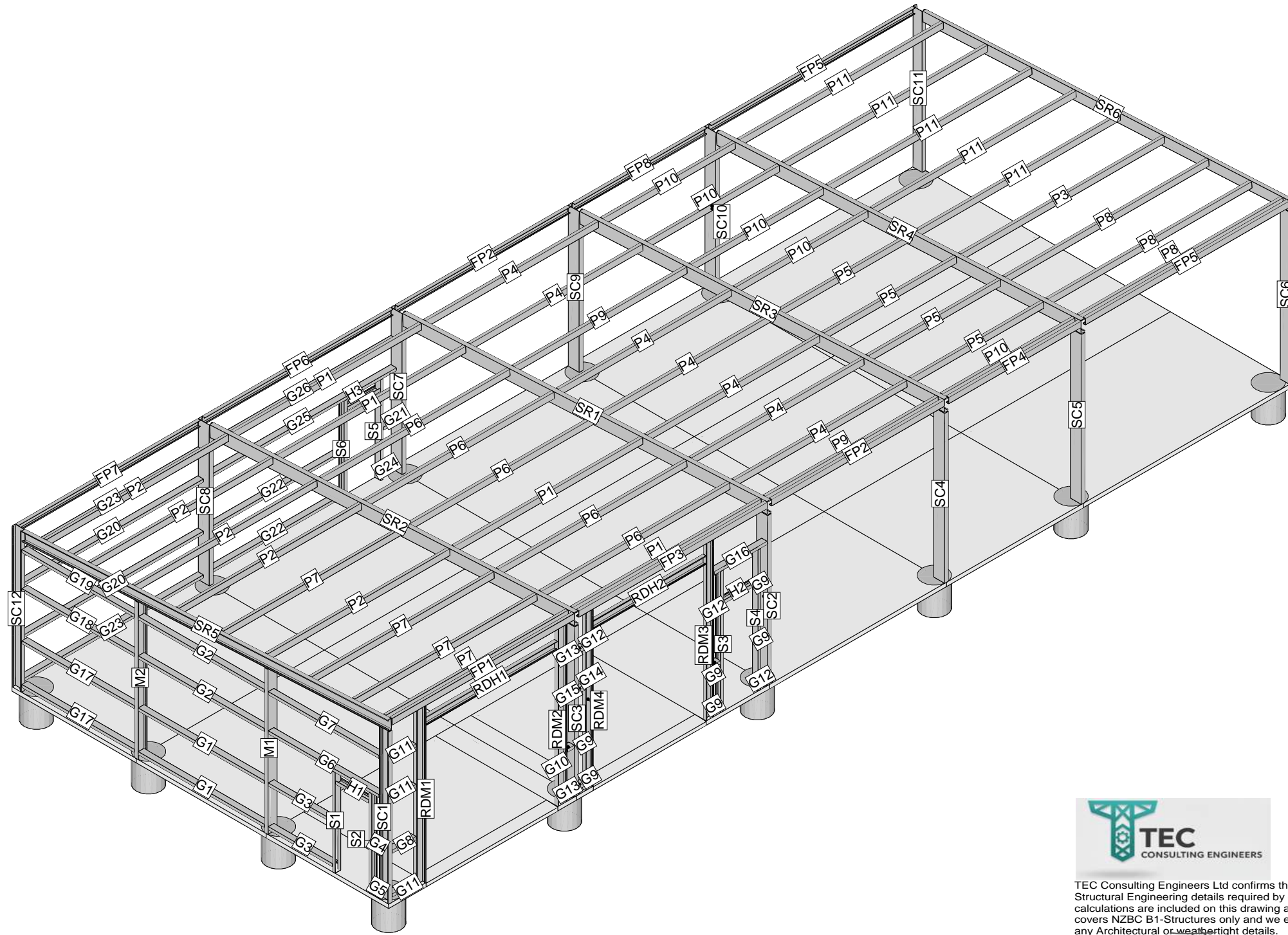


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DRAWING TITLE
NZS3604 DETAILS

DRAWING STATUS ISSUED FOR CONSENT			
SCALE 1:20 @ A3	CLIENT REF No:	JOB No:	
DRAWN DM	TEC	260041.1	
DESIGNED DM	SHEET No:	REVISION:	
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ISO Front Right

Member Schedule



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Date:29/05/2026

PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris	LOT: DP:	
DRAWING NO: MEMSCHED1	QUOTE NAME: Clone Clone ella harris		



MEMBER SCHEDULE				
Code	Member	Stock	Length	Count
FP1	Fascia Purlins	CSection 150mm x 1.2mm Z275	4835mm	1
FP2	Fascia Purlins	CSection 150mm x 1.2mm Z275	4580mm	2
FP3	Fascia Purlins	CSection 150mm x 1.2mm Z275	5000mm	1
FP4	Fascia Purlins	CSection 150mm x 1.2mm Z275	3510mm	1
FP5	Fascia Purlins	CSection 150mm x 1.2mm Z275	5405mm	2
FP6	Fascia Purlins	CSection 150mm x 1.2mm Z275	5000mm	1
FP7	Fascia Purlins	CSection 150mm x 1.2mm Z275	4835mm	1
FP8	Fascia Purlins	CSection 150mm x 1.2mm Z275	3510mm	1
G1	End Wall Girts	CSection 150mm x 1.2mm Z275	3345mm	2
G2	End Wall Girts	CSection 150mm x 1.2mm Z275	3345mm	2
G3	End Wall Girts	CSection 150mm x 1.2mm Z275	1701mm	2
G4	End Wall Girts	CSection 150mm x 1.2mm Z275	191mm	1
G5	End Wall Girts	CSection 150mm x 1.2mm Z275	191mm	1
G6	End Wall Girts	CSection 150mm x 1.2mm Z275	2938mm	1
G7	End Wall Girts	CSection 150mm x 1.2mm Z275	2938mm	1
G8	Side Wall Girts	CSection 150mm x 1.8mm Z275	637mm	1
G9	Side Wall Girts	CSection 150mm x 1.8mm Z275	168mm	6
G10	Side Wall Girts	CSection 150mm x 1.8mm Z275	178mm	1
G11	Side Wall Girts	CSection 150mm x 1.8mm Z275	637mm	3
G12	Side Wall Girts	CSection 150mm x 1.8mm Z275	168mm	3
G13	Side Wall Girts	CSection 150mm x 1.8mm Z275	178mm	2
G14	Side Wall Girts	CSection 150mm x 1.8mm Z275	168mm	1
G15	Side Wall Girts	CSection 150mm x 1.8mm Z275	178mm	1
G16	Side Wall Girts	CSection 150mm x 1.8mm Z275	1406mm	1
G17	End Wall Girts	CSection 150mm x 1.2mm Z275	2988mm	2
G18	End Wall Girts	CSection 150mm x 1.2mm Z275	2988mm	1
G19	End Wall Girts	CSection 150mm x 1.2mm Z275	2988mm	1
G20	Side Wall Girts	CSection 150mm x 1.8mm Z275	4835mm	2
G21	Side Wall Girts	CSection 150mm x 1.8mm Z275	338mm	1
G22	Side Wall Girts	CSection 150mm x 1.8mm Z275	3618mm	2
G23	Side Wall Girts	CSection 150mm x 1.8mm Z275	4835mm	2
G24	Side Wall Girts	CSection 150mm x 1.8mm Z275	338mm	1
G25	Side Wall Girts	CSection 150mm x 1.8mm Z275	5000mm	1
G26	Side Wall Girts	CSection 150mm x 1.8mm Z275	5000mm	1
H1	Header	CSection 150mm x 1.2mm Z275	875mm	1
H2	Header	CSection 150mm x 1.8mm Z275	900mm	1
H3	Header	CSection 150mm x 1.8mm Z275	875mm	1
M1	Skillion Wind Columns	CSection 250mm x 1.5mm Z275	3791mm	1
M2	Skillion Wind Columns	CSection 250mm x 1.5mm Z275	3610mm	1
P1	Purlin	CSection 150mm x 1.8mm Z275	5000mm	4
P2	Purlin	CSection 150mm x 1.8mm Z275	4835mm	5
P3	Purlin	CSection 150mm x 1.8mm Z275	5405mm	1
P4	Purlin	CSection 150mm x 1.8mm Z275	4580mm	7
P5	Purlin	CSection 150mm x 1.8mm Z275	3510mm	4
P6	Purlin	CSection 150mm x 1.8mm Z275	5000mm	5
P7	Purlin	CSection 150mm x 1.8mm Z275	4835mm	4
P8	Purlin	CSection 150mm x 1.8mm Z275	5405mm	3
P9	Purlin	CSection 150mm x 1.8mm Z275	4580mm	2
P10	Purlin	CSection 150mm x 1.8mm Z275	3510mm	5
P11	Purlin	CSection 150mm x 1.8mm Z275	5405mm	5

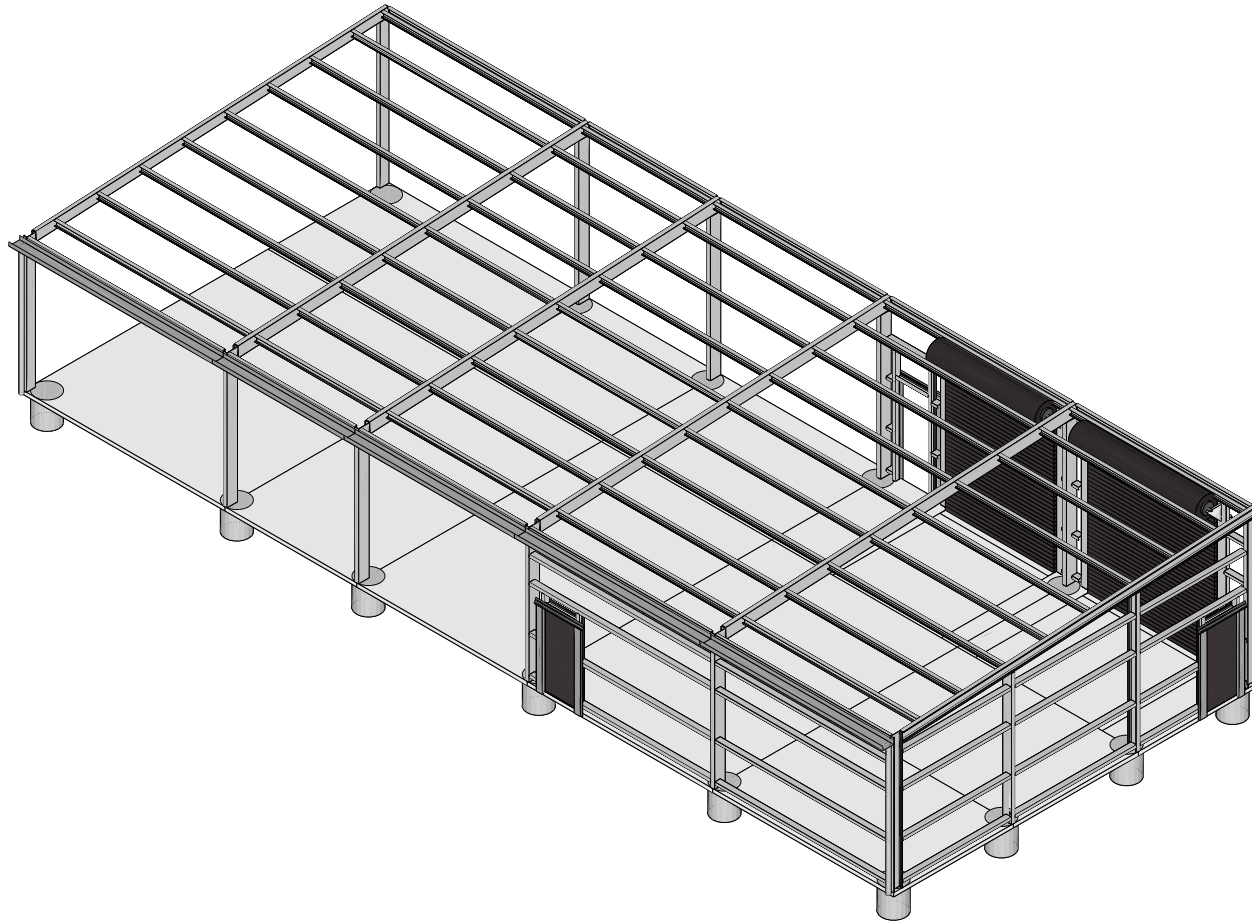
MEMBER SCHEDULE				
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RDH1	Roller Door Header (Cold Roll)	CSection 200mm x 1.2mm Z275	3480mm	1
RDH2	Roller Door Header (Cold Roll)	CSection 200mm x 1.2mm Z275	2980mm	1
RDM1	Roller Door Mullion (Cold Roll)	CSection 250mm x 1.5mm Z275	4062mm	1
RDM2	Roller Door Mullion (Cold Roll)	CSection 250mm x 1.5mm Z275	4062mm	1
RDM3	Roller Door Mullion (Cold Roll)	CSection 200mm x 1.5mm Z275	4062mm	1
RDM4	Roller Door Mullion (Cold Roll)	CSection 200mm x 1.5mm Z275	4062mm	1
S1	Stud	CSection 150mm x 1.2mm Z275	2313mm	1
S2	Stud	CSection 150mm x 1.2mm Z275	2313mm	1
S3	Stud	CSection 150mm x 1.8mm Z275	3242mm	1
S4	Stud	CSection 150mm x 1.8mm Z275	3242mm	1
S5	Stud	CSection 150mm x 1.8mm Z275	2313mm	1
S6	Stud	CSection 150mm x 1.8mm Z275	2313mm	1
SC1	Skillion Column	CSection 250mm x 1.3mm Z275	3957mm	1
SC2	Skillion Column	CSection 300mm x 1.8mm Z275	3904mm	1
SC3	Skillion Column	CSection 300mm x 1.8mm Z275	3904mm	1
SC4	Skillion Column	CSection 300mm x 1.8mm Z275	3904mm	1
SC5	Skillion Column	CSection 300mm x 1.8mm Z275	3904mm	1
SC6	Skillion Column	CSection 250mm x 1.3mm Z275	3957mm	1
SC7	Skillion Column	CSection 300mm x 1.8mm Z275	3697mm	1
SC8	Skillion Column	CSection 300mm x 1.8mm Z275	3697mm	1
SC9	Skillion Column	CSection 300mm x 1.8mm Z275	3697mm	1
SC10	Skillion Column	CSection 300mm x 1.8mm Z275	3697mm	1
SC11	Skillion Column	CSection 250mm x 1.3mm Z275	3697mm	1
SC12	Skillion Column	CSection 250mm x 1.3mm Z275	3697mm	1
SR1	Skillion Rafter	CSection 300mm x 1.8mm Z275	9679mm	1
SR2	Skillion Rafter	CSection 300mm x 1.8mm Z275	9679mm	1
SR3	Skillion Rafter	CSection 300mm x 1.8mm Z275	9679mm	1
SR4	Skillion Rafter	CSection 300mm x 1.8mm Z275	9679mm	1
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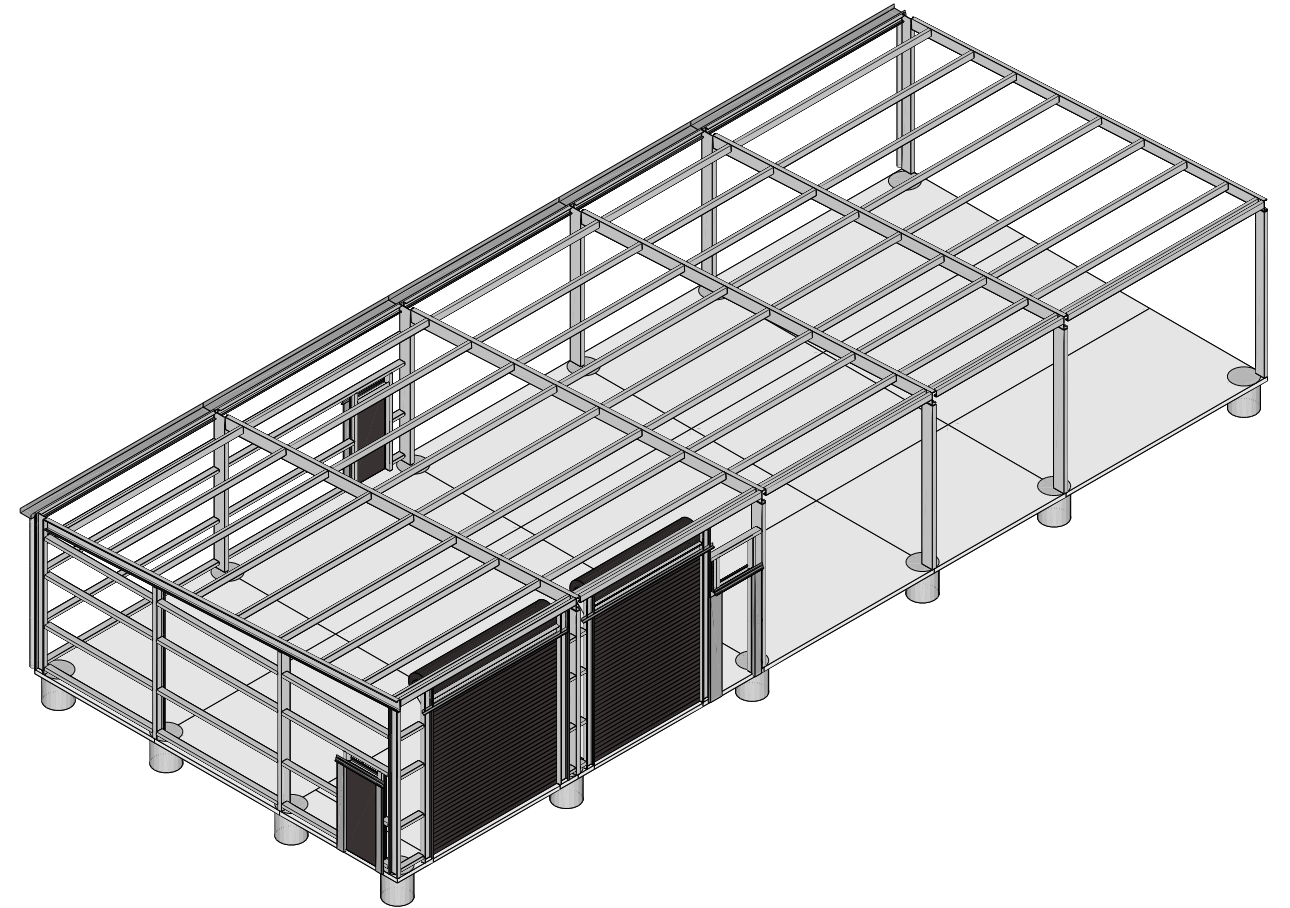
TEC Consulting Engineers Ltd confirms that the Structural Engineering details required by our calculations are included on this drawing and covers NZBC B1-Structures only and we exclude any Architectural or weatheright details.
Date: 29/05/2026

Member Schedule

PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris	LOT:	
DRAWING NO: MEMSCHED2	QUOTE NAME: Clone Clone ella harris	DP:	



ISO Front Left




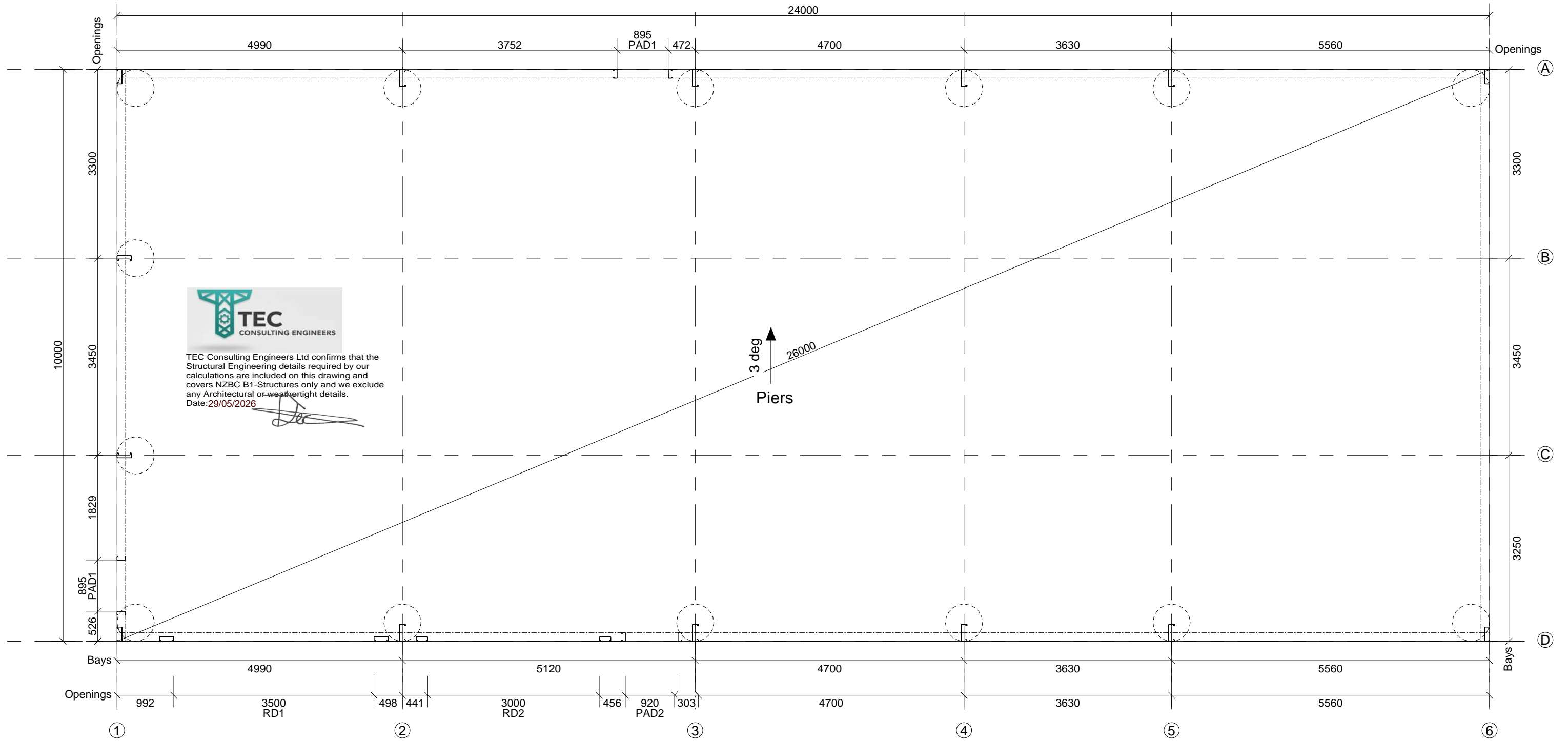
ISO Front Right




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Date: 29/05/2026

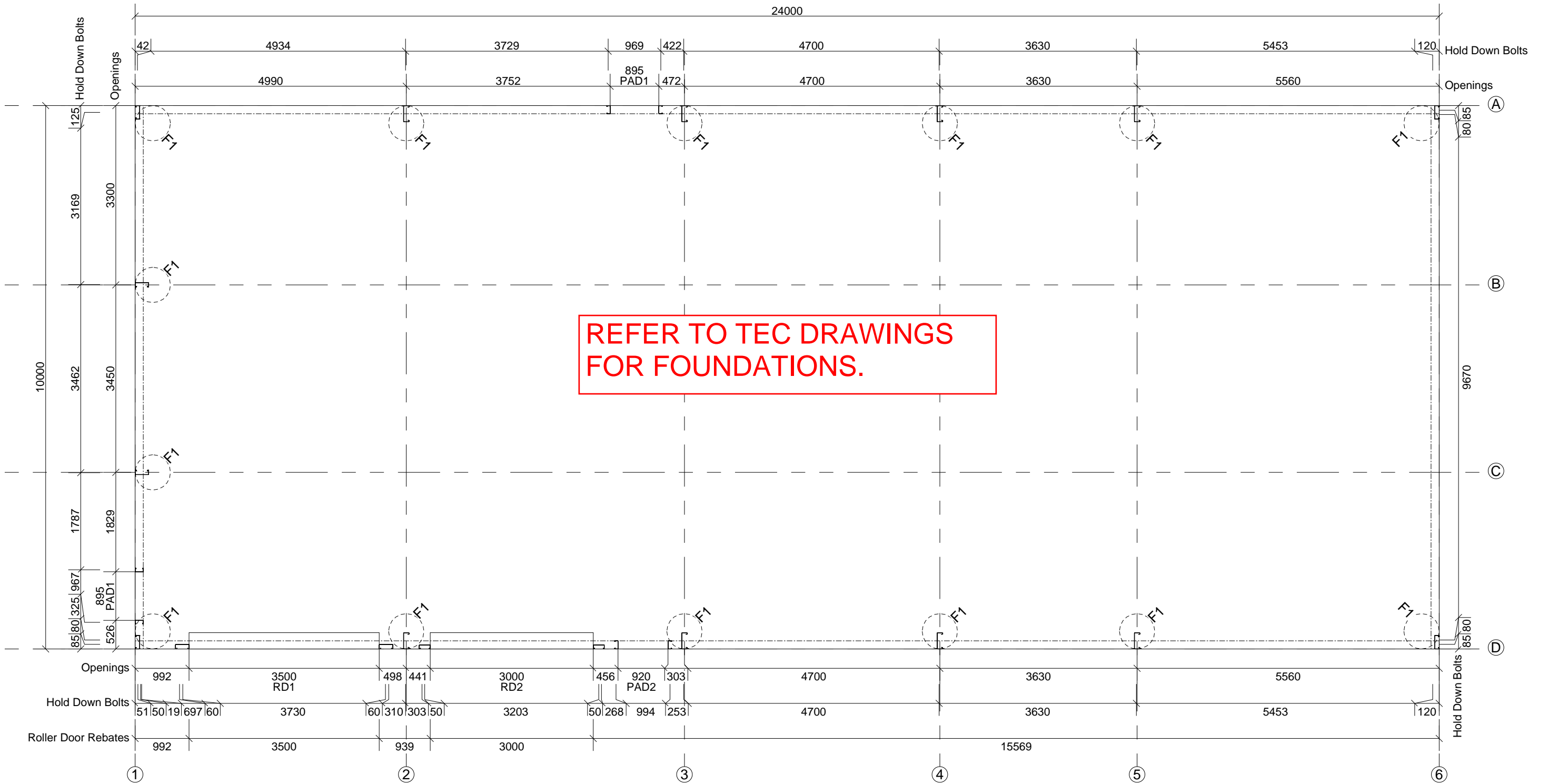
Isometric

PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris		
DRAWING NO: ISO1	QUOTE NAME: Clone Clone ella harris		



Plan


PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris		
DRAWING NO: PLAN1	QUOTE NAME: Clone Clone ella harris	LOT:	DP:



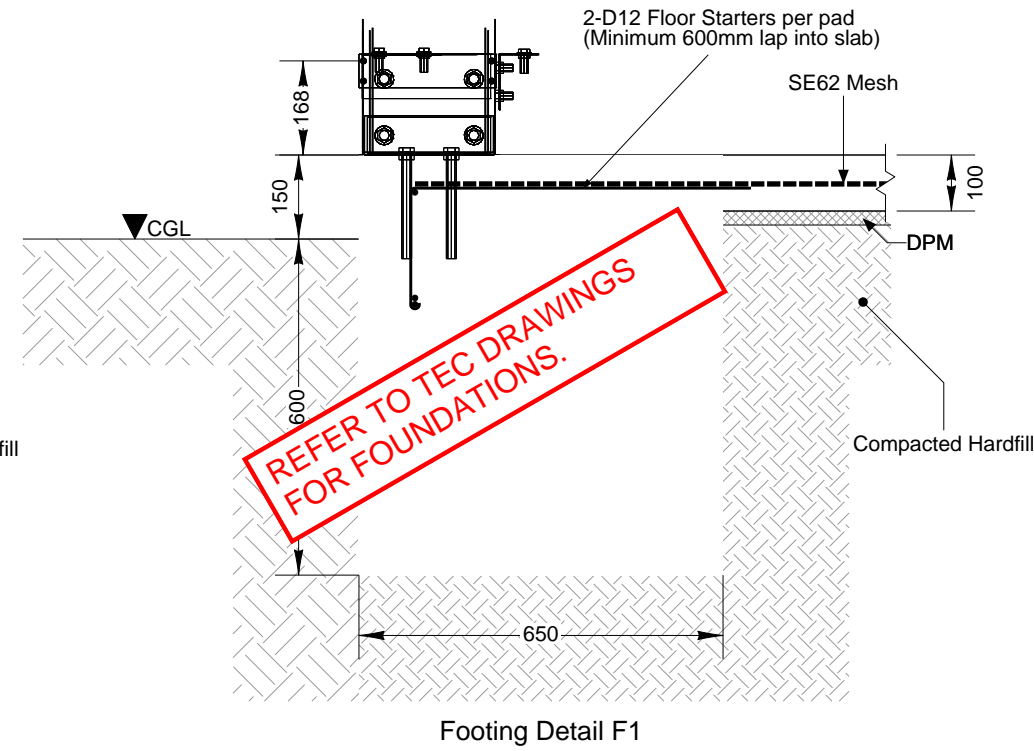
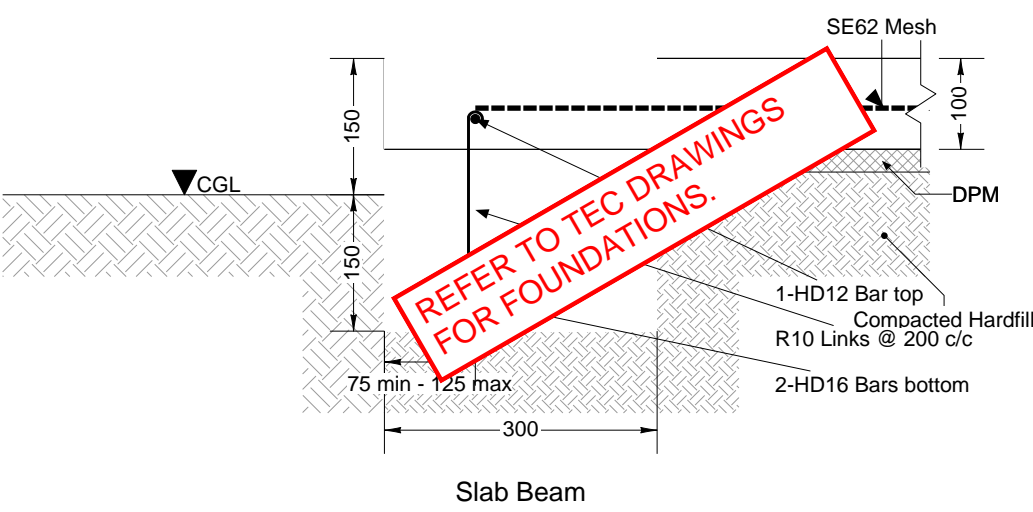
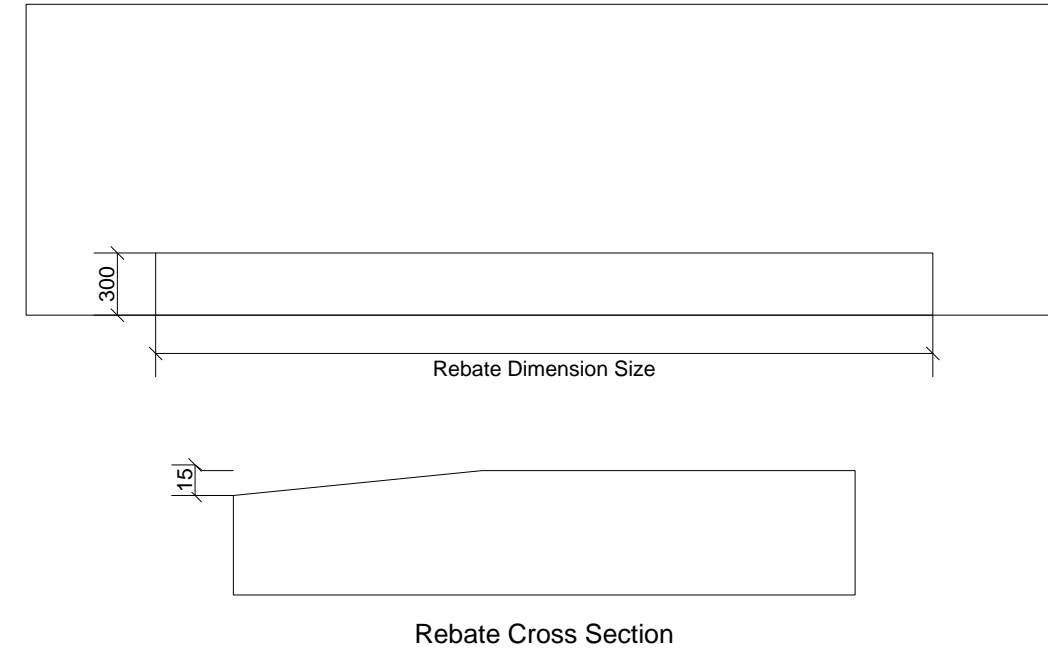
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Slab and Footings

Label	Size	Qty	Depth
F1	650mm dia.	14	750

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DATE: 28/05/2026	PROJECT NAME: ella harris			LOT:
DRAWING NO: SLAB1	QUOTE NAME: Clone Clone ella harris			

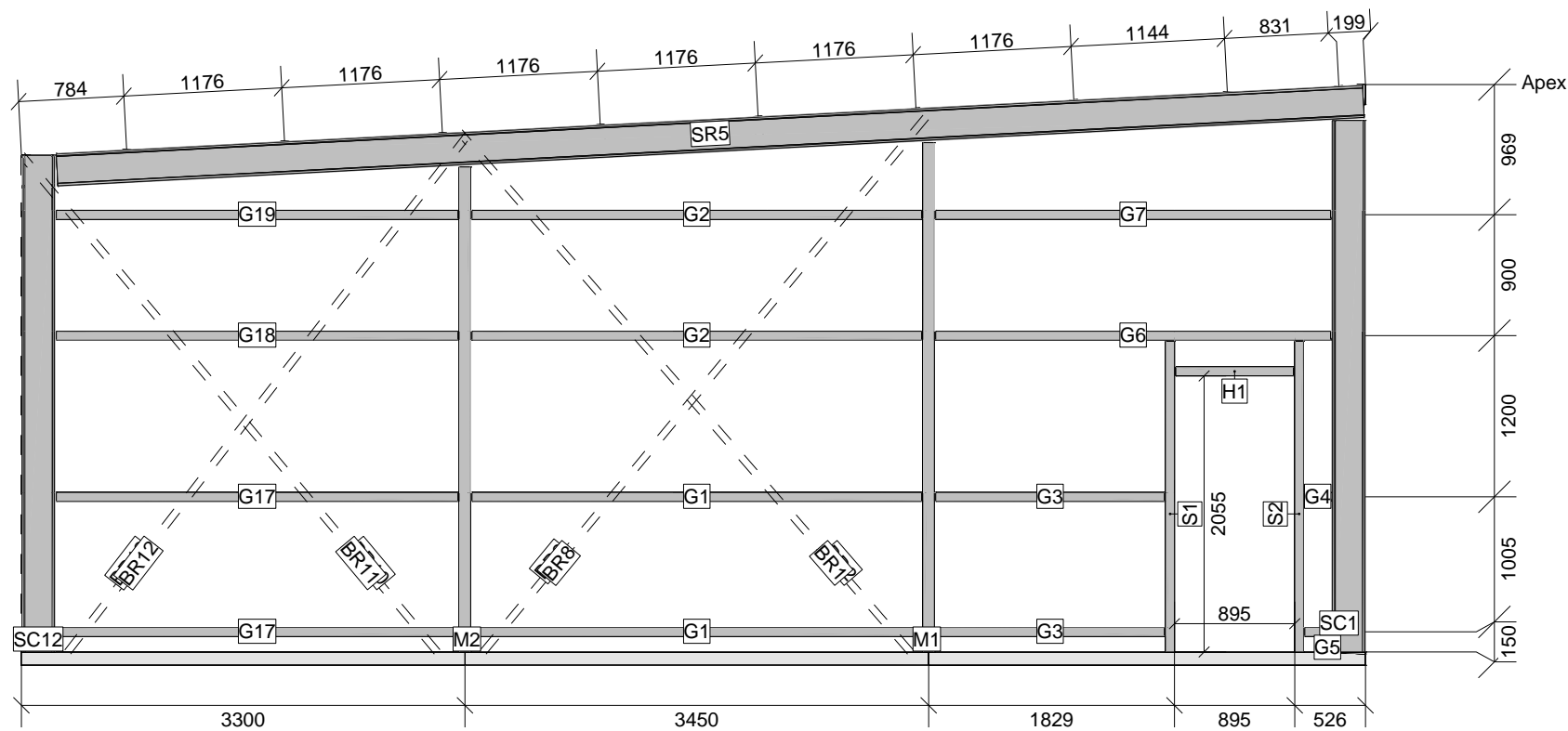
Standard Rebate Layout



TEC Consulting Engineers Ltd confirms that the Structural Engineering details required by our calculations are included on this drawing and covers NZBC B1-Structures only and we exclude any Architectural or weatheright details.
Date:29/05/2026

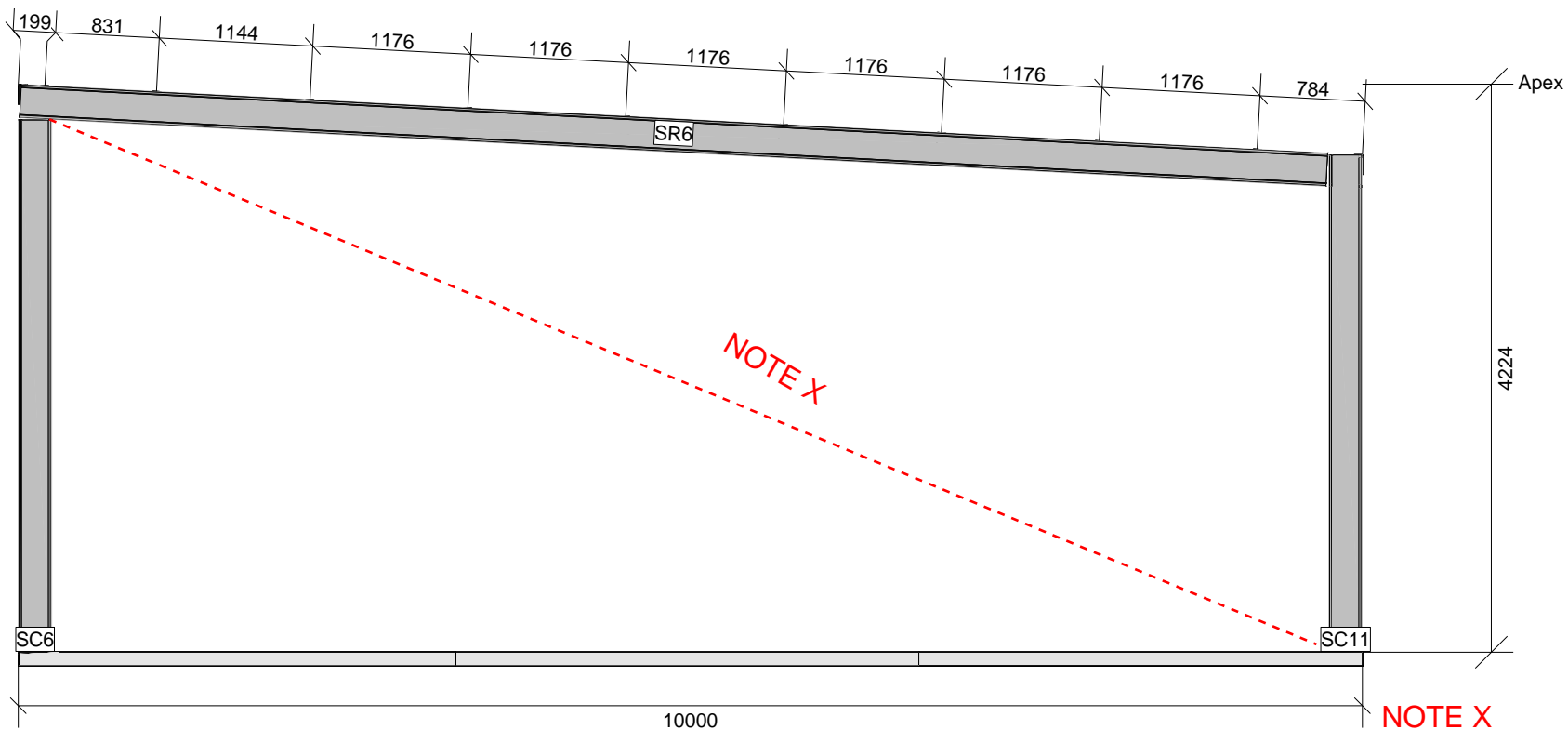
Slab and Footings

PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:		
DATE: 28/05/2026	PROJECT NAME: ella harris			
DRAWING NO: SLAB2	QUOTE NAME: Clone Clone ella harris	LOT:	DP:	



Front of Structure 1

PAD1



Back of Structure 1

Girt Layout


NOTE X
TIMBER WALL FRAMING AND BRACING AS PER TEC STRUCTURAL DRAWINGS AND ARCHITECTURAL DRAWINGS.

