

Application for resource consent or fast-track resource consent

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

1. Pre-Lodgement Meeting

Have you met with a council Resource Consent representative to discuss this application prior to lodgement? ☐ Yes ☒ No

2. Type of Consent being applied for

(more than one circle can be ticked):

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

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

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

☒ Yes ☐ No

4. Consultation

Have you consulted with Iwi/Hapū? ☐ Yes ☒ No

If yes, which groups have you consulted with?

Who else have you consulted with?

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

5. Applicant Details

Name/s:

Regan Polglaze

Email:

Phone number:

Postal address:

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

6. Address for Correspondence

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

Name/s:

Northland Planning & Development 2020 Ltd

Email:

Phone number:

Postal address:

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

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

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

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

Name/s:

Rebekah and Regan Polglaze

**Property Address/
Location:**

Postcode

0295

8. Application Site Details

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

Name/s:

Regan Polglaze

**Site Address/
Location:**

Legal Description:

Va

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.

Please contact the applicant prior to arranging a site 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.

Land Use resource consent for extensions to an existing dwelling and removal of existing minor residential unit, with a new minor residential unit proposed. The proposal will also include activities approved under RC2240317, with RC2240317 proposed to be surrendered subject to approval of this application. The proposal requires consent as a Discretionary Activity within the Rural Production zone under the ODP.

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

10. Would you like to request Public Notification?

☐ Yes ☒ No

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

(more than one circle can be ticked):

- ☒ **Building Consent**
- ☐ **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. Assessment of Environmental Effects:

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

Your AEE is attached to this application ☒ Yes

13. Draft Conditions:

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

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

14. Billing Details:

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

Name/s: (please write in full) Regan Polglaze

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)

Regan Polglaze

Signature:

(signature of bill payer)

15. Important Information:

Note to applicant

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

You may apply for 2 or more resource consents that are needed for the same activity on the same form. You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

Fast-track application

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

Privacy Information:

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

15. Important information continued...

Declaration

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

Name: (please write in full)

Regan, Polylare

Signature:

Checklist (please tick if information is provided)

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

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

Land-Use Consent for
Regan Polglaze
11 Ironbark Road, Kerikeri

Date: 26 August 2025

To whom it may concern.

Please find attached:

- an application form for a Land-use Resource Consent for extensions to an existing dwelling and a replacement minor dwelling as well as activities previously consented under approved RC2240137 within the **Rural Production zone** and
- an Assessment of Environmental Effects indicating the potential and actual effects of the proposal on the environment.

The application has been assessed as a **Discretionary Activity** under the Far North Operative District Plan and a **Permitted Activity** under the Proposed District Plan.

If you require further information, please do not hesitate to contact me.

Regards,

Alex Billot



Resource Planner

Reviewed by:



Sheryl Hansford

Director/Senior Planner

NORTHLAND PLANNING & DEVELOPMENT 2020 LIMITED



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Attachments:

1. Far North District Council Application - signed
2. Record of Title - LINZ
3. Plan Set – Extension to Dwelling – O’Brien Design Consulting
4. Plan Set – Minor Residential Unit – O’Brien Design Consulting
5. Stormwater Report – Wilton Joubert Consulting Engineering
6. Site Suitability Report – T&A Structures
7. RMAVAR/A 1980137 Approved Decision – FNDC
8. RMALUC 1980137 Approved Plans – FNDC
9. RMALUC 2240317 Approved Decision – FNDC
10. RMALUC 2240317 Approved Plans – FNDC
11. Approved Form 4 - FNDC



Assessment of Environment Effects Report

1. Description of the Proposed Activity

- 1.1. This land use consent application will involve existing consented activities under RC2240317 as well as proposed new activities. The existing consented activities under RC2240317 include extensions to the north and west of the dwelling, a swimming pool and fence as well as retrospective consent for the office. The proposed new activities include the construction of an extension to the south of the main dwelling as well as introduction of a new relocated minor residential unit (MRU), with the existing consented MRU on the site being removed the from site to allow room for the extension.
- 1.2. Given the history of the site and the previously approved resource consent applications, it is considered important to determine what has already been granted resource consent and what will be applied for as part of this resource consent application. Before going further into the proposed application, assessment of the previously approved resource consent applications for the site will be undertaken below.

Previously Approved Resource Consent Applications

RC1980137

- 1.3. This resource consent application included the proposal to construct a family flat on the site. The decision document was issued on 19th August 2007. Condition 4 of the approved decision document stated, *'That the family flat be used as a residence of a socially dependent relative of the household living in the dwelling on the site, and that the family flat shall not be sold, leased or otherwise disposed of except in conjunction with the dwelling.'*

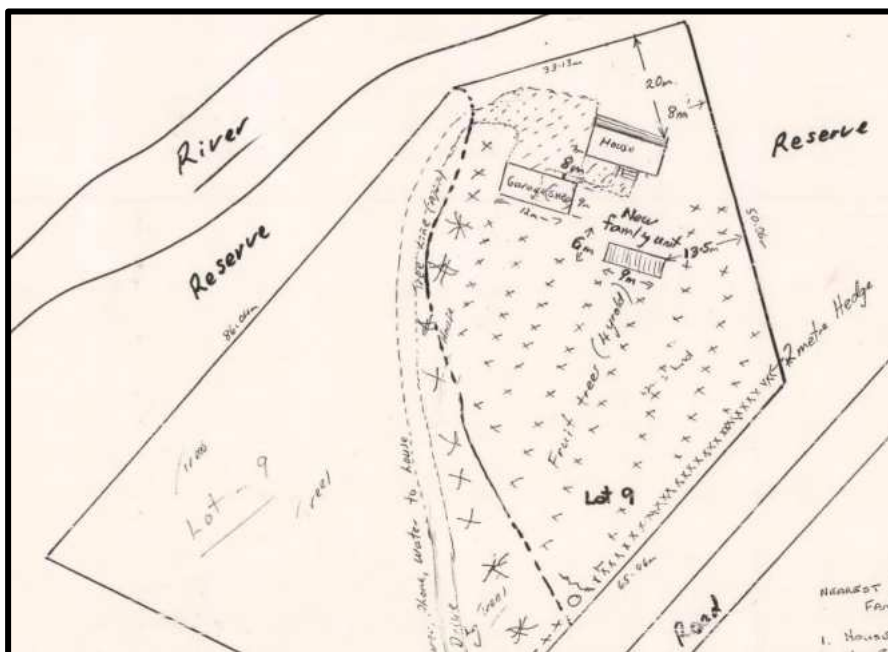


Figure 1: RC1980137 Approved Plan showing location of existing dwelling and proposed family flat.

1980137-RMAVAR/A

- 1.4. This variation application was to remove Condition 4 of RC1980137 to allow for the family flat to be used as a minor residential unit, in accordance with Rule 8.6.5.2.3 in the Rural Production Zone. This was approved and granted on 26th October 2017.
- 1.5. This minor residential unit currently remains on site, however, will be removed from site as part of the subject proposal. This is stated on the site plan included within the Plan Set attached within **Appendix 3** of this application. A replacement minor residential unit is proposed which will be located elsewhere on the site. This will be discussed further in this report.

2240317-RMALUC

- 1.6. This application included a proposal to extend the main dwelling for an additional living area to the north, decking along the west of the proposed additional living area, an extension to the south of the main dwelling and retrospective consent for the existing office. The proposal also included construction of a future swimming pool and swimming pool fence. The proposal triggered consent for stormwater management, setback from boundaries and setback from a river in the Rural Production zone. The proposal was assessed as a Discretionary Activity and was granted on 15th June 2024, subject to conditions.

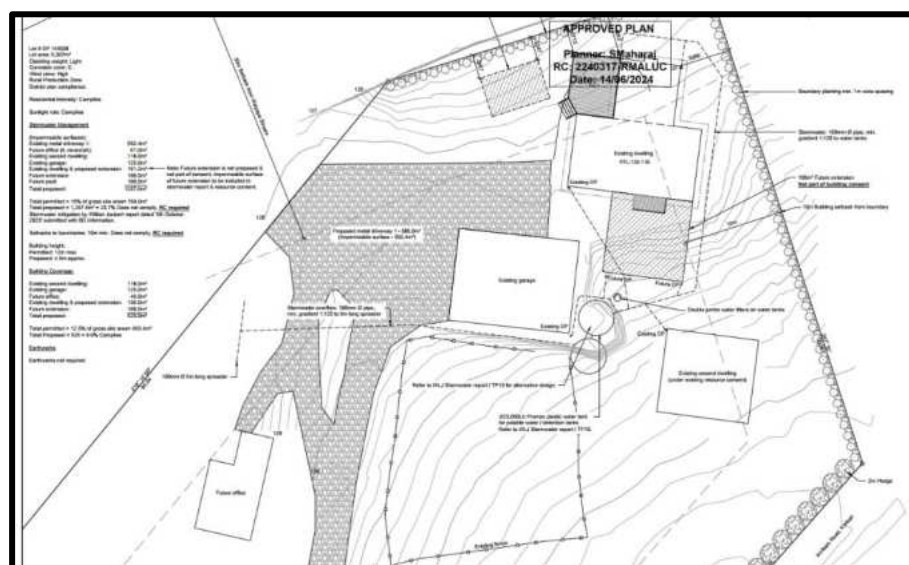


Figure 2: RC2240317 Approved Plan showing proposed activities.

- 1.7. To ensure consistency and ease of reference and completion of works, it is proposed that RC2240317 is surrendered as part of this proposal, with all works approved under RC2240317 being included within this fresh new consent. This will ensure that all proposed activities are under one new consent. This will ensure consistency and transparency as well as no conflict in consent conditions. The surrendering of RC2240317 will be subject to approval of the subject application.

Proposed Activity subject of this application

- 1.8. As discussed previously, the proposed resource consent application will include new activities on the site which will be undertaken in conjunction with the activities approved under RC2240317. The new activities include:
- Extension to the south of the dwelling which will require the removal of the existing garage and existing minor residential unit.
 - A replacement minor residential unit will be relocated in the south-western corner of the site.
- 1.9. The activities which obtained consent under RC2240317 and will form part of this consent are:
- Extension to the main dwelling to the north.
 - Decking along the west of the proposed additional living area.
 - Retrospective consent for the existing office
 - Construction of future swimming pool and fence which will be constructed at a later date.

The breaches for these activities consisted of , Stormwater management, setback from boundaries and setback from lakes, rivers and the CMA.

- 1.10. The extension to the south of the dwelling which was approved under RC2240317 is no longer required given the proposed new extension to the south. A Building Consent has been lodged for the proposed extension works under EBC-2024-416/0/A with a Form 4 issued on 17th June 2025. The Approved Form 4 document is included within **Appendix 11**.

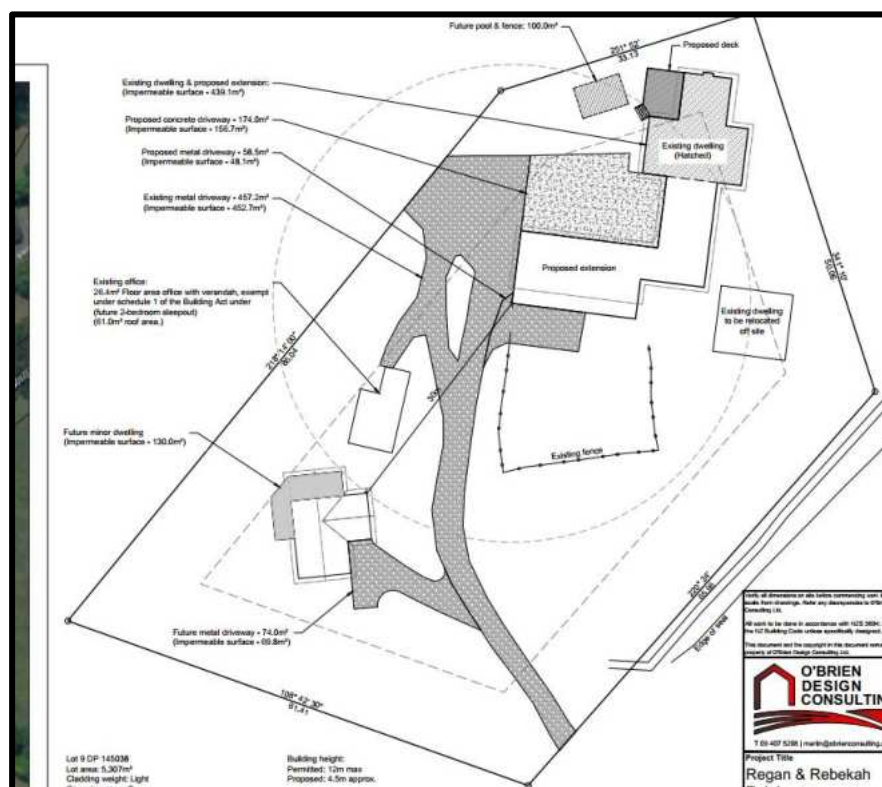


Figure 3: Site Plan showing proposed activities including previously approved activities under RC2240317.



- 1.11. The subject site is located within the Rural Production zone under the Operative District Plan. The proposal will result in a total impermeable surface coverage of 1467.6m² or 27.7% of the total site area. This is 210m² more than the previously approved impermeable surface coverage applied under RC2240317. The impermeable surface coverage cannot comply with the permitted standard of 15% of the total site area and therefore consent is triggered. Wilton Joubert have completed a Stormwater report, which is included within **Appendix 5** of this application.
- 1.12. The volume of excavations associated with the extension to the main dwelling equates to 431.2m³ of cut and 431.2m³ of fill, which brings the total volume to 862.4m³. Although this complies with the permitted volume of excavations for the Rural Production zone, the average height of the cut face will be 1.64m such that consent is triggered. A Site Suitability Report (SSR) has been completed by T&A Structures in support of the application which is included within **Appendix 6** of this application.
- 1.13. Although the site has existing consent for a minor residential unit under 1980137-RMAVAR/A, given that the location of the minor residential unit will be changing, it is considered that a new consent be applied for. The proposed minor residential unit (MRU) can comply with the controlled provisions set out under Rule 8.6.5.2.3 of the ODP.
- 1.14. As per previously approved RC2240317, the extension to the north of the dwelling, the deck and the future pool area will be located less than 10m from the northern and eastern boundaries as well as being located within 30m of the river located to the north. As such, consent is triggered under Rules 8.6.5.1.4 Setback from Boundaries and 12.7.6.1.1 Setback from Lakes, Rivers and the CMA. Given that there will be no changes to these activities and consent has been granted under RC2240317, these activities will form part of this application to ensure consistency and transparency of consent approval and conditions, there are no additional effects created which would require reassessment of these rule infringements. Nonetheless, an assessment of the decision made with RC2240317 for the rule infringements will be included as part of this application for completeness.
- 1.15. The proposal has been assessed as a **Discretionary Activity** under the Operative District Plan (ODP).

2. Site Description

- 2.1. The property is located at 11 Ironbark Road, Kerikeri, which is legally described as Lot 9 DP 145038 with an area of 5274m².
- 2.2. The property contains one dwelling, a minor residential unit, a garage and an office.
- 2.3. The property is located off Ironbark Road with two separate vehicle crossings located on each end of the road boundary which provides access to the site.



- 2.4. The site is predominately grass with areas of scattered vegetation and landscaping on site.



Figure 4: Aerial view of the site and immediate environment.

- 2.5. As depicted in *Figure 5* below, the surrounding environment, consists of various sized rural-residential allotments on the western side of Ironbark Road. The character and amenity of the surrounding environment includes rural lifestyle living, with the only productive activities being associated with residential living. The existing productive land uses in the surrounding environment include mostly gardening and very small-scale household activities, small scale horticultural activities, small scale farming among a few larger 10ha land parcels which contain a residential dwelling.
- 2.6. The surrounding environment is located approximately 3km from the Waipapa Commercial area.



Figure 5: Wider aerial image showing surrounding environment.

3. Background

- 3.1. The subject site is held within Record of Title NA86A/271 and is legally described as Lot 9 DP 145038. The subject site has an area of 5307m².
- 3.2. There are no interests relevant to this proposal registered on the title.



Site Features

- 3.3. The property is located in the Rural Production Zone and is not subject to any Outstanding Natural Landscapes or other resource features under the Operative District Plan.
- 3.4. Under the Proposed District Plan the property is zoned as Horticulture.
- 3.5. The site does not contain any Significant Natural Areas, Protected Areas, Wetlands or PNA's.
- 3.6. Given the sites rural location, the site does not have any available connections to Council's infrastructure.
- 3.7. The NRC Hazard Maps do not show the site to be prone to any Natural Hazards.
- 3.8. The site does not contain any archaeological sites.
- 3.9. The site does not contain any wetlands or waterbodies.
- 3.10. The site is located within a kiwi area.
- 3.11. The site contains soils which have a Land Use Classification of LUC 3s1; which is considered highly productive land under the NPS-HPL.
- 3.12. The site is not located within a Statutory Acknowledgement Area.
- 3.13. With regard to the Regional Policy Statement for Northland, the site is not located within the Coastal Environment and is not identified as containing an area of High Natural Character.
- 3.14. The site is not shown to be impacted by surface water protection zones.

4. Permitted activities that are part of the proposal

- 4.1. Clause 3(A) of Schedule 4 of the Resource Management Act requires that information about related permitted activities be provided in the resource consent application.
- 4.2. There are existing activities on the site which resource consent has been provided for, as detailed earlier in this application. There is nothing within the previous consent applications which would imply the existing land use consents cannot be enjoyed by the current owners and occupiers of the land. It is therefore considered that the existing activities on the site as well as those approved under RC2240317, can be undertaken on the site at this point in time. As mentioned, the previous approved consents detailed in this application will be surrendered subject to this proposal being approved, in order to provide clarity and consistency of consents granted for this piece of land.



5. Weighting of Plans

- 5.1. The site is zoned as Horticulture under the Proposed District Plan.
- 5.2. The Council notified its' PDP on 27 July 2022. The period for public submissions closed on the 21 October 2022. A summary of submissions was notified on the 4 August 2023. The further submission period closed on the 5 September 2023. It is apparent from the summary of submissions relating to the applicable zone that a large number relate to the application of these provisions. Based on the volume and comprehensive nature of these submissions, the Council has confirmed that no other rules will have legal effect until such time as a decision is made on those provisions.
- 5.3. District Plan hearings on submissions are currently underway and are scheduled to conclude in October 2025. No decision on the PDP has been issued. For this reason, little weight is given to the PDP provisions with the exception of those rules which have immediate legal effect.

6. Activity Status of the proposal

Operative District Plan

- 6.1. The subject site is zoned Rural Production within the Operative District Plan. An assessment of the relevant permitted District Plan rules is outlined below:

Assessment of the Permitted Section 8.6.5.1 Rural Production		
Plan Reference	Rule	Performance of Proposal
8.6.5.1.1	Residential Intensity	<p>Permitted.</p> <p>The proposal does not include an additional residential dwelling.</p> <p>The proposal does include removal of the approved minor residential unit on the site with a replacement minor residential unit included as part of this proposal, which will be discussed further in this report.</p>
8.6.5.1.2	Sunlight	<p>Permitted.</p> <p>The proposed structures are setback sufficiently, such that it complies with sunlight.</p> <p>The proposed southern extension and minor dwelling are located further than 10 metres from all boundaries.</p> <p>The existing activities consented under RC2240317 were not found to incur any sunlight infringements.</p>
8.6.5.1.3	Stormwater Management	Discretionary Activity.



		<p>The site is 5307m²; therefore, to comply with this rule the site shall have less than 796m² of impermeable surface coverage.</p> <p>In this case, the proposal will seek to include the impermeable surfaces noted within the Stormwater Report prepared by Wilton Joubert, which equates to 1467.6m² or 27.7% of the total site area.</p> <p>It is noted that the impermeable surface coverage within the Plan Set prepared by O'Brien Consulting differs by approximately <10m², which is due to the addition of a third tank as recommended within the Stormwater Report by Wilton Joubert. Given that the ODP only allows for an exemption of 20m² for water tanks, WJ have included the third tank as an impermeable surface.</p> <p>Therefore, the total impermeable surfaces equate to 27.7% of the site area. The proposal exceeds the permitted threshold (15%) and Controlled threshold (20%) and must be assessed as a Discretionary Activity.</p> <p>It is noted RC2240317 also included a Discretionary Stormwater breach of 1364.6m² or 25.7% of the site area.</p> <p>Wilton Joubert have prepared a Stormwater Report in support of the application which is included within Appendix 5 of this application.</p>
8.6.5.1.4	Setback from Boundaries	<p>Restricted Discretionary Activity.</p> <p>The proposed new activities which did not form part of RC2240317 do not result in any setback infringements.</p> <p>However, the activities consented under RC2240317 do result in setback infringements. These include the proposed dwelling extension to the north and future pool area which will be located less than 10m from the northern & eastern boundaries.</p> <p>The deck along the eastern part of the northern dwelling extension, is less than 1 metre in height and therefore is not defined as a building.</p> <p>Therefore, this rule will be included and assessed as a Restricted Discretionary Activity for those activities already consented under RC2240317 for consistency.</p>
8.6.5.1.5	Transportation	<p>Permitted.</p> <p>For further assessment please see below.</p>



8.6.5.1.6	Keeping of Animals	Not applicable.
8.6.5.1.7	Noise	Permitted. Noise is anticipated to be consistent with a residential activity.
8.6.5.1.8	Building Height	Permitted. As shown on the plans the maximum height of the northern building extension will be 5120mm, which includes the proposed chimney. The maximum height of the southern extension will be 4.799m and the maximum height of the minor dwelling will be 7.034m. All heights are within the permitted threshold.
8.6.5.1.9	Helicopter Landing Area	Not applicable.
8.6.5.1.10	Building Coverage	Permitted. The site is 5307m ² ; to comply with this rule the site shall have less than approximately 663.4m ² of total building coverage. As detailed on the Site Plan prepared by O'Brien Design Consulting, the total building coverage equates to 518.7m ² (9.8%) which is within the permitted threshold for this rule.
8.6.5.1.11	Scale of Activities	Not applicable. No non-residential activities are proposed.
8.6.5.2.3	Minor Residential Unit	Controlled. <ul style="list-style-type: none"> (a) Complies - The existing MRU will be removed from site, with the replacement MRU being the only one on site. (b) Complies – the site has a minimum area of 5,000m². (c) Complies – Vehicle access will be shared (d) Complies – the separation distance of the MRU to the principal dwelling is no more than 30m. The replacement MRU can also meet the definition of a MRU as the GFA will be 65m ² with an attached garage of 17.4m ² . The MRU will be subsidiary to the principal dwelling and will be located and retained with the same Certificate of Title as the principal dwelling.