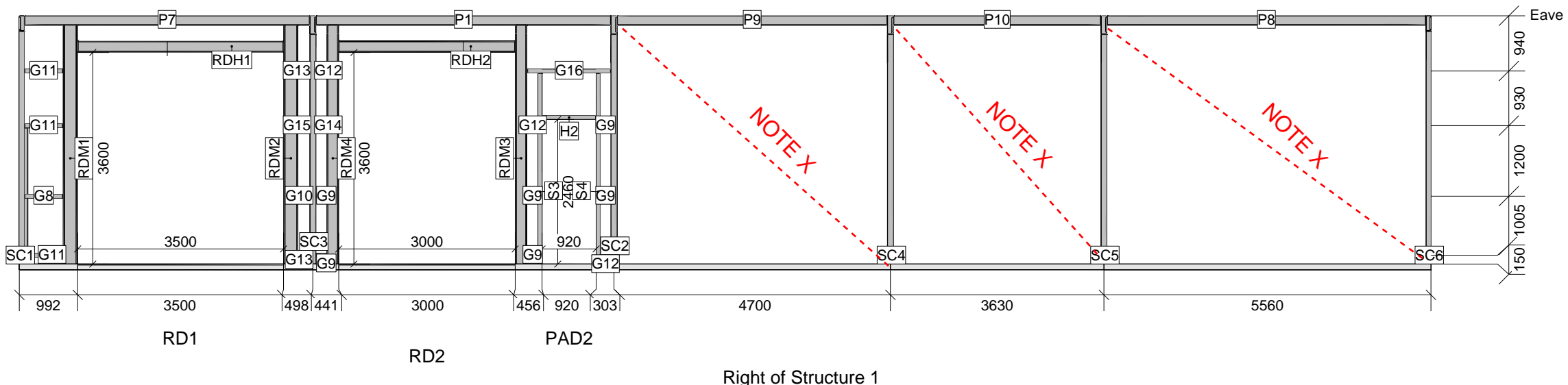
MEMBER SCHEDULE				
Code	Member	Stock	Length	Count
BR1	Cross Bracing	Bracing Strap 50x0.95mm	5059mm	1
BR2	Cross Bracing	Bracing Strap 50x0.95mm	5122mm	1
BR8	Cross Bracing	Bracing Strap 50x0.95mm	5197mm	1
BR9	Cross Bracing	Bracing Strap 50x0.95mm	5263mm	1
BR10	Cross Bracing	Bracing Strap 50x0.95mm	4822mm	1
BR11	Cross Bracing	Bracing Strap 50x0.95mm	4756mm	1
BR12	Cross Bracing	Bracing Strap 50x0.95mm	4827mm	1
BR13	Cross Bracing	Bracing Strap 50x0.95mm	4899mm	1
G1	End Wall Girts	CSection 150mm x 1.2mm Z275	3345mm	2
G2	End Wall Girts	CSection 150mm x 1.2mm Z275	3345mm	2
G3	End Wall Girts	CSection 150mm x 1.2mm Z275	1701mm	2
G4	End Wall Girts	CSection 150mm x 1.2mm Z275	191mm	1
G5	End Wall Girts	CSection 150mm x 1.2mm Z275	191mm	1
G6	End Wall Girts	CSection 150mm x 1.2mm Z275	2938mm	1
G7	End Wall Girts	CSection 150mm x 1.2mm Z275	2938mm	1
G17	End Wall Girts	CSection 150mm x 1.2mm Z275	2988mm	2
G18	End Wall Girts	CSection 150mm x 1.2mm Z275	2988mm	1
G19	End Wall Girts	CSection 150mm x 1.2mm Z275	2988mm	1
H1	Header	CSection 150mm x 1.2mm Z275	875mm	1
M1	Skillion Wind Columns	CSection 250mm x 1.5mm Z275	3791mm	1
M2	Skillion Wind Columns	CSection 250mm x 1.5mm Z275	3610mm	1
S1	Stud	CSection 150mm x 1.2mm Z275	2313mm	1
S2	Stud	CSection 150mm x 1.2mm Z275	2313mm	1
SC1	Skillion Column	CSection 250mm x 1.3mm Z275	3957mm	1
SC6	Skillion Column	CSection 250mm x 1.3mm Z275	3957mm	1
SC11	Skillion Column	CSection 250mm x 1.3mm Z275	3697mm	1
SC12	Skillion Column	CSection 250mm x 1.3mm Z275	3697mm	1
SR5	Skillion Rafter	CSection 250mm x 1.3mm Z275	9731mm	1
SR6	Skillion Rafter	CSection 250mm x 1.3mm Z275	9731mm	1



TEC Consulting Engineers Ltd confirms that the Structural Engineering details required by our calculations are included on this drawing and covers NZBC B1-Structures only and we exclude any Architectural or weatheright details.
 Date: 29/05/2026

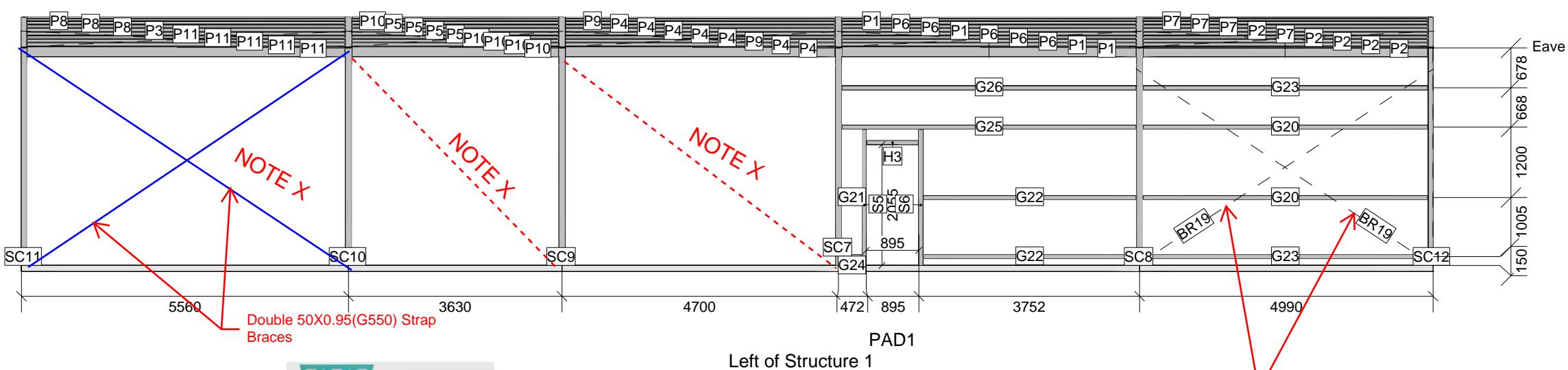
[Signature]

PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris	LOT:	
DRAWING NO: GRT1	QUOTE NAME: Clone Clone ella harris	DP:	



Right of Structure 1

NOTE X
 TIMBER WALL FRAMING AND
 BRACING AS PER TEC
 STRUCTURAL DRAWINGS AND
 ARCHITECTURAL DRAWINGS.



Left of Structure 1



TEC Consulting Engineers Ltd confirms that the Structural Engineering details required by our calculations are included on this drawing and covers NZBC B1-Structures only and we exclude any Architectural or weatheright details.
 Date: 29/05/2026

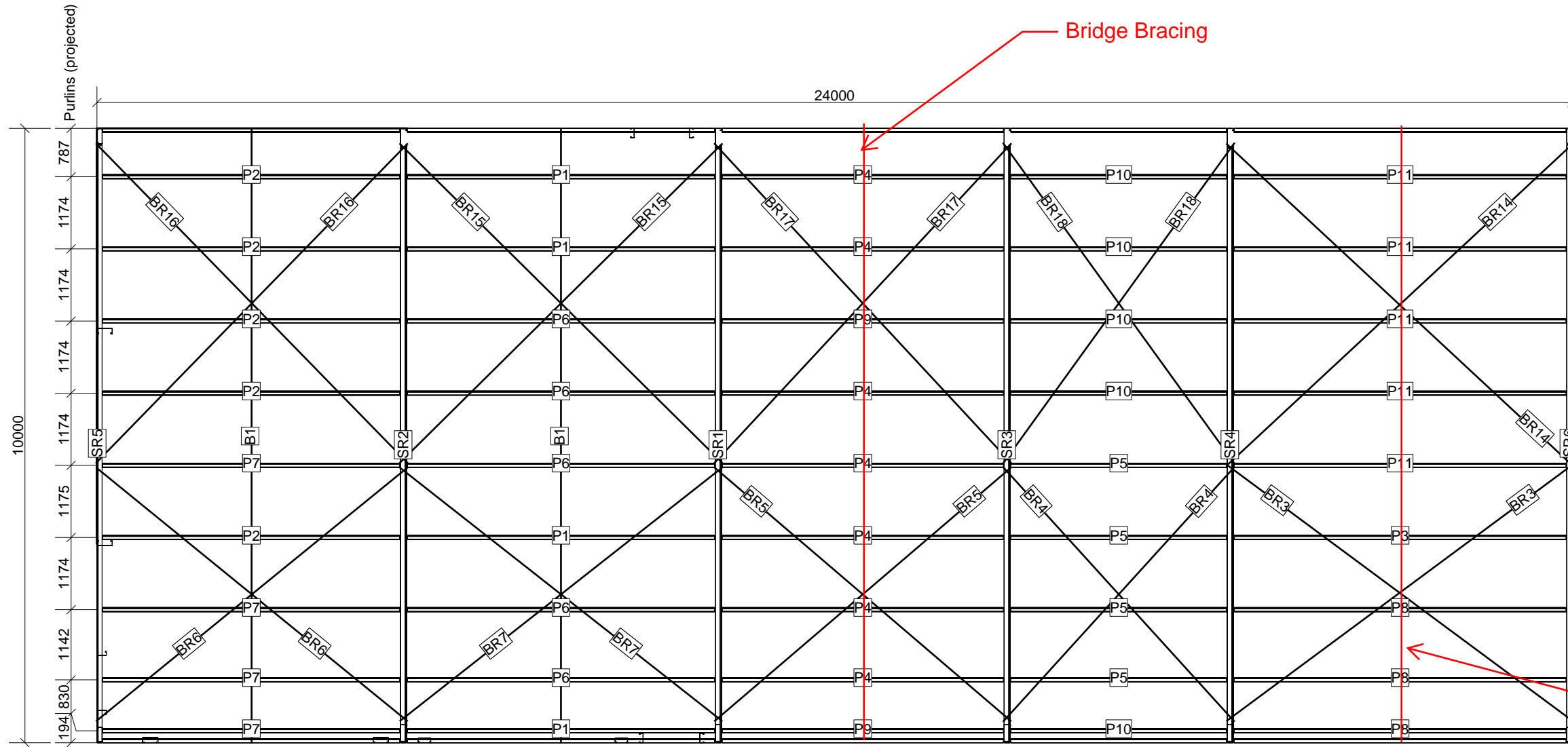
Girt Layout

MEMBER SCHEDULE				
Code	Member	Stock	Length	Count
BR19	Cross Bracing	Bracing Strap 50x0.95mm	6078mm	2
G8	Side Wall Girts	CSection 150mm x 1.8mm Z275	637mm	1
G9	Side Wall Girts	CSection 150mm x 1.8mm Z275	168mm	6
G10	Side Wall Girts	CSection 150mm x 1.8mm Z275	178mm	1
G11	Side Wall Girts	CSection 150mm x 1.8mm Z275	637mm	3
G12	Side Wall Girts	CSection 150mm x 1.8mm Z275	168mm	3
G13	Side Wall Girts	CSection 150mm x 1.8mm Z275	178mm	2
G14	Side Wall Girts	CSection 150mm x 1.8mm Z275	168mm	1
G15	Side Wall Girts	CSection 150mm x 1.8mm Z275	178mm	1
G16	Side Wall Girts	CSection 150mm x 1.8mm Z275	1406mm	1
G20	Side Wall Girts	CSection 150mm x 1.8mm Z275	4835mm	2
G21	Side Wall Girts	CSection 150mm x 1.8mm Z275	338mm	1
G22	Side Wall Girts	CSection 150mm x 1.8mm Z275	3618mm	2
G23	Side Wall Girts	CSection 150mm x 1.8mm Z275	4835mm	2
G24	Side Wall Girts	CSection 150mm x 1.8mm Z275	338mm	1
G25	Side Wall Girts	CSection 150mm x 1.8mm Z275	5000mm	1
G26	Side Wall Girts	CSection 150mm x 1.8mm Z275	5000mm	1
H2	Header	CSection 150mm x 1.8mm Z275	900mm	1
H3	Header	CSection 150mm x 1.8mm Z275	875mm	1
P1	Purlin	CSection 150mm x 1.8mm Z275	5000mm	4
P2	Purlin	CSection 150mm x 1.8mm Z275	4835mm	5
P3	Purlin	CSection 150mm x 1.8mm Z275	5405mm	1
P4	Purlin	CSection 150mm x 1.8mm Z275	4580mm	7
P5	Purlin	CSection 150mm x 1.8mm Z275	3510mm	4
P6	Purlin	CSection 150mm x 1.8mm Z275	5000mm	5
P7	Purlin	CSection 150mm x 1.8mm Z275	4835mm	4
P8	Purlin	CSection 150mm x 1.8mm Z275	5405mm	3
P9	Purlin	CSection 150mm x 1.8mm Z275	4580mm	2
P10	Purlin	CSection 150mm x 1.8mm Z275	3510mm	5
P11	Purlin	CSection 150mm x 1.8mm Z275	5405mm	5
RDH1	Roller Door Header (Cold Roll)	CSection 200mm x 1.2mm Z275	3480mm	1
RDH2	Roller Door Header (Cold Roll)	CSection 200mm x 1.2mm Z275	2980mm	1
RDM1	Roller Door Mullion (Cold Roll)	CSection 250mm x 1.5mm Z275	4062mm	1
RDM2	Roller Door Mullion (Cold Roll)	CSection 250mm x 1.5mm Z275	4062mm	1
RDM3	Roller Door Mullion (Cold Roll)	CSection 200mm x 1.5mm Z275	4062mm	1
RDM4	Roller Door Mullion (Cold Roll)	CSection 200mm x 1.5mm Z275	4062mm	1
S3	Stud	CSection 150mm x 1.8mm Z275	3242mm	1
S4	Stud	CSection 150mm x 1.8mm Z275	3242mm	1

PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:
DATE: 28/05/2026	PROJECT NAME: ella harris	
DRAWING NO: GRT2	QUOTE NAME: Clone Clone ella harris	LOT: DP:



MEMBER SCHEDULE				
Code	Member	Stock	Length	Count
B1	Bridge Bracing	Ceiling Batten	10014mm	2
BR3	Cross Bracing	Bracing Strap 50x0.95mm	7023mm	2
BR4	Cross Bracing	Bracing Strap 50x0.95mm	5607mm	2
BR5	Cross Bracing	Bracing Strap 50x0.95mm	6364mm	2
BR6	Cross Bracing	Bracing Strap 50x0.95mm	6546mm	2
BR7	Cross Bracing	Bracing Strap 50x0.95mm	6685mm	2
BR14	Cross Bracing	Bracing Strap 50x0.95mm	7713mm	2
BR15	Cross Bracing	Bracing Strap 50x0.95mm	7400mm	2
BR16	Cross Bracing	Bracing Strap 50x0.95mm	7276mm	2
BR17	Cross Bracing	Bracing Strap 50x0.95mm	7113mm	2
BR18	Cross Bracing	Bracing Strap 50x0.95mm	6449mm	2
P1	Purlin	CSection 150mm x 1.8mm Z275	5000mm	4
P2	Purlin	CSection 150mm x 1.8mm Z275	4835mm	5
P3	Purlin	CSection 150mm x 1.8mm Z275	5405mm	1
P4	Purlin	CSection 150mm x 1.8mm Z275	4580mm	7
P5	Purlin	CSection 150mm x 1.8mm Z275	3510mm	4
P6	Purlin	CSection 150mm x 1.8mm Z275	5000mm	5
P7	Purlin	CSection 150mm x 1.8mm Z275	4835mm	4
P8	Purlin	CSection 150mm x 1.8mm Z275	5405mm	3
P9	Purlin	CSection 150mm x 1.8mm Z275	4580mm	2
P10	Purlin	CSection 150mm x 1.8mm Z275	3510mm	5
P11	Purlin	CSection 150mm x 1.8mm Z275	5405mm	5
SR1	Skillion Rafter	CSection 300mm x 1.8mm Z275	9679mm	1
SR2	Skillion Rafter	CSection 300mm x 1.8mm Z275	9679mm	1
SR3	Skillion Rafter	CSection 300mm x 1.8mm Z275	9679mm	1
SR4	Skillion Rafter	CSection 300mm x 1.8mm Z275	9679mm	1
SR5	Skillion Rafter	CSection 250mm x 1.3mm Z275	9731mm	1
SR6	Skillion Rafter	CSection 250mm x 1.3mm Z275	9731mm	1




Bridge Bracing

Bridge Bracing

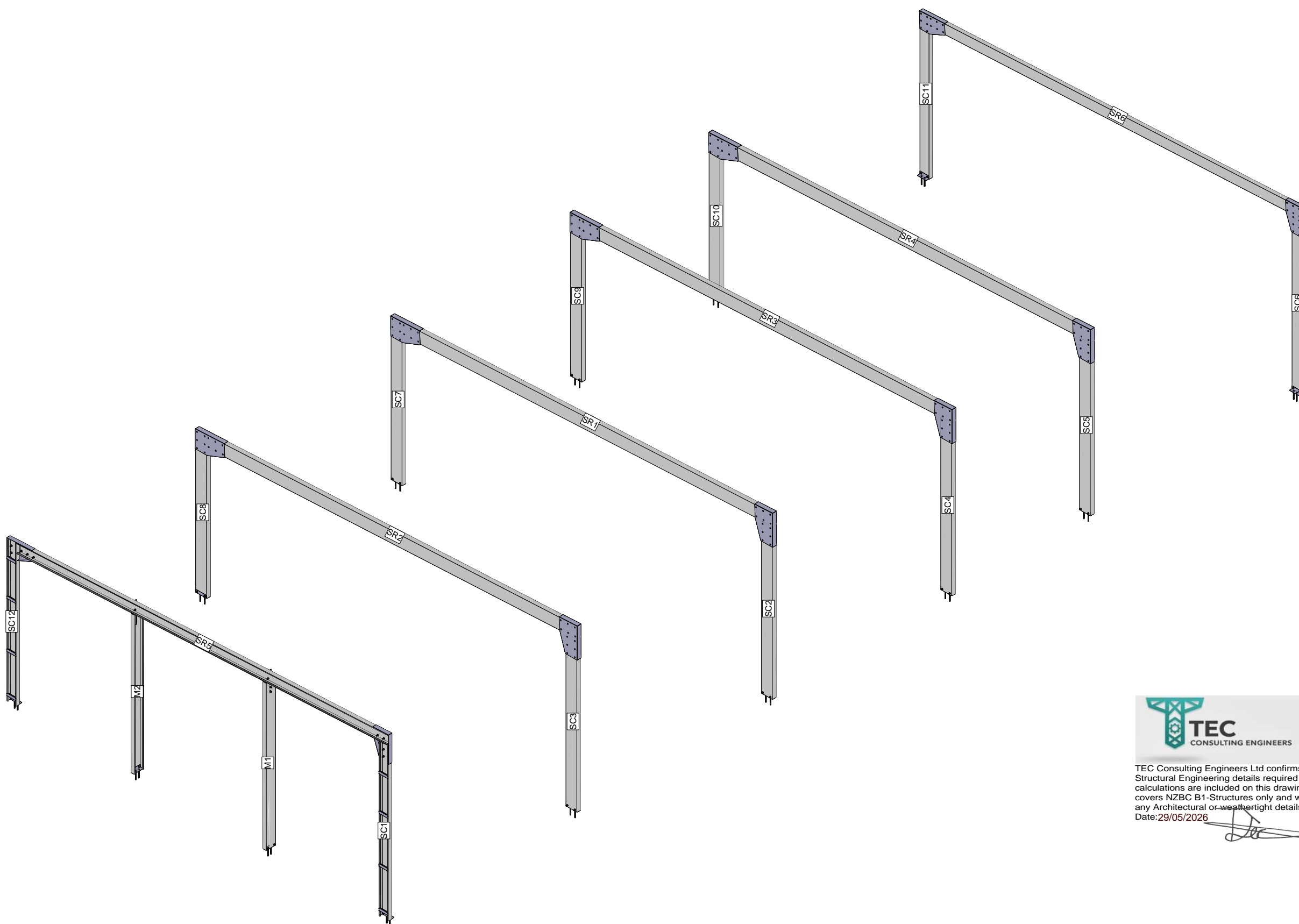


TEC Consulting Engineers Ltd confirms that the Structural Engineering details required by our calculations are included on this drawing and covers NZBC B1-Structures only and we exclude any Architectural or weatheright details.
Date: 29/05/2026

Purlin Layout

PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris	LOT:	
DRAWING NO: PLN1	QUOTE NAME: Clone Clone ella harris	DP:	

MEMBER SCHEDULE			
Code	Member	Stock	Count
M1	Skillion Wind Columns	CSection 250mm x 1.5mm Z275	1
M2	Skillion Wind Columns	CSection 250mm x 1.5mm Z275	1
SC1	Skillion Column	CSection 250mm x 1.3mm Z275	1
SC2	Skillion Column	CSection 300mm x 1.8mm Z275	1
SC3	Skillion Column	CSection 300mm x 1.8mm Z275	1
SC4	Skillion Column	CSection 300mm x 1.8mm Z275	1
SC5	Skillion Column	CSection 300mm x 1.8mm Z275	1
SC6	Skillion Column	CSection 250mm x 1.3mm Z275	1
SC7	Skillion Column	CSection 300mm x 1.8mm Z275	1
SC8	Skillion Column	CSection 300mm x 1.8mm Z275	1
SC9	Skillion Column	CSection 300mm x 1.8mm Z275	1
SC10	Skillion Column	CSection 300mm x 1.8mm Z275	1
SC11	Skillion Column	CSection 250mm x 1.3mm Z275	1
SC12	Skillion Column	CSection 250mm x 1.3mm Z275	1
SR1	Skillion Rafter	CSection 300mm x 1.8mm Z275	1
SR2	Skillion Rafter	CSection 300mm x 1.8mm Z275	1
SR3	Skillion Rafter	CSection 300mm x 1.8mm Z275	1
SR4	Skillion Rafter	CSection 300mm x 1.8mm Z275	1
SR5	Skillion Rafter	CSection 250mm x 1.3mm Z275	1
SR6	Skillion Rafter	CSection 250mm x 1.3mm Z275	1



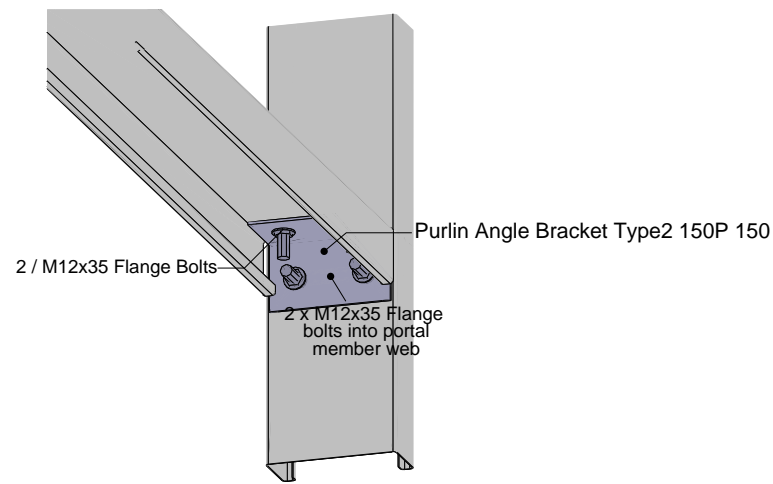
All Frames



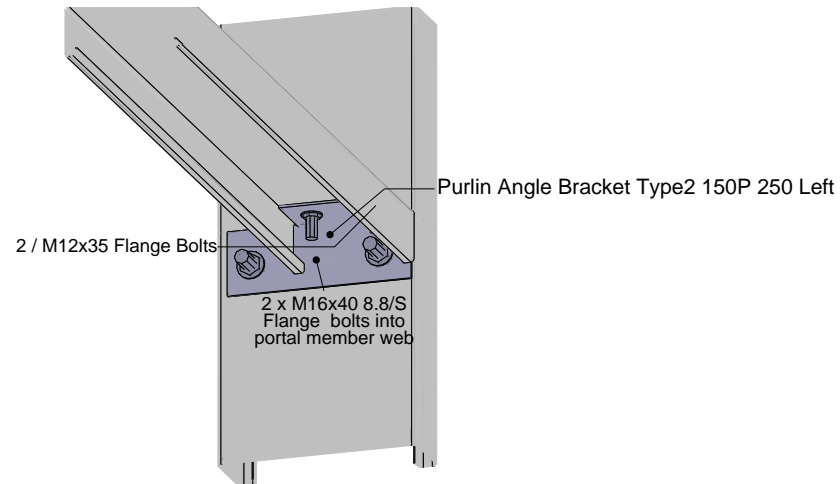
TEC Consulting Engineers Ltd confirms that the Structural Engineering details required by our calculations are included on this drawing and covers NZBC B1-Structures only and we exclude any Architectural or weathertight details.
Date:29/05/2026

PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris		
DRAWING NO: FRAME1	QUOTE NAME: Clone Clone ella harris	LOT:	DP:

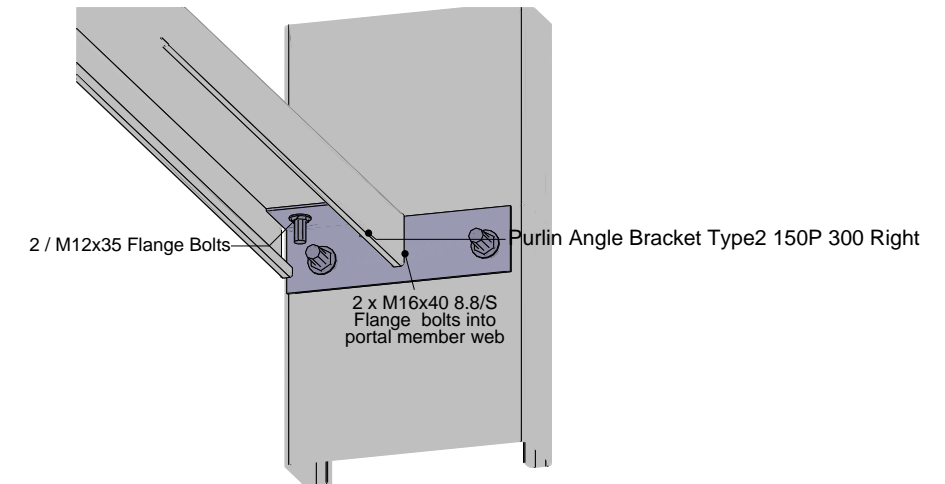




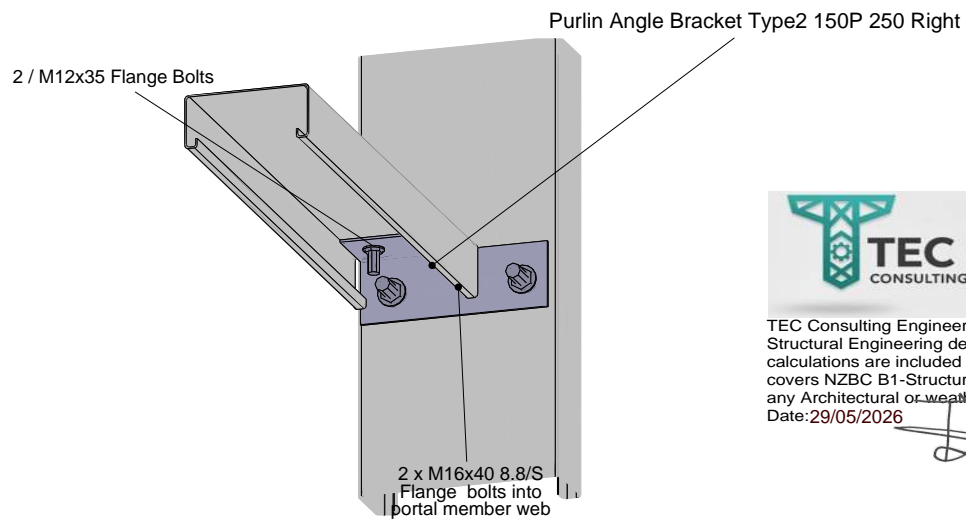
Type 2 Purlin Bracket
Not to Scale



Type 2 Purlin Bracket
Not to Scale



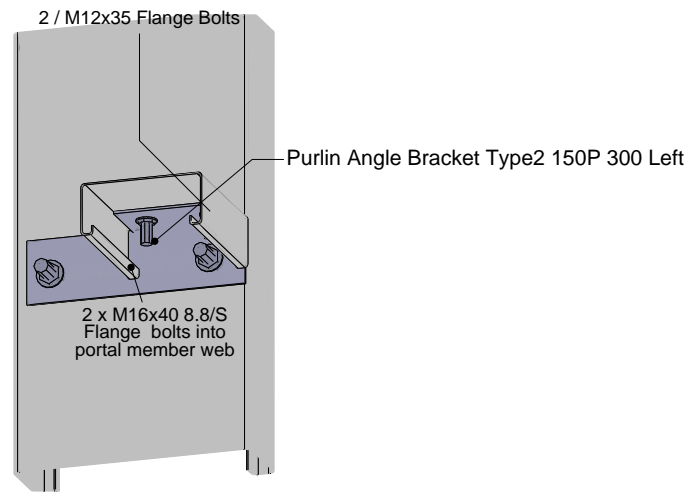
Type 2 Purlin Bracket
Not to Scale



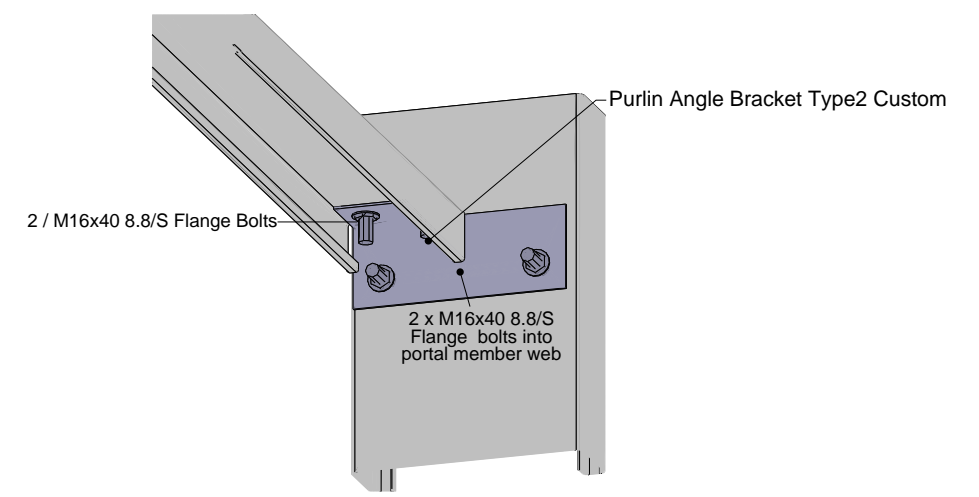
Type 2 Purlin Bracket
Not to Scale



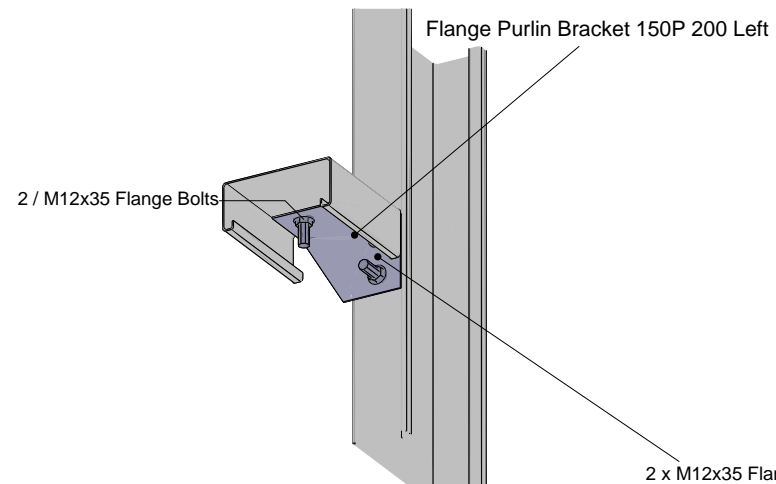
TEC Consulting Engineers Ltd confirms that the Structural Engineering details required by our calculations are included on this drawing and covers NZBC B1-Structures only and we exclude any Architectural or weatheright details.
Date: 29/05/2026