District Wide Matters

Assessment of the District Wide Matters		
Plan Reference	Rule	Performance of Proposal
12.3.6.1.1	Excavation and/or filling, including obtaining roading material but excluding mining and quarrying, in the Rural Production zone and Kauri Cliffs Zone.	<p>Restricted Discretionary</p> <p>The proposed excavation volume can comply with the permitted standard, given that 862.4m³ of excavation is anticipated which is well within the 5,000m³ threshold.</p> <p>Rule 12.3.6.1.1 allows for an average of 1.5m over a continuous cut or filled face as a permitted activity. The average cut face for the proposed works will be 1.6.4m such that the proposal exceeds the permitted average cut/fill face for the zone.</p> <p>RDA Rule 12.3.6.2.3 does not have any limit on the maximum cut/fill face for the zone, such that the proposal can comply with the RDA standard.</p>
12.4.6.1.2	Fire Risk to Residential Units	<p>Permitted.</p> <p>The proposed works are not considered to be within 20m of a bush dripline.</p>
12.7.6.1.1	Setback from Lakes, Rivers & CMA	<p>Discretionary Activity.</p> <p>The recently approved dwelling extension, deck and proposed pool will be located within 30m of the river located on the adjoining site. Consent for these activities was obtained under RC2240317 but as these will be contained within the one consent application, consent is being re-sought although effects are considered to remain unchanged.</p> <p>All new activities subject of this application will be located further than 30m from the river boundary and as such, no additional infringements are created.</p>
Assessment of the chapter 15 Transportation		
15.1.6A	Traffic Intensity	<p>Permitted</p> <p>The permitted TIF for the Rural Production zone is 60 for a site which is not accessed via a State Highway. The proposal will not increase the existing consented TIF for the site. The proposal will result in an extension to the existing dwelling and removal and relocation of a replacement minor dwelling.</p>
15.1.6B	Parking	<p>Permitted</p> <p>The dwelling and MRU will have adequate parking spaces.</p>
15.1.6C	Access	<p>Permitted</p> <p>Access to the site will be via the existing crossing place. It is considered that the existing crossing place complies with the relevant engineering standards as</p>



		per RC2240317. Internal access to the dwelling and MRU will be provided as per the site plan, no private accessways are proposed.
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District Plan Breaches

- 6.2. The assessment above has identified the following breaches to the District Plan Rules:
- 8.6.5.1.3 Stormwater Management
 - 8.6.5.1.4 Setback from Boundaries (for previously consented activities under RC2240317)
 - 8.6.5.2.3 Minor Residential Unit
 - 12.3.6.1.1 Excavation in the Rural Production zone
 - 12.7.6.1.1 Setback from Lakes, Rivers and the CMA (for previously consented activities under RC2240317).
- 6.3. When bundled the proposal will be assessed as a **Discretionary Activity** insofar as the Operative District Plan.

Proposed District Plan

- 6.4. The proposal is also subject to the Proposed District Plan process. Within the Proposed District Plan, the site is zoned Horticulture. An assessment of the matters relating to the Proposed District Plan that have immediate legal effect, has been undertaken below:

Chapter	Rule Reference	Compliance of Proposal
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. The site does not contain any hazardous substances to which these rules would apply.
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. The site is not located within a Heritage Area Overlay.
Historic Heritage	All rules have immediate legal effect (HH-R1 to HH-R10). Schedule 2 has immediate legal effect.	Permitted The site does not contain any historic heritage.
Notable Trees	All rules have immediate legal effect (NT-R1 to NT-R9)	Not applicable.



	All standards have legal effect (NT-S1 to NT-S2) Schedule 1 has immediate legal effect	The site does not contain any notable trees.
Sites and Areas of Significance to Māori	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 sites or areas of significance to Māori.
Ecosystems and Indigenous Biodiversity	All rules have immediate legal effect (IB-R1 to IB-R5) IB-R1 – Indigenous vegetation pruning, trimming and clearance and any associated land disturbance for specified activities within and outside a Significant Natural Area.	Permitted. No vegetation clearance is proposed.
Subdivision	The following rules have immediate legal effect: SUB-R6, SUB-R13, SUB-R14, SUB-R15, SUB-R17	Not applicable. The proposal is not for subdivision.
Activities on the Surface of Water	All rules have immediate legal effect (ASW-R1 to ASW-R4)	Not applicable. The proposal does not involve activities on the surface of water.
Earthworks	The following rules have immediate legal effect: EW-R12, EW-R13 The following standards have immediate legal effect: EW-S3, EW-S5	Permitted. Earthworks as part of this proposal will proceed in accordance with the Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016, in accordance with Rules EW-12, EW-R13, EW-S3 and EW-S5.
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 signs are proposed as part of this application.
Orongo Bay Zone	Rule OBZ-R14 has partial immediate legal effect because RD-1(5) relates to water	Not applicable. The site is not located in the Orongo Bay Zone.

6.5. The proposal is **Permitted** within the Proposed District Plan.



National Environmental Standards

National Environment Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011

- 6.6. The site is not identified as HAIL on the Council database of HAIL sites. A review of historic aerials has determined that there are no known activities that have previously occurred or currently occurring on the site that are registered as HAIL Activities. For this reason, the NESCS (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) is not a consideration of this application. The proposal is considered **Permitted** in terms of this regulation.
- 6.7. There are no other National Environmental Standards relevant to this application.

7. Statutory Assessment

Section 104B of the Act

- 7.1. Section 104B governs the determination of applications for Discretionary and Non-Complying Activities. With respect to these activities, a consent authority may grant or refuse the application and if it grants the application, it may impose conditions under Section 108.

Section 104(1) of the Act

- 7.2. Section 104(1) of the Act states that when considering an application for resource consent –

“the consent authority must, subject to Part II, have regard to –

(a) any actual and potential effects on the environment of allowing the activity; and

(ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment that will or may result from allowing the activity; and

(b) any relevant provisions of –

i. a national environmental standard:

ii. other regulations:

iii. a national policy statement:

iv. a New Zealand Coastal Policy Statement:

v. a regional policy statement or proposed regional policy statement:

vi. a plan or proposed plan; and

(c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.”



- 7.3. Actual and potential effects arising from the development as described in 104(1)(a) can be both positive and adverse (as described in Section 3 of the Act). Positive effects arising from this development include that the principal dwelling can be extended as well as relocation of the MRU within the site to suit the families' growing needs. The proposal will see the existing consented activities under RC2240137 combined with the proposed new activities to ensure consistency and ease of compliance with consent conditions. Potential adverse effects relate to stormwater and excavations.
- 7.4. Section 104(1)(ab) requires that the consent authority consider 'any measure proposed or agreed to by the applicant for the purposes of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity'. In this case, the proposal is not of a scale or nature that would require specific offsetting or environmental compensation measures to ensure positive effects on the environment.
- 7.5. Section 104(1)(b) requires that the consent authority consider the relevant provisions of the above listed documents. An assessment of the relevant statutory documents that corresponds with the scale and significance of the effects that the activity may have on the environment has been provided in Section 9 below.
- 7.6. Section 104(1)(c) states that consideration must be given to 'any other matters that the consent authority considers relevant and reasonable, necessary to determine the application.' There are no other matters relevant to this application.

8. Environmental Effects Assessment

- 8.1. Having reviewed the relevant plan provisions and taking into account the matters to be addressed by an assessment of environmental effects as outlined in Clause 7 of Schedule 4 of the Act, the following environmental effects warrant consideration as part of this application.
- 8.2. The proposal is to be assessed as a Discretionary Activity as per 8.6.5.4 *Discretionary Activities*. The Council may approve or refuse an application for a Discretionary Activity, and it may impose conditions on any consent. In assessing an application for a discretionary activity, the Council have full discretion.
- 8.3. The activities with RC2240317 which created the setback from boundaries and setback from river infringements will not change in location or size as a result of this proposal. It is considered that there are no additional effects created which would require additional mitigation measures to those proposed within RC2240137. Given that these activities will be contained within the one application, a brief re-assessment of the previously consented activities will be provided below for completeness, however it is reiterated that effects in relation to setback from boundaries and setback from river are considered to remain unchanged from what was previously assessed with RC2240137.



- 8.4. As such, the below assessment will include assessment of the infringements for setback from boundaries, setback from river, stormwater management and excavations. An assessment of the conditions imposed within RC2240317 will also be included so it is clear which conditions are proposed to be brought forward on to the new decision document.

Setback from Boundaries and Setback from River

- 8.5. The subject site adjoins a Recreation Reserve along the northern and eastern boundaries, where the setback breaches occur. The river adjoins the recreation reserve. The original plan set submitted with the application under RC2240137 included a wrap-around deck around the proposed northern extension. This was later redesigned as part of the s92 request in order to satisfy comments made by the FNDC Parks and Reserves Team, such that the deck was only to be located on the western side of the proposed northern extension. As the deck is less than 1m in height, it was now not defined as a building and as such, did not create any setback infringements. As a result of this re-design, the setback infringements relate to the proposed northern extension to the dwelling and the proposed swimming pool.
- 8.6. To mitigate visual effects from the proposed extension and pool, conditions of consent were imposed under RC2240137 to require a landscaping plan to be prepared by a suitably qualified person and provided for approval by the Parks and Recreation Planner to mitigate visual and amenity effects for views from surrounding public places. The condition included specific criteria to be met as part of the landscape plan as well as an additional condition requiring planting to be undertaken at certain times of the year. These conditions are proposed to be brought forward on to the new decision document to ensure that visual and amenity effects are mitigated to a less than minor degree and to satisfy the concerns of the Parks and Recreation Planner.
- 8.7. As the dimensions and location of these buildings will not be changing, nor are any additional infringements created by the proposed activities, it is considered that the existing conditions of consent requiring a landscape plan are adequate to mitigate effects of the setback infringements to a less than minor degree.

Stormwater Management

- 8.8. The proposed works will result in additional impermeable surfaces from the dwelling extension and future swimming pool (approved under RC2240317) as well as the proposed southern extension to the dwelling and minor residential unit shown on the site plan and detailed within the Stormwater Report (SR) provided in this application. With the additional impermeable surfaces, this will result in the site containing 1,467.6m² or 27.7% impermeable surfaces which will breach the permitted threshold of 15%. A Stormwater Management Report prepared by Wilton Joubert Consulting Engineers (WJ) has been provided with this report.



- 8.9. WJ have determined that the total impermeable area in exceedance of the Permitted Activity Rule 8.6.5.1.3 is 671.55m². Stormwater attenuation has therefore been provided for the 10% AEP and 1% AEP storm events with an adjustment for climate change.
- 8.10. WJ have recommended that rainwater harvesting is utilised by installing a guttering system to collect roof runoff from the existing dwelling and proposed extension, with runoff being directed to potable water tanks. The upper section of the tanks is to act as detention volume to achieve stormwater neutrality for the proposed impermeable areas exceeding the permitted activity threshold. One of the tanks is to be fitted with a 150mm diameter overflow outlet as per WJ's SR. A dispersal device has been recommended. WJ have recommended 3x 25,000L water tanks are utilised, which are shown in *Figure 6* below from WJ's report as well as indicated within the Plan Set attached within **Appendix 5** of this application.

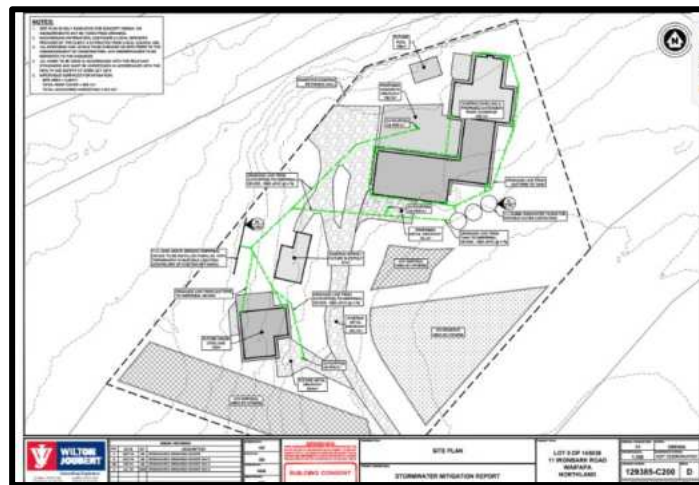


Figure 6: WJ Site Plan showing proposed stormwater attenuation methods.

- 8.11. Hardstand areas have been recommended to shed runoff to catch pits which are to drain directly to the dispersal device detailed within WJ's SR. Pool overflows are to be directed to a separate system designed by a suitably qualified person. It is considered that Condition 6 of RC2240317 which relates to a separate system for the pool being provided prior to the construction of the swimming pool will be adopted as a condition of consent on the new decision document to ensure that this is accounted for.
- 8.12. An assessment of Section 11.3 of the ODP has been undertaken within WJ's SR. This assessment is accepted and adopted as part of this application. No further assessment of Section 11.3 of the ODP is considered necessary.
- 8.13. The proposed development is not considered out of the ordinary within the surrounding environment or within the Rural Production zone in general. Stormwater runoff from the proposed development will be adequately controlled, with runoff being directed to the proposed water tanks and overflow being dispersed via a dispersal device. No cumulative effects or effects on adjoining properties are anticipated, as stormwater will be managed within the site boundaries, as per the recommendations within WJ's SR are adhered to.
- 8.14. It is therefore considered that the proposal will not create any effects that are more than minor in relation to stormwater management.



Excavations

- 8.15. The proposal involves excavations in association with the southern extension to the dwelling. The total excavation volume is within the permitted volume for the zone, however the cut height over the length of the face will be just over the permitted average. The permitted average is 1.5m, with the proposal having an average cut height of 1.64m. This results in a breach of the permitted standard under Rule 12.3.6.1.1. The proposal can comply with the RDA standards under Rule 12.3.6.2.3, given there is no restriction of a cut or filled face height under this rule.

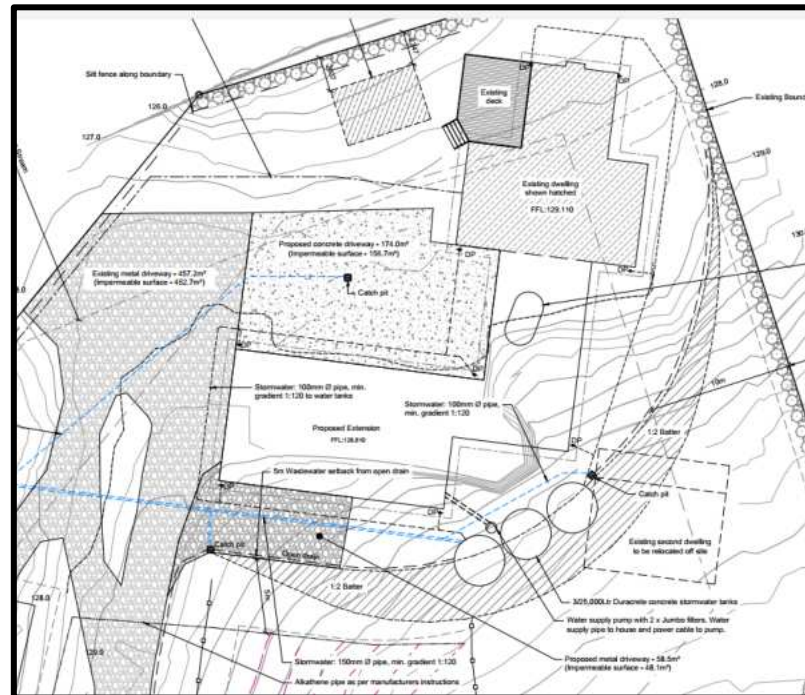


Figure 7: Snippet of the site plan showing location of battered face subject of this application and silt fence along northern boundary.

- 8.16. Given that the proposal has been bundled as a Discretionary Activity, assessment of the criteria within Section 12.3.7 will be undertaken below. A Site Suitability Report (SSR) has been completed by LDE, which is included within **Appendix 6** of this application.

- (a) the degree to which the activity may cause or exacerbate erosion and/or other natural hazards on the site or in the vicinity of the site, particularly lakes, rivers, wetlands and the coastline;
- (b) any effects on the life supporting capacity of the soil;
- (c) any adverse effects on stormwater flow within the site, and stormwater flow to or from other properties in the vicinity of the site including public roads;
- (d) any reduction in water quality;
- (e) any loss of visual amenity or loss of natural character of the coastal environment;



- (f) effects on Outstanding Landscape Features and Outstanding Natural Features (refer to Appendices 1A and 1B in Part 4, and Resource Maps);*
- (g) the extent to which the activity may adversely affect areas of significant indigenous vegetation or significant habitats of indigenous fauna;*
- (h) the extent to which the activity may adversely affect heritage resources, especially archaeological sites;*
- (i) the extent to which the activity may adversely affect the cultural and spiritual values of Māori, especially Sites of Cultural Significance to Māori and waahi tapu (as listed in Appendix 1F in Part 4, and shown on the Resource Maps);*
- (j) any cumulative adverse effects on the environment arising from the activity;*
- (k) the effectiveness of any proposals to avoid, remedy or mitigate any adverse effects arising from the activity;*
- (l) the ability to monitor the activity and to take remedial action if necessary;*
- (m) the criteria in Section 11.20 Development Plans in Part 2.*
- (n) the criteria (p) in Section 17.2.7 National Grid Yard.*

- 8.17. The proposal is not considered to cause or exacerbate erosion or other natural hazards. LDE have recommended within Section 7.3 of the SSR that *'cut and fills in excess of 0.5m high and within 3 metres of any of the building footprints, if needed should either be battered back at no greater than 1v:2h or retained by a suitably qualified designed retaining wall.'* As shown on the Site Plan prepared by O'Brien Consulting and shown in Figure 7 above, the area of excavation will be battered to 1v:2h, complying with the recommendations of the SSR prepared by LDE. A silt fence will also be located along the northern most boundary of the site which adjoins the recreation reserve to ensure sediment is contained within the site boundaries and as such, mitigating downstream effects on the river. Stormwater will be managed on site, with an open drain running along the base of the battered face, as well as stormwater pipes and catchpits being installed to capture runoff from the roof of the dwelling and impermeable areas and redirecting the runoff to appropriate devices, as per the Stormwater Report prepared by WJ. Given the above, it is considered that the proposal is not anticipated to cause or exacerbate erosion or other natural hazards.
- 8.18. The life supporting capacity of soil is considered to remain unchanged, given that the site is already utilised as a rural-residential site.
- 8.19. As detailed above, stormwater design has been incorporated into the proposal as per the Stormwater Report prepared by WJ. Given that the recommendations within the Stormwater Report are adhered to, it is considered that there will be no adverse effects in regard to stormwater flow within the site or within other properties. As mentioned, a silt fence will be located along the northernmost boundary of the site.
- 8.20. No reduction in water quality is anticipated so long as the recommendations within the supporting reports are adhered to. The site is not located within the coastal environment and as such no loss of visual amenity or natural character of the coastal environment is considered applicable. The site does not include any outstanding landscapes or outstanding natural features. The site does not contain any areas of significant indigenous vegetation or fauna and



no vegetation clearance is proposed as part of the excavation works. The excavation works will be located at the rear of the extension to the south of the current dwelling. The site is not known to contain any archaeological sites. The proposal is not considered to adversely affect cultural and spiritual values of Māori given that the site is not known to contain such significance.

- 8.21. No cumulative effects are anticipated so long as the recommendations within the supporting reports are adhered to. Adverse effects are considered to be mitigated to a less than minor degree given that the recommendations within the supporting reports have been incorporated into the design. Monitoring of the activity can be undertaken during the construction of the works such that remedial action can be undertaken if required.
- 8.22. The proposal is not considered to require a Development Plan given the minor nature of the proposal. The site is not located within the National Grid Yard.

Minor Residential Unit

- 8.23. The proposal includes removal of the existing minor residential unit (MRU) and introduction of a replacement MRU. As previously discussed earlier in this report, RC1980137-RMAVAR/A approved the use of the existing family flat on the site for use as a MRU which is in keeping with provisions of the Operative District Plan. As the location and structure of the MRU will be changing, it is considered this rule should be addressed within this new consent proposal.

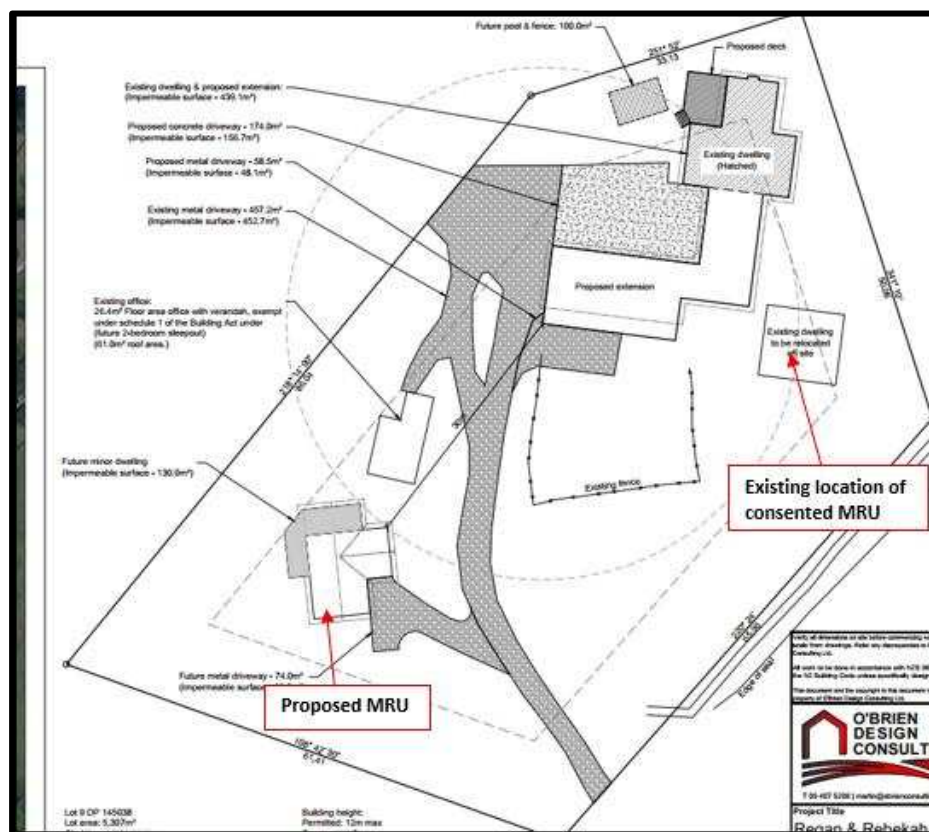


Figure 8: Snip of the site plan showing location of the existing and proposed MRU.



- 8.24. As assessed earlier in this report, the proposed MRU can comply with the controlled provisions under Rule 8.6.5.2.3 as there will be no more than one residential unit per site; the site has a minimum net area of more than 5,000m²; the MRU shares vehicle access with the principal dwelling and the separation distance of the MRU is no greater than 30m from the principal unit. This is detailed within the site plan attached within the Plan Set in **Appendix 4** of this application and captured in *Figure 8* above.
- 8.25. The proposed building meets the definition of a MRU as the GFA area will be 65m² with an attached garage of 17.4m² (less than 18m²). The MRU will be subsidiary to the principal dwelling on the site and will be located and retained within the same Certificate of Title as the principal dwelling.
- 8.26. As the proposed MRU application is being bundled in the same application as the other proposed activities on the site, assessment of the relevant rules within Section 11.1 of the ODP will be undertaken below.

11.1 (s) When establishing a minor residential unit

- (i) the extent of the separation between it and the principal dwelling;*
- (ii) the degree to which the design is compatible with the principal dwelling;*
- (iii) the extent that services can be shared;*
- (iv) the extent that the floor plan is fit for purpose;*
- (v) the extent to which landscaping is utilised to mitigate adverse effects;*
- (vi) the design of the building in regard to how easily it may be removed from a site should circumstances change.*

- 8.27. As shown on the site plan, the separation distance between the MRU and the principal dwelling will be 30 metres. This complies with the controlled provisions set out under Rule 8.6.5.2.3 of the ODP and is therefore considered acceptable. The MRU will be constructed of similar materials to the principal dwelling being linear weatherboard with corrugate roofing. The design of the MRU is considered to be compatible and will complement the principal dwelling. The MRU and principal dwelling will share the existing vehicle access, stormwater disposal and wastewater systems. The floor plan of the MRU is shown within Sheet A02 of the Plan set which is contained within **Appendix 4** of this application. The floor plan includes 2 bedrooms, one bathroom and an open plan kitchen/dining/living area, with attached deck and garage. The proposed floor plan is considered to be fit for purpose for a MRU. There is existing landscaping along the driveway and surrounding the existing office, which will adequately mitigate visual effects. The existing landscaping is depicted within *Figure 9* below. No additional landscaping is proposed to mitigate visual effects of the MRU to the principal dwelling. Given the slope of the site where the MRU is to be located, the MRU will be constructed on piles, rather than a concrete slab.