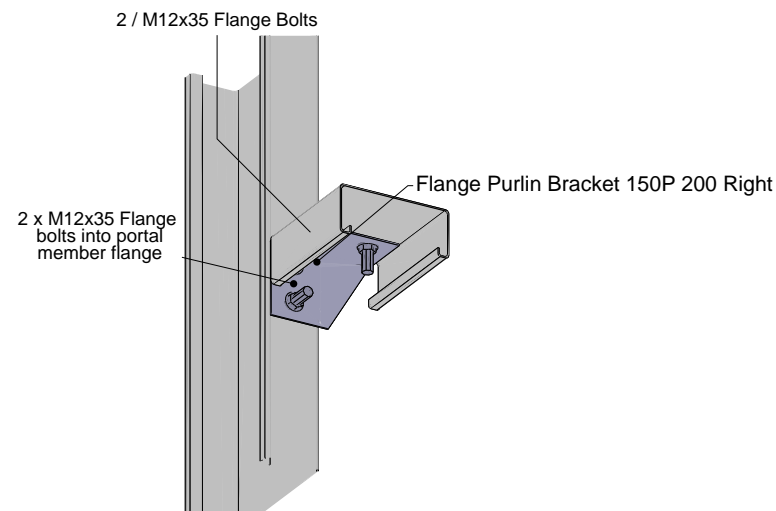
Type 2 Purlin Bracket
Not to Scale



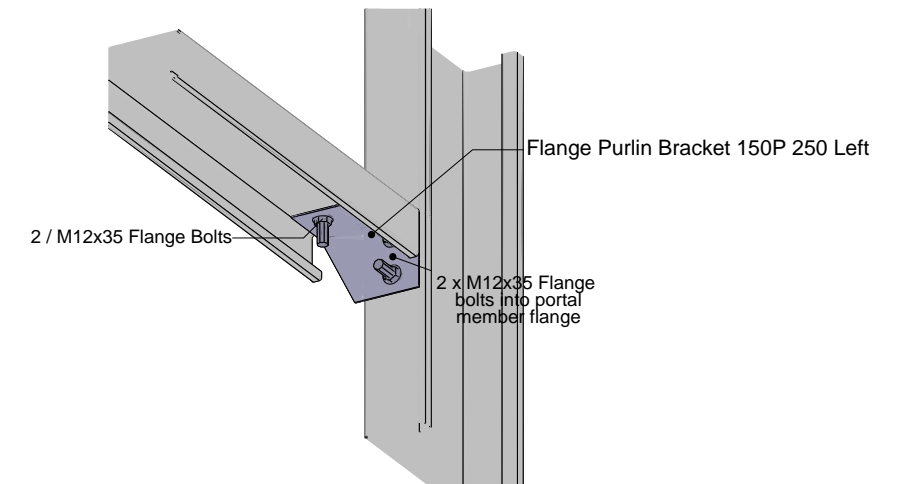
Type 2 Purlin Bracket
Not to Scale



Gable End Purlin Bracket
Not to Scale




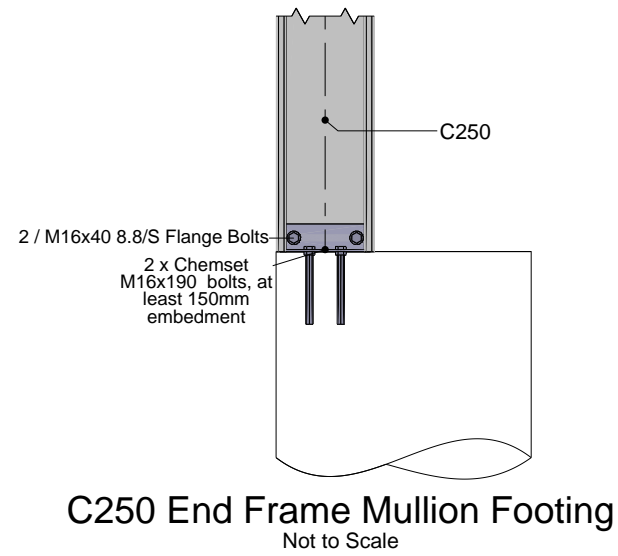
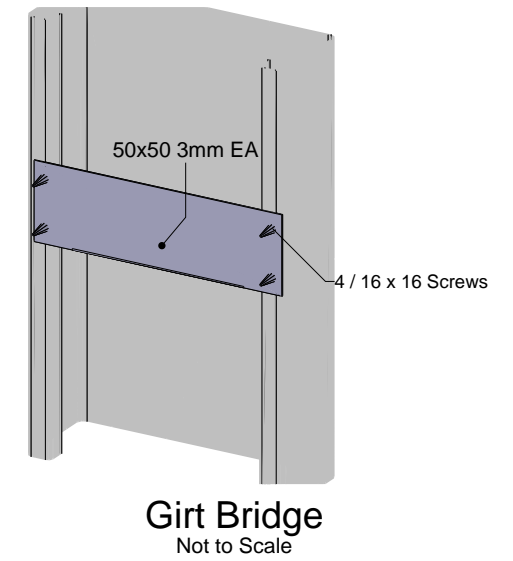
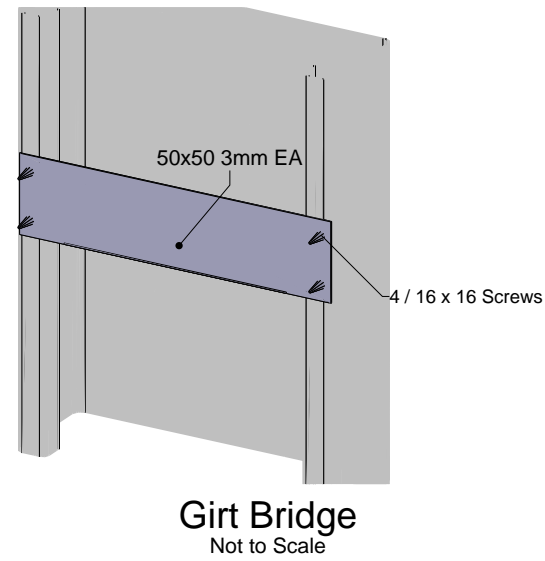
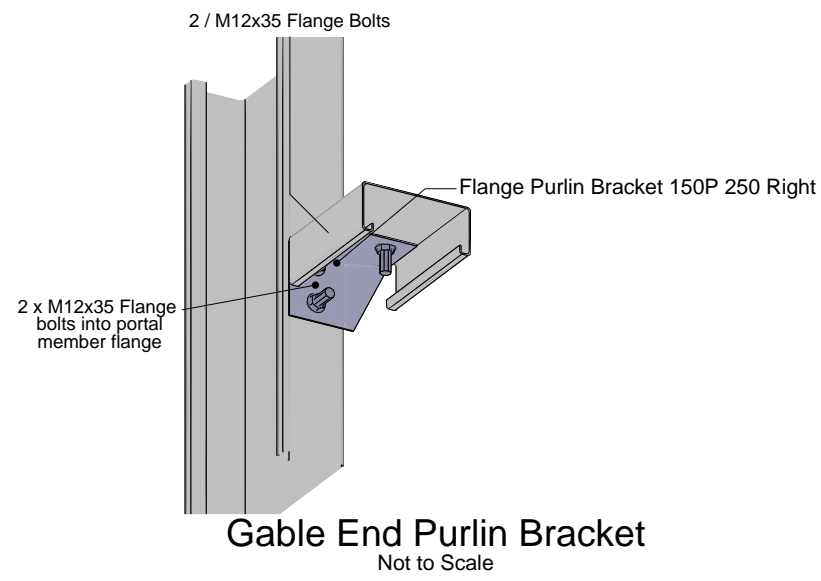
Gable End Purlin Bracket
Not to Scale



Gable End Purlin Bracket
Not to Scale

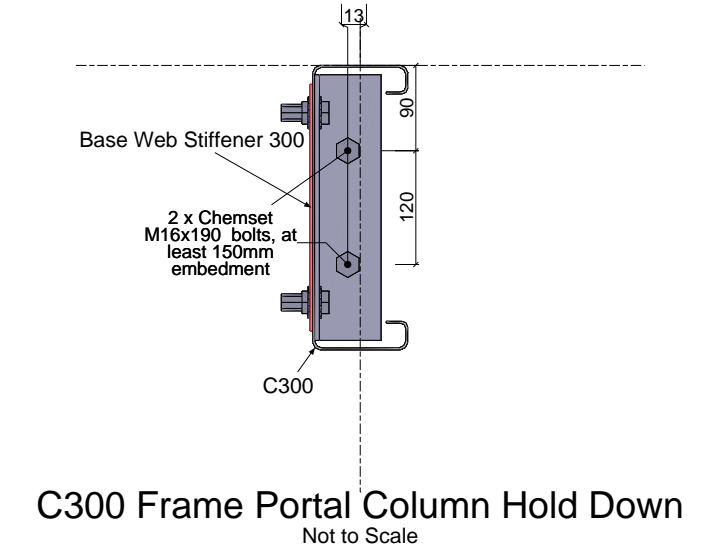
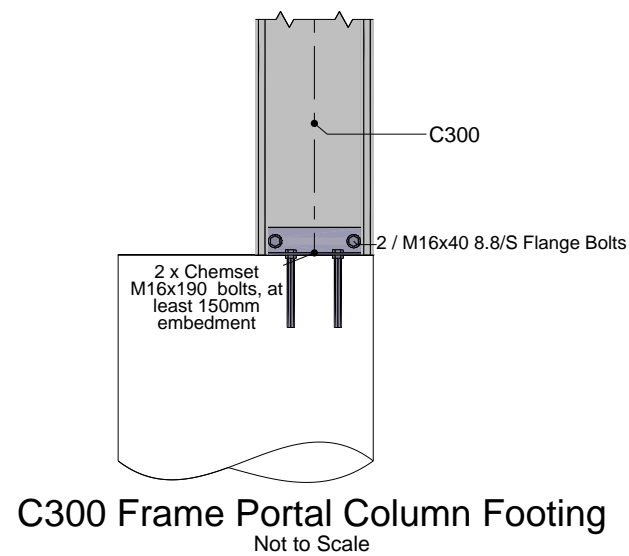
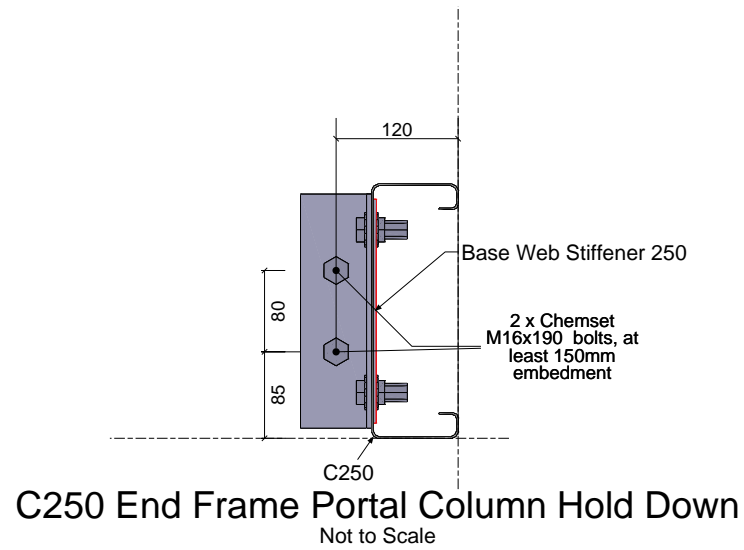
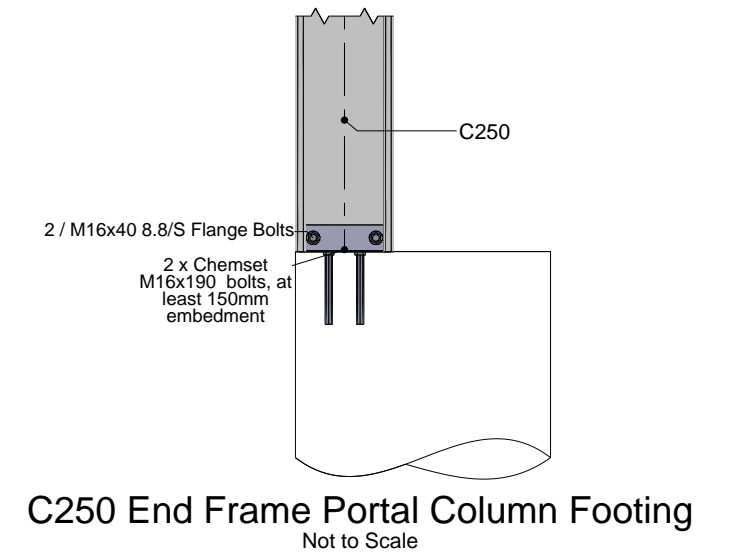
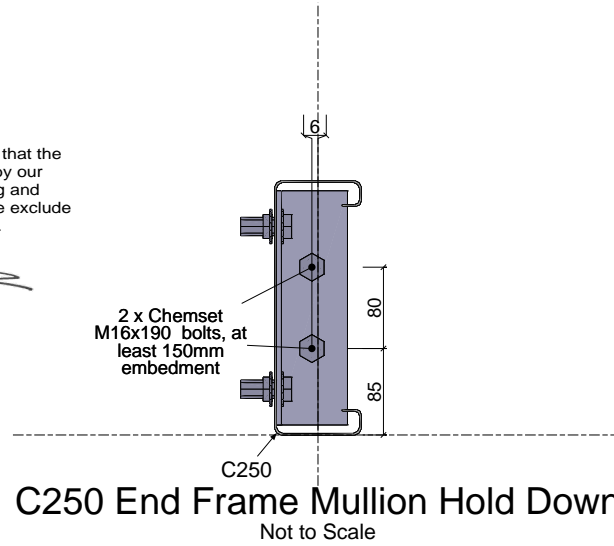
Connections

PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris	LOT:	
DRAWING NO: CONN1	QUOTE NAME: Clone Clone ella harris	DP:	



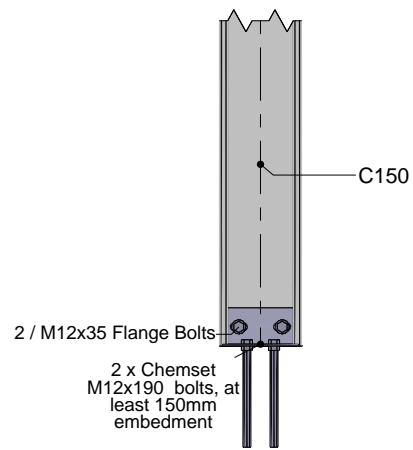
TEC
CONSULTING ENGINEERS

TEC Consulting Engineers Ltd confirms that the Structural Engineering details required by our calculations are included on this drawing and covers NZBC B1-Structures only and we exclude any Architectural or weatheright details.
Date: 29/05/2026

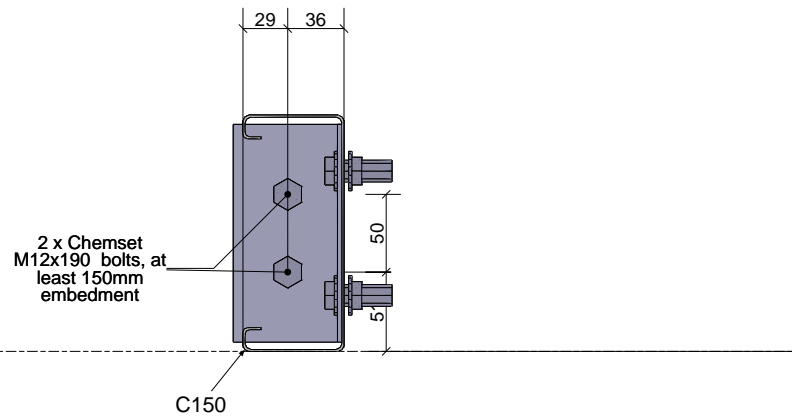


Connections

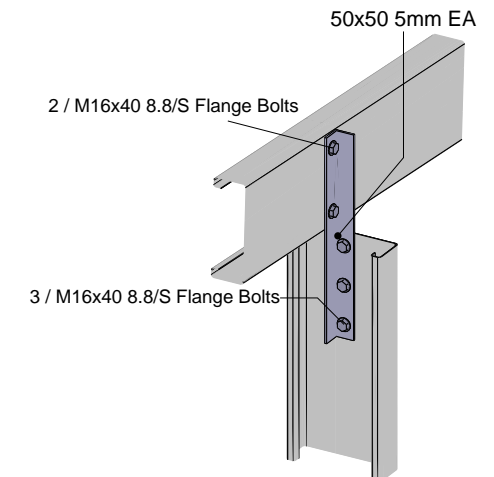
PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris	LOT:	
DRAWING NO: CONN2	QUOTE NAME: Clone Clone ella harris	DP:	



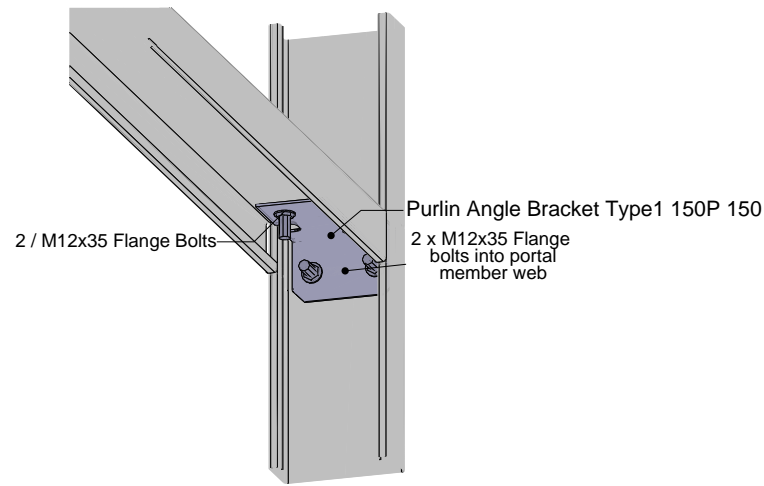
C150 Frame Mullion Footing
Not to Scale



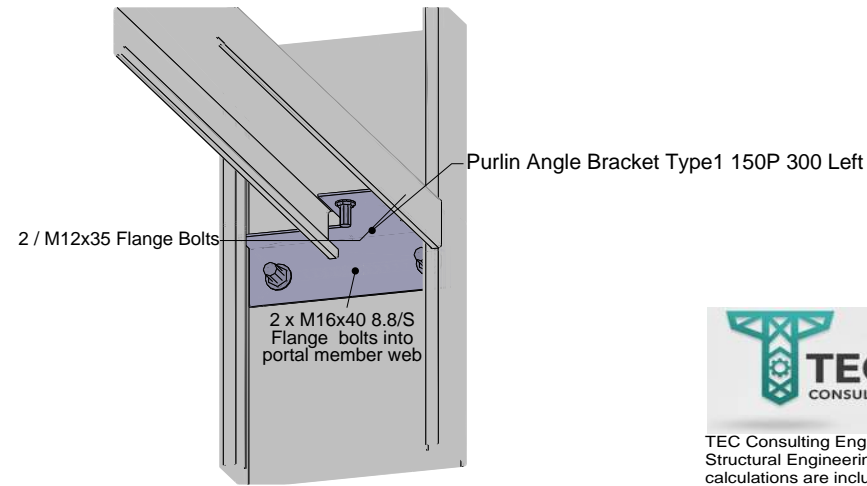
C150 Frame Mullion Hold Down
Not to Scale



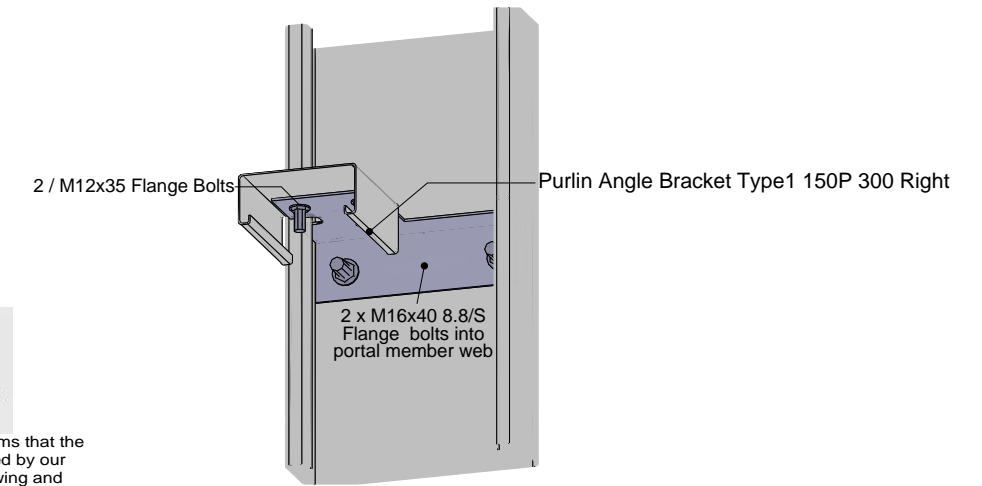
EWWC to Rafter
Not to Scale



Type 1 Purlin Bracket
Not to Scale



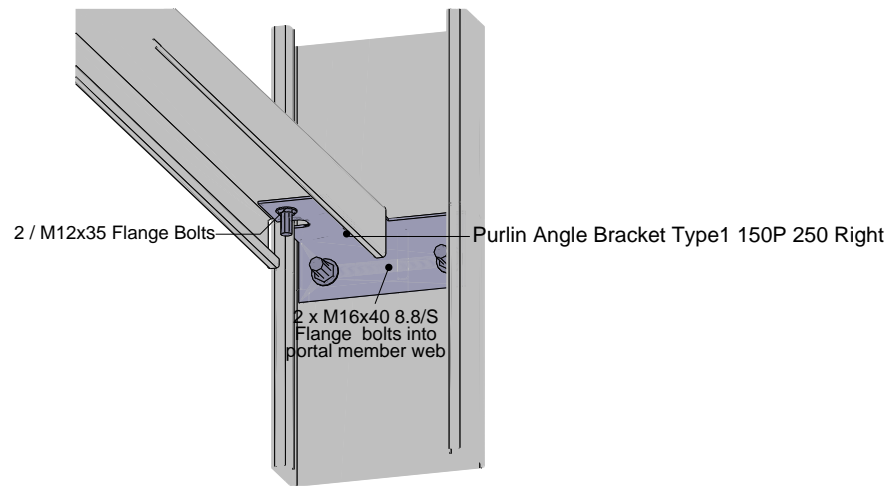
Type 1 Purlin Bracket
Not to Scale



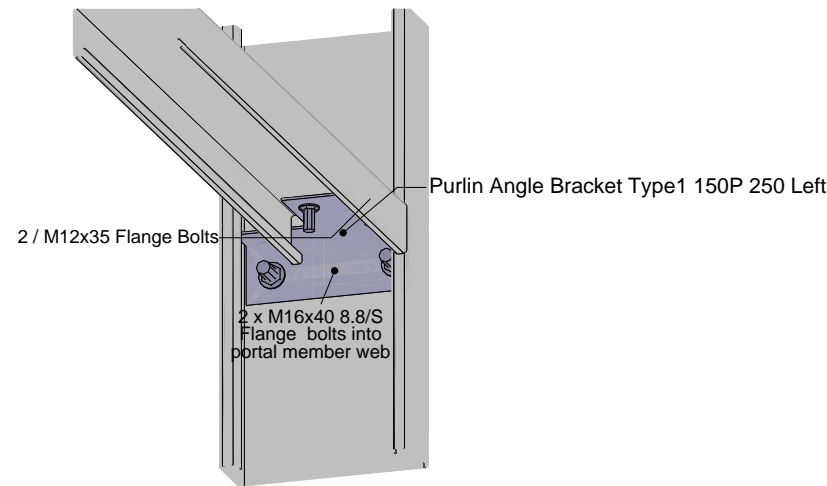
Type 1 Purlin Bracket
Not to Scale



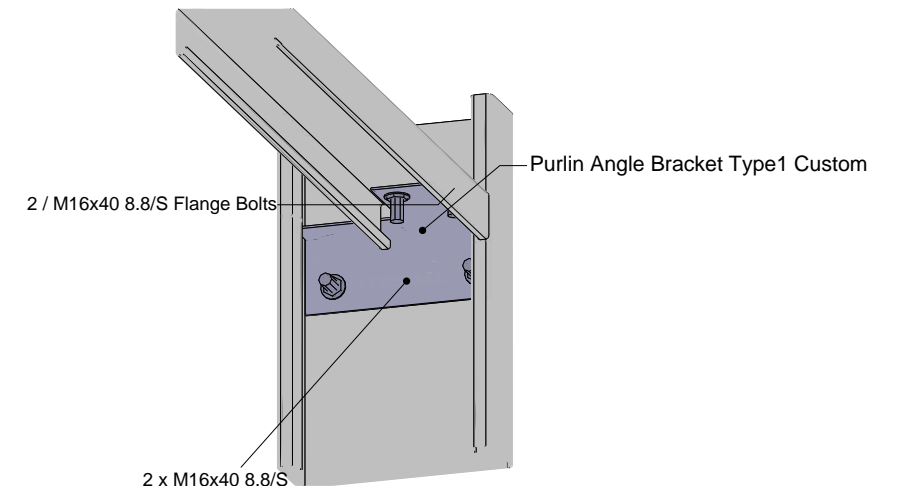
TEC Consulting Engineers Ltd confirms that the Structural Engineering details required by our calculations are included on this drawing and covers NZBC B1-Structures only and we exclude any Architectural or weatheright details.
Date:29/05/2026



Type 1 Purlin Bracket
Not to Scale



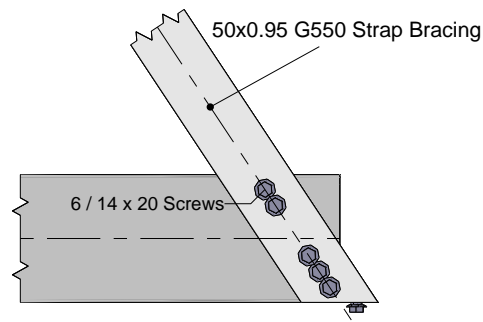
Type 1 Purlin Bracket
Not to Scale



Type 1 Purlin Bracket
Not to Scale

Connections

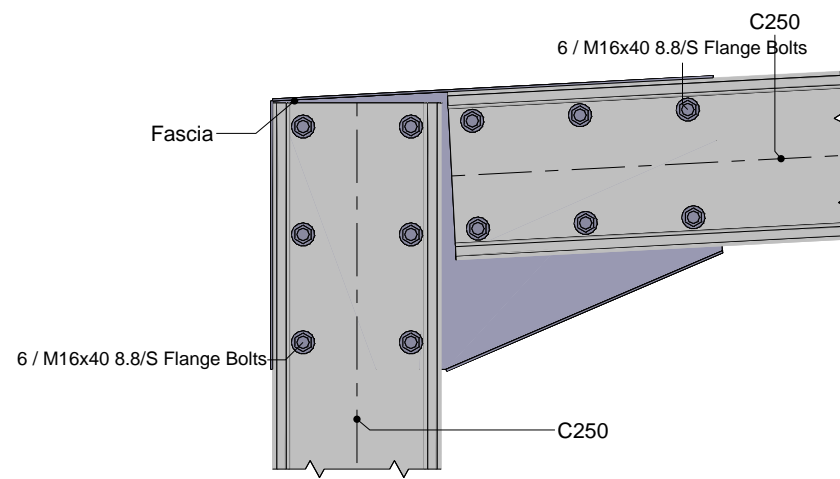
PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris	LOT:	
DRAWING NO: CONN3	QUOTE NAME: Clone Clone ella harris	DP:	



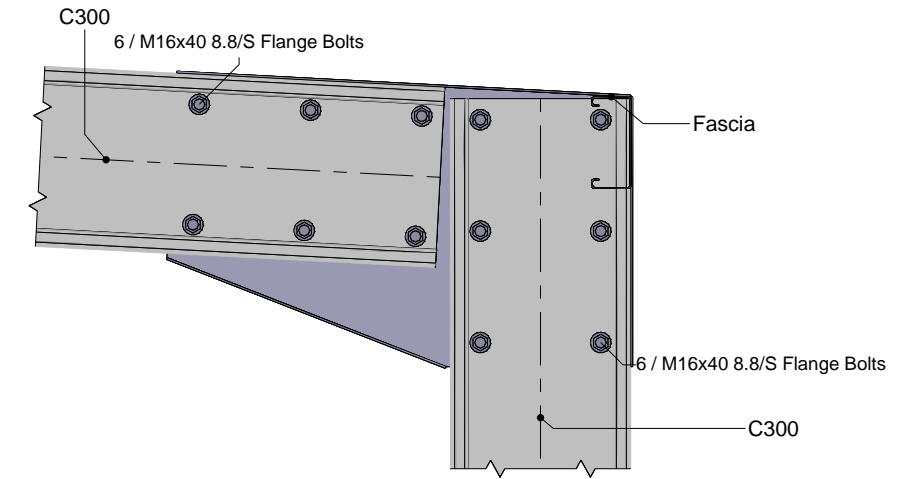
5/14 x 20 Screw For Wall/Roof Bracing

No more than one Tek screw used on any cross section of the cross bracing member. Tek screw centres shall be at minimum 25mm

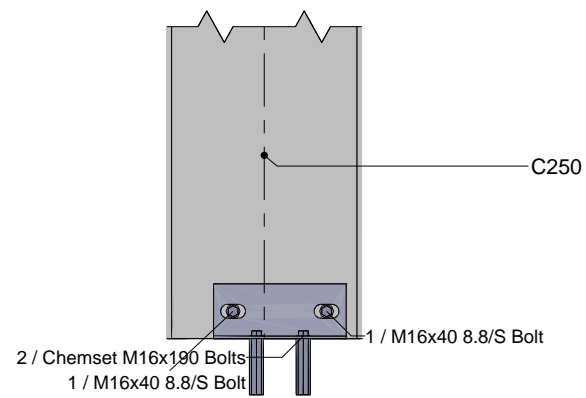
Cross Bracing
Not to Scale



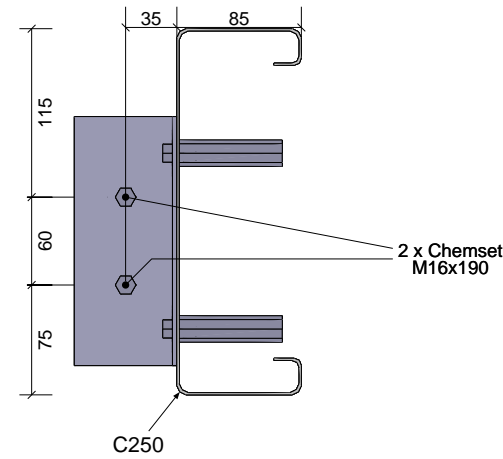
Knee Connection
Not to Scale



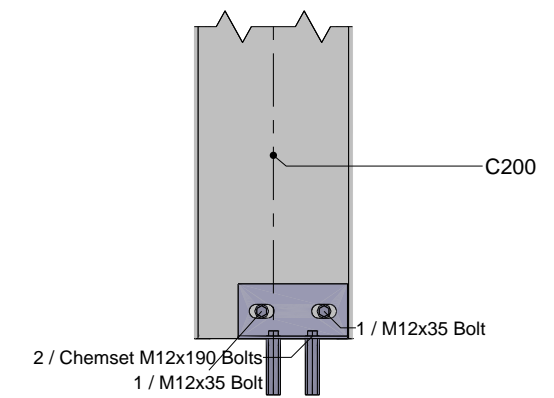
Knee Connection
Not to Scale



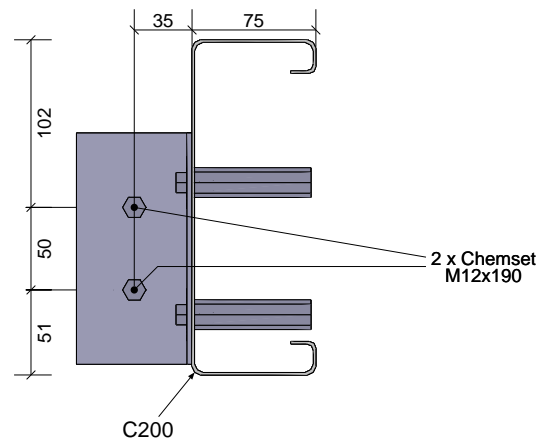
RD Stud Footing
Not to Scale



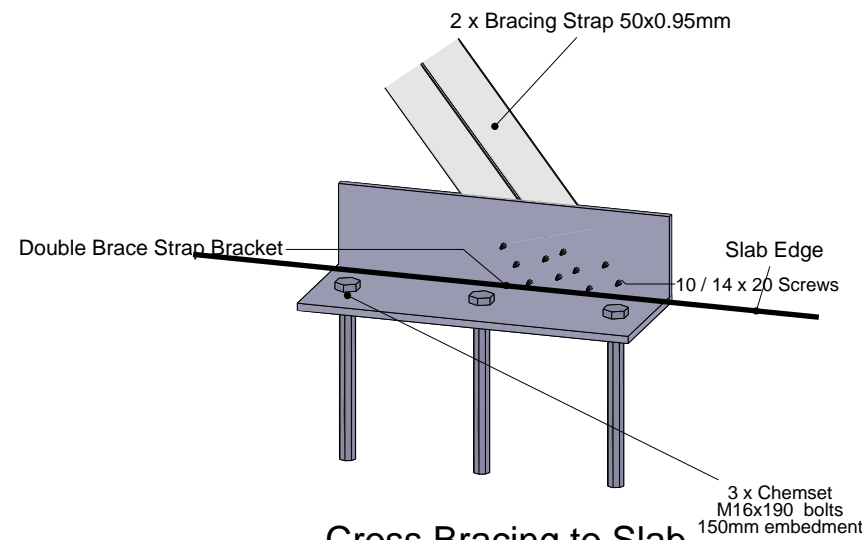
RD Stud Footing Hold Down
Not to Scale



RD Stud Footing
Not to Scale



RD Stud Footing Hold Down
Not to Scale



Cross Bracing to Slab
Not to Scale



TEC Consulting Engineers Ltd confirms that the Structural Engineering details required by our calculations are included on this drawing and covers NZBC B1-Structures only and we exclude any Architectural or weathertight details.
Date:29/05/2026

Connections

PROJECT NO: P2035Q3	CUSTOMER: ella harris	SITE:	
DATE: 28/05/2026	PROJECT NAME: ella harris	LOT: DP:	
DRAWING NO: CONN4	QUOTE NAME: Clone Clone ella harris		





RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy




R. W. Muir
Registrar-General
of Land

Identifier **95372**
Land Registration District **North Auckland**
Date Issued 26 January 2005

Prior References
NA1536/18

Estate Fee Simple
Area 1.0052 hectares more or less
Legal Description Lot 10 Deposited Plan 323666

Registered Owners

Jake Andrew Currin and Ella Kathryn Harris

Estate Fee Simple - 1/11 share
Area 6224 square metres more or less
Legal Description Lot 13 Deposited Plan 323666

Registered Owners

Jake Andrew Currin and Ella Kathryn Harris

Interests

D574558.1 Gazette Notice declaring part State Highway No.1F Far North District commencing on the eastern side of the highway at the intersection with Hendersons Bay Road and on the western side of the highway at the northern boundary and proceeding in the southerly direction to the intersection with State Highway No.10 to be a limited access road - 25.1.2001 at 12:09 pm

6290071.3 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 26.1.2005 at 9:00 am

Subject to Section 241(2) Resource Management Act 1991 (affects DP 323666)

Subject to a right (in gross) to a telecommunications easement over part marked A on DP 323666 in favour of Telecom New Zealand Limited created by Easement Instrument 6290071.5 - 26.1.2005 at 9:00 am

The easements created by Easement Instrument 6290071.5 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right (in gross) to transmit electricity easement over part marked A on DP 323666 in favour of Top Energy Limited created by Easement Instrument 6290071.6 - 26.1.2005 at 9:00 am

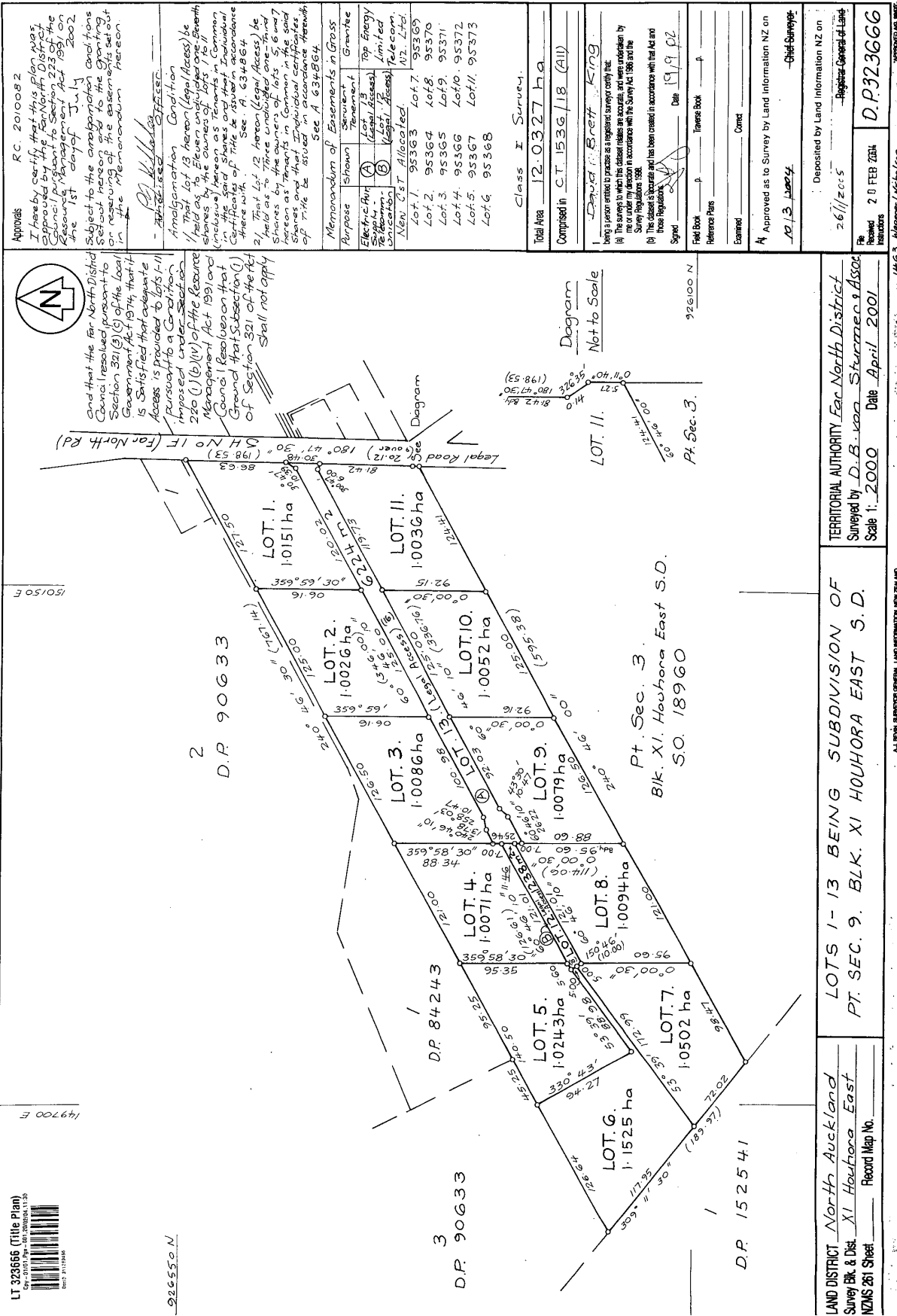
The easements created by Easement Instrument 6290071.6 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 6290071.7 - 26.1.2005 at 9:00 am

Fencing Covenant in Transfer 6379087.2 - 12.4.2005 at 9:00 am

11016062.2 Notice pursuant to Section 91 Transit New Zealand Act 1989 - 26.1.2018 at 3:17 pm

12904453.2 Mortgage to ASB Bank Limited - 21.12.2023 at 10:59 am



Approvals RC 2010082

I hereby certify that this Plan was approved by the Far North District Council pursuant to Section 223 of the Resource Management Act 1991 on the 1st day of July 2002.