Figure 9: Image showing location of proposed MRU location, existing building locations and existing landscaping on the site.

Conditions to be adopted from RC2240317

- 8.28. Given that the subject consent application will include the activities consented under RC2240317, with RC2240317 being surrendered (subject to this application being approved), it is considered appropriate to assess the consent conditions within RC2240317 and if these are relevant to include within the new decision document.
- 8.29. An assessment will be made of the conditions under RC2240317 and comment made on whether these are proposed to be brought forward/updated on the new decision document.
1. *The activity shall be carried out in accordance with the approved plans prepared by O'Brien Design Consulting Ltd, referenced Polgaze 11 Ironbark Road Kerikeri Lot 9 DP 145038, dated 24th April 2024, and attached to this consent with the Council's "Approved Stamp" affixed to them*
- 8.30. This condition will be updated to reflect the new plan set.
2. *Prior to commencement of works on site, a landscape plan prepared by a suitably qualified person is provided for approval by the Parks and Recreation Planner to mitigate visual and amenity effects in views from surrounding public places. This plan is to include:*
 - a) *Location of planting, including accurate location of existing planting proposed to be retained as mitigation;*
 - b) *Details of the minimum height that all planting and particularly hedges will be maintained at*
 - c) *Tall hedge planting (2m minimum) along the road frontage of the site, within the site boundary, excluding the access and along at least a third of the eastern boundary to*



- assist in mitigating views from the road.*
- d) Low, (minimum 1m height) hedge planting or similar within the northern side of the site between existing and proposed development and the reserve.*
- e) Planting below the spreader bar to mitigate any stormwater effects on the adjoining reserve;*
- f) A basic planting methodology statement to include planting works and maintenance for a minimum period of 2 years and continued maintenance operations in perpetuity*
- 3. Planting within the Site shall occur within the planting season (April-September) following approval of the plan, and all plants, species and methods for planting shall be in accordance with the Approved Landscape Plan.*
 - 4. Prior to the establishment of mitigation planting along boundaries, any retaining walls and ancillary and supporting structures shall be entirely located within the site and shall be clear of the boundary of the reserve (Lot 11 DP 145038). Where any structures or materials are removed from the reserve, the area is to be reinstated to the satisfaction of the relevant Council asset manager*
- 8.31. Bring conditions forward to new decision document as it relates to the previously approved structures within the 30m setback of the river.
- 5. Prior to construction of the swimming pool, the consent holder must provide, for the approval of the Council's Resource Consents Monitoring Officers details of the swimming pool ie whether it is above ground or in-ground. If the pool is below ground, plans prepared by a suitably qualified professional is required to confirm that the earthworks is within permitted threshold. If an Earthworks rule breach is noted, the consent holder must apply for relevant resource consents at the consent holder's expense and to the satisfaction of the Council.*
 - 6. Prior to construction of the swimming pool, the consent holder must provide, for the approval of the Council's Resource Consents Monitoring Officers details for a separate system designed by a suitably qualified professional to prevent contamination by pool runoff to the reserve and mitigation planting, how pool water will be managed while being emptied, and how pool overflows will be managed to avoid effects on the reserve and mitigation planting.*
Note: Please submit plan for review to RCmonitoring@fndc.govt.nz with the relevant application number and address
- 8.32. Bring forward to new decision document to ensure design and stormwater attenuation for the swimming pool is accounted for.
- 7. Within 6 months following the approval of this resource consent, the accessway located towards the northeastern boundary of the site is to be legally established or must be reinstated to grassed berm and the 2m hedge planting within the site boundaries road*



frontage is planted and maintained. This must be undertaken at the consent holder's expense and to the satisfaction of the Council

- 8.33. Bring forward to the new decision document as this access will be redundant given the existing MRU will be removed from site.

8. Prior to the issue of a Code Compliance Certificate for the proposed extension and associated impermeable surface areas, stormwater runoff from the proposed extension and associated impermeable surface areas are to be restricted to those of predevelopment levels for the 1% and 10% AEP storm events plus an allowance for climate change generally in accordance with the recommendations of the Wilton Joubert Ltd Stormwater Report ref. 129385 dated 26th Feb 2024 submitted with the application.

- 8.34. Reference to updated Stormwater Report prepared by Wilton Joubert and submitted with this application to be made.

Summary

- 8.35. As determined above, all conditions, or a similar variation, are proposed to be brought forward on to the new decision document. This will ensure that effects considered under RC2240317 in terms of the setback infringements will remain unchanged to what was previously approved, with mitigation measures imposed via conditions of consent remaining unchanged and therefore effects are considered to be less than minor.

9. Policy Documents

- 9.1. In accordance with Section 104(1)(b) of the Act, the following documents are considered relevant to this application.

National Environmental Standards

National Environment Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011

- 9.2. As mentioned earlier in this report, there have been no previous or current activities listed as HAIL, undertaken on the site. The proposal is therefore considered permitted in terms of the National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011.

National Environment Standard for Freshwater 2020

- 9.3. There are no areas on the site which are considered to meet the definition of a natural inland wetland, the proposal does not involve reclamation of a river nor will the passage of fish be affected and therefore the NES for Freshwater is not considered applicable.



Other National Environmental Standards

9.4. No other National Environmental Standards are considered applicable to this development.

National Policy Statements

9.5. There are currently 8 National Policy Statements in place. These are as follows:

- National Policy Statement on Urban Development
- National Policy Statement for Freshwater Management
- National Policy Statement for Renewable Electricity Generation
- National Policy Statement on Electricity Transmission
- New Zealand Coastal Policy Statement
- National Policy Statement for Highly Productive Land.
- National Policy Statement for Indigenous Biodiversity.
- National Policy Statement for Greenhouse Gas Emissions from industrial Process Heat

9.6. In this case, the relevant National Policy Statement which is relevant to this site includes the National Policy Statement for Highly Productive Land.

National Policy Statement for Highly Productive Land

9.6.1. The subject site has soils which are mapped as 3w1 which are classified as highly versatile under the NZLRI's Land Use Capability Maps. These soils cover the entirety of the site.

9.6.2. The NPS for HPL has one objective and 9 policies. These all relate to sites which are classified as having highly productive land. Highly Productive Land is defined as –

highly productive land means land that has been mapped in accordance with clause 3.4 and is included in an operative regional policy statement as required by clause 3.5 (but see clause 3.5(7) for what is treated as highly productive land before the maps are included in an operative regional policy statement and clause 3.5(6) for when land is rezoned and therefore ceases to be highly productive land)

9.6.3. As this is a new NPS the Regional Policy Statement is yet to map highly productive land and as such in assessing this, we refer to clause 3.5(7).

3.5(7) - Until a regional policy statement containing maps of highly productive land in the region is operative, each relevant territorial authority and consent authority must apply this National Policy Statement as if references to highly productive land were references to land that, at the commencement date:

(a) Is

- i. zoned general rural or rural production; and*
- ii. LUC 1, 2, or 3 land; but*



(b) *Is not*

- i. *identified for future urban development; or*
- ii. *subject to a Council initiated, or an adopted, notified plan change to rezone it from general rural or rural production to urban or rural lifestyle*

- 9.6.4. The subject site is zoned as Rural Production and does contain soils which are of LUC 3. The site is not identified for future urban development within the Proposed District Plan and is not proposed to be rezoned to urban or rural lifestyle.
- 9.6.5. It is worth noting that an assessment of the NPS-HPL was undertaken within RC2240317 where the Processing Planner concluded that given the existing structures and area of the site, only gardening activities to support the existing residential activities could be undertaken on the site. The site was found to not be located near any larger land parcels such that it could be amalgamated and even if the existing built development on the site was removed, future productive potential for land based primary production activities would not be feasible. It was concluded as part of RC2240317 that the site was not considered to have any economic viability for production within the next 30 years. It is considered that the same assessment applies to the proposal given the proposed development and use of the site. The development will be located within the curtilage of the existing built development such that the area of land affected by the activities is already removed from productive use.
- 9.6.6. Nonetheless, an assessment of the one objective and relevant policies within the NPS-HPL will be undertaken below for completeness.

2.1 Objective

Highly productive land is protected for use in land-based primary production, both now and for future generations.

- 9.6.7. The subject site is only 5307m² and is not currently utilised for a productive activity. The site is already developed with a principal dwelling and MRU, a garage, an office and impermeable areas for the driveway, with the remaining area being utilised for outdoor living space. The proposal is extending the existing dwelling as detailed in the Site Plan, as well as a potential future extension on the rear of the main dwelling and a future swimming pool and removal of the existing MRU with replacement of a new MRU elsewhere on the site. The land which is mapped as being Highly Productive has already been removed from production with the existing development within the site. This proposal will not change this scenario.

Policy 1: Highly productive land is recognised as a resource with finite characteristics and long term values for land-based primary production.

- 9.6.8. The proposal is not considered to jeopardise the productive use of the land. This is because this has already occurred with the subdivision that created the site and the existing built development. While it is acknowledged that Highly Productive Land is a finite resource; this site is located only 3km from Waipapa within an area which has rural lifestyle allotments. Small scale production activities are able to be undertaken such as growing vegetables and



other gardening activities, however given the existing subdivision pattern and the fact that it is already developed it has been determined that those qualities which make the land highly productive no longer exist.

Policy 2: The identification and management of highly productive land is undertaken in an integrated way that considers the interactions with freshwater management and urban development.

Policy 3: Highly productive land is mapped and included in regional policy statements and district plans.

- 9.6.9. As this is a new NPS, the Regional Policy Statement is yet to map highly productive land. Section 3.4 of the NPS for HPL provides some guidelines for mapping of highly productive land.
- 9.6.10. The site is within an area which could be considered for rezoning based on the fact the site is located within an area with rural residential sized allotments and located approximately 3km from Waipapa. This has not occurred in the Proposed District Plan.
- 9.6.11. Due to the nature of the proposed application, it is considered that the proposal does not affect the identification and management of highly productive land. The proposal will support the existing activity on site, in a manner which promotes the well-being of the community by providing housing which can accommodate their growing family. This site cannot be functionally utilised as part of a larger farming unit as there are no larger farming units within the vicinity of the site. To the west of the site, the site adjoins another similar sized allotment with residential development and to the north and east it is adjoining public reserve. It is not the intention to remove the land from production use, as this has already occurred.

Policy 4: The use of highly productive land for land-based primary production is prioritised and supported.

- 9.6.12. While the site is mapped as having highly productive land the site is too small to be productive, it cannot be amalgamated with any neighbouring farming units, and the proposed development is already consolidated to the small area surrounding the main dwelling. So, while the mapped highly productive land on site is not being prioritised and supported for primary production, this is no change from the current situation where it is not being utilised for this nor is it likely that given the site constraints it could ever be utilised for this reason.

Policy 5: The urban rezoning of highly productive land is avoided, except as provided in this National Policy Statement.

Policy 6: The rezoning and development of highly productive land as rural lifestyle is avoided, except as provided in this National Policy Statement.



- 9.6.13. The proposal does not involve urban rezoning of the site. The proposal does not result in rezoning or development of highly productive land as rural lifestyle. The proposal seeks to support an existing activity which has already been developed on land mapped as highly productive, therefore is already compromised.

Policy 7: The subdivision of highly productive land is avoided, except as provided in this National Policy Statement.

Policy 8: Highly productive land is protected from inappropriate use and development.

- 9.6.14. It is considered that Section 3.9 of the NPS-HPL is the relevant section in this instance. It is considered that the site qualifies for an exemption from the definition of 'inappropriate use' of highly productive land under Clause 3.9(2) due to the nature of the existing consented activities that occupy the majority of the useable part of the site and the 'small-scale' nature of the proposed activities that would have no impact on the productive capacity of the land (sub-clause (g)). The proposed location of the shed is entirely within the established curtilage of the existing built development on the site.

- 9.6.15. As discussed throughout this section, no cumulative loss of the availability and productive capacity of HPL is anticipated given the physical constraints of the site which render productive use not possible. This has occurred via previous approved subdivision and built development within the site and even if all built development was removed from the site, this would not add value to productive capacity in the district. No reverse sensitivity effects are anticipated given the existing use of the site and the surrounding environment.

Policy 9: Reverse sensitivity effects are managed so as not to constrain land-based primary production activities on highly productive land.

- 9.6.16. No reverse sensitivity effects are anticipated.

Summary

- 9.7. Overall, it is considered that the proposal is consistent with the objectives and policies of the NPS for HPL. It is considered that the development in this instance is provided for within Clause 3.9(2)(g) of the NPS for HPL.

Regional Policy Statement for Northland

- 9.8. The relevant policy statement applicable to the application is the Operative Regional Policy Statement for Northland (RPSN). The activity is not located within any areas identified as having High Natural Character; the site is not known to be located within an area of Outstanding Landscape or within the Coastal Environment.
- 9.9. The relevant objectives and policies relate to Economic Wellbeing, Tangata Whenua, Natural character, Indigenous Ecosystems and Species, Historic Heritage, Infrastructure, and Water quality management.



- 9.10. The proposal is considered to create no more than minor effects on the character of the locality. The proposal is considered to have negligible effects on the life supporting capacity of air, water, soil and ecosystems. As such, it is considered the proposal is compatible with the intent of the RPS.
- 9.11. As per the assessment above, the proposal is not considered to create any adverse effects in relation to the above-mentioned themes.
- 9.12. It is considered that with the imposition of the recommendations of this report, the activity is not contrary to the RPSN.

Far North Operative District Plan

Relevant Objectives and Policies

- 9.13. The relevant objectives and policies of the Plan are those related to the Rural Environment, in particular Chapter 8.6 Rural Production Zone. The proposal is considered to create less than minor adverse effects on the surrounding environment. The proposal is considered to be consistent with the character of the surrounding area and is considered to have negligible effects on the amenity value of the area. The proposal is considered to be consistent with the objectives and policies of the Plan, as per below.

Assessment of the objectives and policies within the Rural Environment

- 9.14. The following assessment is based upon the objectives and policies contained within Sections 8.3 and 8.4.

Objectives

- 8.3.1 *To promote the sustainable management of natural and physical resources of the rural environment.*
- 8.3.2 *To ensure that the life supporting capacity of soils is not compromised by inappropriate subdivision, use or development.*
- 8.3.3 *To avoid, remedy or mitigate the adverse and cumulative effects of activities on the rural environment.*
- 8.3.4 *To protect areas of significant indigenous vegetation and significant habitats of indigenous fauna.*
- 8.3.5 *To protect outstanding natural features and landscapes.*
- 8.3.6 *To avoid actual and potential conflicts between land use activities in the rural environment.*
- 8.3.7 *To promote the maintenance and enhancement of amenity values of the rural environment to a level that is consistent with the productive intent of the zone.*
- 8.3.8 *To facilitate the sustainable management of natural and physical resources in an integrated way to achieve superior outcomes to more traditional forms of subdivision, use and development through management plans and integrated development*
- 8.3.9 *To enable rural production activities to be undertaken in the rural environment.*



8.3.10 To enable the activities compatible with the amenity values of rural areas and rural production activities to establish in the rural environment.

- 9.14.1. The proposal promotes sustainable management by implementing effective stormwater mitigation methods to avoid potential adverse effects on the river or surrounding properties. Furthermore, any earthworks will be carried out in accordance with GD05.
- 9.14.2. The life supporting capacity of the soil will not be compromised by the proposal. The proposal is for a proposed extension and future extension to the main dwelling and a future swimming pool and removal and relocation of a new MRU, which are consistent with the principal activity on the subject site and on adjacent sites.
- 9.14.3. The proposal is not considered to result in any cumulative effects.
- 9.14.4. The site does not contain any areas of significant indigenous vegetation and significant habitats of indigenous fauna.
- 9.14.5. There are no areas of Outstanding Natural Features or Landscapes.
- 9.14.6. The proposal is for a proposed and future extension to an existing dwelling and for a future swimming pool as well as the removal of an existing MRU and construction of a new MRU. The proposal is consistent with the existing activities on the subject site and surrounding properties such that it is not considered to create any potential conflicts with existing land use activities. The proposal it not considered to be objectional within the surrounding area.
- 9.14.7. The proposal is not considered to compromise the amenity values of the rural environment. The surrounding environment includes smaller lifestyle sections with low density residential development associated with small scale rural activities.
- 9.14.8. Not relevant.
- 9.14.9. The proposed development will retain the rural amenity of the environment as it is consistent with the existing activities onsite.
- 9.14.10. The proposed activity is consistent with the amenity values of the surrounding rural environment. The proposal is consistent with the existing use of the site which is consistent with the built development on adjacent properties.

Policies

- 8.4.1 *That activities which will contribute to the sustainable management of the natural and physical resources of the rural environment are enabled to locate in that environment.*
- 8.4.2 *That activities be allowed to establish within the rural environment to the extent that any adverse effects of these activities are able to be avoided, remedied or mitigated*



and as a result the life supporting capacity of soils and ecosystems is safeguarded, and rural productive activities are able to continue.

- 8.4.3 *That any new infrastructure for development in rural areas be designed and operated in a way that safeguards the life supporting capacity of air, water, soil and ecosystems while protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna, outstanding natural features and landscapes.*
- 8.4.4 *That development which will maintain or enhance the amenity value of the rural environment and outstanding natural features and outstanding landscapes be enabled to locate in the rural environment.*
- 8.4.5 *That plan provisions encourage the avoidance of adverse effects from incompatible land uses, particularly new developments adversely affecting existing land-uses (including by constraining the existing land-uses on account of sensitivity by the new use to adverse affects from the existing use – i.e. reverse sensitivity).*
- 8.4.6 *That areas of significant indigenous vegetation and significant habitats of indigenous fauna habitat be protected as an integral part of managing the use, development and protection of the natural and physical resources of the rural environment.*
- 8.4.7 *That Plan provisions encourage the efficient use and development of natural and physical resources, including consideration of demands upon infrastructure.*
- 8.4.8 *That, when considering subdivision, use and development in the rural environment, the Council will have particular regard to ensuring that its intensity, scale and type is controlled to ensure that adverse effects on habitats (including freshwater habitats), outstanding natural features and landscapes on the amenity value of the rural environment, and where appropriate on natural character of the coastal environment, are avoided, remedied or mitigated. Consideration will further be given to the functional need for the activity to be within rural environment and the potential cumulative effects of non-farming activities.*

9.14.11. The proposal contributes to the sustainable management of the rural environment by providing onsite stormwater management. If any earthworks are required, erosion and sediment controls will be constructed in accordance with GD05 to ensure all effects resulting from earthworks are less than minor.

9.14.12. As demonstrated throughout this report, the proposed activity can be carried out in a manner which ensures any adverse effects arising from the proposal are avoided, remedied, or mitigated.

9.14.13. The proposal is considered to safeguard the life supporting capacity of soil and ecosystems.

9.14.14. All infrastructure has been designed in a way that safeguards the life supporting capacity of air, water, soil and ecosystems.

9.14.15. There are no areas of Outstanding Natural Features and Landscapes.



- 9.14.16. The proposal is considered to maintain the amenity value of the area. The proposed development is consistent with the allotments in the surrounding environment. The productive capacity of the site will remain unchanged, such that it is not considered to compromise the amenity of the Rural Production zone.
- 9.14.17. The use of the site will predominately remain unchanged, with the majority of the site currently used for residential activities which was intended for the site at the time of subdivision. The proposal will not alter the existing activities onsite.
- 9.14.18. The site does not contain any areas of significant indigenous vegetation and significant habitats of indigenous fauna.
- 9.14.19. No additional demand is placed on infrastructure as the development can provide for its own on-site services.
- 9.14.20. The surrounding environment includes similar lifestyle sections with low density residential development. In this case, the subject site was intended for rural lifestyle use which is consistent with existing activities. The proposal supports the existing activities on site, such that the proposal is not inconsistent with the intensity or scale of the Rural Environment.

Assessment of the objectives and policies within the Rural Production Zone

- 9.15. The following assessment is based upon the objectives and policies contained within Sections 8.6.3 and 8.6.4.

Objectives

- 8.6.3.1 To promote the sustainable management of natural and physical resources in the Rural Production Zone.*
- 8.6.3.2 To enable the efficient use and development of the Rural Production Zone in a way that enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety.*
- 8.6.3.3 To promote the maintenance and enhancement of the amenity values of the Rural environment to a level that is consistent with the productive intent of the zone.*
- 8.6.3.4 To enable rural production activities to be undertaken in the zone.*
- 8.6.3.5 To promote the protection of significant natural values of the Rural Production Zone.*
- 8.6.3.6 To avoid, remedy or mitigate the actual and potential conflicts between new land use activities and existing lawfully established activities (reverse sensitivity) within the Rural Production Zone and on land use activities in neighbouring zones.*
- 8.6.3.7 To avoid remedy or mitigate the adverse effects of incompatible use or development on natural and physical resources.*
- 8.6.3.8 To enable the efficient establishment and operation of activities and services that have a functional need to be located in rural environments.*
- 8.6.3.9 To enable rural production activities to be undertaken in the zone.*



- 9.15.1. The proposal promotes to the sustainable management of natural and physical resources in the Rural Production zone by mitigating any potential adverse effects generated from the additional impermeable surfaces.
- 9.15.2. The proposal will allow the site to be developed so it can accommodate the applicant's growing family while maintaining the rural lifestyle character of the site, which is considered to be an efficient use of the site while providing for the social, economic and cultural well-being of the community.
- 9.15.3. The proposal maintains the existing amenity values as the proposal relates to an extension to an existing dwelling and future swimming pool as well as removal of an existing MRU and replacement with a new MRU in a different location within the site which is consistent with the existing use of the site. The proposal is not considered to compromise the amenity values of the environment as the proposal is generally consistent with the existing land uses in the surrounding environment and is able to carry out small productive activities on site to provide enjoyment for the occupants.
- 9.15.4. The proposal will not compromise the productivity of the site, as the site can still accommodate small productive activities such as gardening.
- 9.15.5. The site does not contain any areas of significant indigenous vegetation and significant habitats of indigenous fauna.
- 9.15.6. The proposal is not considered to create any conflicting land use or reverse sensitivity effects as the development is consistent with the existing activities in the surrounding environment.
- 9.15.7. There is a functional need for the proposed development on the subject site.