Subject to the embargos and conditions set out herein and to the granting or renewing of the easements set out in the Memorandum herein.

Patricia Walker
- Applicant's Officer

Amalgamation Condition

1/ That Lot 13 hereon (Legal Access) be held as to Eleven undivided one-Eleventh shares by the owners of lots 1 to 11 (inclusive) hereon as tenants in Common and as to two undivided one-Twelfth shares with Lot 12 hereon in accordance with the Certificate of Title for the said lots.

2/ That Lot 12 hereon (Legal Access) be held as to Three undivided one-Tenth shares by the owners of lots 5, 6 and 7 hereon as tenants in Common in the said Certificate of Title for the said lots and as to nine undivided one-Tenth shares by the owners of lots 8 to 11 (inclusive) hereon as tenants in Common in accordance with the Certificate of Title for the said lots.

See A 634864.

Memorandum of Easements in Gross

Purpose	Shown	Benefit	Grantee
Electricity	Lot 13	Top Energy Supply	Top Energy Supply (Limited)
Water	Lot 13	Water	Water (Limited)
Water	Lot 13	Water	Water (Limited)
Water	Lot 13	Water	Water (Limited)
Water	Lot 13	Water	Water (Limited)

Mem. Cat. Allocated: 102.265.01

Lot 1: 95363 Lot 7: 95367
 Lot 2: 95364 Lot 8: 95370
 Lot 3: 95365 Lot 9: 95371
 Lot 4: 95366 Lot 10: 95372
 Lot 5: 95367 Lot 11: 95373
 Lot 6: 95368

Total Area 12.0327 ha

Comprised in C.T. 1536/18 (All)

Class I Survey.

being a person entitled in practice as a registered surveyor certify that:

(a) The survey was conducted in accordance with the Survey Act 1988 and the Survey Regulations 1988.

(b) The classes of easements and have been created in accordance with that Act and those Regulations.

Signed: *Dave O'Brien* Date: 19/9/02

Field Book: _____ Traverse Book: _____

Examined: _____ Correct: _____

Approved as to Survey by Land Information NZ on: 20/3/2004

Chief Surveyor: _____

Deposited by Land Information NZ on: 26/1/2005

Registered Certificate of Land: _____

Received: 20 FEB 2004

Plan No: D.P.323666

and that the Far North District Council resolved pursuant to Section 321(3) of the local Government Act 1974 that it is satisfied that adequate access is provided to lots 1-11 pursuant to a condition imposed under Section 240(1)(b)(iv) of the Resource Management Act 1991 and Council Resolution that Ground that Subsection (1) of Section 321 of the Act shall not apply.

Diagram Not to Scale

Pt. Sec. 3.

926100 N

LEGAL ROAD (over) CH No 1E (For North Rd)

Diagram

Legal Road (over) CH No 1E (For North Rd)

Diagram

TERRITORIAL AUTHORITY Far North District

Surveyed by D.B. van Sturmeo

Scale 1: 2000 Date April 2001

149700 E

150150 E

2 D.P. 906633

LT 323666 (Title Plan)

926550 N

LOT. 1. 1-0151 ha

LOT. 2. 1-0026 ha

LOT. 3. 1-0086 ha

LOT. 4. 1-0071 ha

LOT. 5. 1-0243 ha

LOT. 6. 1-1525 ha

LOT. 7. 1-0502 ha

LOT. 8. 1-0094 ha

LOT. 9. 1-0079 ha

LOT. 10. 1-0052 ha

LOT. 11. 1-0036 ha

LOT. 12. 1-0141 ha

LOT. 13. 1-0222 ha

D.P. 84243

D.P. 906633

Pt. Sec. 3

Blk. XI, Houhora East S.D.

S.O. 18960

D.P. 152541

D.P. 906633

LAND DISTRICT North Auckland

Survey Blk. & Dist. XI Houhora East

NZMS 261 Sheet _____

Record Map No. _____

14 G 3

ALBION SURVEY GENERAL LAND INFORMATION NEW ZEALAND

14 G 3

UNPROD VLS 800



FAR NORTH DISTRICT COUNCIL

THE RESOURCE MANAGEMENT ACT 1991

CONO 6290071.3 Consen

Cpy - 01/01, Pgs - 002, 26/01/05, 11:03



DocID: 311776767

SECTION 221 : CONSENT NOTICE

REGARDING RC 2010082

The subdivision of Pt Sec 9, Blk XI Houhora East SD
North Auckland Registry.

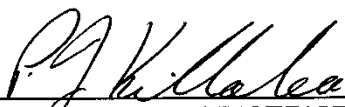
PURSUANT to Section 221 for the purposes of Section 224 of the Resource Management Act 1991, this Consent Notice is issued by the FAR NORTH DISTRICT COUNCIL to the effect that conditions described in the schedule below are to be complied with on a continuing basis by the subdividing owner and the subsequent owners after the deposit of the survey plan, and is to be registered on the title of the affected allotments.

SCHEDULE

- I. Maintain the trees and/or shrubs comprising the approved landscaping, including the replacement of any dead and/or diseased plants and a share of any private way landscaping, as may be required.
- II. Comply on an on-going basis with the duties and obligations imposed by way of the provisions of the document prepared in compliance with Condition (3) (j). of RC 2010082 dated 9 July 2001.
- III. Lots 1 and 11 are to form their site access only off the Lot 13 private way and at a point no closer than 30 metres from its intersection with State Highway No 1F, unless specific written approval is obtained from Transit New Zealand.
- IV. Undertake any maintenance, as and how required, by the stormwater management plan as prepared and implemented under Condition (3) (b) of RC 2010082 dated 9 July 2001.

- V. In any subsequent re-subdivision of the allotments within this development, the new proposal will be assessed (either in money, works or a combined thereof, as is appropriate) for its contribution toward providing an urban solution to the stormwater control within the area of the original subdivision.

SIGNED:


by the FAR NORTH DISTRICT COUNCIL
under delegated authority:
RESOURCE CONSENTS MANAGER

DATED at KAIKOHE this 10th day of December 2004

RC2010082
SRM\CERT\3221
4wagener221

D574558.1

Transit New Zealand

Transit New Zealand Act 1989

This reproduction is certified to be a true copy of GN D574558.1 for the purposes of Section 215B Land Transfer Act 1952.

in the New Zealand Gazette under the "14" and

18.7.2016



for RGL Highway

Declaring State Highway to be Limited Access Road—Dunedin Region

It is notified that Transit New Zealand, by resolution dated 5 April 2000, pursuant to section 88 (1) of the Transit New Zealand Act 1989, hereby declares the parts of State highway described in the Schedule hereto, and as more particularly shown on plans LA 13/006/978/A and LA 14/098/000/A and accompanying Schedules held in the office of the Regional State Highway Manager, Transit New Zealand, Dunedin, and there available for public inspection, to be limited access road.

Schedule

1. The section of State Highway No. 6 in Queenstown Lakes District commencing at the Kawarau River Bridge (Route Position 978/0.00) and proceeding in a generally westerly direction to Hayes Creek (Route Position 983/5.72); a distance of 10.72 kilometres.
2. The entire length of State Highway No. 98 in Southland District and Invercargill City commencing at the intersection with State Highway No. 1 (Route Position 0/0.00) and proceeding in a generally westerly direction to the intersection with State Highway No. 6 and State Highway No. 99 (Route Position 0/21.62); a distance of 21.62 kilometres.

Signed at Wellington this 1st day of May 2000.
M. K. LAUDER, State Highway Control Manager, Transit New Zealand.
au3145

Declaring State Highway to be Limited Access Road—Auckland Region

It is notified that Transit New Zealand, by resolution dated 5 April 2000, pursuant to section 88 (1) of the Transit New Zealand Act 1989, hereby declares the parts of State highway described in the Schedule hereto, and as more particularly shown on plans LA 11/1/6-8, LA 11/39/1 and LA 11/58/1 and accompanying Schedules held in the office of the Regional State Highway Manager, Transit New Zealand, Auckland, and there available for public inspection, to be limited access road.

Schedule

1. The section of State Highway No. 1F in Far North District commencing on the eastern side of the highway

at the intersection with Hendersons Bay Road (Route Position 54/6.17) and on the western side of the highway at the northern boundary of Lot 1, D.P. 110189 (Route Position 54/6.06), and proceeding in a generally southerly direction to the intersection with State Highway No. 10 (Route Position 86/17.39); a distance of 43.76 kilometres.

2. The section of State Highway No. 10 at Taipa in Far North District commencing at the intersection with Taipa Heights Drive (Route Position 79/3.49) and proceeding in a westerly direction to the north abutment of the Kaingaroa Bridge (Route Position 95/3.38); a distance of 16.03 kilometres.
3. The entire length of State Highway No. 11 in Far North District commencing at the intersection with State Highway No. 1 at Kawakawa (Route Position 0/0.00) and proceeding in a northerly direction to the southern urban boundary of Paihia township (Route Position 0/14.05); a distance of 14.05 kilometres.

Signed at Wellington this 1st day of May 2000.
M. K. LAUDER, State Highway Control Manager, Transit New Zealand.

au3146

GN D574558.1 Gazette N

Cpy - 01/01, Pgs - 002, 18/02/16, 1b:12



DocID: 516322243

Declaring State Highway to be Limited Access Road—Hamilton Region

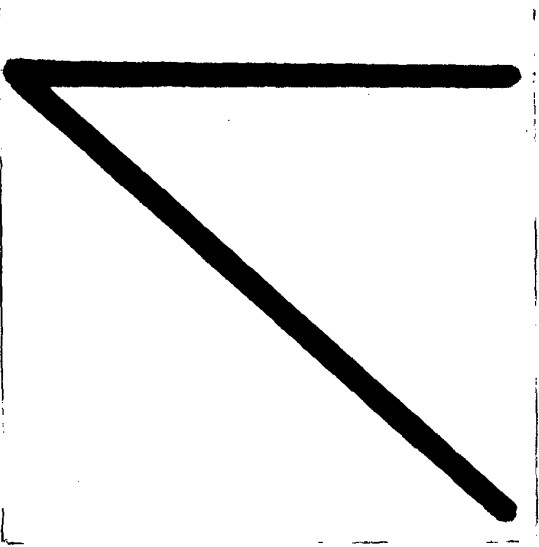
It is notified that Transit New Zealand, by resolution dated 5 April 2000, pursuant to section 88 (1) of the Transit New Zealand Act 1989, hereby declares the parts of State highway described in the Schedule hereto, and as more particularly shown on plans LA 20/1613/1, LA 20/52/1 and LR 154 and accompanying Schedules held in the office of the Regional State Highway Manager, Transit New Zealand, Hamilton, and there available for public inspection, to be limited access road.

Schedule

1. The section of State Highway No. 3 in Waitomo District commencing at the State Highway 3/4 Junction (Route Position 88/0.00) and proceeding generally in a south-westerly direction to the north abutment of the Kuratahi Stream Bridge, Piopio (Route Position 88/10.71); a distance of 10.71 kilometres.
2. The section of State Highway No. 4 in Waitomo District commencing at the State Highway 3/4 Junction (Route Position 0/0.00) and proceeding in a generally south-easterly direction to the north abutment of the Mapara Stream Bridge (Route Position 0/12.24); a distance of 12.24 kilometres.
3. The section of State Highway No. 29 in Matamata Piako District commencing at the State Highway 28/29 Junction and proceeding in a generally southerly direction to Tapapa/Te Poi Road (Route Position 50/3.77); a distance of 5.19 kilometres.

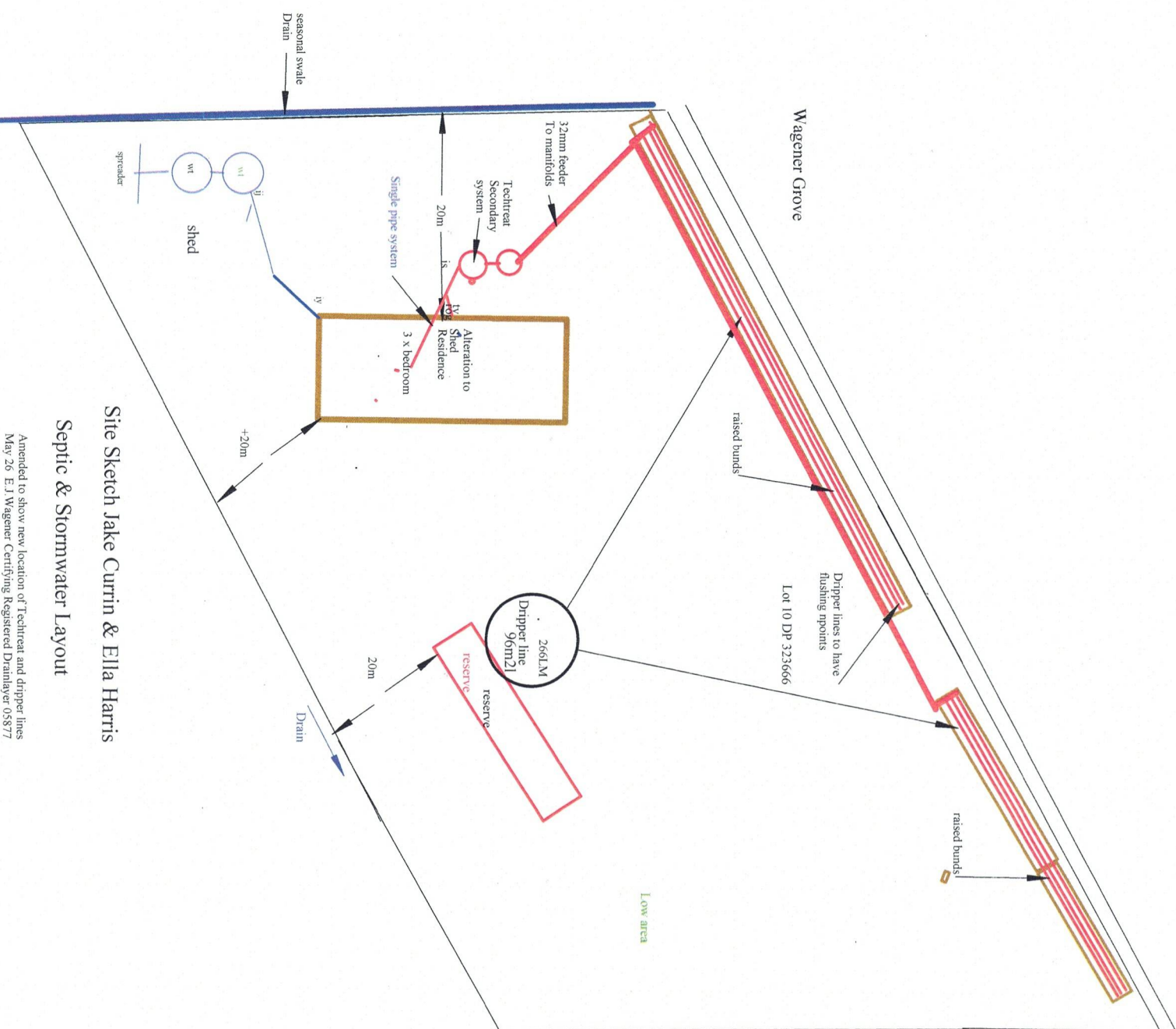
Signed at Wellington this 1st day of May 2000.
M. K. LAUDER, State Highway Control Manager, Transit New Zealand.

au3147



D574558.1
North Queensland Railway
- 25.1.2001 at 12.09 -

Notes
 All works to comply with AS/NZS 3500
 All materials to comply with AS/NZS 1260
 Septic tank is 4500L fitted with Fat & Bio
 Fall in septic main to be no less than 1:60
 Bed to be hand level
 All septic works to be at least 3m off buildings
 Bed to be a minimum of 3m off septic tank
 All septic works to be a minimum of 1.5 off any boundary



Site Sketch Jake Currin & Ella Harris
 Septic & Stormwater Layout

Amended to show new location of Techtreat and dripper lines
 May 26 E.J. Wagener Certifying Registered Drainlayer 05877

Far North District Council

Appendix E

TP58 & TP10

Jake Currin & Ella Harris

Lot 10 Wagener Grove

Pukenui

E.J.Wagener Certifying Registered Drainlayer

Robert Wagener Associate Engineer



MASON STREET
architectural drafting

Job Title
Proposed Home - Currin

Kyle Kake
027 567 8808
kyle@masonstreet.co.nz
www.masonstreet.co.nz

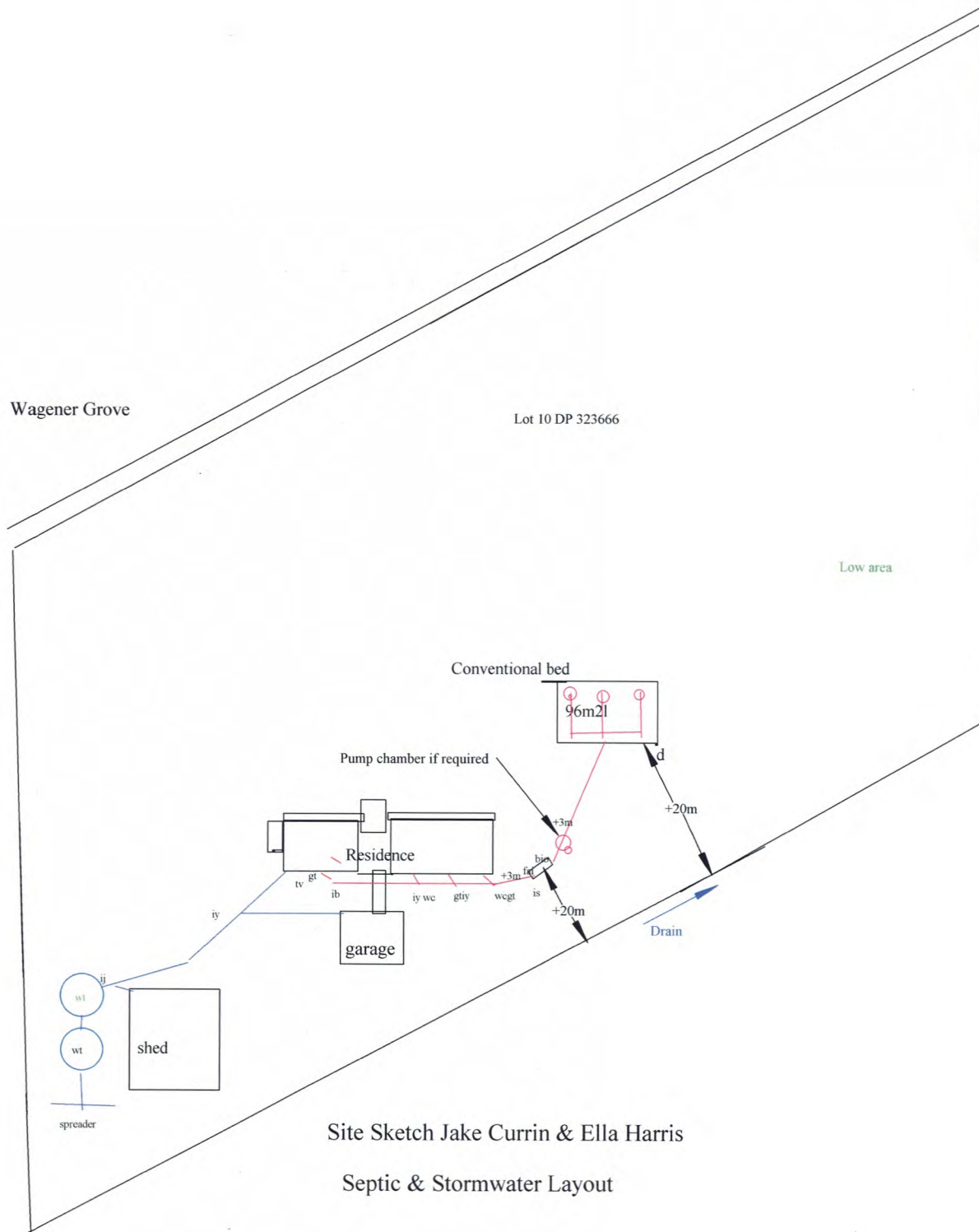
Project Location
**Lot 10 Wagener Grove,
Pukenui,
Whangarei**

Drawn
Checked
Print Date
Scale @ A3

KK
Kyle Kake
15/11/2024
1:500

Sheet Title
Site Plan

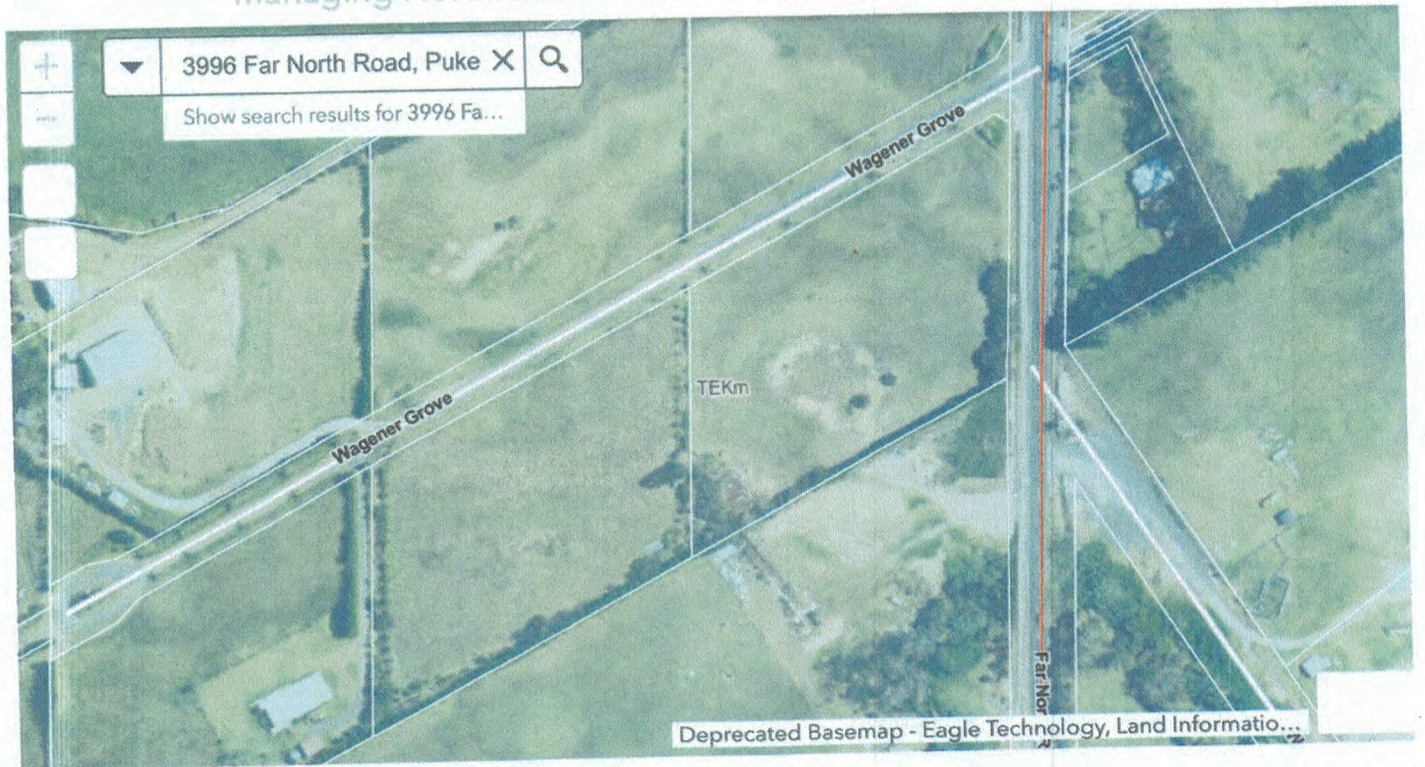
This design and drawing is the copyright of MASON STREET ARCHITECTURAL DRAFTING and is not to be reproduced without written permission



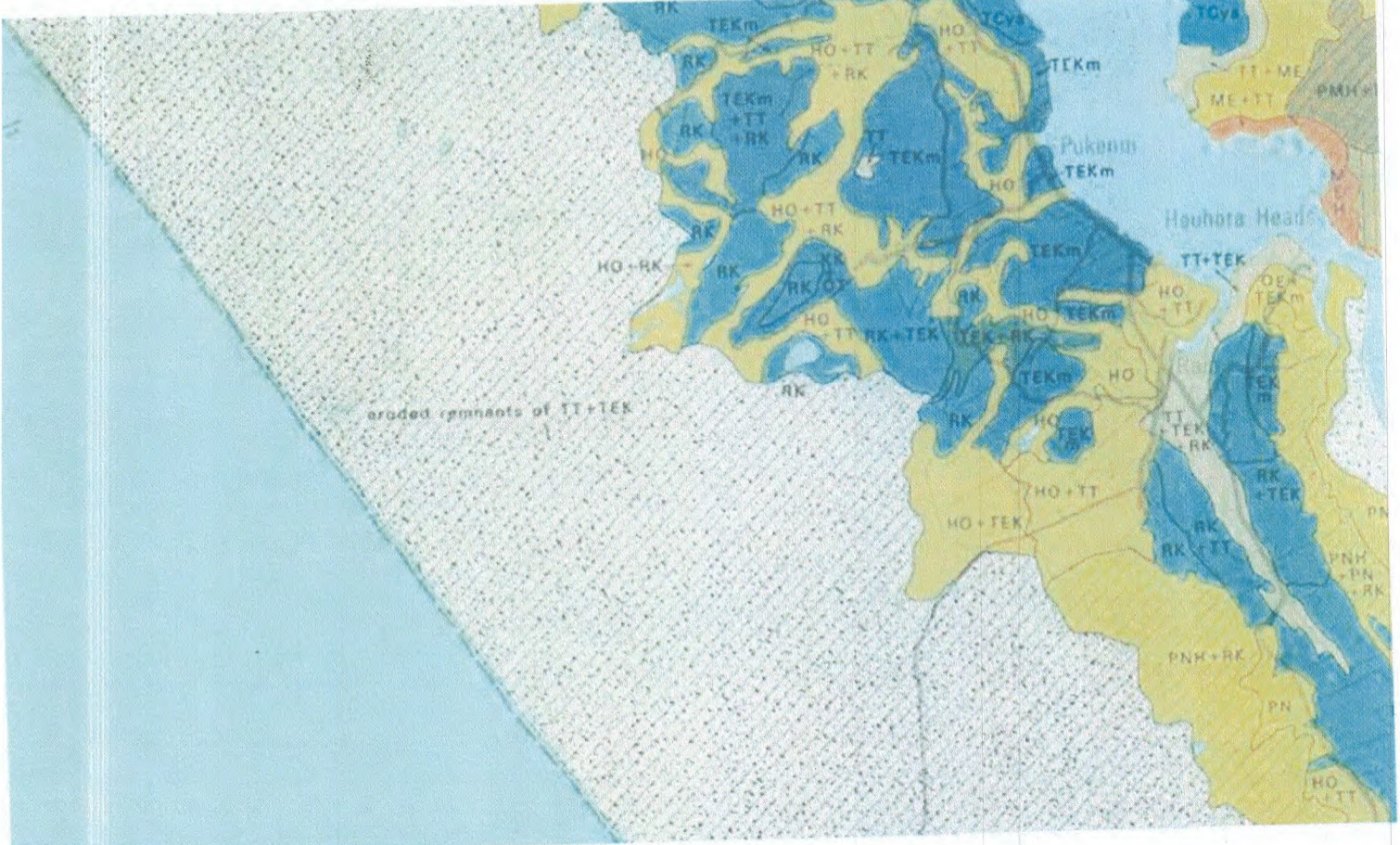
- Notes
- All works to comply with AS/NZS 3500
 - All materials to comply with AS/NZS 1200
 - Septic tank is 4500L fitted with Fai & Bi
 - Fall in septic main to be no less than 1:6
 - Bed to be laid level
 - All septic works to be at least 3m off boundary
 - Bed to be a minimum of 3m off septic tank
 - All septic works to be a minimum of 1.5m

Site Sketch Jake Currin & Ella Harris
 Septic & Stormwater Layout

Managing Northland Soils factsheet viewer



60m



PRODUCER STATEMENT

DESIGN: ON-SITE EFFLUENT DISPOSAL SYSTEMS (T.P.58)

ISSUED BY:..... *Eric Wagener*..... (approved qualified design professional)

TO:..... *Jake Currin & Ella Harris*..... (owner)

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

PROPERTY LOCATION:... *Lot 10 Wagener Grove Pukenui*.....

LEGAL DESCRIPTION *Lot 10 DP 323666*

TO PROVIDE : Design an on-site effluent disposal system in accordance with Technical paper 58 and provide a schedule to the owner for the systems maintenance.

THE DESIGN: Has been in accordance with G13 (Foul Water) G14 (Industrial Liquid Waste) B2 (durability 15 years) of the Building Regulations 1992.

As an independent approved design professional covered by a current policy of Professional Indemnity

Insurance (Design) to a minimum value of \$200,000.00, I BELIEVE ON REASONABLE GROUNDS that subject to:

- (1) The site verification of the soil types.
- (2) All proprietary products met the performance requirements.

The proposed design will meet the relevant provisions of the Building Code and 5.3.11 of The Far North District Council Engineering Standards.

..... ..... (Signature of approved design professional)

..... *Certifying Registered Drainlayer*..... (Professional qualifications)

..... *05877*..... (Licence Number or professional Registration number)

Address *3778 Far North Rd, RD4 Kaitaia*.....

Phone Number..... *09 4098 854*.....

Fax Number

Cell Phone *0274 885 584*.....

Date *2/03/2025*.....

Note: This form is to accompany every application for a Building Consent incorporating a T.P.58. Approval as a design professional is at Councils discretion.

FAR NORTH DISTRICT COUNCIL

Appendix E

TP58

**On-site Wastewater Disposal Site Evaluation
Investigation Checklist**

Part B- Property Details

1. Property for which this application relates:

Physical Address of Property	<i>Lot 10 Wagener Grove Pukenui</i>
Territorial Local Authority	<i>FAR NORTH DISTRICT COUNCIL</i>
Regional Council	<i>NORTHLAND REGIONAL COUNCIL</i>
Legal Status of Activity	Permitted: Controlled: Discretionary:
Relevant Regional Rule(s) (Note 1)	
Total Property Area (m ²)	<i>10151m2</i>
Map Grid Reference of Property If Known	

2. Legal description of land (as shown on Certificate of Title)

Lot No.	DP No.	CT No.
<i>10</i>	<i>323666</i>	<i>95372</i>
Other (specify)		

Please ensure copy of Certificate of Title is attached

PART C: Site Assessment - Surface Evaluation

(Refer TP58 - Sn 5.1 General Purpose of Site Evaluation and Sn 5.2.2(a) Site Surface Evaluation)

Note: Underlined terms defined in Table 1, attached

Has a relevant property history study been conducted?

Yes	No	<input checked="" type="checkbox"/>	(Please tick one)
-----	----	-------------------------------------	-------------------

If yes, please specify the findings of the history study, and if not please specify why this was not considered necessary.

<i>There are no HAIL issues as it is remote from hazardous activity. The property has been urban lifestyle for many years. There are no known recorded hazards</i>

1. Has a Slope Stability Assessment been carried out on the property?

Yes		No	<input checked="" type="checkbox"/>	Please tick
-----	--	----	-------------------------------------	-------------

If No, why not?