Policies

- 8.6.4.1 *That the Rural Production Zone enables farming and rural production activities, as well as a wide range of activities, subject to the need to ensure that any adverse effects on the environment, including any reverse sensitivity effects, resulting from these activities are avoided, remedied or mitigated and are not to the detriment of rural productivity.*
- 8.6.4.2 *That standards be imposed to ensure that the off-site effects of activities in the Rural Production Zone are avoided, remedied or mitigated.*
- 8.6.4.3 *That land management practices that avoid, remedy or mitigate adverse effects on natural and physical resources be encouraged*
- 8.6.4.4 *That the type, scale and intensity of development allowed shall have regard to the maintenance and enhancement of the amenity values of the Rural Production Zone to a level that is consistent with the productive intent of the zone*
- 8.6.4.5 *That the efficient use and development of physical and natural resources be taken into account in the implementation of the Plan.*



- 8.6.4.6 That the built form of development allowed on sites with frontage to Kerikeri Road between its intersection with SH10 and Cannon Drive be maintained as small in scale, set back from the road, relatively inconspicuous and in harmony with landscape plantings and shelter belts.*
- 8.6.4.7 That although a wide range of activities that promote rural productivity are appropriate in the Rural Production Zone, an underlying goal is to avoid the actual and potential adverse effects of conflicting land use activities.*
- 8.6.4.8 That activities whose adverse effects, including reverse sensitivity effects, cannot be avoided remedied or mitigated are given separation from other activities*
- 8.6.4.9 That activities be discouraged from locating where they are sensitive to the effects of or may compromise the continued operation of lawfully established existing activities in the Rural Production zone and in neighbouring zones.*
- 9.15.8. There are no adverse effects anticipated to arise from the proposal. All effects can be managed within the respective lot boundaries.
- 9.15.9. No conflicting land uses, or reverse sensitivity effects are anticipated as there is no change to the existing activities already occurring within the subject site. The proposed activity is consistent with those in the surrounding environment being rural lifestyle living.
- 9.15.10. No adverse effects on natural and physical resources are anticipated.
- 9.15.11. Amenity values will remain unchanged from the proposal. The proposal is considered to be of an appropriate type, scale and intensity for the environment.
- 9.15.12. The proposal is not considered to affect the continued operation of lawfully established existing activities.

Assessment of the objectives and policies within the Soils and Minerals Chapter

- 9.16. The following assessment is based upon the objectives and policies contained within Sections 12.3.3. & 12.3.4.

Objectives

12.3.3.1 To achieve an integrated approach to the responsibilities of the Northland Regional Council and Far North District Council in respect to the management of adverse effects arising from soil excavation and filling, and minerals extraction.

12.3.3.2 To maintain the life supporting capacity of the soils of the District.

12.3.3.3 To avoid, remedy or mitigate adverse effects associated with soil excavation or filling.

12.3.3.4 To enable the efficient extraction of minerals whilst avoiding, remedying or mitigating any adverse environmental effects that may arise from this activity.



- 9.16.1. The proposal does not result in any infringements under the NRC Proposed Regional Plan for excavations. The life supporting capacity of soils is not considered to be adversely affected. All effects are anticipated to be mitigated to a less than minor degree, given that the recommendations within the Site Suitability report and Stormwater Report are adhered to. No extraction of minerals is proposed.

Policies

12.3.4.1 That the adverse effects of soil erosion are avoided, remedied or mitigated.

12.3.4.2 That the development of buildings or impermeable surfaces in rural areas be managed so as to minimise adverse effects on the life supporting capacity of the soil.

12.3.4.3 That where practicable, activities associated with soil and mineral extraction be located away from areas where that activity would pose a significant risk of adverse effects to the environment and/or to human health. Such areas may include those where:

- (a) there are people living in close proximity to the site or land in the vicinity of the site is zoned Residential, Rural Living, Coastal Residential or Coastal Living;*
- (b) there are significant ecological, landscape, cultural, spiritual or heritage values;*
- (c) there is a potential for adverse effects on lakes, rivers, wetlands and the coastline;*
- (d) natural hazards may pose unacceptable risks.*

12.3.4.4 That soil excavation and filling, and mineral extraction activities be designed, constructed and operated to avoid, remedy or mitigate adverse effects on people and the environment.

12.3.4.5 That soil conservation be promoted.

12.3.4.6 That mining tailings that contain toxic or bio-accumulative chemicals are contained in such a way that adverse effects on the environment are avoided.

12.3.4.7 That applications for discretionary activity consent involving mining and quarrying be accompanied by a Development Plan.

12.3.4.8 That as part of a Development Plan rehabilitation programmes for areas no longer capable of being actively mined or quarried may be required.

12.3.4.9 That soil excavation and filling in the National Grid Yard are managed to ensure the stability of National Grid support structures and the minimum ground to conductor clearances are maintained.

12.3.4.10 To ensure that soil excavation and filling are managed appropriately, normal rural practices as defined in Chapter 3 will not be exempt when determining compliance with rules relating to earthworks, except if the permitted standards in the National Grid Yard specify that activity is exempt.

- 9.16.2. Adverse effects are considered to be mitigated to a less than minor degree as discussed. The site is rural-residential in nature, and the proposal will enable the existing use of the site to remain. No adverse effects on the life supporting capacity of soils are anticipated. No adverse effects on the environment and/or human health are anticipated. Soil conservation will be promoted by using the cut material as fill material onsite. No mining tailings are proposed, and the proposal does not involve mining or quarrying activities. No development



plan is proposed, and the site is not located within the National Grid Yard. The proposal does not involve works defined as normal rural practices.

Proposed Far North District Plan

- 9.17. As discussed in the sections above, the site is located within the Horticulture zone. The proposal is considered to be consistent with the character of the surrounding area and is considered to have negligible effects on the amenity value of the area. Although the site is proposed to be rezoned as Horticulture, it is worth noting that the site size combined with the existing development on the site would render the site not suitable for large scale productive use. The adjoining sites are also of similar size and land use activities such that it is considered Horticulture use would be inappropriate. Given the close proximity of the river and public reserves, there could also potentially be reverse sensitivity effects for any horticulture use of the site. The s32 report for the Horticulture zone advises this zone does not prevent existing lawfully established activities from continuing to be used for residential activities, nor does it require a landowner to undertake a horticulture activity. It is further noted that the matter of zoning has not been heard yet therefore currently has little weighting. While this is the case, an assessment of the objectives and policies for the Horticulture zone will be undertaken below.

Assessment of objectives and policies in the Horticulture zone

Objectives

HZ-O1 - The Horticulture zone is managed to ensure its availability for Horticultural activities and its long-term protection for current and future generations.

HZ-O2 The Horticulture zone enables horticultural and ancillary activities, while managing adverse environmental effects on site.

HZ-O3 - Land use and subdivision in the Horticulture zone:

- a. avoids land sterilisation that reduces the potential for highly productive land to be used for a horticulture activity;*
- b. avoids land fragmentation that comprises the use of land for horticultural activities;*
- c. avoids any reverse sensitivity effects that may constrain the effective and efficient operation of primary*
- d. production activities;*
- e. does not exacerbate any natural hazards;*
- f. maintains the rural character and amenity of the zone;*
- g. is able to be serviced by on-site infrastructure.*

- 9.17.1. The proposal will not affect the availability of land for primary production activities, as the site is rural residential in nature. The site is 5307m² with existing development, the proposal is not considered to alter the availability of land for primary production activities as this was already compromised at the time of subdivision.



- 9.17.2. The proposal will support the existing activities on site, which is rural residential; while the Horticulture zone enables horticultural activities, the site was subdivided and developed prior to the rezoning. The proposal will not change the existing situation on site.
- 9.17.3. The proposal involves an extension to the main dwelling and future swimming pool which is consolidated around the existing dwelling. The existing MRU will be removed with a replacement MRU being established in a different location within the site. Given the site has been subdivided for rural-residential living, the surrounding environment and the site has already been developed, the proposal is not considered to result in any land sterilisation of highly productive land. The site does not contain any natural hazards and contains existing onsite infrastructure which services the existing development. The proposal is complementing the existing activities on site, and adjacent properties such that it is not considered to result in reverse sensitivity. No reverse sensitivity effects are anticipated. The proposal does not compromise the use of the land for farming activities or result in fragmentation.
- 9.17.4. The site is not prone to any known natural hazards.
- 9.17.5. On-site infrastructure is existing on site with new infrastructure proposed to accommodate the proposed activities.
- 9.17.6. The rural character and amenity will not be affected as the proposed development is consistent with other built development in the area.

Policies

HZ-P1 - Identify a Horticulture Zone in the Kerikeri / Waipapa area using the following criteria:

- a) presence of highly productive land suitable for horticultural use;*
- b) access to a water source, such as an irrigation scheme or dam able to support horticultural use; and*
- c) infrastructure available to support horticultural use.*

HZ-P2 - Avoid land use that:

- a) is incompatible with the purpose, function and character of the Horticulture Zone;*
- b) will result in the loss of productive capacity of highly productive land;*
- c) compromises the use of highly productive land for horticultural activities in the Horticulture Zone; and*
- d) does not have a functional need to be located in the Horticultural Zone and is more appropriately located in another zone.*

HZ-P3 - Enable horticulture and associated ancillary activities that support the function of the Horticulture zone, where:

- a) adverse effects are contained on site to the extent practicable; and*
- b) they are able to be serviced by onsite infrastructure.*



HZ-P4 - Ensure residential activities are designed and located to avoid, or otherwise mitigate, reverse sensitivity effects on horticulture activities, including adverse effects associated with dust, noise, spray drift and potable water collection.

HZ-P5 - Manage the subdivision of land in the Horticulture zone to:

- a) avoid fragmentation that results in loss of highly productive land for use by horticulture and other farming activities;*
- b) ensure the long-term viability of the highly productive land resource to undertake a range of horticulture uses;*
- c) enable a suitable building platform for a future residential unit; and*
- d) ensure there is provision of appropriate onsite infrastructure.*

HZ-P6 - Encourage the amalgamation or boundary adjustments of Horticulture zoned land where this will help to make horticultural activities more viable on the land

HZ – O7 - 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) whether the proposal will increase production potential in the zone;*
- b) whether the activity relies on the productive nature of the soil;*
- c) consistency with the scale and character of the rural environment;*
- d) location, scale and design of buildings or structures;*
- e) for subdivision or non-primary production activities:*
 - i. scale and compatibility with rural activities;*
 - ii. potential reverse sensitivity effects on primary production activities and existing infrastructure;*
 - iii. the potential for loss of highly productive land, land sterilisation or fragmentation*
- f) at zone interfaces:*
 - i. any setbacks, fencing, screening or landscaping required to address potential conflicts;*

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Subdivision Consent

- ii. the extent to which adverse effects on adjoining or surrounding sites are mitigated and internalised within the site as far as practicable;*
- g) the capacity of the site to cater for on-site infrastructure associated with the proposed activity, including whether the site has access to a water source such as an irrigation network supply, dam or aquifer;*
- h) the adequacy of roading infrastructure to service the proposed activity;*
- i. Any adverse effects on historic heritage and cultural values, natural features and landscapes or indigenous biodiversity;*
- i) Any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P*

9.17.7. The site has been identified as a Horticulture zone under the Proposed District Plan.

9.17.8. The proposal is for a future and proposed extension to the main dwelling and a future swimming pool and removal of an existing MRU which will be replaced within the site in a new



location, which is consistent with the existing use of the site. As mentioned throughout this report the proposal will not result in loss of Highly Productive Land as the site is already developed for rural residential activities and the productive capacity of the site was compromised prior to the rezoning of the site. Given the size of the allotment and existing development on the site, the proposed development has a functional need to be located on the site.

9.17.9. Not relevant.

9.17.10. The proposal avoids reverse sensitivity effects on horticultural activities as the site is topographically separated from any larger productive parcels. The site is located within an area that consists of similar sized land parcels which are used for rural-residential activities, such that the proposal is not objectional to the surrounding environment.

9.17.11. Not relevant.

9.17.12. Even if the site undertook a boundary adjustment or amalgamation with a neighbouring site, the development area is still compromised by existing housing, the public reserve and topographic barriers being the river or Ironbark Road. Due to locality of the site and surrounding environment an amalgamation or boundary adjustment would not make the land more viable for Horticultural activities.