<i>There are no signs of stability problems. Confirmed by Geotec report</i>

If Yes, please give details of report (and if possible, please attach report):

Author	
Company/Agency	
Date of Report	
Brief Description of Report Findings:-	

2. Site Characteristics (See Table 1 attached):

Provide descriptive details below:
Performance of Adjacent Systems:
<i>Systems are working well</i>
Estimated Rainfall and Seasonal Variation:
Information available from N.I.W.A MET RESEARCH
<i>1100-1300mm/yr</i>
Vegetation / Tree Cover:
<i>Grass palms, and some garden</i>
Slope Shape: (Please provide diagrams)
<i>Basically flat.</i>
Slope Angle:
<i>Minor parabolic dune structure It will not create any difficulties for installation of disposal system. Slope 1>2 degrees</i>
Surface Water Drainage Characteristics:
<i>Surface water will be alleviated by the natural contour of the land.</i>
Flooding Potential: YES/NO
<i>Unlikely to flood at proposed building, or disposal field location.</i>
If yes, specify relevant flood levels on appended site plan, I.e. one in 5 years and/or 20 year and/or 100 year return period flood level, relative to disposal area.
Surface Water Separation:
<i>+20m</i>
Site Characteristics: or any other limitation influencing factors

3. Site Geology Check Rock Maps

Te Koupuru sand over sandstone, followed by silica sands is listed in the soil maps. This was confirmed by onsite test

Geological Map Reference Number	NZMS 290
---------------------------------	----------

4. What Aspect(s) does the proposed disposal system face? (please tick)

North	<input checked="" type="checkbox"/>	West	<input type="checkbox"/>
North-West	<input type="checkbox"/>	South-West	<input type="checkbox"/>
North-East	<input type="checkbox"/>	South-East	<input type="checkbox"/>
East	<input type="checkbox"/>	South	<input type="checkbox"/>

5. Site clearances,(Indicate on site plan where relevant)

Separation Distance from	Treatment Separation Distance (m)	Disposal Field Separation Distance (m)
Boundaries	+20m	Check Council requirements +1.5m
Surface water, rivers creeks, drains etc	+20m	+20m
Groundwater	+ 1.8m	+ .800m
Stands of Trees/Shrubs	+5m	+5m
Wells, water bores	N/A	N/A
Embankments/retaining walls	N/A	N/A
Buildings	+3m	+3m
Other (specify):	N/A	N/A

PART D: Site Assessment - Subsoil Investigation

(Refer TP58 - Sn 5.1 General Purpose of Site Evaluation, and Sn 5.2.2(a) Site Surface Evaluation and Sn 5.3 Subsurface Investigations)

Note: Underlined terms defined in Table 2, attached

1. Please identify the soil profile determination method:

Test Pit	Depth _____m	No of Test Pits	
Bore Hole	Depth <u>0.75</u> m	No of Bore Holes	2
Other (specify):			

Soil Report attached?

Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Please tick
-----	-------------------------------------	----	--------------------------	-------------

2. Was fill material intercepted during the subsoil investigation?

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Please tick
-----	--------------------------	----	-------------------------------------	-------------

If yes, please specify the effect of the fill on wastewater disposal

3. Percolation testing (mandatory and site specific for trenches in soil type 4 to 7)

Please specify the method
<i>Constant Head ks_{at}</i>

Test Report Attached?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Please tick
-----------------------	-----	-------------------------------------	----	--------------------------	-------------

4. Are surface water interception/diversion drains required?

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Please tick
-----	--------------------------	----	-------------------------------------	-------------

If yes, please show on site plan

4a Are subsurface drains required

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
-----	--------------------------	----	-------------------------------------

If yes enter details

5. Please state the depth of the seasonal water table:

Winter	<i>Not found</i>	Measured	<input type="checkbox"/>	Estimated	<input checked="" type="checkbox"/>
Summer	<i>Not found</i>	Measured	<input type="checkbox"/>	Estimated	<input checked="" type="checkbox"/>

6. Are there any potential storm water short circuit paths?

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Please tick
-----	--------------------------	----	-------------------------------------	-------------

If the answer is yes, please explain how these have been addressed

7. Based on results of subsoil investigation above, please indicate the disposal field soil category (Refer TP58 Table 5.1)

Is Topsoil Present?	<i>Yes</i>	If so, Topsoil Depth? (m)	<i>70 > 750mm</i>
---------------------	------------	---------------------------	----------------------

Soil Category	Description	Drainage	Tick One
1	Gravel, coarse sand	Rapid draining	<input type="checkbox"/>
2	Coarse to medium sand	Free draining	<input type="checkbox"/>
3	Medium-fine & loamy sand	Good drainage	<input type="checkbox"/>
4	Sandy loam, loam & silt loam	Moderate drainage	<input type="checkbox"/>
5	Sandy clay-loam, clay-loam & silty clay-loam	Moderate to slow drainage	<input type="checkbox"/>
6	Sandy clay, non-swelling clay & silty clay	Slow draining	<input checked="" type="checkbox"/>
7	Swelling clay, grey clay, hardpan	Poorly or non-draining	<input type="checkbox"/>

Reasons for placing in stated category

<i>Onsite soil tests put this soil into category 6.</i>
<i>Category was corroborated by soil maps.</i>

PART E: Discharge Details

1. Water supply source for the property (please tick):

Rainwater (roof collection)	<input checked="" type="checkbox"/>
Bore/well	<input type="checkbox"/>
Public supply	<input type="checkbox"/>

2. Calculate the maximum daily volume of wastewater to be discharged, unless accurate water meter readings are available

(Refer TP58 Table 6.1 and 6.2)

Number of Bedrooms	3+office =4	
Design Occupancy	6	(Number of People)
Per capita Wastewater Production	160	(Litres per person per day)
Other – specify		
Total Daily Wastewater Production	960	(Litres per day)

3. Do any special conditions apply regarding water saving devices

a) Full Water Conservation Devices?	Yes		No	<input checked="" type="checkbox"/>	(Please tick)
b) Water Recycling - what %?		%			(Please tick)

If you have answered yes, please state what conditions apply and include the estimated reduction in water usage

4. Is Daily Wastewater Discharge Volume more than 2000 litres:

Yes		(Please tick)
No	<input checked="" type="checkbox"/>	(Please tick)

Note if answer to the above is yes, an N.R.C wastewater discharge permit may be required

5. Gross Lot Area to Discharge Ratio:

Gross Lot Area	10151	m ²
Total Daily Wastewater Production	960	(Litres per day)(from above)
Lot Area to Discharge Ratio	10.57	

7. Does this proposal comply with the Northland Regional Council Gross Lot Area to Discharge Ratio of greater than 3?

Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	(Please tick)
-----	-------------------------------------	----	--------------------------	---------------

8. Is a Northland Regional Council Discharge Consent Required?

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	(Please tick)
-----	--------------------------	----	-------------------------------------	---------------

PART F: Primary Treatment (Refer TP58 Section 7.2)

1. Please indicate below the no. and capacity (litres) of all septic tanks including type (single/dual chamber grease traps) to be installed or currently existing: If not 4500 litre, dual chamber explain why not

Number of Tanks	Type of Tank	Capacity of Tank (Litres)
1	Standard concrete septic	4500L
	Total Capacity	4500L

2. Type of Septic Tank Outlet Filter to be installed?

Biofilter

PART G: Secondary and Tertiary Treatment

(Refer TP58 Section 7.3, 7.4, 7.5 and 7.6)

1. Please indicate the type of additional treatment, if any, proposed to be installed in the system: (please tick)

Secondary Treatment		
Home aeration plant		
Commercial aeration plant		
Intermediate sand filter		
Recirculating sand filter		
Recirculating textile filter		
Clarification tank		
Tertiary Treatment		
Ultraviolet disinfection		
Chlorination		
Other	Specify	

PART H: Land Disposal Method

(Refer TP58 Section 8)

1. Please indicate the proposed loading method: (please tick)

Gravity	<input checked="" type="checkbox"/>
Dosing Siphon	<input type="checkbox"/>
Pump	<input type="checkbox"/>

2. High water level alarm to be installed in pump chambers

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
-----	--------------------------	----	-------------------------------------

If not to be installed, explain why

3. If a pump is being used, please provide the following information:

Total Design Head		(m)
Pump Chamber Volume		(Litres)
Emergency Storage Volume		(Litres)

4. Please identify the type(s) of land disposal method proposed for this site: (please tick)

(Refer TP58 Sections 9 and 10)

Surface Dripper Irrigation						
Sub-surface Dripper irrigation						
Standard Trench						
Deep Trench						
Mound						
Conventional bed	<input checked="" type="checkbox"/>					
Other		Specify				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; height: 20px;"></td> <td style="width: 50%;"></td> </tr> <tr> <td style="height: 20px;"></td> <td></td> </tr> </table>						

5. Please identify the loading rate you propose for the option selected in Part H, Section 4 above, stating the reasons for selecting this loading rate:

Loading Rate	10		(Litres/m ² /day)
Disposal Area	Design	96	(m ²)
	Reserve	96	(m ²)

Explanation *(Refer TP58 Sections 9 and 10)*

<i>This is in line with TP58 for cat 6 soils.</i>

6. What is the available reserve wastewater disposal area *(Refer TP58 Table 5.3)*

Reserve Disposal Area (m ²)	96
Percentage of Primary Disposal Area (%)	100%

7. Please provide a detailed description of the design and dimensions of the disposal field and attach a detailed plan of the field relative to the property site:

Description and Dimensions of Disposal Field:

<i>See Design Site Plan</i>				
<i>Total basal area required is 96m²</i>				
Plan Attached?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

If not, explain why not

PART I: Maintenance & Management

(Refer TP58 Section 12.2)

1. Has a maintenance agreement been made with the treatment and disposal system suppliers?

Yes		No	<input checked="" type="checkbox"/>
-----	--	----	-------------------------------------

(Please tick)

Name of Suppliers

--

PART J: Assessment of Environmental Effects

1. Is an assessment of environmental effects (AEE) included with application?

(Refer TP58 section 5. Ensure all issues concerning potential effects addressed)

Yes	<input checked="" type="checkbox"/>	No	
-----	-------------------------------------	----	--

(Please tick)

If Yes, list and explain possible effects

Nil

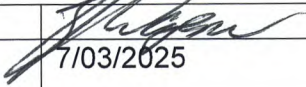
PART K: Is Your Application Complete?

1. In order to provide a complete application you have remembered to:

Fully Complete this Assessment Form	<input checked="" type="checkbox"/>
Include a <i>Location Plan</i> and <i>Site Plan</i> (with Scale Bars)	<input checked="" type="checkbox"/>
Attach an Assessment of Environmental Effects (AEE)	<input checked="" type="checkbox"/>

1. Declaration

I hereby certify that, to the best of knowledge and belief, the information given in this application is true and complete.

Name	Eric Wagener	Signature	
Position	Certifying Reg Drainlayer	Date	7/03/2025

Note

Any alteration to the site plan or design after approval will result in non compliance.

APPENDIX – A

ASSESSMENT OF ENVIRONMENTAL EFFECTS

Summary:

Jake Currin

Lot 10

Wagener Grove

In Preparing this design and recommendations the writer has taken into account:

- Subsoil structure, surface structure and the ability to contain effluent on the existing residential site.
- Ground water separation and potential for contamination.
- Evaluated the potential for effluent disposal and assessed the absorption field ability to cope with the design load.
- Adopted and evaluated design criteria as they apply to standard septic tank systems.
- Selected a simple solution and design recommendation for any additions to effluent disposal.
- Calculated the daily water use and combined that into the calculations for effluent disposal in m² requirements plus 100% reserve.
- Evaluated visually the potential for surface water contamination and potential for system short circuit.
- Identified that there is enough area within the proposed site constraints to allow for any designed load, and the designed effluent disposal.
- Identified that there is capacity for reserve if the reserve is required
- Identified and recorded the site aspect, and location
- Included site drainage location
- Stipulated design criteria
- Referred to the design criteria in T.P.58 Manual for On Site Disposal with particular reference to soil categories “Appendix D”
- Taken note of the special clauses of the consent notices, and evaluated the impact that this proposal may have.
- Used for assessment purposes calculations based on site land bore investigation, and percolation tests, balancing that against seasonal absorption variations.
- Taken note of overland surface water drainage patterns
- Concluded from careful evaluation that there will be no environmental effects which cannot be easily mitigated.

Background to the summary for the Assessment of Environmental Effects and Mitigation Measures Appendix A-

Owner:

Jake Currin & Ella Harris
Lot 10 Wagener Grove
Pukenui R.D.4 Kaitaia

The property is located off Far North Road via a private road Wagener Grove. The site is part of a consolidated parabolic due structure, consisting in the main of Te Koupuru sands, followed by sandstone and then silica sand.

The property is flat to mildly undulating with minor falls. The building site, is shown on the site map. Site measurements are as per architectural drawings.

Natural surface water will be directed away from a new building via the natural contours of the land.

Risk Assessment:

The section is adjacent to other developments. Due to the topography of the site there is little chance of runoff from the building site effecting other properties. The sand type is highly absorbent in the summer and poor in winter. The natural fall is towards the main drain on the southern boundary, therefore runoff effect on other infrastructure is likely to have minimal effect.

The land mass is above any local recognised flood level. There are no ecological risks. No Hail issues have been identified with this area. The effluent system has been placed so that maximum separation possible is achieved from any assessed risk area. The wastewater and septic system have been designed using rates and design calculations from the ARC TP58 Design Manual approved by the FNDC.

The soakage is poor in winter. Groundwater in winter at the effluent site is at a depth greater than 0.8m. This is significantly deeper than the designed effluent disposal system, which in turn is elevated above the surrounding land mass.

Impact on surface water:

Visual evaluation of the site showed that adequate fall can be generated at the current proposed effluent site. This disposal area will not be affected by surface water. The primary treated effluent has been designed to be disposed of into the soil by conventional bed. There is sufficient slope on the section to ensure that there will be no surface water retention for any length of time which could affect or compromise the effluent disposal system chosen.

The designed effluent system is not seen to pose any threat to surface water for the above risk matrix reasons or pose a threat to others in the near vicinity.

Impact on groundwater:

On site exploration and extensive testing has shown:

- Tests carried out on the site indicate that the soil falls into a category 6. There will be adequate area for reserve areas. The proposed lot in general at over 10151m² has acceptable buffer areas.
- The decision tree process upon which the design was evaluated involved the careful analysis of soil structure, consideration of the areas available, the depth of soil available and the ability of the site to safely contain effluent discharge. The soil loading rates used were as a result of K_{sat} tests, those recommended in T.P58, and ASNZS standards.

Having taken all the above factors into consideration it is believed that there will be little possibility of any effect on groundwater. There is a buffer between the effluent site and any risk area. The location of the effluent disposal systems has been placed so that the horizontal movement of any contaminants would not cause a hazard or have any effect on the immediate environment.

Soil testing was completed in a period of very wet weather (June 2024)

Impact on the soil:

It is generally accepted that the degree of nitrogen leaching increases with higher soil carriage water (rain fall and effluent loading rate). Therefore, low effluent loading rates can assist in the mitigation of nitrogen leaching.

The primary mechanism for reducing nitrogen discharges into the receiving environment is the reduction of the organic load. In this case the opportunity for intensive organic load is not considered a major factor due to the low occupancy and the reliance on rainwater.

The soil type is listed as Te Koupuru sand. This is classed as being poorly drained. Onsite testing suggests drainage at this site is better than listed, the night before testing recording some 80mm of rain. Category 6 has been used for calculations.

Design mitigation measures:

The system installed for effluent disposal (appendix C) has been designed to maximise the potential for basal ground area, wall and transpiration disposal.

The separation distance of wastewater distribution from potential groundwater aquifers, which were not found, minimises the opportunity for any aquifer contamination. Storm water and storm water treatment is managed so that there will be no impact on effluent disposal.

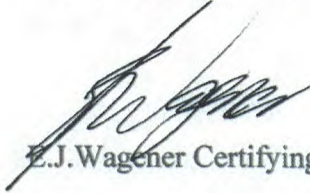
Amenity Values:

An in-depth study of the immediate areas of impact indicates that this proposal will have no more impact on the surrounding land users or occupiers than that currently existing. The current systems for the neighbouring dwellings into similar structures show no sign of septic stress.

Conclusion:

The summary of factors taken into consideration "Appendix A" leads to the conclusion that there are no environmental effects which are not mitigated by adequate design.

It is our assessment that there are no environmental effects that would give reasons why this change in use should not go ahead.



E.J. Wagener Certifying Registered Drainlayer 05877

Robert Wagener Associate Engineer

Effluential DrainLayers Ltd

3778 Main North Road

R.D.4

Kaitaia 0484

Phone 09 409 8854 Fax 09 409 7720 Mobile 0274 8855 84

20//03/2025

Jake Currin & Ella Harris

Lot 10 Wagener Grove

Pukenui

Report on Storm Water Attenuation

Purpose

To control/assist the management of the effects of stormwater runoff from building developments and mitigate the impact this has on infrastructural assets.

Considerations

It needs to be accepted that the impact is greater in densely populated areas and less in urban/rural.

The definition of soakage is the process where a permeable substance receives a liquid, in this case where storm water is disposed of into ground, or effective runoff slowed so as to minimize effects on the environment or infrastructure.

The infiltration factor k_{sat} assessment, assists in mitigating runoff impact.

Characteristics that determine permeability are soil structure, soil particle size, and geomorphology.

The flow rate of the soakage discharge is also dependent upon the soakage area and the hydraulic pressure forcing water into the absorbent media.

Site Description

The property is located off Wagener Grove. Pukenui Area being 10151m²

This is a large section predominantly covered in grass with a few trees. The property is relatively flat, having an elevated part to the west and gently slopes to the southeast.

There is an open drain along the entire length of the south-eastern boundary line. This drain ultimately reaches the Raio Creek.

Natural surface water would be directed away from a new building via the contours of the land.

The soil type is listed as Te Kopuru sand over sand stone. Soil maps class this as poorly drained.

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Design Criteria

Soakage devices must be 3m from dwellings.

The Far North District Council aligns storm water attenuation requirements with other authorities.

The Whangarei District Council requires site attenuation when the percentage of impermeable surfaces exceeds 2%.

The Auckland Regional Council prepared TP10 as a reference on a similar basis and ASNZS 1547 is also structured in the same manner.

The spread sheet used in calculating Attenuation requirements has been developed in conjunction with the FNDC stormwater Engineer.

The Far North District Council information was designed specifically to enable storm water design to be expedited quickly. The ARC prepared TP10 on the same basis. ASNZS1547 is also structured in the same manner.

Therefore, attenuation is only required when the ratio of impermeable surfaces to total property area exceeds 2%. However other factors can influence the requirement to attenuate.

Design Calculations

All calculations submitted are via Stormwater calculation spread sheet. It is a given that new calculations may be required should future development take place.

Run off from impervious surfaces on a total land area of 101510m² is of marginal concern. The estimated additional impermeable surfaces have been calculated as: residential 208.42m², driveway 252m². This is a combined total of 496.42m² out of an overall 10151m².

The ratio of impermeable surfaces to overall area is 4.8%.

In line with the design criteria above, the property, with a ratio of 4.8%, should require attenuation. However, given that there is a large open drain along the south-eastern boundary that within 400m drains to the Raio Creek it is unlikely that the proposed development will have a negative effect on council infrastructure.

Design Proposal

Any development has some adverse effects however in relation to the major area the effects are small, with stormwater having no immediate effect on any regional infrastructure.

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The principle being used in this case is that stormwater generated by the building roof area is discharged via 100mm uPVC stormwater pipe and spreader to the surrounding environment. The cumulative effects from this sized development will be minor, in relation to the whole.

Devices which discharge water via infiltration through soil provide a storm water quality benefit to the receiving environment and the in-situ soil acts as a filter media for removing contaminants. This is a known beneficial factor and provides for infiltration devices to be used as storm water quality treatment.

On site observation indicates that there is not, and is unlikely to be, any erosion from this source.

It is most unlikely given the percentage of impervious surfaces that there will be any environmental effect which cannot be contained within the boundaries with this proposed development.

This combination of circumstance lessens the impact on the downstream environment while providing for the maximum soil absorption as proposed by TP10, again lessening the potential impact on infrastructure.

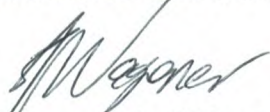
Regional Plan:

The Northland Regional Council proposed rule C6.4.2 provides for the diversion and discharge of stormwater from outside a public stormwater network, provided that (amongst other conditions) the discharge or diversion does not cause or increase nuisance or damage to other property. In this case there will be no affected neighbouring properties.

Therefore, this proposal is in accordance with NRC Rule C6.4.2.

Conclusion:

Any stormwater overflow from this proposed building will be discharged via a spreader bar to the surrounding environment at the south-east of the building site. There will be no cumulative effect on FNDC infrastructure.



Eric Wagener Certifying Registered Drainlayer 05877
Robert Wagener (Engineer) Effluential Drainlayers Associate

Rational method

48hr

1 Lake Currah 25		Rational method				
Pre - Development water flow		Roof & decks	Concrete & smooth seal	Metaled area Or rough seal	Other Impervious	Vegetation
(Original water flow)	Total area.	1 (m ²)	2 (m ²)	3 (m ²)	4 (m ²)	5 (m ²)
	496.42	0	0	0	0	496.42
Runoff coefficient		CI (coefficient)	CI (coefficient)	CI (coefficient)	CI (coefficient)	CI (coefficient)
Use "C" values from FNDc TR55 chart		FALSE	FALSE	FALSE	FALSE	0.59
Generally do not use slope adjustment Ci factor if using TR55		0.96	0.96	0.3	0.65	0.59
Rainfall intensity		I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)
Rainfall Data from NIWA, Hirds 4, RCP6, 2081-2100		1.58	2.99	2.99	2.99	2.99
Use an appropriate event for the situation		Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)
Flow rate of surface water		0.000	0.000	0.000	0.000	0.000
Pre - development flow of developed area		Qp (m ³ /sec)	Qp (L/sec)			
		0.0002	0.24			

Pre-development Slope %
10
CI correction
0.00

Post-development Slope %
10
CI correction
0.00

Post - Development water flow

Any area where there is a change in the impermeability values

Pre-development area where there is a change in impermeable surfaces but not collected in attenuation system

Any area where there is no change to the impermeability values

Total area.	Area (m ²)	Roof & decks	Concrete & smooth seal	Metaled area Or rough seal	Vegetation	Concrete & smooth seal	Metaled area or vegetation	Vegetation
	496.42	1 (m ²)	2 (m ²)	3 (m ²)	4 (m ²)	5 (m ²)	6 (m ²)	7 (m ²)
	244.42	0	0	252	0	0	0	0
Use "C" values from FNDc TR55 chart		CI (coefficient)	CI (coefficient)	CI (coefficient)	CI (coefficient)	CI (coefficient)	CI (coefficient)	CI (coefficient)
Generally do not use slope adjustment Ci factor if using TR55		0.96	FALSE	0.90	FALSE	0.2	0.3	FALSE
Rainfall intensity rate		I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)
Rainfall Data from NIWA, Hirds 4, RCP6, 2081-2100		3.33	3.33	3.33	3.33	2.99	2.99	2.99
Use an appropriate event for the situation		Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)
Flow rate of surface water		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total included in attenuation system calc's		Qc (L/sec)	Qc (L/sec)	Qc (L/sec)	Qc (L/sec)	Qc (L/sec)	Qc (L/sec)	Qc (L/sec)
post - development flow		0.22	0.00	0.21	0.00	0.00	0.00	0.00
Post - Pre development flow		Qipp (m ³ /sec)	Qipp (L/sec)					
		0.0002	0.18					
Total post development flow		Qatt (m ³ /sec)	Qatt (L/sec)					
Developed flow + undeveloped flow								
Total impermeable excluded from attenuation system collection		Qby (m ³ /sec)	Qby (L/sec)					
		0.000	0.00					
Total no change, excluded from attenuation system calc's		Qby (m ³ /sec)	Qby (L/sec)					
		0.000	0.00					

Select 1 for type of tank/area, 0 for other		Round		Calculation (initial)		Calculation (initial)		Calculation (initial)		Calculation (final)		Calculation (final)		Slope out control (volume)	
Estimate storage volume	Adjust to match max Vstord	Round area	Square	Num. Of tanks	Total tank area	Tank radius	Total tank volume	usable height	hmax (m)	Additional area	Num. Of tanks	r (m)	1390min (row4235)	2130min (row4435)	2160min (line4465)
0	0	0	1	0	0.00004	6.00	9.60	1.6	1.6	m ²	1	1.9	0.00307	0.00814	0.00890048
0	0	0	0	0	0.00008	0.00	0.00	OK	OK	Total area	11.34	m ² for fixed H68 height	0.00938	0.00841	0.00825665
1	2	3	0	0	0.00004	6.00	9.60	13.27	2.211	Final volume	Not used	Not used	0.03144	0.02665	0.006173
0.76	0.76	0.62	0	0	0.00008	0.00	0.00	0.42	0.042	Same as initial	Not used	Not used	0.00008	0.00008	0.000481
0.76	0.76	0.62	0	0	0.00008	0.00	0.00	0.32	0.32	Trench length	4	1500	0.00216	0.00190	0.00108
0.76	0.76	0.62	0	0	0.00008	0.00	0.00	0.104	0.104	Trench width	6.1	0.00208	0.00198	0.00149	0.00149
0.76	0.76	0.62	0	0	0.00008	0.00	0.00	0.79	0.79	80 minute crossover	24.40	-0.00008	0.00008	0.00041	0.00041
0.76	0.76	0.62	0	0	0.00008	0.00	0.00	0.79	0.79	Line to compare pre-development original line with crossover line changes at point	20	Not used	Not used	Not used	Not used

Pre-development flow matches 2hr 40min intensity		Pre - development flow of developed area		48hr program		Slope factor		Chart step factor		Check		Catchment pre-devel.		Catchment pre-devel.	
Uses (80min,crossover 0126) as a source value	Do not change	Qp (m ³ /sec)	Qp (L/sec)	Qhr max.	Qout (m ³ /sec)	Qout (m ³ /sec)	Min. crossover	Chart point (min.)	peak flow	Qod (L/sec)	Qod (L/sec)	Diff. -> normally	Adjust step factor if required	Adjust step factor if required	Adjust step factor if required
OK	OK	0.0018	1.7952	0.00723	0.00198	0.00216	0.91	1500	0.41342	0.41342	0.18691	0.22651	1.4	1.4	1.4
OK	OK	0.00232	2.317	1.981	0.00198	0.00216	0.91	1500	0.41342	0.41342	0.18691	0.22651	1.4	1.4	1.4

Calculate maximum storage volume

Chart intensity	Storm duration- (hr)	Storm duration- (min)	Attenuation calc.	Chart intensity	Storm duration- (hr)	Storm duration- (min)	Attenuation calc.	Chart intensity	Storm duration- (hr)	Storm duration- (min)	Attenuation calc.	Chart intensity	Storm duration- (hr)	Storm duration- (min)	Attenuation calc.
48	720	12.00	0.18	0.36	720	12.00	0.18	0.36	720	12.00	0.18	0.36	720	12.00	0.18
24	1080	6.00	0.3	0.7	1080	6.00	0.3	0.7	1080	6.00	0.3	0.7	1080	6.00	0.3
12	1260	3.00	0.6	1.1	1260	3.00	0.6	1.1	1260	3.00	0.6	1.1	1260	3.00	0.6
6	1380	2.00	0.9	1.7	1380	2.00	0.9	1.7	1380	2.00	0.9	1.7	1380	2.00	0.9
2	1410	0.50	1.9	3.1	1410	0.50	1.9	3.1	1410	0.50	1.9	3.1	1410	0.50	1.9
1	1425	0.25	2.9	4.4	1425	0.25	2.9	4.4	1425	0.25	2.9	4.4	1425	0.25	2.9
30	1430	0.08	4.2	6.0	1430	0.08	4.2	6.0	1430	0.08	4.2	6.0	1430	0.08	4.2
20	1435	0.08	5.2	7.2	1435	0.08	5.2	7.2	1435	0.08	5.2	7.2	1435	0.08	5.2
10	1440	0.08	7.2	9.5	1440	0.08	7.2	9.5	1440	0.08	7.2	9.5	1440	0.08	7.2
10	1445	0.08	9.5	11.8	1445	0.08	9.5	11.8	1445	0.08	9.5	11.8	1445	0.08	9.5
20	1450	0.08	7.7	8.49	1450	0.08	7.7	8.49	1450	0.08	7.7	8.49	1450	0.08	7.7
30	1455	0.08	5.2	6.7	1455	0.08	5.2	6.7	1455	0.08	5.2	6.7	1455	0.08	5.2
6	1470	0.25	2.9	5.3	1470	0.25	2.9	5.3	1470	0.25	2.9	5.3	1470	0.25	2.9
2	1500	0.50	1.9	4.2	1500	0.50	1.9	4.2	1500	0.50	1.9	4.2	1500	0.50	1.9
6	1620	2.00	0.9	2.6	1620	2.00	0.9	2.6	1620	2.00	0.9	2.6	1620	2.00	0.9
12	1800	3.00	1.3	1.8	1800	3.00	1.3	1.8	1800	3.00	1.3	1.8	1800	3.00	1.3
24	2160	6.00	0.3	0.7	2160	6.00	0.3	0.7	2160	6.00	0.3	0.7	2160	6.00	0.3
48	2880	12.00	0.2	0.4	2880	12.00	0.2	0.4	2880	12.00	0.2	0.4	2880	12.00	0.2

Catchment flow Qcat (cell MAX(P109:P130))	Catchment flow = office flow out + catchment pre-development flow	Qcat max.	Qp (m ³ /sec)	Qp (L/sec)	Qout max.	Qout max.	Vol. stored (m ³)	Vol. stored (m ³)
3.920	0.0039	3.9	0.00461	4.61	13.268	OK	OK	

OMAIKO SUITE Basement rock: greywacke, argillite and quartz

OV, OVH, OVp	Omaiko gravelly silt loam	3⇒2 OV Moderately to imp 1⇒0 OVH, OVp - Poorly to v
--------------	---------------------------	--

OMU SUITE Basement rock: mudstone, claystone, shale

WK, WKH, WKp	Wharekohe silt loam	1⇒0 - Poorly to very poorly c
WKr	Wharekohe silt loam with brown subsoil	1⇒0 - Poorly to very poorly c

PINAKI SUITE Basement rock: sand and sand terraces

OE	Ohia sand	5 - Very well drained
TX, TXp	Te Hapua fine sandy loam	2⇒1 TX Imperfectly to poor 1⇒0 TXp Poorly to very poor
OEy	Ohia peaty sand	1⇒0 - Poorly to very poorly c
TEK	Te Kopuru sand	1⇒0 - Poorly to very poorly c
TEKm	Te Kopuru sand wet phase	1⇒0 - Poorly to very poorly c
TEKy	Te Kopuru peaty sand	1⇒0 - Poorly to very poorly c

PUHOI SUITE Basement rock: banded sandstone

WKf, WKfp	Wharekohe fine sandy loam	1⇒0 - Poorly to very poorly c
-----------	---------------------------	-------------------------------

Jake Currin & Ella Harris

Constant Head Ksat Test Results

	Depth of Hole mm	Height of Water in Hole mm	Drop in Tube mm	Volume drained from Tube mL	Time mins:sec	Time decimal	mL per min
Hole 1	750	725	1150	479	31sec	0.6	821
Hole 2							
Average							821

Ksat Calcs

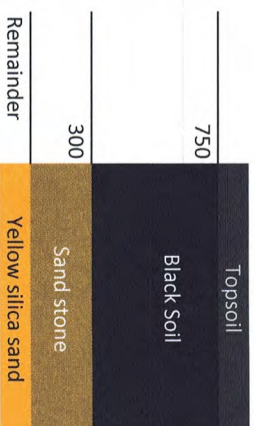
Q Rate of loss of water (cm³/min)
 H Depth of water in test hole (cm)
 r Radius of hole (cm)

821	0.027 m/d
725	27 mm/d
9	

Design Calculations

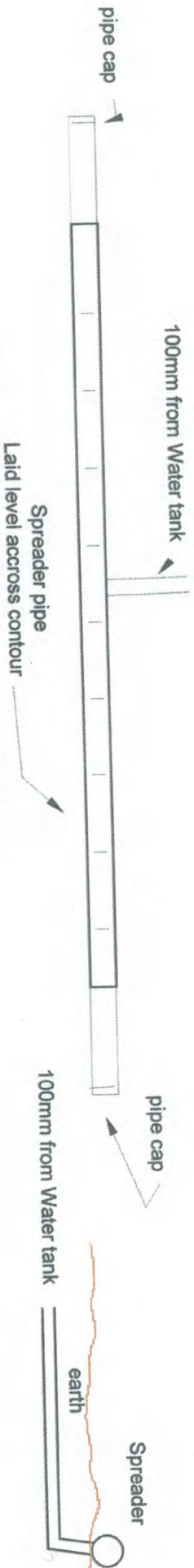
Bedrooms	4
Design Occupancy	6
Per capita wastewater production	160 L/d
Daily wastewater production	960 L/d
	0.96 m ³ /d
DLR	10 mm/d
	0.01 m/d
Treatment Area Required	96.00 m ²

Borehole Profile



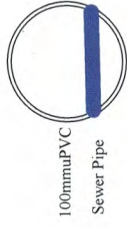
Spreader Detail

Appendix D



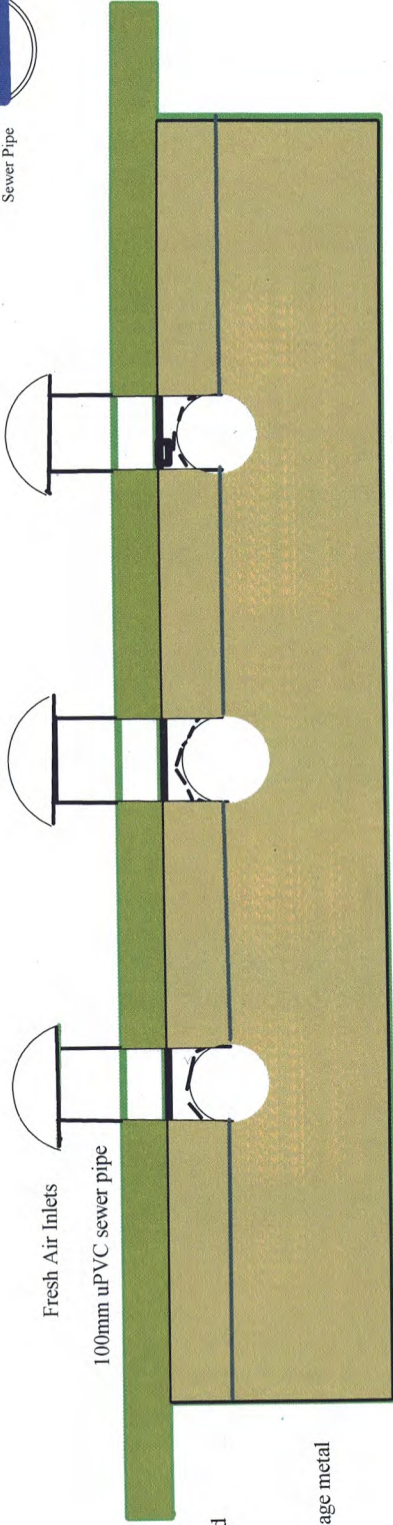
100mm uPVC sewer pipe saw cut at 500mm c/c
Jake Currin & Ella Harris
Wagener Grove Pukenui

E.J. Wagener - Certifying Registered Drainlayer 05877



20mm drilled holes or saw cut @ 600mm/c
so as to form a cup laid level so as to provide
dose loading

Calculation: 4 x bed @ 160L = 960L
960L/ksat10 = 96m2
= Bed 9.6 wide x 10m Long



Grass

Rock dust or sand
Geotec cloth

200mm
19mm clean drainage metal

Fresh Air Inlets

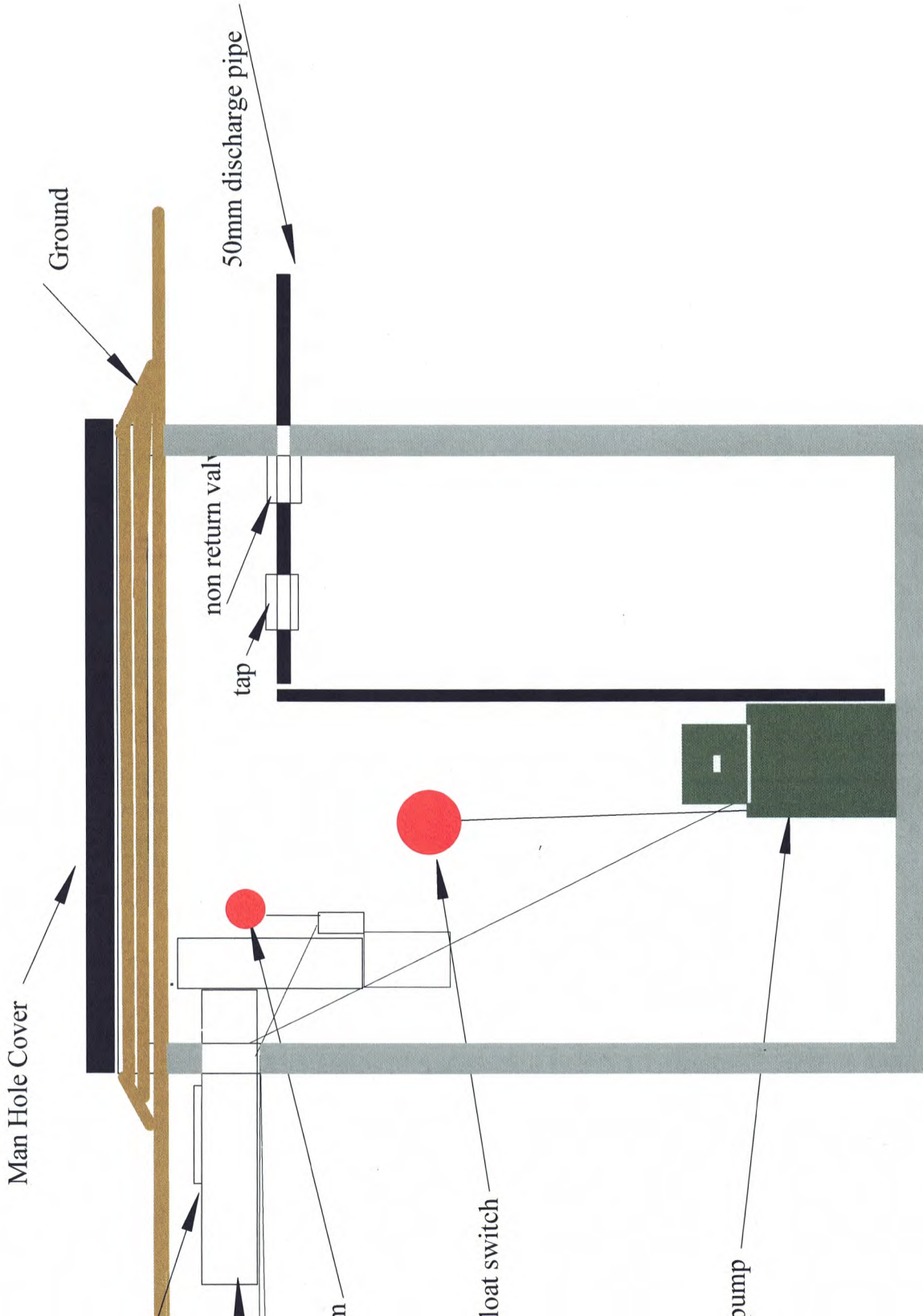
100mm uPVC sewer pipe

9.6m wide

Bed Not to Scale

Conventional Soakage Bed - Jake Currin & Ella Harris



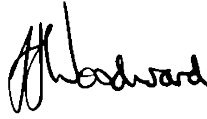
E.J.Wagener Certifying Registered Drainlayer 05877



Pump Chamber Jake Currin Wagener Grove

SITE Wagener Grove, Pukenui
LEGAL DESCRIPTION Lot 10 DP 323666
PROJECT New Dwelling
CLIENT Jake Currin
REFERENCE NO. 138302
DOCUMENT Geotechnical Assessment Report
STATUS/REVISION NO. FINAL – For Building Consent
DATE OF ISSUE 28 January 2025

Report Prepared For	Email
Jake Currin	jake@currinbuilders.co.nz

Authored by	S. Page <i>Pt NZDE (Civil)</i>	Engineering Technician	shaun@wjl.co.nz	
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Approved by	S.J. Woodward <i>Meng, CPEng, CMEngNZ</i>	Principal Geotechnical Engineer	simonwoodward@wjl.co.nz	

1 EXECUTIVE SUMMARY

The following table is intended to be a concise summary which must be read in conjunction with the relevant report sections as referenced herein.

Development Type:	New dwelling (assumed NZS3604:2011 type loads).
Development Proposals Supplied:	Yes – Preliminary architectural drawings (7 sheets).
Geology Encountered:	Early Pleistocene Fixed Parabolic Dune Sands.
Loose Surficial Subsoils Encountered:	Unsuitable, loose surficial organic subsoils were encountered beneath the building site to depths of approximately 0.30m to 0.90m below existing ground level.
Overall Site Gradient in Proximity to Development:	Flat natured.
Natural Hazards:	<p>Slope Stability: No perceived risk of global slope instability affecting the Building Platform, provided recommendations made in this report are followed.</p> <p>Liquefaction: Negligible risk of liquefaction susceptibility and liquefaction damage is therefore considered to be unlikely.</p>
Suitable Foundation Type(s):	Reinforced, raft slab foundation system.
NZBC B1 Expansive Soil Classification:	Class A (non-expansive) soils.
Minimum Depth for Alfresco Roof Footings:	0.40m below finished ground levels and 0.40m into competent natural ground and/or engineered fill.
NZS1170.5:2004 Site Subsoil Classification:	Class C – Shallow Soil stratigraphy.
Earthworks:	<p>Proposed Ground Improvement: Earthworks in forming the building platform will require an engineered earthworks operation, consisting of the removal of unsuitable, loose surficial organic subsoils and replacement with engineered fill. Imported clean hardfill is recommended as the least difficult material for filling purposes.</p> <p>Our Dynamic Cone – Scala Penetrometer Testing indicates that the loose, surficial layer is generally of 0.30m to 0.60m thickness however, may be up to approximately 0.90m across the eastern extents of the building site.</p> <p>Refer to section 9.3 for further guidance.</p>
Further Geotechnical Review of Development Proposals Required:	Not anticipated unless development proposals are revised.

2 INTRODUCTION

2.1 SCOPE OF WORK

Wilton Joubert Limited (WJL) was engaged by **Jake Currin** (the client), to undertake a geotechnical assessment of ground conditions at the above site, where we understand, it is proposed to construct a new dwelling within the south-western quartile of the property.

For the purposes of this report, we have assumed the dwelling will comprise of a lightweight, timber framed structure, designed and constructed generally in keeping with the requirements of NZS3604:2011.

2.2 SUPPLIED INFORMATION

At the time of preparing this report, the client has supplied a set of preliminary architectural drawings (7 sheets), titled; *'Proposed Home for Currin, Lot 10 Wagener Grove, Pukenui'*, dated 26 November 2024, prepared by Mason Street Architectural Drafting. The drawing set includes Site, Floor, Elevation, and 3D plans.

Any revision of the above architectural drawings with Geotechnical implications should be referred to WJL for review.

Additionally, we have reviewed a Site-Specific Geotechnical Assessment Report (dated 10 April 2024, ref: 133207) our consultancy previously completed at the property for the client pertaining to the proposed construction of a new shed.

3 SITE DESCRIPTION

The subject 1.0151ha parallelogram shaped, Coastal Living Zoned property is positioned off the southern side of Wagener Grove, within the eastern outskirts of the Pukenui district. No driveway formation is present on-site however, it is generally envisaged a new formation will be constructed off the north-western boundary, approximately 200m to 250m west of the State Highway 1 intersection.

Topographically speaking, the property and wider surrounding land lie atop of a broad, flat, fixed sand dune crest. The site generally ranges in between heights of approximately 12m and 13m New Zealand Vertical Datum (NZVD).

No existing built development is present on-site. A minor cabin placed on above-ground skids, water tank, and two shipping containers are situated near the south-western boundary corner.

Ground cover comprises of lawn with shelterbelts planted along the western, southern, and eastern boundaries. Open drains also border the western and southern boundaries.

The FNDC on-line GIS Water Services Map indicates reticulated water, wastewater, and stormwater services are not available to the property.

The site and proposed development location is shown on the appended site plan (ref: 1339302-G600) and in Figure 1 below.

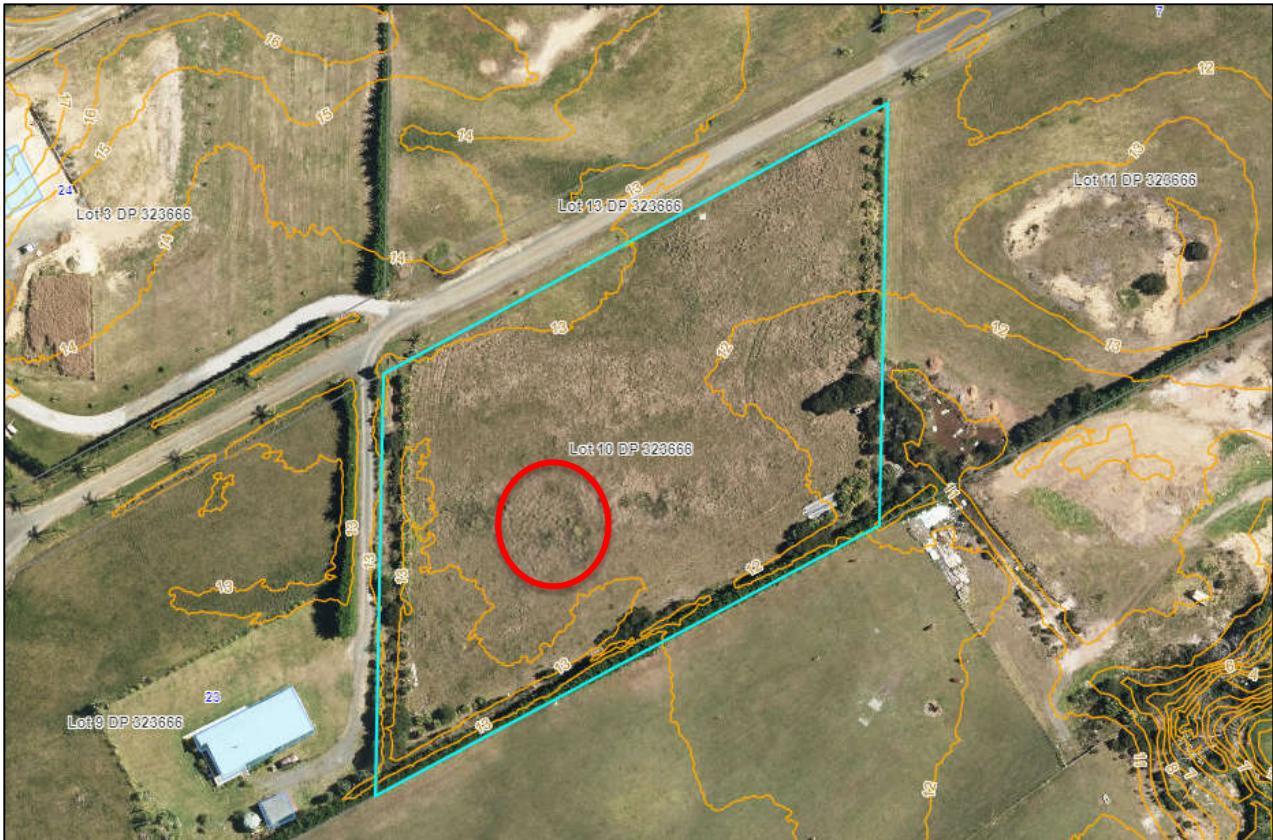


Figure 1: Screenshot aerial view of the subject site from the Far North District Council (FNDC) on-line GIS Property and Land Map. Subject property is highlighted in cyan. Red ring indicatively depicts development area. 1.0m contours are overlaid.



Figure 2: Site photograph looking south-westerly towards the proposed development location. Orange cones indicatively depict the eastern and southern ends of the building site.

4 DEVELOPMENT PROPOSALS

Based on our review of the supplied preliminary architectural drawings, the client proposes to construct a new 239m² dwelling with attached garage within the south-western quartile of the property.

It is our understanding the dwelling is to be founded on a reinforced, raft slab foundation system, supporting lightweight timber framing, vertical weatherboard cladding and a longrun steel roof.

Two footings, likely for a portal frame, will also be required to support an alfresco roof at the western end of the building site.

The proposed finished floor level (FFL) for the dwelling is currently unknown. The build site location targeted for development is located on flat ground with an envisaged crossfall of less than 0.50m present.

As a result, the principal objectives were to investigate and assess the suitability of potential foundation options for the site soils, not only primarily in terms of bearing capacity, but also for differential foundation movement.



Figure 3: Screenshot of the Site Plan from the supplied architectural drawings.

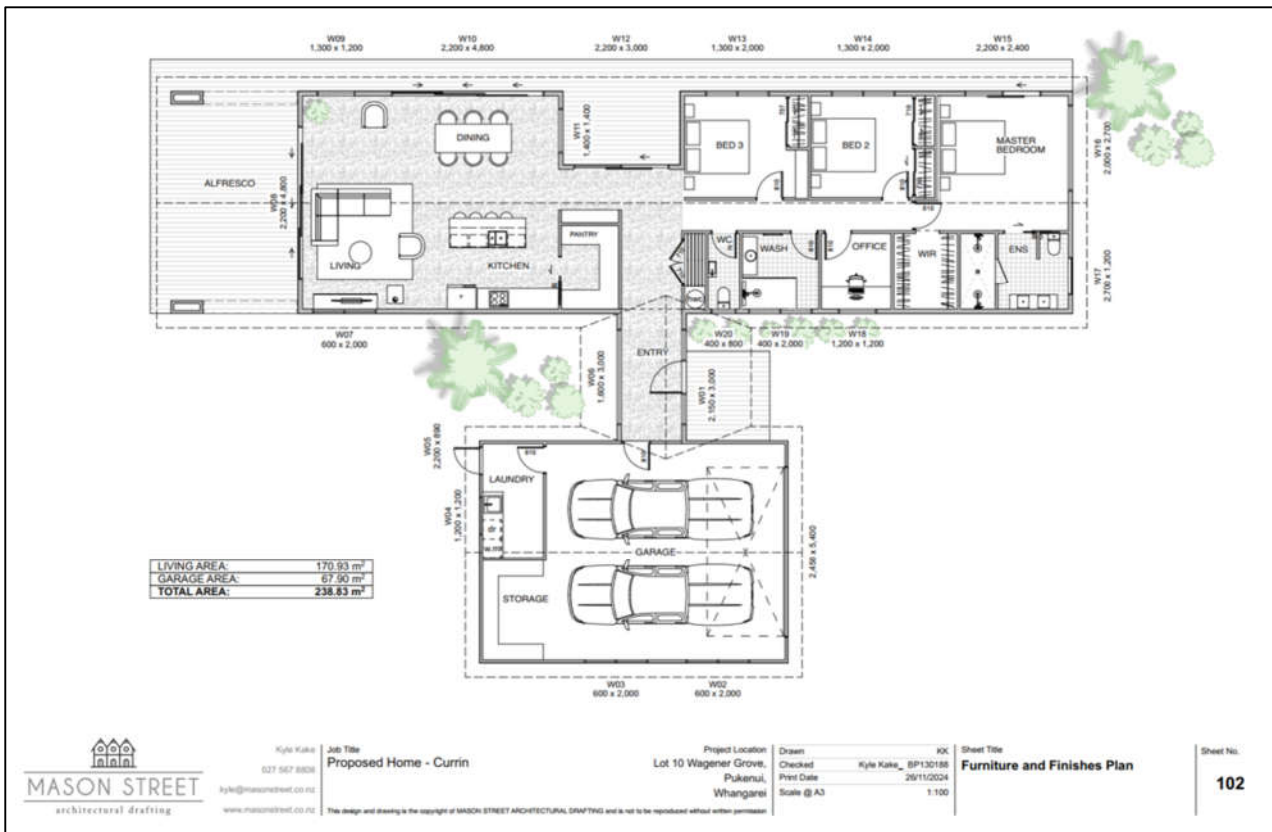


Figure 4: Screenshot of the Furniture and Finishes Plan from the supplied architectural drawings.

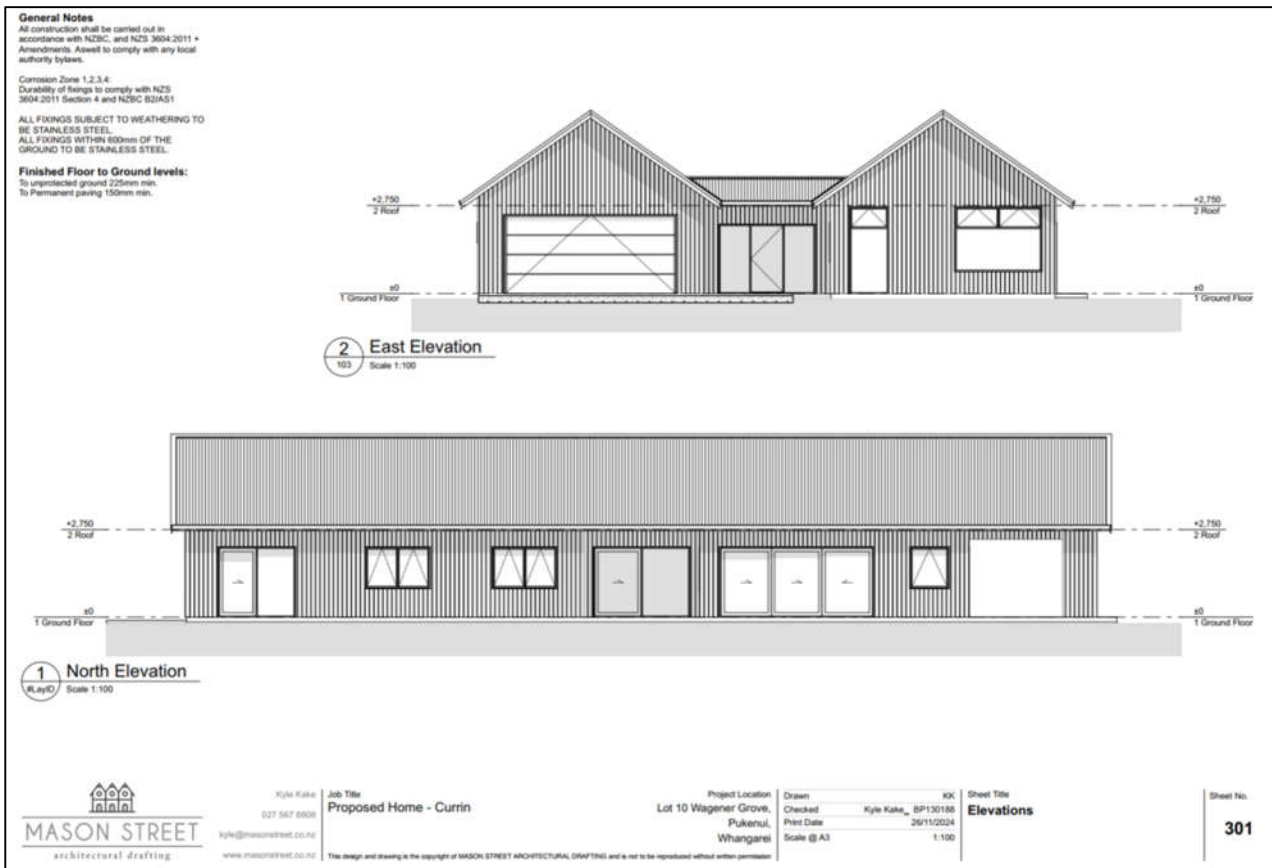


Figure 5: Screenshot of the East-North Elevation Plan from the supplied architectural drawings.

5 PUBLISHED GEOLOGY

Local geology across the property and wider surrounding land is noted on the GNS Science New Zealand Geology Web Map, Scale 1:250,000, as; **Early Pleistocene Parabolic Dunes**. These deposits are approximately 1 million years in age and described as; “*Weakly cemented and partly consolidated sand in parabolic dunes, interdune lake and swamp deposits*”, which as a result of their vegetated state, and indicated by the flat nature of the site, are considered to be ‘fixed’ in place.



Figure 6: Screenshot aerial view of the subject property and wider surrounding land from New Zealand Geology Web Map hosted by GNS Science. Red ring depicts the property location.

6 GEOTECHNICAL INVESTIGATION

WJL carried out ground investigations at the property on 8 April 2024 and 16 January 2025.

Our subsoil testing of the land targeted for proposed development involved drilling four hand auger boreholes (HA) of 50mm diameter, to refusal depths ranging between 0.70m to 1.10m below existing ground level (BEGL). All HA's were supplemented with dynamic cone – scala penetrometer tests (DCP) to provide an indication of the bearing capacities of the underlying subsoils.

The approximate locations of the HAs are shown on our appended Site Plan (ref: 138302-G600).

The soil sample arisings from the HA's were logged in accordance with the “Field Description of Soil and Rock”, NZGS, December 2005. The materials identified are described in detail on the appended records, together with the results of the various tests undertaken, plus the groundwater conditions as determined during time on site.

7 **GEOTECHNICAL FINDINGS**

The following is a summary of the ground conditions encountered in our investigation. Please refer to the appended logs for greater detail.

7.1 **NON-ENGINEERED FILL**

An isolated 0.25m thick layer of surficial fill, comprising of loose, Silty SAND with frequent organic inclusions, was overlying HA03. No fill was encountered at our other three HA locations.

7.2 **NATURAL GROUND**

The underlying natural deposits encountered during our HA drilling were consistent with our expectations of Early Pleistocene Parabolic Dune deposits, comprising of a 0.30m to 0.90m thick veneer of loose, Organic SAND, Organic Silty SAND, and Silty SAND, overlying medium dense to dense SAND and Silty SAND. An inferred, very dense, hard pan was underlying the investigated area between depths of 0.7m and 1.10m BEGL, beyond which, it was too dense to auger.

Measured DCP blow counts per 0.10m ground penetration were measured as follows:

- **Overlying Loose Veneer:** Generally ranged between 1 and 2, with occasional counts of 3 and 4,
- **Underlying Medium Dense to Dense Stratum:** Ranged between 3 and 10, and
- **Inferred Hard Pan:** Ranged between 20 and 40. The pan appears to be no less than 0.30m thickness.



Figure 7: Site photograph of HA01 which were typical of the soil arisings encountered (0.0m to 0.95m).

7.3 **GROUNDWATER**

Groundwater was not encountered within any of our four HA's. Due to the denseness of the underlying hard pan, there is the potential for perched levels during the winter period of the year and following prolonged rainfall events.

8 GEOTECHNICAL ASSESSMENT

8.1 SITE STABILITY

Based on:

- No obvious evidence of instability within the immediate vicinity of the proposed development location, and
- Flat nature of the proposed development location and surrounding influential land,

we consider that the risk of deep-seated global slope instability impacting the proposed development to be significantly low.

In the long-term, provided that all of the recommendations within this report, are adhered to, then we do not anticipate any significant risk of instability either within, or immediately beyond, the proposed building site.

8.2 LIQUEFACTION HAZARD ASSESSMENT

Liquefaction is a natural phenomenon where a loss of strength of sand-like soils is experienced following cyclic induced stress, which is typically a result of prolonged seismic shaking and the resultant increase in pore water pressure of saturated soils. Recent examples of this were experienced in Christchurch and the greater Canterbury Region during the Canterbury Earthquake Sequence between 2010-2011.

Cyclic loading during prolonged seismic shaking induces an increase in pore water pressure, which in turn decreases the effective stress of a sand-like deposit of soil. Excess pore water pressure (EPWP) can build to such an extent that the effective stress of the underlying soils is reduced to near zero, whereby the soils no longer carry shear strength and behave as a semi solid/fluid. In such a scenario, excess pore water pressures will follow the path of least resistance to eventual dissipation, which can lead to the manifestation of liquefied soils towards the surface, or laterally towards a free-face (edge of slope, riverbank, etc.) or layers that have not yet undergone liquefaction.

At the time of preparing this report, we note that the FNDC on-line GIS Liquefaction Vulnerability Map designates the property and wider surrounding land as being within an “Undetermined” zone.

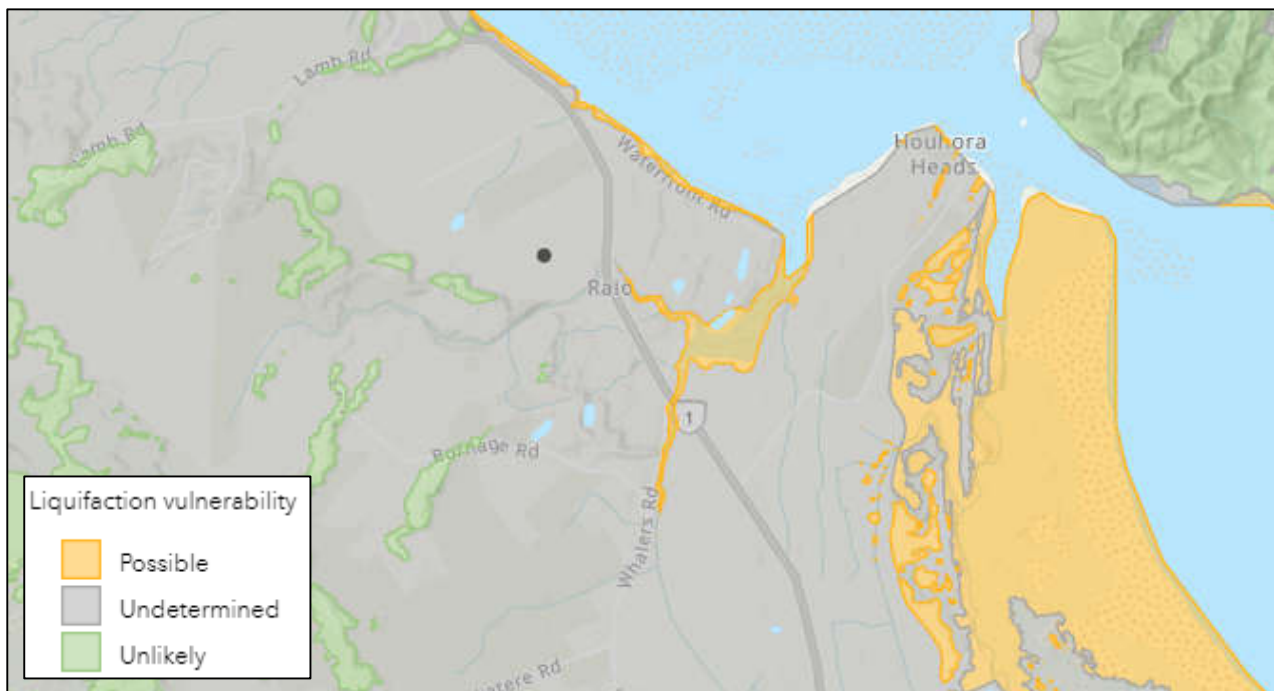


Figure 8: Screenshot from the FNDC on-line GIS Liquefaction Vulnerability Map.
Black dot approximately depicts property location.

A screening procedure based on geological criteria was adopted to examine whether the proposed development might be susceptible to liquefaction, with observations as follows:

- There are no known active faults traversing through the property or wider surrounding land,
- There is no historical evidence of liquefaction at the property,
- The site is situated on an elevated location,
- The site is underlain by a very dense hard pan of minimum 0.30m thickness, at depths ranging from 0.70m to 1.10m BEGL, which is generally considered not to be susceptible to liquefaction. All overlying unsuitable, loose soil is also to be removed and replaced with engineered fill,
- Lack of groundwater evidence within our four HA's, and
- The subsoils deposits are a minimum of 1 million years in age, allowing for adequate consolidation in comparison to Holocene age material.

Based on the above, we conclude that the subsoils influencing the subject building platform have a negligible risk of liquefaction susceptibility and liquefaction damage is therefore considered to be unlikely.

9 CONCLUSIONS AND RECOMMENDATIONS

On the basis of the above analyses, we consider that the risk of moderate to deep-seated slope instability impacting on the proposed development to be satisfactorily low, provided all recommendations contained within our report are implemented in design and construction.

With regard to the Building Act 2004; Sections 71-72, we believe on reasonable grounds that:

- i. The current proposed site development and associated building work within the relayed building platform should not accelerate, worsen, or result in slippage or subsidence on the land on which the building work is to be carried out or any other property; and
- ii. The land beneath the building footprint and surrounding immediate amenity areas of the relayed building platform is neither subject nor likely to be subject to slippage or subsidence, provided the development is undertaken in accordance with the recommendations and guidance of this report.

9.1 FOUNDATIONS

It is our understanding the dwelling is to be founded on a reinforced, raft slab foundation system.

The surficial veneer of loose organic soils contains unsuitable bearing capacities to support foundations. Additionally, pile driving and footing excavations into the hard pan may prove problematic for achieving adequate cantilever anchorage due to the denseness of the pan.

Based on the above, we recommend that all unsuitable, loose surficial soils be removed from the building platform and replaced with engineered fill, compacted and tested in layers to satisfy NZS4431:2022 criteria for Engineered Fill. Such fill material can be either compacted clean cohesive clay fill, or clean, non-cohesive hardfill. The use of clay fill brings with it the need for higher levels of moisture content control, compaction monitoring, testing and certification, and may also add in additional expansive soils mitigation design requirements for the foundation system, whereas non-cohesive hardfill can be placed and compacted with much less overview of water content control and little to no expansive soils mitigation requirements. This ground improvement should extend a minimum of 1.0 outside the building platform in all directions.

Our DCP's indicate that the loose, surficial layer is generally of 0.30m to 0.60m thickness however, may be up to approximately 0.90m across the eastern extents of the building site.

Two isolated footings, likely for a portal frame, will also be required to support an alfresco roof at the western end of the building site.

9.1.1 SHALLOW FOUNDATION BEARING CAPACITY

Following the above ground improvement, the following bearing capacity values are expected to be appropriate for the use of shallow foundations, subject to founding directly on or within competent engineered fill, but which should be confirmed by careful Geo-professional inspections of the firstly the stripped subgrade followed by compaction monitoring of the engineered fill.

Geotechnical Ultimate Bearing Capacity	300 kPa
ULS Dependable Bearing Capacity ($\Phi=0.5$)	150 kPa

When finalising the development proposals, it should be checked that all foundations lie outside 45° envelopes rising up from 0.50m below the invert of service trenches unless such foundation details are found by specific engineering design (SED) to be satisfactory. Deeper foundation embedment's may be required for any surcharging foundations.

9.1.2 EXPANSIVE SOIL CLASSIFICATION

All existing sandy subsoils and required engineered hardfill (or clean, inorganic sand fill) are assessed as **CLASS A (Non-Expansive)**, as defined in clause 7.5.13.1.2, as introduced to NZS3604 by Amendment 19 of NZBC Structure B1/AS1. If sand fill is to be used, then consideration and skill may need to be given to providing adequate confinement and compaction to the surface layers of the sand. Clay fill is not recommended for the ground improvement works as this will change the expansivity aspect of the founding ground, and require specific engineering design that cannot be commenced until after the clay fill has been placed, compacted and sampled insitu for laboratory testing.

All footings for the alfresco roof should be embedded a minimum of 0.40m below finished ground levels and 0.40m into competent natural ground and/or engineered fill.

9.2 NZS1170.5:2004 SITE SUBSOIL CLASSIFICATION

We consider the proposed building to be underlain with a Class C – Shallow Soil stratigraphy.

9.3 SITE EARTHWORKS

The proposed FFL for the dwelling is currently unknown. Earthworks in forming the building platform will require an earthworks operation, consisting of the removal of unsuitable, loose surficial organic subsoils and replacement with engineered fill. Of the options discussed above, we advise that imported clean hardfill offers the easiest and most trouble-free outcome.

Our DCP's indicate that the loose, surficial layer is generally of 0.30m to 0.60m thick however, may be up to approximately 0.90m across the eastern extents of the building site.

All earthworks should be undertaken in accordance with the following standards:

- NZS4431:2022 "Code of Practice for Earth Fill Residential Development",
- Section 2 "Earthworks & Geotechnical Requirements" of NZS4404:2010 "Land Development and Subdivision Infrastructure", and
- Chapter 2 "Site Development Suitability (Geotechnical and Natural Hazards" of the Far North District Council Engineering Standards, (Version 0.6 issued May 2023).

9.3.1 SITE CLEARANCE & PREPARATION

Competency of the exposed subgrade underlying the building platform should be confirmed by a Geo-Professional. In this regard, we recommend the stripping of all surficial subsoils overlying the hard pan at the building site, prior to requesting Geo-Professional inspection(s) of the stripped ground to confirm that the underlying natural subgrade conditions are in keeping with the expectations of this report. Without such inspections being undertaken, a Chartered Professional Geotechnical Engineer is unable to issue a Producer Statement - PS4 – Construction Review likely to be needed to meet Building Consent requirements as set by Council as conditions of consent.

9.3.2 SUBGRADE PROTECTION

Once stripped, the subgrade should not be left exposed for any prolonged period but should be covered with a minimum 0.10m thick layer of granular fill such as GAP40 basecourse, as soon after the geotechnical inspection as possible.

Likewise, pile/pier inverts should be covered with a protective layer of site concrete and/or their concrete poured as soon as possible once inspected by a Geo-Professional.

If subgrade degradation occurs it will be necessary to undercut the degraded material and replace with compacted hardfill.

9.3.3 ENGINEERED HARDFILL AND SAND FILL COMPACTION

The compaction of hardfill should be undertaken using either a heavy plate compactor or a steel wheeled roller with low frequency dynamic compaction. Fill layers should not exceed 0.15m at a time, and as the total depth exceeds 0.60m, there will be a Building Consent condition for observation/testing of the hardfill by a Geo-Professional. We recommend achieving the following compacted target values, with equivalence testing using either a Clegg Impact Hammer or a DCP.

Foundation Support Type	CBR	Equivalent Clegg Impact Value (CIV)	Equivalent DCP-Scala Penetrometer Blows
Foundation Footings & Beams (Over a depth of no less than twice the foundation width)	≥ 10%	Minimum 20 Average 25	≥5 blows/100mm (NZS3604)
Floor Slabs	≥ 7%	Minimum 18 Average 20	≥3.5 blows/100mm (NZS3604)

9.3.4 TEMPORARY & LONG-TERM EARTHWORK BATTERS

We recommend that earthworks only be undertaken during the summer period of the year or prolonged dry forecast weather conditions. Should any proposed cuts result in unsupported batters exceeding 1.0m in height, further specific geotechnical advice should be sought.

Earthwork sites should be shaped to assist in stormwater run-off. The toe of batter excavations should be shaped to direct run-off from the building site.

All exposed batters should be covered with topsoil before being re-grassed and/or planted as soon as practicable to aid in stabilising any newly formed slopes.

9.3.5 GENERAL SITE WORKS

We stress that any and all works should be undertaken in a careful and safe manner so that Health & Safety is not compromised, and that suitable Erosion & Sediment control measures should be put in place. Any stockpiles placed should be done so in an appropriate manner so that land stability and/or adjacent structures are not compromised.

Furthermore:

- All works must be undertaken in accordance with the Health and Safety at Work Act 2015,
- Generally, any open excavations should be fenced off or covered, and/or access restricted as appropriate,
- The location of all services should be verified at the site prior to the commencement of construction,
- The Contractor is responsible at all times for ensuring that all necessary precautions are taken to protect all aspects of the works, as well as adjacent properties, buildings and services, and
- Should the contractor require any site-specific assistance with safe construction methodologies, please contact WJL for further assistance.

9.4 STORMWATER & SURFACE WATER CONTROL

Uncontrolled stormwater flows must not be allowed to saturate the ground, so as to adversely affect foundation conditions.

All stormwater runoff from roofs and paved areas should be collected in sealed pipes and discharged to a stable disposal point that is well clear of the building site.

Under no circumstances should concentrated overflows from any source discharge into or onto the ground in an uncontrolled fashion.

10 UNDERGROUND SERVICES

FNDC on-line GIS Maps do not indicate any underground services to be present within the property, however, other underground services, public or private, mapped, or unmapped, of any type could be present, hence we recommend staying on the side of caution during the commencement of any work within the proposed development area.

This geotechnical report includes no evaluations or advice pertaining to on-site effluent disposal, other than reference can be made to the Auckland Council TP58.

11 FUTURE CONSTRUCTION MONITORING

The foregoing statements are Professional Opinion, based on a limited collection of information, some of which is factual, and some of which is inferred. Because soils are not a homogeneous, manufactured building component, there always exists a level of risk that inferences about soil conditions across the greater site, which have been drawn from isolated "pin-prick" locations, may be subject to localized variations. Generally, any investigation is deemed less complete until the applicability of its inferences and the Professional Opinions arising out of those are checked and confirmed during the construction phase, to an appropriate level.

It is increasingly common for the Building Consent Authorities (BCA) to require a Producer Statement – Construction Review (PS4) which is an important document. The purpose of the PS4 is to confirm the Engineers' Professional Opinion to the BCA that specific elements of construction, such as the verification of design assumptions and soil parameters (NZBC clause B1/VM4 2.0.8), are in accordance with the approved Building Consent (BC) and its related documents, which should include the subject Geotechnical Report. Where site works will involve the placement of fill, the PS4 should reference NZBC clause B1/VM1 10.1.

For WJL to issue a PS4 to meet the above clauses of the NZBC, we will need to carry out the site inspections as per the BC and Council requirements.

We require at least 48 hours' notice for site inspections.

Site inspections should be undertaken by a Chartered Professional Geotechnical Engineer or their Agent, who is familiar with both this site and the contents of this geotechnical report.

Prior to works commencement, the above Engineer should be contacted to confirm the construction methodologies, inspection, and testing frequency.

The primary purpose of the site inspections is to check that the conditions encountered are consistent with those expected from the investigations and adopted for the design as discussed herein. If anomalies or uncertainties are identified, then further Professional advice should be sought from the Geo-Professional, which will allow the timely provision of solutions and recommendations should any engineering problems arise.

Upon satisfactory completion of the above work aspects, WJL would then be in a position to issue the PS4 as required by Council.

At this time, the following Geotechnical site inspections and testing should include, but are not limited to:

- Site cut, and
- Fill compaction testing,

12 LIMITATIONS

We anticipate that this report is to be submitted to Council in support of a BC application.

This report has been commissioned solely for the benefit of our client, **Jake Currin**, in relation to the project as described herein, and to the limits of our engagement, with the exception that the local Territorial Authority may rely on it to the extent of its appropriateness, conditions and limitations, when issuing the subject consent. Any variations from the development proposals as described herein as forming the basis of our appraisal should be referred to us for further evaluation. Copyright of Intellectual Property remains with WJL, and this report may NOT be used by any other entity, or for any other proposals, without our written consent. Therefore, no liability is accepted by this firm or any of its directors, servants, or agents, in respect of any other geotechnical aspects of this site, nor for its use by any other person or entity, and any other person or entity who relies upon any information contained herein does so entirely at their own risk. Where other parties may wish to rely on it, whether for the same or different proposals, this permission may be extended, subject to our satisfactory review of their interpretation of the report.

It is important to note that additional refinement of the assessment may be required, based on the requirements of regional councils.

The report does not cover the necessary information regarding the required floor level in relation to any flood level that must be considered during foundation design. Expert input is needed to address this aspect.

Although this report may be submitted to a local authority in connection with an application for a consent, permission, approval, or pursuant to any other requirement of law, this disclaimer shall still apply and require all other parties to use due diligence where necessary and does not remove the necessity for the normal inspection of site conditions and the design of foundations as would be made under all normal circumstances.

Thank you for the opportunity to provide our service on this project, and if we can be of further assistance, please do not hesitate to contact us.

Yours faithfully,

WILTON JOUBERT LIMITED

Enclosures:

Site Plan (1 sheet)

Hand Auger Borehole Records (4 sheets)

Construction Monitoring (1 sheet)



Lot 10 DP 323666

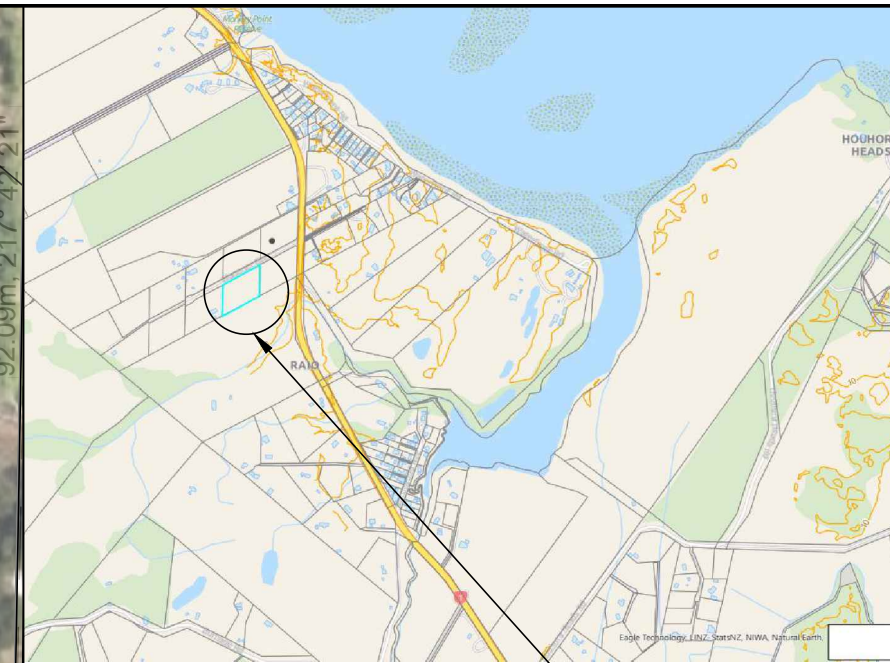
Allow 4m clearance in height and width for fire appliance access

12.00

92.09m, 217° 47' 21"

#23

Drainage: to ASNZS 3500.2
100Ø FW fall @ 1:60 max
Min cover 500mm



SITE LOCATION

IMAGE SOURCE:
FAR NORTH DISTRICT COUNCIL LOCAL MAPS

Lot 09 DP 323666

Part Sec 3 Block XV
Houhora East SD

Water Tanks

HA02

PROPOSED DWELLING

HA03

HA01

HA04

18.493

124.92m, 278° 19' 50"

27.9m

42.1m

42.164

92.03m, 217° 36' 52"

0m 5m 25m 50m

SCALE 1:500

SYMBOL KEY

- HA HAND AUGER LOCATIONS
- PROPOSED DEVELOPMENT LOCATION

GENERAL NOTES

- SITE PLAN IS ONLY INDICATIVE FOR CONCEPT DESIGN. NO MEASUREMENTS MAY BE TAKEN FROM DRAWING.
- BACKGROUND INFORMATION, CONTOURS & LOCAL SERVICES PROVIDED BY THE CLIENT & EXTRACTED FROM LOCAL COUNCIL GIS.
- ALL DIMENSION AND LEVELS TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER.
- ALL WORK TO BE DONE IN ACCORDANCE WITH THE RELEVANT STANDARDS AND MUST BE UNDERTAKEN IN ACCORDANCE WITH THE HEALTH AND SAFETY AT WORK ACT 2015.

WILTON JOUBERT
Consulting Engineers

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Christchurch: 021 824 063
Wanaka: 03 443 6209
www.wiltonjoubert.co.nz

ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
A	JAN 2025	JWB	ISSUED WITH GEOTECHNICAL REPORT

DESIGNED BY:
DRAWN BY:
CHECKED BY:
SURVEYED BY:

JWB
SJW

SERVICES NOTE
WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. WILTON JOUBERT LTD DOES NOT WARRANT THAT ALL, OR INDEED ANY SERVICES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WORKS.

BUILDING CONSENT
DESIGN / DRAWING SUBJECT TO ENGINEERS APPROVAL

DRAWING TITLE:
SITE PLAN

PROJECT DESCRIPTION:
PROPOSED DWELLING

PROJECT TITLE:
**LOT 10 DP 323666
10 WAGENER GROVE
PUKENUI
NORTHLAND**

ORIGINAL DRAWING SIZE: A3	OFFICE: KERIKERI
DRAWING SCALE: 1:500	CO-ORDINATE SYSTEM: NOT COORDINATED
DRAWING NUMBER: 138302-G600	ISSUE: A
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HAND AUGER : HA01

JOB NO.: 138302 SHEET: 1 OF 1

START DATE: 08/04/2024

NORTHING:

GRID:

DIAMETER: 50mm

EASTING:

SV DIAL:

ELEVATION: Ground

FACTOR:

DATUM:

CLIENT: Jake Currin
PROJECT: New Dwelling

SITE LOCATION: Lot 10 DP 323666, Wagener Grove, Pukenui

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE				COMMENTS, SAMPLES, OTHER TESTS
					PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY	DCP - SCALA (Blows / 100mm)	
Karioitahi Group	NATURAL: Organic Fine SAND, brown and dark brown, loose, moist		0.0	Groundwater Not Encountered				2	
			0.1					2	
			0.2					3	
	Slightly Organic Silty Fine SAND, dark brownish black, loose, moist		0.3					2	
			0.4					3	
			0.5					2	
			0.6					4	
			0.7					10	
	Fine SAND, grey with white specks, dense, dry to moist		0.8					20	
			0.9					40	
EOH: 0.95m - Too Dense To Auger			1.0						
			1.2						
			1.4						
			1.6						
			1.8						

REMARKS

End of borehole @ 0.95m (Target Depth: 3.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: NPN

▼ Standing groundwater level

CHECKED BY: SJW

▽ GW while drilling



185 Waipapa Road, Kerikeri 0295
Phone: 09-945 4188
Email: jobs@wj.co.nz
Website: www.wiltonjoubert.co.nz

HAND AUGER : HA02

JOB NO.: 138302 SHEET: 1 OF 1

START DATE: 08/04/2024

NORTHING:

GRID:

DIAMETER: 50mm

EASTING:

SV DIAL:

ELEVATION: Ground

FACTOR:

DATUM:

CLIENT: Jake Currin
PROJECT: New Dwelling

SITE LOCATION: Lot 10 DP 323666, Wagener Grove, Pukenui

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE				COMMENTS, SAMPLES, OTHER TESTS
					PEAK STRENGTH (kPa)	REMOLD STRENGTH (kPa)	SENSITIVITY	DCP - SCALA (Blows / 100mm)	
Kariotiahi Group	NATURAL: Slightly Organic Fine SAND, light brown with occasional orange specks, loose, dry		0.0	Groundwater Not Encountered				3	
			0.2					2	
			0.4					2	
	0.4m: Becoming dark brown & grey, medium dense		0.6					3	
			0.8					4	
	0.7m: Becoming dense		1.0					4	
			1.2					8	
	0.9m: Becoming very dense		1.4					10	
			1.6					20	
			1.8					21	
EOH: 1.00m - Too Dense To Auger			2.0				40		

REMARKS

End of borehole @ 1.00m (Target Depth: 3.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: NPN

▼ Standing groundwater level

CHECKED BY: SJW

▽ GW while drilling



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Phone: 09-945 4188
Email: jobs@wj.com.nz
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HAND AUGER : HA03

JOB NO.: 138302 SHEET: 1 OF 1

START DATE: 16/01/2025

NORTHING:

GRID:

DIAMETER: 50mm

EASTING:

SV DIAL:

ELEVATION: Ground

FACTOR:

DATUM:

CLIENT: Jake Currin
PROJECT: New Dwelling

SITE LOCATION: Lot 10 DP 323666, Wagener Grove, Pukenui

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE				COMMENTS, SAMPLES, OTHER TESTS
					PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY	DCP - SCALA (Blows / 100mm)	
FILL	NON-ENGINEERED FILL: Slightly Silty Fine to Medium SAND, dark brown, grey and orange, loose, dry to moist, frequent organic inclusions		0.0 - 0.2	Groundwater Not Encountered				3	
			0.2 - 0.4					2	
Kairātahi Group	NATURAL: Organic Fine SAND, brown and dark brown, loose, dry to moist		0.4 - 0.6					2	
			0.6 - 0.8					1	
			0.8 - 1.0					4	
			1.0 - 1.2					2	
			1.2 - 1.4					2	
			1.4 - 1.6					2	
			1.6 - 1.8					2	
			1.8 - 2.0					6	
	2.0 - 2.2				25				
	EOH: 1.10m - Too Dense To Auger		2.2 - 3.0						

REMARKS

End of borehole @ 1.10m (Target Depth: 3.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: JEM

▼ Standing groundwater level

CHECKED BY: SJW

▽ GW while drilling



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Website: www.wiltonjoubert.co.nz

HAND AUGER : HA04

JOB NO.: 138302 SHEET: 1 OF 1

START DATE: 16/01/2025 NORTHING: GRID:


DIAMETER: 50mm EASTING:

SV DIAL: ELEVATION: Ground

FACTOR: DATUM:

CLIENT: Jake Currin
PROJECT: New Dwelling

SITE LOCATION: Lot 10 DP 323666, Wagener Grove, Pukenui

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE				COMMENTS, SAMPLES, OTHER TESTS	
					PEAK STRENGTH (kPa)	REMOULD STRENGTH (kPa)	SENSITIVITY	DCP - SCALA (Blows / 100mm)		
Kariotiahi Group	NATURAL: Slightly Silty Organic Fine to Medium SAND, dark brown & black, loose to medium dense, dry to moist.		0.0						3	Groundwater Not Encountered
			0.2						3	
	Slightly Silty Fine to Medium SAND, dark brown & brown, loose, dry to moist.		0.4						2	
			0.6						2	
			0.8						4	
			1.0						5	
			1.2						25	
			1.4							
	EOH: 0.70m - Too Dense To Auger		1.6							
			1.8							

REMARKS
End of borehole @ 0.70m (Target Depth: 3.00m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: JEM

▼ Standing groundwater level

CHECKED BY: SJW

▽ GW while drilling



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Construction Monitoring Services

Northland, Auckland-Waikato, Canterbury, Southern Lakes

Need a PS4?

- Please read the conditions of your Building Consent to determine which section of the works Council wants an engineer to sign off on.
- Book an inspection with Wilton Joubert Ltd or with a suitable qualified engineer.
- Have the Consent documents on site at the time of the inspection
- Be sure to verify both the grounding conditions (soil parameters) as well as the structural elements of works in question
- If in doubt what to get inspected please clarify with Council.

Producer Statements 4 - Construction Review Documents (PS4's) relates to Building Consents (BC) only, not Resource Consents (RC), unless there is an element of the RC which requires a BC, e.g. a retaining wall needed to develop a subdivision.

In soils, RC's are usually verified with a "Statement of Professional Opinion as to Suitability for Building Development", or variations on that title.

CONSTRUCTION MONITORING SERVICES

Construction monitoring refers to the physical inspection of selective components of the design or works as required by Council and as specified in the Consented documents. It is up to the Consent holder to read the special conditions set out by Council and arrange for the required inspections to be done. No PS4 can be issued without the physical inspection of works and sighting of Consented plans either by the design engineer, his representative, or another qualified engineer. (download PDF with more info via our website)

It is also important to note that, more often than not, there are two physical components that needs verification:

1. Geotechnical or grounding Conditions –referring to the strength or bearing capacity of the soil
2. Structural Components – verify that works are done as per design and in accordance with the consented plans.

To complicate matters there can be multiple engineers that might be engaged on the same site:

- Civil Engineer – To do storm water and wastewater designs
- Geotechnical Engineer – to do a Geotech report and specificity soil parameters as required
- Structural Engineer – to design structural components such as retaining walls, raft floors, beams and so on.

In cases where engineers from different companies are appointed it is important to make sure all the required boxes are ticked as not to complicate matters when it comes to the issuing of all the relevant PS4's.

Note: sites in the Auckland area might requires multiple PS4's for the same component (e.g. a raft floor requires a Geotechnical Engineer to verify the bearing capacity of the platform and a Structural engineer needs to verify the structural components are according to the design.

Not to mention a Council inspection is also required on the same floor to verify position, plumbing and so on.

In Summary:

- Read the conditions as laid out in the Consent documents to which elements of the design requires a PS4's from the design engineer.
- Have Consented plans on site during inspection time
- Book inspections ahead of time (a minimum of 48 hours in advanced)
- Ensure both grounding conditions as well as structural components are inspected. In some cases, this might mean two separate inspections if different engineers are involved.
- If you have any further questions, feel free to contact us at any time during business hours.



Construction Monitoring Enquiries

Email: jobs@wjl.co.nz

or scan QR code to visit our website

TP58 & TP10

Up Date

Jake Currin & Ella Harris

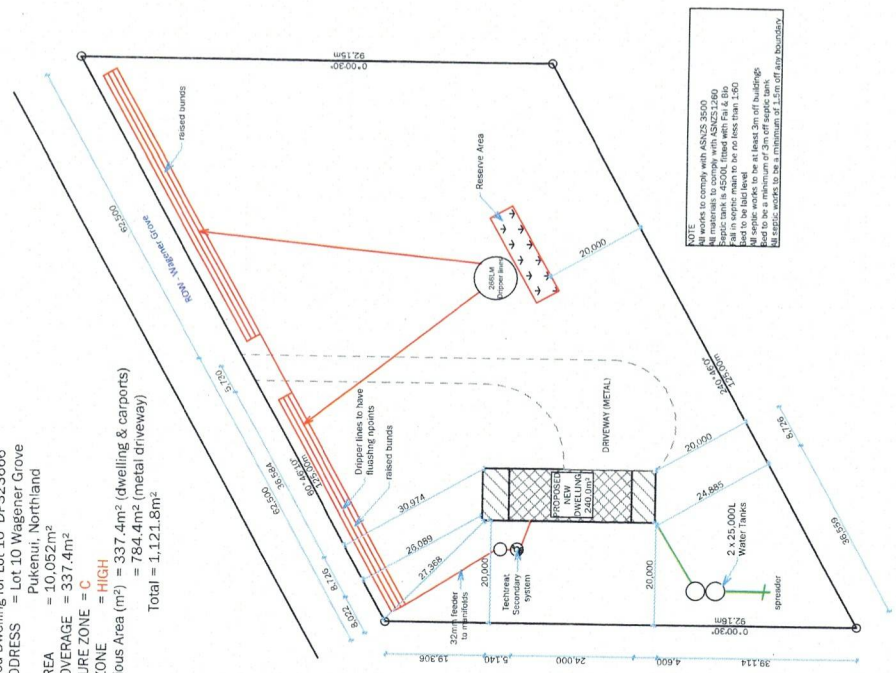
Wagener Grove

Pukenui

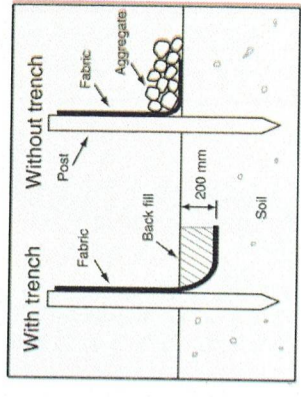
June 2026



Proposed Dwelling for Lot 10, DP323666
 = Lot 10 Wagerer Grove
 Pukenui, Northland
 SITE AREA = 10,052m²
 SITE COVERAGE = 337.4m²
 WIND ZONE = HIGH
 Impervious Area (m²) = 337.4m² (dwelling & carports)
 = 784.4m² (metal driveway)
 Total = 1,121.8m²



Driveways & Paths comply with NZBC D1/AS1
 Surface water to comply with NZBC E1/AS1.
 Surface water from all new impermeable surface
 to be collected and piped away from building.
 The building site is to comply with NZBC F5 Construction
 and Demolition Hazards. Provide 2.0m high site barrier
 to prevent unauthorized access.



SEDIMENT CONTROL SYSTEM

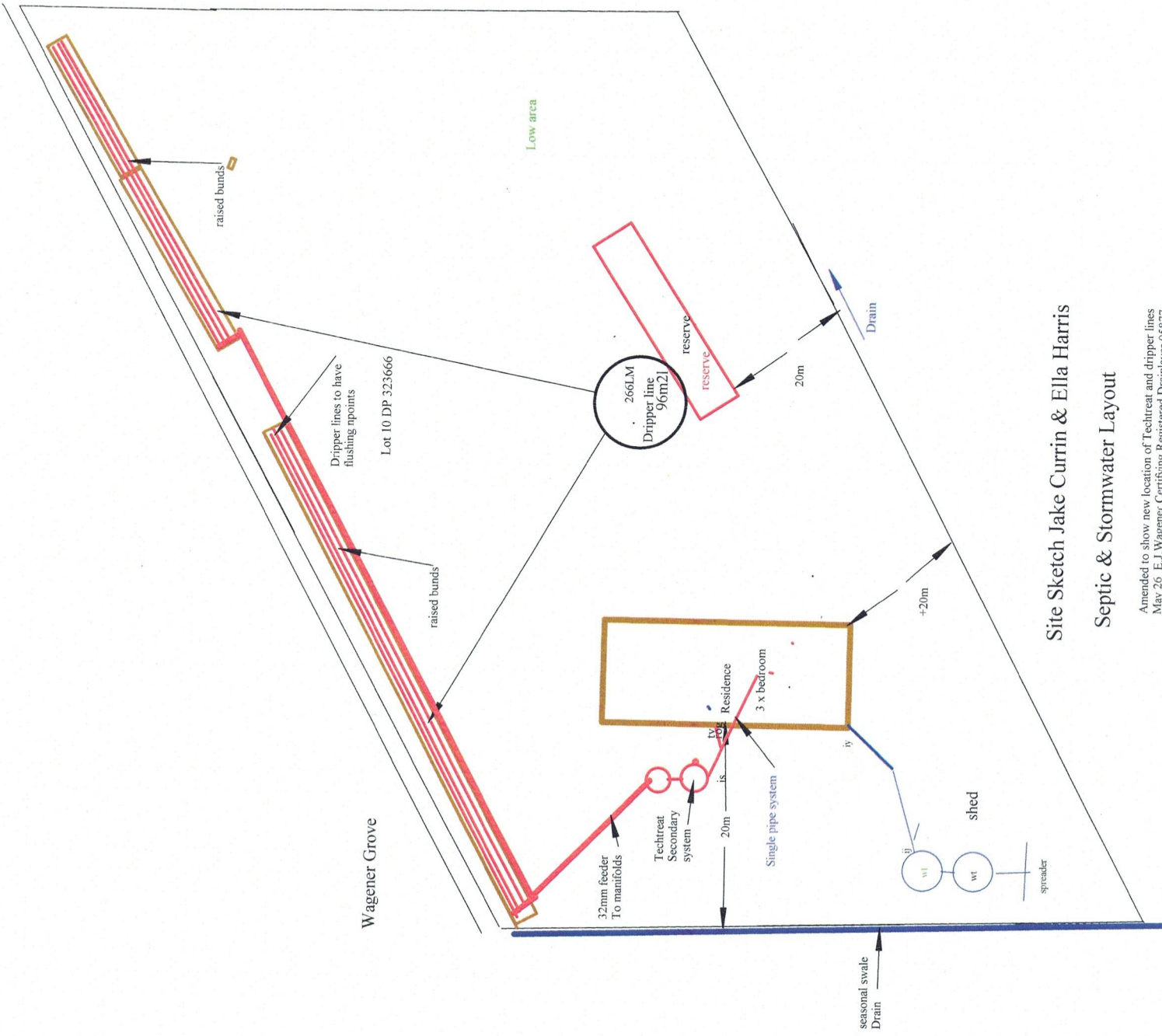


ENDC-AERIAL MAP

All dimensions & underground service locations to be checked prior to construction.
 of all works. DO NOT scale off drawings. Cross reference all drawings, confirm size
 levels, floor heights & restrictions prior to earthworks. If any discrepancies, ask the
 engineer for clarification. All dimensions & underground service locations remain the property
 of Halo Homes Ltd and are provided for use as described above. No liability for loss or
 re-produced in whole or part without written permission.

Notes

- All works to comply with AS/NZS 3500
- All materials to comply with AS/NZS 1260
- Septic tank is 4500L fitted with Fa & Bio
- Fall in septic main to be no less than 1:60
- Bed to be laid level
- All septic works to be at least 3m off buildings
- Bed to be a minimum of 3m off septic tank
- All septic works to be a minimum of 1.5 off any boundary



Site Sketch Jake Currin & Ella Harris

Septic & Stormwater Layout

Amended to show new location of Techreat and drifter lines
May 26 E.J Wagener Certifying Registered Drainlayer 05877

PRODUCER STATEMENT

DESIGN: ON-SITE EFFLUENT DISPOSAL SYSTEMS (T.P.58)

ISSUED BY:.....*Eric Wagener*..... (approved qualified design professional)

TO:.....*Jake Currin & Ella Harris*..... (owner)

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

PROPERTY LOCATION:... *Lot 10 Wagener Grove Pukenui R.D.4 Kaitaia*.....

LEGAL DESCRIPTION*Lot 10 DP323666*.....

TO PROVIDE : Design an on-site effluent disposal system in accordance with Technical paper 58 and provide a schedule to the owner for the systems maintenance.

THE DESIGN: Has been in accordance with G13 (Foul Water) G14 (Industrial Liquid Waste) B2 (durability 15 years) of the Building Regulations 1992.

As an independent approved design professional covered by a current policy of Professional Indemnity

Insurance (Design) to a minimum value of \$200,000.00, I BELIEVE ON REASONABLE GROUNDS that subject to:

- (1) The site verification of the soil types.
- (2) All proprietary products met the performance requirements.

The proposed design will meet the relevant provisions of the Building Code and 5.3.11 of The Far North District Council Engineering Standards.

.....*Eric Wagener*..... (Signature of approved design professional)

.....*Certifying Registered Drainlayer*..... (Professional qualifications)

.....*05877*..... (Licence Number or professional Registration number)

Address*3778 Far North Rd, RD4 Kaitaia*.....

Phone Number.....*09 4098 854*.....

Fax Number

Cell Phone*0274 885 584*.....

Date*20/3/2025*.....

Note: This form is to accompany every application for a Building Consent incorporating a T.P.58. Approval as a design professional is at Councils discretion.

FAR NORTH DISTRICT COUNCIL

Appendix E

TP58

On-site Wastewater Disposal Site Evaluation Investigation Checklist

Part A –Owners Details

1. Applicant Details:

Applicant Name	<i>Jake Currin</i>		
Company Name			
	First Name(s)	Surname	
Property Owner Name(s)	<i>Jake Currin & Ella Harris</i>	<i>Currin & Harris</i>	
Nature of Applicant*	<i>Owner</i>		

(*i.e. *Owner, Leasee, Prospective Purchaser, Developer*)

2. Consultant / Site Evaluator Details:

Consultant/Agent Name	<i>Eric Wagener & Robert Wagener</i>		
Site Evaluator Name			
Postal Address	<i>3778 Far North Rd</i>		
	<i>RD4</i>		
	<i>Kaitaia</i>		
Phone Number	Business	<i>094098854</i>	Private
	Mobile	<i>0274885584</i>	Fax
Name of Contact Person	<i>Eric Wagener</i>		
E-mail Address	<i>ewagener@xtra.co.nz</i>		

3. Are there any previous existing discharge consents relating to this proposal or other waste discharge on this site?

Yes		No	<input checked="" type="checkbox"/>	(Please tick)
-----	--	----	-------------------------------------	---------------

If yes give Reference Numbers and Description

4. List any other consent in relation to this proposal site and indicate whether or not they have been applied for or granted

If so, specify Application Details and Consent No.

(eg. *LandUse, Water Take, Subdivision, Earthworks Stormwater Consent*)

<i>See CT</i>

Part B- Property Details

1. Property for which this application relates:

Physical Address of Property	<i>Lot 10 Wagener Grove Pukenui</i> <i>R.D.4 Kaitaia</i>
Territorial Local Authority	<i>FAR NORTH DISTRICT COUNCIL</i>
Regional Council	<i>NORTHLAND REGIONAL COUNCIL</i>
Legal Status of Activity	Permitted: <input checked="" type="checkbox"/> Controlled: Discretionary:
Relevant Regional Rule(s) (Note 1)	
Total Property Area (m ²)	<i>1051m2</i>
Map Grid Reference of Property If Known	

2. Legal description of land (as shown on Certificate of Title)

Lot No.		DP No.		CT No.	
<i>10</i>		<i>323666</i>			
Other (specify)					

Please ensure copy of Certificate of Title is attached

PART C: Site Assessment - Surface Evaluation

(Refer TP58 - Sn 5.1 General Purpose of Site Evaluation and Sn 5.2.2(a) Site Surface Evaluation)

Note: Underlined terms defined in Table 1, attached

Has a relevant property history study been conducted?

Yes No (Please tick one)

If yes, please specify the findings of the history study, and if not please specify why this was not considered necessary.

<i>There are no HAIL issues on the house plateau recorded, and no flood, or ecology issues noted. The property has been a life style block for many years.</i>

1. Has a Slope Stability Assessment been carried out on the property?

Yes		No	<input checked="" type="checkbox"/>	Please tick
-----	--	----	-------------------------------------	-------------

If No, why not?

Site visits and visual observation of the surrounding areas show no sign of instability.

If Yes, please give details of report (and if possible, please attach report):

Author	
Company/Agency	
Date of Report	
Brief Description of Report Findings:-	

2. Site Characteristics (See Table 1 attached):

Provide descriptive details below:

Performance of Adjacent Systems:

Systems are working within design limits!

Estimated Rainfall and Seasonal Variation:

Information available from N.I.W.A MET RESEARCH

1100-1300mm/yr

Vegetation / Tree Cover:

Grass,

Slope Shape: (Please provide diagrams)

Basically flat

Slope Angle:

Slope 1 > 3 degrees

Surface Water Drainage Characteristics:

Surface water will be alleviated by the natural contour of the land.

Flooding Potential: YES/NO

Will not flood at proposed building, or disposal field location.

If yes, specify relevant flood levels on appended site plan, i.e. one in 5 years and/or 20 year and/or 100 year return period flood level, relative to disposal area.

Surface Water Separation:

+20m

Site Characteristics: or any other limitation influencing factors

3. Site Geology Check Rock Maps

Soil is predominately classed as Tekopuru sand over sandstone and silica sand

Geological Map Reference Number **NZMS 290**

4. What Aspect(s) does the proposed disposal system face? (please tick)

North	<input checked="" type="checkbox"/>	West	
North-West		South-West	
North-East		South-East	
East		South	

5. Site clearances, (Indicate on site plan where relevant)

Separation Distance from	Treatment Separation Distance (m)	Disposal Field Separation Distance (m)
Boundaries	+20m	Check Council requirements +1.5m
Surface water, rivers creeks, drains etc	+20m	+20m
Groundwater	1.8	
Stands of Trees/Shrubs	NA	placed on bund
Wells, water bores	N/A	N/A
Embankments/retaining walls		
Buildings	+3m	+3m
Other (specify):	N/A	N/A

PART D: Site Assessment - Subsoil Investigation

(Refer TP58 - Sn 5.1 General Purpose of Site Evaluation, and Sn 5.2.2(a) Site Surface Evaluation and Sn 5.3 Subsurface Investigations)

Note: Underlined terms defined in Table 2, attached

1. Please identify the soil profile determination method:

Test Pit		Depth _____ m	No of Test Pits	
Bore Hole		Depth <u>0.750</u> _____ m	No of Bore Holes	2
Other (specify):				

Soil Report attached?

Yes No Please tick

2. Was fill material intercepted during the subsoil investigation?

Yes No Please tick

If yes, please specify the effect of the fill on wastewater disposal

3. Percolation testing (mandatory and site specific for trenches in soil type 4 to 7)

Please specify the method
Constant Head

Test Report Attached?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Please tick
-----------------------	-----	-------------------------------------	----	--------------------------	-------------

4. Are surface water interception/diversion drains required?

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Please tick
-----	--------------------------	----	-------------------------------------	-------------

If yes, please show on site plan

4a Are subsurface drains required

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
-----	--------------------------	----	-------------------------------------

If yes enter details

5. Please state the depth of the seasonal water table:

Winter	<i>Not found @ 1.3m</i>	Measured	<input type="checkbox"/>	Estimated	<input checked="" type="checkbox"/>
Summer	<i>Est 1.5></i>	Measured	<input type="checkbox"/>	Estimated	<input checked="" type="checkbox"/>

6. Are there any potential storm water short circuit paths?

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Please tick
-----	--------------------------	----	-------------------------------------	-------------

If the answer is yes, please explain how these have been addressed

7. Based on results of subsoil investigation above, please indicate the disposal field soil category (Refer TP58 Table 5.1)

Is Topsoil Present?	<i>Yes</i>	If so, Topsoil Depth? (m)	<i>100> mm</i>
---------------------	------------	---------------------------	-------------------

Soil Category	Description	Drainage	Tick One
1	Gravel, coarse sand	Rapid draining	<input type="checkbox"/>
2	Coarse to medium sand	Free draining	<input type="checkbox"/>
3	Medium-fine & loamy sand	Good drainage	<input type="checkbox"/>
4	Sandy loam, loam & silt loam	Moderate drainage	<input type="checkbox"/>
5	Sandy clay-loam, clay-loam & silty clay-loam	Moderate to slow drainage	<input type="checkbox"/>
6	Sandy clay, non-swelling clay & silty clay	Slow draining	<input checked="" type="checkbox"/>
7	Swelling clay, grey clay, hardpan	Poorly or non-draining	<input type="checkbox"/>

Reasons for placing in stated category

<i>Onsite evaluation put this soil into category 6</i>
<i>Category was found to be as per soil mapping</i>

PART E: Discharge Details

1. Water supply source for the property (please tick):

Rainwater (roof collection)	<input checked="" type="checkbox"/>
Bore/well	<input type="checkbox"/>
Public supply	<input type="checkbox"/>

2. Calculate the maximum daily volume of wastewater to be discharged, unless accurate water meter readings are available

(Refer TP58 Table 6.1 and 6.2)

Number of Bedrooms	3	
Design Occupancy	5	(Number of People)
Per capita Wastewater Production	160	(Litres per person per day)
Other – specify		
Total Daily Wastewater Production	800L	(Litres per day)

3. Do any special conditions apply regarding water saving devices

a) Full Water Conservation Devices?	Yes		No	<input checked="" type="checkbox"/>	(Please tick)
b) Water Recycling - what %?		%			(Please tick)

If you have answered yes, please state what conditions apply and include the estimated reduction in water usage

4. Is Daily Wastewater Discharge Volume more than 2000 litres:

Yes	<input type="checkbox"/>	(Please tick)
No	<input checked="" type="checkbox"/>	(Please tick)

Note if answer to the above is yes, an N.R.C wastewater discharge permit may be required

5. Gross Lot Area to Discharge Ratio:

Gross Lot Area	10151	m ²
Total Daily Wastewater Production	800	(Litres per day)(from above)
Lot Area to Discharge Ratio	12.6	

7. Does this proposal comply with the Northland Regional Council Gross Lot Area to Discharge Ratio of greater than 3?

Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	(Please tick)
-----	-------------------------------------	----	--------------------------	---------------

8. Is a Northland Regional Council Discharge Consent Required?

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	(Please tick)
-----	--------------------------	----	-------------------------------------	---------------

PART F: Primary Treatment (Refer TP58 Section 7.2)

1. Please indicate below the no. and capacity (litres) of all septic tanks including type (single/dual chamber grease traps) to be installed or currently existing: If not 4500 litre, dual chamber explain why not

Number of Tanks	Type of Tank	Capacity of Tank (Litres)
2	<i>uPVC Techtrete primary & secondary</i>	<i>6000L</i>
	Total Capacity	<i>6000L</i>

2. Type of Septic Tank Outlet Filter to be installed?

Bio filter

PART G: Secondary and Tertiary Treatment

(Refer TP58 Section 7.3, 7.4, 7.5 and 7.6)

1. Please indicate the type of additional treatment, if any, proposed to be installed in the system: (please tick)

Secondary Treatment	<input checked="" type="checkbox"/>			
Home aeration plant	<input type="checkbox"/>			
Commercial aeration plant	<input type="checkbox"/>			
Intermediate sand filter	<input type="checkbox"/>			
Recirculating sand filter	<input type="checkbox"/>			
Recirculating textile filter	<input type="checkbox"/>			
Clarification tank	<input type="checkbox"/>			
Tertiary Treatment	<input type="checkbox"/>			
Ultraviolet disinfection	<input type="checkbox"/>			
Chlorination	<input type="checkbox"/>			
Other	<input type="checkbox"/>	Specify <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 100px; height: 20px;"></td></tr><tr><td style="width: 100px; height: 20px;"></td></tr></table>		

PART H: Land Disposal Method

(Refer TP58 Section 8)

1. Please indicate the proposed loading method: (please tick)

Gravity	<input type="checkbox"/>
Dosing Siphon	<input type="checkbox"/>
Pump	<input checked="" type="checkbox"/>

2. High water level alarm to be installed in pump chambers

Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
-----	-------------------------------------	----	--------------------------

If not to be installed, explain why

3. If a pump is being used, please provide the following information:

Total Design Head	>12m	(m)
Pump Chamber Volume		(Litres)
Emergency Storage Volume		(Litres)

4. Please identify the type(s) of land disposal method proposed for this site: (please tick)

(Refer TP58 Sections 9 and 10)

Surface Dripper Irrigation	<input checked="" type="checkbox"/>	
Sub-surface Dripper irrigation	<input type="checkbox"/>	
Standard Trench	<input type="checkbox"/>	
Deep Trench	<input type="checkbox"/>	
Mound	<input type="checkbox"/>	
Conventional bed	<input type="checkbox"/>	
Other		Specify <input type="text"/>

5. Please identify the loading rate you propose for the option selected in Part H, Section 4 above, stating the reasons for selecting this loading rate

Loading Rate	<i>Ksat 5</i>	(Litres/m ² /day)
Disposal Area	Design	160m ² (m ²)
	Reserve	160m ² (m ²)

Explanation (Refer TP58 Sections 9 and 10)

DWF 160L/D = 800/5 = 160m ² = area of disposal
800/3L/emitter = 266Lm of dripper line

6. What is the available reserve wastewater disposal area (Refer TP58 Table 5.3)

Reserve Disposal Area (m ²)	160m ²
Percentage of Primary Disposal Area (%)	100%

7. Please provide a detailed description of the design and dimensions of the disposal field and attach a detailed plan of the field relative to the property site:

Description and Dimensions of Disposal Field:

<i>See Design Site Plan</i>				
Plan Attached?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

If not, explain why not

PART I: Maintenance & Management

(Refer TP58 Section 12.2)

1. Has a maintenance agreement been made with the treatment and disposal system suppliers?

Yes		No	<input checked="" type="checkbox"/>
-----	--	----	-------------------------------------

 (Please tick)

Name of Suppliers

--

PART J: Assessment of Environmental Effects

1. Is an assessment of environmental effects (AEE) included with application?

(Refer TP58 section 5. Ensure all issues concerning potential effects addressed)

Yes	<input checked="" type="checkbox"/>	No	
-----	-------------------------------------	----	--

 (Please tick)

If Yes, list and explain possible effects

All development has effects however these are seen to be minimal given the mitigation measures

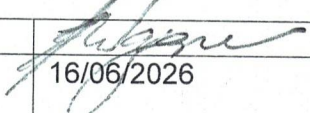
PART K: Is Your Application Complete?

1. In order to provide a complete application you have remembered to:

Fully Complete this Assessment Form	<input checked="" type="checkbox"/>
Include a <i>Location Plan</i> and <i>Site Plan</i> (with Scale Bars)	<input checked="" type="checkbox"/>
Attach an Assessment of Environmental Effects (AEE)	<input checked="" type="checkbox"/>

1. Declaration

I hereby certify that, to the best of knowledge and belief, the information given in this application is true and complete.

Name	Eric Wagener	Signature	
Position	Certifying Reg Drainlayer	Date	16/06/2026

Note

Any alteration to the site plan or design after approval will result in non compliance.

Jake Currin & Ella Harris

Constant Head Ksat Test Results

	Depth of Hole mm	Height of Water in Hole mm	Drop in Tube mm	Volume drained from Tube mL	Time mins:sec	Time decimal	mL per min
Hole 1	750	725	1150	479	31sec	0.6	821
Hole 2							
Average							821

Ksat Calcs

Q
 Rate of loss of water (cm³/min) 821
H
 Depth of water in test hole (cm) 725
r
 Radius of hole (cm) 9
 0.027 m/d
 27 mm/d

Design Calculations

Bedrooms 4
Design Occupancy 6
Per capita wastewater production 160 L/d
Daily wastewater production 960 L/d
 0.96 m³/d
DLR 10 mm/d
 0.01 m/d
Treatment Area Required 96.00 m²

Borehole Profile



Effluential DrainLayers Ltd

3778 Main North Road

R.D.4

Kaitaia 0484

Phone 09 409 8854 Fax 09 409 7720 Mobile 0274 8855 84

20//03/2025

Jake Currin & Ella Harris

Lot 10 Wagener Grove

Pukenui

Report on Storm Water Attenuation

Purpose

To control/assist the management of the effects of stormwater runoff from building developments and mitigate the impact this has on infrastructural assets.

Considerations

It needs to be accepted that the impact is greater in densely populated areas and less in urban/rural.

The definition of soakage is the process where a permeable substance receives a liquid, in this case where storm water is disposed of into ground, or effective runoff slowed so as to minimize effects on the environment or infrastructure.

The infiltration factor k_{sat} assessment, assists in mitigating runoff impact.

Characteristics that determine permeability are soil structure, soil particle size, and geomorphology.

The flow rate of the soakage discharge is also dependent upon the soakage area and the hydraulic pressure forcing water into the absorbent media.

Site Description

The property is located off Wagener Grove. Pukenui Area being 10151m²

This is a large section predominantly covered in grass with a few trees. The property is relatively flat, having an elevated part to the west and gently slopes to the southeast.

There is an open drain along the entire length of the south-eastern boundary line. This drain ultimately reaches the Raio Creek.

Natural surface water would be directed away from a new building via the contours of the land.

The soil type is listed as Te Kopuru sand over sand stone. Soil maps class this as poorly drained.

Effluential DrainLayers Ltd

3778 Main North Road

R.D.4

Kaitaia 0484

Phone 09 409 8854 Fax 09 409 7720 Mobile 0274 8855 84

Design Criteria

Soakage devices must be 3m from dwellings.

The Far North District Council aligns storm water attenuation requirements with other authorities.

The Whangarei District Council requires site attenuation when the percentage of impermeable surfaces exceeds 2%.

The Auckland Regional Council prepared TP10 as a reference on a similar basis and ASNZS 1547 is also structured in the same manner.

The spread sheet used in calculating Attenuation requirements has been developed in conjunction with the FNDC stormwater Engineer.

The Far North District Council information was designed specifically to enable storm water design to be expedited quickly. The ARC prepared TP10 on the same basis. ASNZS1547 is also structured in the same manner.

Therefore, attenuation is only required when the ratio of impermeable surfaces to total property area exceeds 2%. However other factors can influence the requirement to attenuate.

Design Calculations

All calculations submitted are via Stormwater calculation spread sheet. It is a given that new calculations may be required should future development take place.

Run off from impervious surfaces on a total land area of 101510m² is of marginal concern. The estimated additional impermeable surfaces have been calculated as: residential 337.4m², driveway 784.4m², This is a combined total of 1121.8m² out of an overall 10151m².

The ratio of impermeable surfaces to overall area is 11%.

In line with the design criteria above, the property, with a ratio of 11%, should require attenuation. However, given that there is a large open drain along the south-eastern boundary that within 400m drains to the Raio Creek it is unlikely that the proposed development will have a negative effect on council infrastructure.

Design Proposal

Any development has some adverse effects however in relation to the major area the effects are small, with stormwater having no immediate effect on any regional infrastructure.

Effluential DrainLayers Ltd

3778 Main North Road

R.D.4

Kaitaia 0484

Phone 09 409 8854 Fax 09 409 7720 Mobile 0274 8855 84

The principle being used in this case is that stormwater generated by the building roof area is discharged via 100mm uPVC stormwater pipe and spreader to the surrounding environment. The cumulative effects from this sized development will be minor, in relation to the whole.

Devices which discharge water via infiltration through soil provide a storm water quality benefit to the receiving environment and the in-situ soil acts as a filter media for removing contaminants. This is a known beneficial factor and provides for infiltration devices to be used as storm water quality treatment.

On site observation indicates that there is not, and is unlikely to be, any erosion from this source.

It is most unlikely given the percentage of impervious surfaces that there will be any environmental effect which cannot be contained within the boundaries with this proposed development.

This combination of circumstance lessens the impact on the downstream environment while providing for the maximum soil absorption as proposed by TP10, again lessening the potential impact on infrastructure.

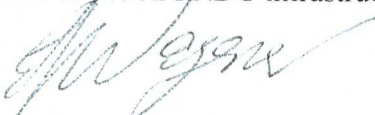
Regional Plan:

The Northland Regional Council proposed rule C6.4.2 provides for the diversion and discharge of stormwater from outside a public stormwater network, provided that (amongst other conditions) the discharge or diversion does not cause or increase nuisance or damage to other property. In this case there will be no affected neighbouring properties.

Therefore, this proposal is in accordance with NRC Rule C6.4.2.

Conclusion:

Any stormwater overflow from this proposed building will be discharged via a spreader bar to the surrounding environment at the south-east of the building site. There will be no cumulative effect on FNDC infrastructure.



Eric Wagener Certifying Registered Drainlayer 05877

Robert Wagener (Engineer) Effluential Drainlayers Associate

4 Calculate maximum storage volume

For period 2081-2100									
Chart intensity hr values steps used	Chart intensity accumulated minute steps	Storm duration- THR (hr)	Storm duration- Event data, TMIN5 mins	Attenuation calc. to Catchment pre-devel. plus orifice flow out		Houhora CC		Chart step factor	Check Adjust step factor if required
				Qa (L/sec)	Qtin (L/sec)	Post-dev RCP6 10 yr	Houhora Pre-dev (0 deg) 10 yr		
48	720	12.00	720	0.90	4.93	3.33	2.99	1.4	
24	1080	6.00	360	1.7	9.8	5.72	5.05	1	OK
12	1260	3.00	180	3.1	16.1	9.6	8.31	0.55	Lower Factor
6	1380	2.00	120	5.4	25.6	15.6	13.3	0.55	OK
2	1410	0.50	30	12.2	50.8	31.9	26.5	0.9	OK
1	1425	0.25	15	18.7	78.7	47.8	39.4	0.8	OK
30	1430	0.08	5	27.2	112.6	69.3	57.1	0.04	OK
20	1435	0.08	5	33.2	137.0	84.9	70	1.0	OK
10	1440	0.08	5	46.7	185.4	118	97	1.0	OK
10	1445	0.08	5	46.7	185.4	118	97	1.5	OK
20	1450	0.08	5	33.2	149.8	84.9	70	1.0	Lower Factor
30	1455	0.08	5	27.2	126.7	69.3	57.1	0.9	OK
1470	1470	0.25	15	18.7	88.3	47.8	39.4	0.8	OK
2	1500	0.50	30	12.2	53.9	31.9	26.5	1.1	OK
6	1620	2.00	120	5.4	26.2	15.6	13.3	1	OK
12	1800	3.00	180	3.1	16.1	9.6	8.31	1	OK
24	2160	6.00	360	1.7	9.7	5.72	5.05	0.8	OK
48	2880	12.00	720	0.9	6.3	3.33	2.99	0.73	OK

Catchment flow Qpat (cell MAX(P109:P130))
 Catchment flow = orifice flow out + catchment
 pre-development flow

For calculation purposes this section changes
 the dia only and thereby the area
 The information is not used for anything else

Qcap max.	Qp (m³/sec)	Qp (L/sec)	Qout max. (m³/sec)	Qout max. (L/sec)	Vstored max. Vol. stored, (m³)
130.250	0.1303	130.3	0.12550	185.90	19.559
Dia check	Dia	Area			OK
0.1976	0.19736	0.0306			OK
	197.35				OK

Use this orifice size for final design

Rational method

48hr

Pre - Development water flow (Original water flow)		48hr					
Area (m ²)	Roof & decks 1 (m ²)	Concrete & smooth seal 2 (m ²)	Metalled area Or rough seal 3 (m ²)	Other Impervious 4 (m ²)	Vegetation 5 (m ²)	Bush 6 (m ²)	
Total area	0	0	0	0	10052	0	
Runoff coefficient	Ci (coefficient)	Ci (coefficient)	Ci (coefficient)	Ci (coefficient)	Ci (coefficient)	Ci (coefficient)	
Use "C" values from FNDC TR55 chart Generally do not use slope adjustment Ci factor if using TR55	FALSE	FALSE	FALSE	FALSE	0.59	FALSE	
	0.96	0.96	0.3	0.65	0.59	0.59	
Rainfall intensity	I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	
Rainfall Data from NIWA, Hirds 4, RCP6, 2081-2100 Use an appropriate event for the situation	1.58	2.99	2.99	2.99	2.99	2.99	
Flow rate of surface water	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	
	0.000	0.000	0.000	0.000	0.005	0.000	
Pre - development flow of developed area	Qp (L/sec)	Qp (L/sec)					
	0.0049	4.93					
Any area where there is a change in the permeability values							
Pre-development area where there is a change in impermeable surfaces but not collected in attenuation system							
Roof & decks	Concrete & smooth seal	Metalled area Or rough seal	Vegetation	Metalled area or vegetation			
337.4	2 (m ²)	3 (m ²)	4 (m ²)	5 (m ²)	6 (m ²)	8 (m ²)	
Ci (coefficient)	Ci (coefficient)	Ci (coefficient)	Ci (coefficient)	Ci (coefficient)	Ci (coefficient)	Ci (coefficient)	
0.96	FALSE	0.90	0.59	0.2	0.3	FALSE	
0.96	0.96	0.9	0.59	"C" value difference between Pre & Post Maximum value 0.2 (at the moment)			
I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	I (mm/hr)	
3.33	3.33	3.33	3.33	2.99	2.99	2.99	
Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	Qc (m ³ /sec)	
0.000	0.000	0.001	0.005	0.000	0.000	0.000	
Qc (L/sec)	Qc (L/sec)	Qc (L/sec)	Qc (L/sec)	Qc (L/sec)	Qc (L/sec)	Qc (L/sec)	
0.30	0.00	0.85	4.87	0.00	0.00	0.00	
Qa (m ³ /sec)	Qa (L/sec)						
0.001	0.90						
Total included in attenuation system calc's post - development flow							
	Qlpp (m ³ /sec)	Qlpp (L/sec)					
	0.0009	0.90					
Post - Pre development flow							
Total post development flow							
	Qatl (m ³ /sec)	Qatl (L/sec)					
	0.0058	5.83					
Any area where there is no change to the permeability values							
Pre-development area where there is no change to the permeability values							
Metalled area or seal							
Vegetation							
7 (m ²)							
8 (m ²)							
Ci (coefficient)							
FALSE							
0.59							
I (mm/hr)							
2.99							
Qc (m ³ /sec)							
0.000							
Qc (L/sec)							
0.00							
Total no change, excluded from attenuation system calc's							
Qby (m ³ /sec)							
0.000							
Qby (L/sec)							
0.00							

Pre-development Slope %	10
Ci correction	0.00

Post-development Slope %	10
Ci correction	0.00



OMAIKO SUITE Basement rock: greywacke, argillite and quartz		
OV, OVH, OVp	Omaiko gravelly silt loam	3⇒2 OV Moderately to impe 1⇒0 OVH, OVp - Poorly to v
OMU SUITE Basement rock: mudstone, claystone, shale		
WK, WKH, WKp	Wharekohe silt loam	1⇒0 - Poorly to very poorly c
WKR	Wharekohe silt loam with brown subsoil	1⇒0 - Poorly to very poorly c
PINAHI SUITE Basement rock: sand and sand terraces		
OE	Ohia sand	5 - Very well drained
TX, TXp	Te Hapua fine sandy loam	2⇒1 TX Imperfectly to poorl 1⇒0 TXp Poorly to very poor
OEy	Ohia peaty sand	1⇒0 - Poorly to very poorly c
TEK	Te Kopuru sand	1⇒0 - Poorly to very poorly c
TEKm	Te Kopuru sand wet phase	1⇒0 - Poorly to very poorly c
TEKy	Te Kopuru peaty sand	1⇒0 - Poorly to very poorly c
PUHOI SUITE Basement rock: banded sandstone		
WKf, WKfp	Wharekohe fine sandy loam	1⇒0 - Poorly to very poorly c

Background to the summary for the Assessment of Environmental Effects and Mitigation Measures Appendix A-

Owner:

Jake Currin & Ella Harris
Lot 10 Wagener Grove
Pukenui R.D.4 Kaitaia

The property is located off Far North Road via a private road Wagener Grove. The site is part of a consolidated parabolic due structure, consisting in the main of Te Koupuru sands, followed by sandstone and then silica sand.

The property is flat to mildly undulating with minor falls. The building site, is shown on the site map. Site measurements are as per architectural drawings.

Natural surface water will be directed away from a new building via the natural contours of the land.

Risk Assessment:

The section is adjacent to other developments. Due to the topography of the site there is little chance of runoff from the building site effecting other properties. The sand type is highly absorbent in the summer and poor in winter. The natural fall is towards the main drain on the southern boundary, therefore runoff effect on other infrastructure is likely to have minimal effect.

The land mass is above any local recognised flood level. There are no ecological risks. No Hail issues have been identified with this area. The effluent system has been placed so that maximum separation possible is achieved from any assessed risk area. The wastewater and septic system have been designed using rates and design calculations from the ARC TP58 Design Manual approved by the FNDC.

The soakage is poor in winter. Groundwater in winter at the effluent site is at a depth greater than 0.8m. This is significantly deeper than the designed effluent disposal system, which in turn is elevated above the surrounding land mass.

Impact on surface water:

Visual evaluation of the site showed that adequate fall can be generated at the current proposed effluent site. This disposal area will not be affected by surface water. The primary treated effluent has been designed to be disposed of into the soil by conventional bed. There is sufficient slope on the section to ensure that there will be no surface water retention for any length of time which could affect or compromise the effluent disposal system chosen.

The designed effluent system is not seen to pose any threat to surface water for the above risk matrix reasons or pose a threat to others in the near vicinity.

Impact on groundwater:

On site exploration and extensive testing has shown:

- Tests carried out on the site indicate that the soil falls into a category 6. There will be adequate area for reserve areas. The proposed lot in general at over 10151m² has acceptable buffer areas.
- The decision tree process upon which the design was evaluated involved the careful analysis of soil structure, consideration of the areas available, the depth of soil available and the ability of the site to safely contain effluent discharge. The soil loading rates used were as a result of K_{sat} tests, those recommended in T.P58, and ASNZS standards.

Having taken all the above factors into consideration it is believed that there will be little possibility of any effect on groundwater. There is a buffer between the effluent site and any risk area. The location of the effluent disposal systems has been placed so that the horizontal movement of any contaminants would not cause a hazard or have any effect on the immediate environment.

Soil testing was completed in a period of very wet weather (June 2024)

Impact on the soil:

It is generally accepted that the degree of nitrogen leaching increases with higher soil carriage water (rain fall and effluent loading rate). Therefore, low effluent loading rates can assist in the mitigation of nitrogen leaching.

The primary mechanism for reducing nitrogen discharges into the receiving environment is the reduction of the organic load. In this case the opportunity for intensive organic load is not considered a major factor due to the low occupancy and the reliance on rainwater.

The soil type is listed as Te Koupuru sand. This is classed as being poorly drained. Onsite testing suggests drainage at this site is better than listed, the night before testing recording some 80mm of rain. Category 6 has been used for calculations.

Design mitigation measures:

The system installed for effluent disposal (appendix C) has been designed to maximise the potential for basal ground area, wall and transpiration disposal.

The separation distance of wastewater distribution from potential groundwater aquifers, which were not found, minimises the opportunity for any aquifer contamination. Storm water and storm water treatment is managed so that there will be no impact on effluent disposal.

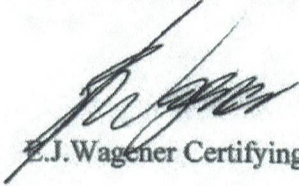
Amenity Values:

An in-depth study of the immediate areas of impact indicates that this proposal will have no more impact on the surrounding land users or occupiers than that currently existing. The current systems for the neighbouring dwellings into similar structures show no sign of septic stress.

Conclusion:

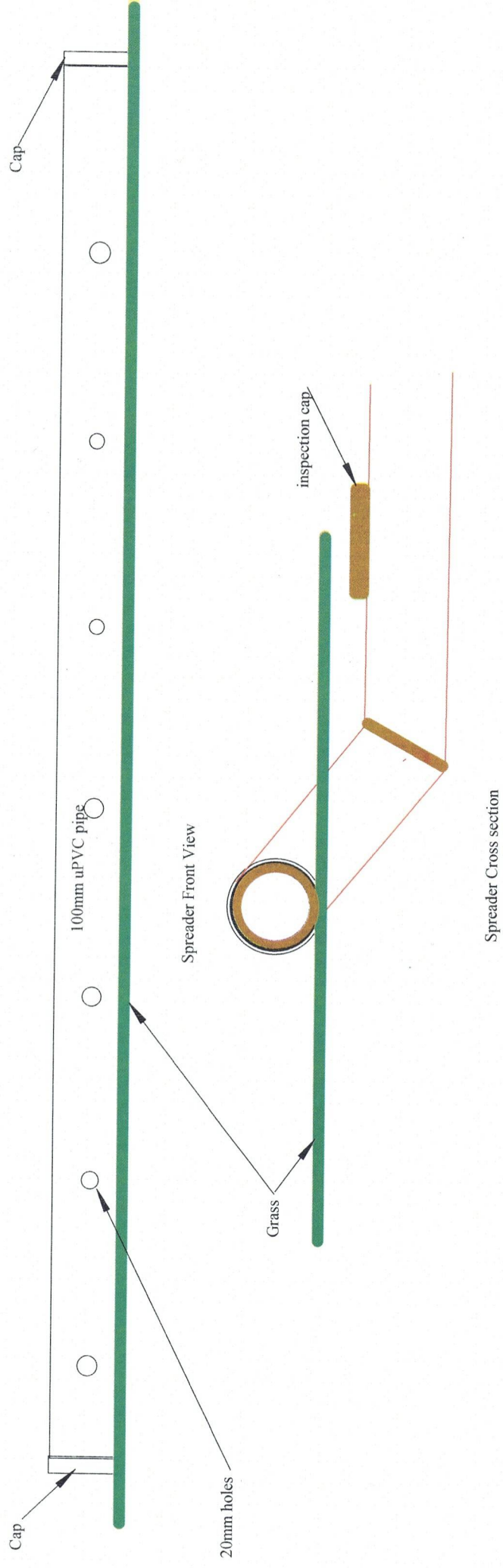
The summary of factors taken into consideration "Appendix A" leads to the conclusion that there are no environmental effects which are not mitigated by adequate design.

It is our assessment that there are no environmental effects that would give reasons why this change in use should not go ahead.



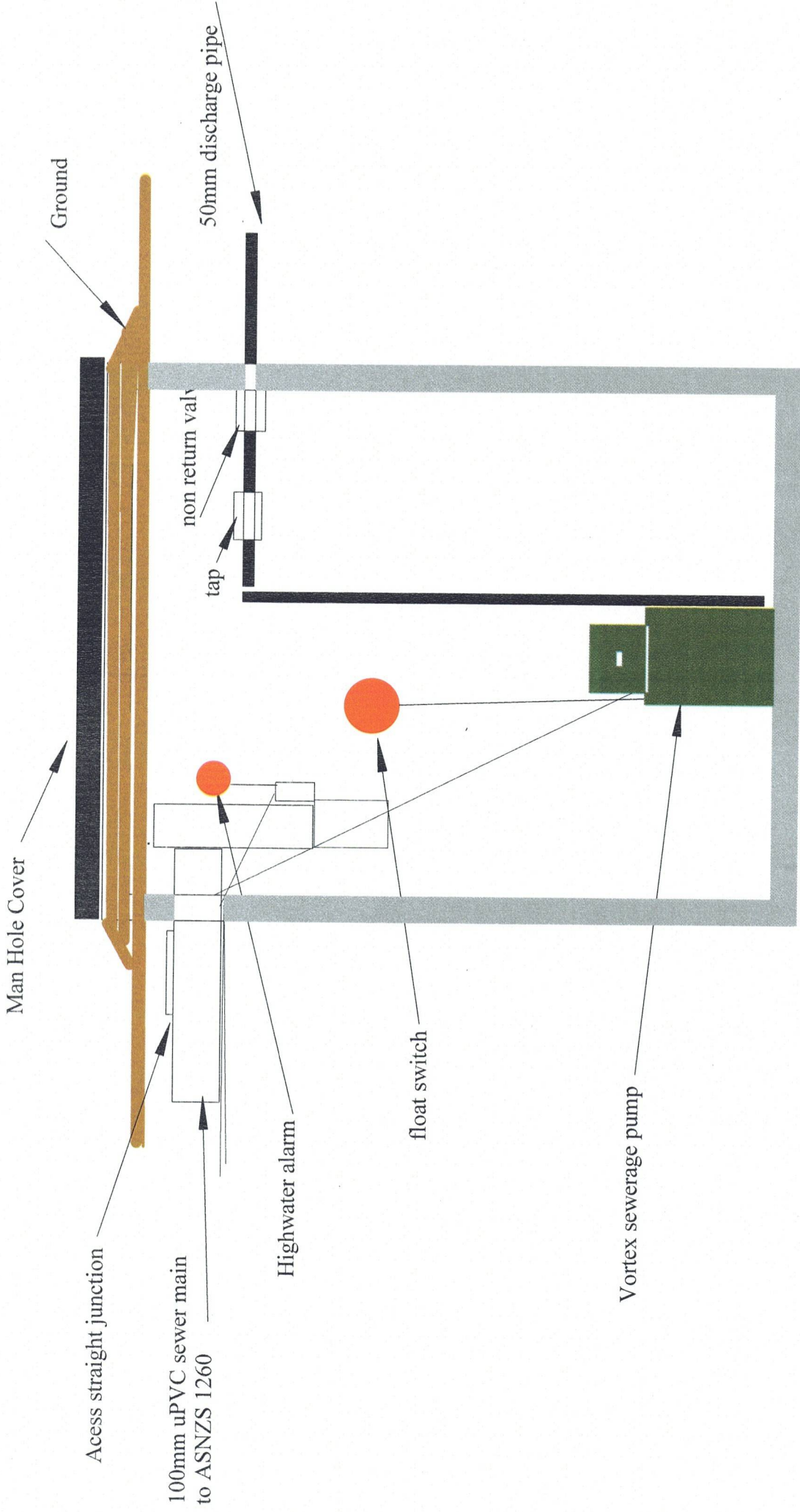
E.J. Wagener Certifying Registered Drainlayer 05877

Robert Wagener Associate Engineer



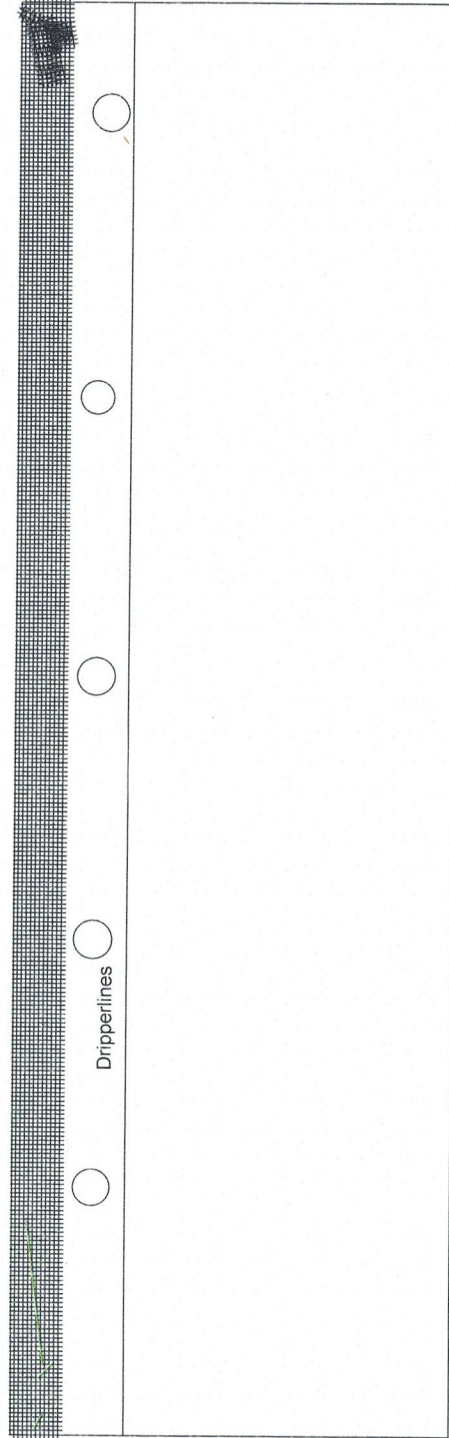
Spreader Detail Jake Currin * Ella Harris Wagener Grove Pukenui

E.J.Wagner Certifying Registered Drainlayer 05877



Pump Chamber Jake Currin Wagener Grove

Shallow sub-surface drip irrigation system cross section



Grass

Top Soil

Subsoil

3 bed room 5 persn
5 x 160 = 800L
allow 3L/m = 8003
=266 m dripper line

Note: Dripper lines to be fed via a manifold
Lines to be fitted with flushing valves
Pump mains to manifold to be fitted
with non return and gate valve

○ Jake Currin Dripper Line Ex Secondary Treatment

Note Dripper line to be pressure compensating, and root inhibited

DECISION ON LAND USE CONSENT APPLICATION UNDER THE RESOURCE MANAGEMENT ACT 1991

Decision

Pursuant to section 34A(1) and sections 104, 104B, and Part 2 of the Resource Management Act 1991 (the Act), the Far North District Council **grants** land use resource consent for a discretionary activity, subject to the conditions listed below, to:

Applicant:	Jake Currin and Ella Harris
Council Reference:	2260185-RMALUC
Property Address:	Lot 10, Wagener Grove, Pukenui 0484
Legal Description:	LOT 10 DP 323666 HAVING 1/11 SH IN LOT 13 DP 323666 (Record of Title 95372)

The activities to which this decision relates are listed below:

To construct a residential unit breaching visual amenity and stormwater management in the coastal living zone as a discretionary activity.

Conditions

Pursuant to sections 108 of the Act, this consent is granted subject to the following [conditions](#):

- The activity shall be carried out in general accordance with the approved plan and report referenced below, and attached to this consent with the Council's "Approved Stamp" affixed to them:

Drawing/Report Title	Prepared by	Dated
Site Plan (Sheet No. 101)	Mason Street	7/10/25
Wall Dimension Plan (Sheet No, 104)	Mason Street	7/10/25
Elevations (Sheet No. 201 and 202)	Mason Street	7/10/25
Report on Storm Water Attenuation	Effluential DrainLayers Ltd	20/03/2025
TP58 & TP10 Report	Effluential DrainLayers Ltd	No date.

- In conjunction with the installation of the roof for the proposed residential unit, the consent holder must construct a Stormwater Management System generally in accordance with the recommendations and plans contained within the Report on Storm Water Attenuation approved in Condition 1 of this consent.
- Within 3 months of the issue of the Code Compliance Certificate, the consent holder must provide a Producer Statement (PS3) from a suitably qualified and experienced person to Councils Resource Consent Engineer (planning_technicians@fndc.govt.nz) to confirm the Stormwater Management System was completed in general accordance with

the recommendations and plans contained within the Report on Storm Water Attenuation approved in Condition 1 of this consent.

4. The consent holder must pay the Council's compliance monitoring charges to cover the actual and reasonable costs incurred in monitoring compliance with the conditions of this consent, in accordance with section 36(1)(c) of the Resource Management Act.

Advice Notes

Lapsing of Consent

1. Pursuant to section 125 of the Act, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;
 - a) The consent is given effect to; or
 - b) An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Act.

Right of Objection

2. If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 357A of the Act) to object to the decision. The objection must be in writing, stating reasons for the objection and must be received by Council within 15 working days of the receipt of this decision.

Monitoring Condition

3. Compliance monitoring charges cover the costs associated with site inspections (where required), and the review of plans, reports, and other documentation to ensure compliance with the resource consent. These charges will be calculated based on the applicable hourly rate at the time and included in a final invoice once monitoring is complete. A letter confirming compliance will be issued by the Council, upon request, only after all consent conditions have been met.

Archaeological Sites

4. Archaeological sites are protected pursuant to the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence, pursuant to the Act, to modify, damage or destroy an archaeological site without an archaeological authority issued pursuant to that Act. Should any site be inadvertently uncovered, the procedure is that work should cease, with the Trust and local iwi consulted immediately. The New Zealand Police should also be consulted if the discovery includes koiwi (human remains). A copy of Heritage New Zealand's Archaeological Discovery Protocol (ADP) is attached for your information. This should be made available to all person(s) working on site.

General Advice Notes

5. During the assessment of your application it was noted that a private Land Covenant exists on your property. Council does not enforce private land covenants, and this does not affect Council approving your plans. However, you may wish to get independent legal advice, as despite having a resource consent from Council, the private land covenant can be enforced by those parties specified in the covenant.

6. *The consent holder is advised that Erosion and Sedimentation Control shall be designed and carried out in accordance with GD05 "Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region.*
7. *The consent holder is advised that at the date of issuing this consent any development and any earthworks undertaken as a result of this activity, or the consent conditions need to be undertaken in accordance with the relevant permitted rules and standards of the Proposed District Plan (PDP) which was notified on the 27th of July 2022. Please note, when Council releases its decisions on the PDP, these rules and standards may change.*

Reasons for the Decision

1. By way of an earlier report that is contained within the electronic file of this consent, it was determined that pursuant to sections 95A and 95B of the Act the proposed activity will not have, and is not likely to have, adverse effects on the environment that are more than minor, there are also no affected persons and no special circumstances exist. Therefore, under delegated authority, it was determined that the application be processed without notification.
2. The application is for a discretionary activity resource consent as such under section 104 the Council can consider all relevant matters.
3. In regard to section 104(1)(a) of the Act the actual and potential effects of the proposal will be acceptable as:
 - a. The visual effects as a result of the residential unit are considered to be less than minor due to the single storey height, central location within a large site anticipated to be utilised for residential development, and the presence of established boundary landscaping that provides screening when viewed from the wider environment. The dwelling is not visible from public viewpoints, including the coastal marine area and State Highway 1, and therefore does not alter public amenity or landscape character.
 - b. The appearance of the residential unit is not anticipated to create adverse character or dominance effects, as the scale and form of the building are consistent with the established pattern of residential development within Wagener Grove. The applicant has proposed to use recessive colours with a Light Reflectance Value below 30% to ensure the building integrates with the surrounding environment.
 - c. Stormwater effects are considered to be acceptable because the proposal exceeds the permitted impermeable surface threshold by only 1%, which is a marginal exceedance of the permitted level of impermeable surfaces on site. The stormwater management system will collect all roof and hardstand runoff in two 25,000 litre tanks, with overflow discharged via a spreader bar to ground. The Resource Consents Engineer has reviewed and accepted the design.
 - d. The receiving environment contains similar residential development patterns, including dwellings and large accessory buildings on comparable sized lots. When viewed within this context, the proposal does not introduce any new or intensified

effects beyond what is anticipated in the Coastal Living Zone. As a result, the overall level of environmental effects is considered to be less than minor.

- e. Any adverse effects on Iwi/Hapu are considered to be less than minor as there are no known archaeological or culturally significant sites on the property.
 - f. Any adverse effects on neighbouring persons will be less than minor.
 - g. The proposal will also result in positive effects, including contributing to local housing stock within a subdivision development anticipated to contain this type of built form.
4. In regard to section 104(1)(ab) of the Act there are no offsetting or environmental compensation measures proposed or agreed to by the applicant for the activity.
5. In regard to section 104(1)(b) of the Act the following statutory documents are considered to be relevant to the application:
- a. Operative Far North District Plan 2009,
 - b. Proposed Far North District Plan 2022

Operative Far North District Plan

Coastal Living Zone

Objectives: 10.7.3.1 and 10.7.3.2

Policies: 10.7.4.1, 10.7.4.2, and 10.7.4.3

The proposal is consistent with the relevant objectives and policies of the Coastal Living Zone. It enables low density residential use through the construction of a single storey residential unit that will be partially visually screened by existing vegetation/landscaping. The site is not located within a sensitive landscape and is not anticipated to diminish the natural character of the surrounding environment, and includes stormwater management controls to mitigate stormwater effects. It is not anticipated to affect heritage sites or cultural values, with accidental discovery protocols in place. Overall, the proposal maintains amenity values, provides an adequate stormwater management system, and represents an appropriate form of development anticipated by the zone.

Proposed Far North District Plan

Rural Lifestyle Zone

Objectives: RLZ-O1, RLZ-O2, RLZ-O3, and RLZ-O4

Policies: RLZ-P1, RLZ-P2, and RLZ-P4

The proposal aligns with the objectives and policies of the Rural Lifestyle Zone. The proposed single residential unit is considered to be low density residential use and is consistent with the expected form and scale of development in the zone. The building is modest, single storey, and well sited within the property, maintaining open space and rural character. The proposal does not introduce any urban, industrial, or high-intensity activity, nor does it compromise the role, function, or amenity of the zone. The

development is internalised within the site and avoids adverse effects on adjoining properties, with mature boundary vegetation providing visual screening. Adequate on-site stormwater management ensures environmental effects can be managed. There are no anticipated reverse sensitivity effects on adjacent Rural Production land, and no cultural, heritage, or ecological values are affected. The activity is therefore considered appropriate in the context of the Rural Lifestyle Zone and consistent with the strategic intent of the zone policies and objectives.

Although hearings on the Proposed Far North District Plan have concluded, decisions have not yet been released, and there remains potential for changes through the statutory process. While the PDP rules (other than those with immediate legal effect) cannot be applied at this stage, the relevant PDP objectives and policies remain applicable. The current Operative Coastal Living Zone objectives and policies and the Proposed Rural Lifestyle Zone objectives and policies generally align, as the Coastal Living Zone is coastal character driven and transitional between coastal residential and general coastal areas, the Rural Lifestyle Zone is rural character driven and functions as a transition between rural residential areas and Rural Production zones. Despite these contextual differences, both zones anticipate low density residential use supported by appropriate servicing, building design, and the retention of amenity and character values.

6. In regard to section 104(1)(c) of the Act there are no other matters relevant and reasonably necessary to determine the application.
7. Based on the assessment above the activity will be consistent with Part 2 of the Act. The activity will avoid, remedy or mitigate any potential adverse effects on the environment while providing for the sustainable management of natural and physical resources and is therefore in keeping with the Purpose and Principles of the Act. There are no matters under section 6 that are relevant to the application. The proposal is an efficient use and development of the site that will maintain existing amenity values without compromising the quality of the environment. The activity is not considered to raise any issues in regard to Te Tiriti o Waitangi.
8. Overall, for the reasons above it is appropriate for consent to be granted subject to the imposed conditions.

Approval

This resource consent has been prepared by Eden Nathan, Intermediate Resource Planner. I have reviewed this and the associated information (including the application and electronic file material) and for the reasons and subject to the conditions above, and under delegated authority, grant this resource consent.



Nicola Cowley

Date: 2nd December 2025

Principal Planner