9.17.13. The proposal does not result in the loss of highly productive land, nor will it exacerbate natural hazards, as the site is not known to contain any areas prone to natural hazards. The site contains existing infrastructure. The proposal is consistent with the surrounding environment. The site has no known historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.

Summary

9.17.14. The above assessment of the relevant policy documents demonstrates that the proposal will be consistent with the relevant objectives and policies of those statutory documents.

10. Notification Assessment – Sections 95A to 95G of the Act

Public Notification Assessment

10.1. Section 95A requires a council to follow specific steps to determine whether to publicly notify an application. The following is an assessment of the application against these steps:

Step 1 Mandatory public notification in certain circumstances

An application must be publicly notified if, under section 95A(3), it meets any of the following criteria:

(a) the applicant has requested that the application be publicly notified:



- (b) public notification is required under section 95C:*
- (c) the application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.*

- 10.1.1. It is not requested the application be publicly notified and the application is not made jointly with an application to exchange reserve land. Therefore Step 1 does not apply and Step 2 must be considered.

Step 2: Public Notification precluded in certain circumstances.

- (4) Determine whether the application meets either of the criteria set out in subsection (5) and,—*
 - (a) if the answer is yes, go to step 4 (step 3 does not apply); and*
 - (b) if the answer is no, go to step 3.*
- (5) The criteria for step 2 are as follows:*
 - (a) the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes public notification:*
 - (b) the application is for a resource consent for 1 or more of the following, but no other, activities:*
 - (i) a controlled activity;*
 - (ii) [Repealed]*
 - (iii) a restricted discretionary, discretionary, or non-complying activity, but only if the activity is a boundary activity.*
 - (iv) [Repealed]*
- (6) [Repealed]*

- 10.1.2. Public Notification is not precluded as the proposal is a Discretionary Activity and includes activities other than a boundary activity. Therefore Step 3 must be considered.

Step 3: Public Notification required in certain circumstances.

- (7) Determine whether the application meets either of the criteria set out in subsection (8) and,—*
 - (a) if the answer is yes, publicly notify the application; and*
 - (b) if the answer is no, go to step 4.*
- (8) The criteria for step 3 are as follows:*
 - (a) the application is for a resource consent for 1 or more activities, and any of those activities is subject to a rule or national environmental standard that requires public notification:*
 - (b) the consent authority decides, in accordance with section 95D, that the activity will have or is likely to have adverse effects on the environment that are more than minor.*

- 10.1.3. The proposal is not subject to a rule or NES requiring public notification and the proposal does not have effects that will be more than minor. Therefore, Public Notification is not required, and Step 4 must be considered.

Step 4: Public notification in special circumstances

- 10.1.4. Section 95A(9) states that a council must publicly notify an application for resource consent if it considers that 'special circumstances' exist, notwithstanding that Steps 1 – 3 above do not require or preclude public notification. Special circumstances are not defined in the Act.



- 10.1.5. There are no special circumstances that exist to justify public notification of the application because the proposal is not considered to be controversial or of significant public interest, particularly given that it is private land and the proposal will result in extending an existing residential dwelling on the site and replacement of an existing MRU, which is considered as neither exceptional nor unusual.

Public Notification Summary

- 10.1.6. From the assessment above it is considered that the application does not need to be publicly notified, but an assessment of limited notification is required.

Limited Notification Assessment

- 10.2. If the application is not publicly notified, a consent authority must follow the steps of section 95B to determine whether to give limited notification of an application.

Step 1: Certain affected groups and affected persons must be notified.

(2) Determine whether there are any—

(a) affected protected customary rights groups; or

(b) affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity).

(3) Determine—

(a) whether the proposed activity is on or adjacent to, or may affect, land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11; and

(b) whether the person to whom the statutory acknowledgement is made is an affected person under section 95E.

(4) Notify the application to each affected group identified under subsection (2) and each affected person identified under subsection (3).

- 10.2.1. There are no protected customary rights groups or customary marine title groups or statutory acknowledgement areas that are relevant to this application. Therefore Step 1 does not apply and Step 2 must be considered.

Step 2: Limited notification precluded in certain circumstances.

(5) Determine whether the application meets either of the criteria set out in subsection (6) and,—

(a) if the answer is yes, go to step 4 (step 3 does not apply); and

(b) if the answer is no, go to step 3.

(6) The criteria for step 2 are as follows:

(a) the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes limited notification;

(b) the application is for a controlled activity (but no other activities) that requires a resource consent under a district plan (other than a subdivision of land).



- 10.2.2. There is no rule in the plan or national environmental standard that precludes notification. The application is not for a controlled activity. Therefore Step 2 does not apply and Step 3 must be considered.

Step 3: Certain other affected persons must be notified.

- (7) In the case of a boundary activity, determine in accordance with section 95E whether an owner of an allotment with an infringed boundary is an affected person.*
(8) In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.
(9) Notify each affected person identified under subsections (7) and (8) of the application.

- 10.2.3. The proposal includes a boundary activity which has been previously consented under RC2240137.

In deciding who is an affected person under section 95E, a council under section 95E(2):

- (2) The consent authority, in assessing an activity's adverse effects on a person for the purpose of this section,—*
(a) may disregard an adverse effect of the activity on the person if a rule or a national environmental standard permits an activity with that effect; and
(b) must, if the activity is a controlled activity or a restricted discretionary activity, disregard an adverse effect of the activity on the person if the effect does not relate to a matter for which a rule or a national environmental standard reserves control or restricts discretion; and
(c) must have regard to every relevant statutory acknowledgement made in accordance with an Act specified in Schedule 11.

- 10.2.4. A council must not consider that a person is affected if they have given their written approval, or it is unreasonable in the circumstances to seek that person's approval. In the case of this application no persons have given written approval to this development.
- 10.2.5. With respect to section 95B(8) and section 95E, the permitted baseline was considered as part of the assessment of environmental effects undertaken in Section 5 of this report, which found that the potential adverse effects on the environment will be less than minor. In regard to effects on persons, the assessment in Sections 5, 6 and 7 are also relied on and the following comments made:
- The proposed works are consistent with other development in the area.
 - The proposal complements the existing activities on site.
 - The proposal is not considered to be contrary to the objectives and policies under the District Plan and Regional Policy Statement.
 - The proposal is not considered to have any adverse effects within the site nor on any adjoining sites.
 - All other persons are sufficiently separated from the proposed development and works, such that there will be no effects on these people.
- 10.2.6. With regard to the setback breach, to the adjoining boundary with Lot 11 DP 145038 (reserve area) and the setback from the river, it is considered an adequate setback has been provided



as the site will continue to be used for residential use along these boundaries. The proposed extension, deck area and pool area are not considered to be obtrusive due to the small scale of the structures and/or impermeable areas associated with these. The existing vegetation and contour of the land contributes to this. Furthermore, these activities were already consented under RC2240137, with no change to the use, layout or structure of these activities. All new activities proposed as part of this application will comply with the permitted standards for setback from boundaries and setback to the river, such that no additional infringements in terms of setback are created. It is considered that as approval was granted for the setback infringements under RC2240137 and that these are only being included as part of this application to ensure consistency and ease of referencing to comply with consent conditions, no additional written approvals need to be obtained nor any re-approval of the existing consented development.

10.2.7. Therefore, no persons will be affected to a minor or more than minor degree.

10.2.8. Overall, the adverse effects on any persons are considered to be no more than minor. Therefore Step 3 does not apply and Step 4 must be considered.

Step 4: Further notification in special circumstances

(10) whether special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined to be eligible for limited notification under this section (excluding persons assessed under section 95E as not being affected persons),

10.2.9. The proposal is to include the existing consented activities under RC2240137 and the new proposed activities of an additional extension to the dwelling and removal of an existing MRU and replacement of the MRU in a new location within the site, in one decision document to ensure consistency and ease of compliance for consent conditions. It is considered that no special circumstances exist in relation to the application.

Limited Notification Assessment Summary

10.2.10. Overall, from the assessment undertaken Steps 1 to 4 do not apply and there are no affected persons.

11. Part 2 Assessment

11.1. The application must be considered in relation to the purpose and principles of the Resource Management Act 1991 which are contained in Section 5 to 8 of the Act inclusive.

11.2. The proposal will meet Section 5 of the RMA as the proposal will sustain the potential of natural and physical resources whilst meeting the foreseeable needs of future generations as the site is being used for its intended use. In addition, the proposal will avoid adverse effects on the environment and will maintain the character of the site and surrounding environment.



- 11.3. Section 6 of the Act sets out a number of matters of national importance. The subject site is not located within the coastal environment under the RPS. The proposed development includes additional impermeable surfaces, all stormwater run-offs will be managed by being directed to multiple 25,000 litre water tanks, with overflow being dispersed in a controlled manner. Public access is not considered relevant to this application, as the proposal does not impact any existing access points into the reserve. The proposal has taken into account the relationship of Māori and their culture and traditions. The subject site is not known to contain any archaeological sites. The proposal is not considered to exacerbate natural hazards.
- 11.4. 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, including the maintenance and enhancement of amenity values. The proposal maintains amenity values in the area as the proposal is in keeping with the existing character of the surrounding environment. The proposal also maintains and enhances the quality of the environment.
- 11.5. Section 8 requires Council to take into account the principals of the Treaty of Waitangi. It is considered that the proposal raises no Treaty issues. The subject site is not located within an area of significance to Māori. The proposal has taken into account the principals of the Treaty of Waitangi and is not considered to be contrary to these principals.
- 11.6. Overall, the application is considered to be consistent with the relevant provisions of Part 2 of the Act, as expressed through the objectives, policies and rules reviewed in earlier sections of this application. Given that consistency, we conclude that the proposal achieves the purposes of sustainable management set out by section 5 of the Act.

12. Conclusion

- 12.1. This application includes combining the existing consented activities within approved decision document RC2240137, with the additional new proposed activities to be undertaken on the site. Combining these activities will ensure that there is one decision document which includes all proposed activities, which will ensure consistency as well as ease of compliance with consent conditions and avoid multiple professional reports.
- 12.2. The proposed development is considered consistent with the surrounding environment. Adequate setback distances have been provided and all stormwater from impermeable areas will be adequately managed and are considered to have less than minor effects. Secondly, mitigation measures have been incorporated into the proposal to mitigate any additional runoff resulting from additional impermeable surfaces.
- 12.3. No significant adverse effects are anticipated to arise from the activity included in the application and no consideration of alternatives has been undertaken. All effects of the activity are being managed within the property boundaries. Overall, it is considered that the proposal will result in no more than minor effects on the environment.



- 12.4. In terms of section 104(1)(a) of the Act, the actual and potential effects of the proposal will be less than minor. The relevant provisions within Part 2 of the Act have been addressed as part of this application. The overall conclusion from the assessment of the statutory considerations is that the proposal is considered to be consistent with the sustainable management purpose of the Resource Management Act 1991.
- 12.5. It is also considered that the proposal will have less than minor adverse effects on the wider environment; no persons will be adversely affected by the proposal and there are no special circumstances.
- 12.6. In terms of section 104(1)(b) of the Act, the proposal is found to be generally consistent with the objectives, policies and assessment criteria of the relevant statutory documents as set out in this report.
- 12.7. As a Discretionary Activity, the application has been assessed under the matters specified under Section 104 and 104B of the Resource Management Act 1991. It is considered that the proposal results in no more than minor effects on the environment. It is considered appropriate for consent to be granted on a non-notified basis, subject to fair and reasonable conditions.

13. Limitations

- 13.1. This report has been commissioned solely for the benefit of our client, in relation to the project as described above, and to the limits of our engagement, with the exception that the Far North District Council or Northland Regional Council may rely on it to the extent of its appropriateness, conditions and limitations, when issuing their subject consent.
- 13.2. Copyright of Intellectual Property remains with Northland Planning and Development 2020 Limited, 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 information contained within this report.
- 13.3. 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.
- 13.4. 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.





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

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




R. W. Muir
Registrar-General
of Land

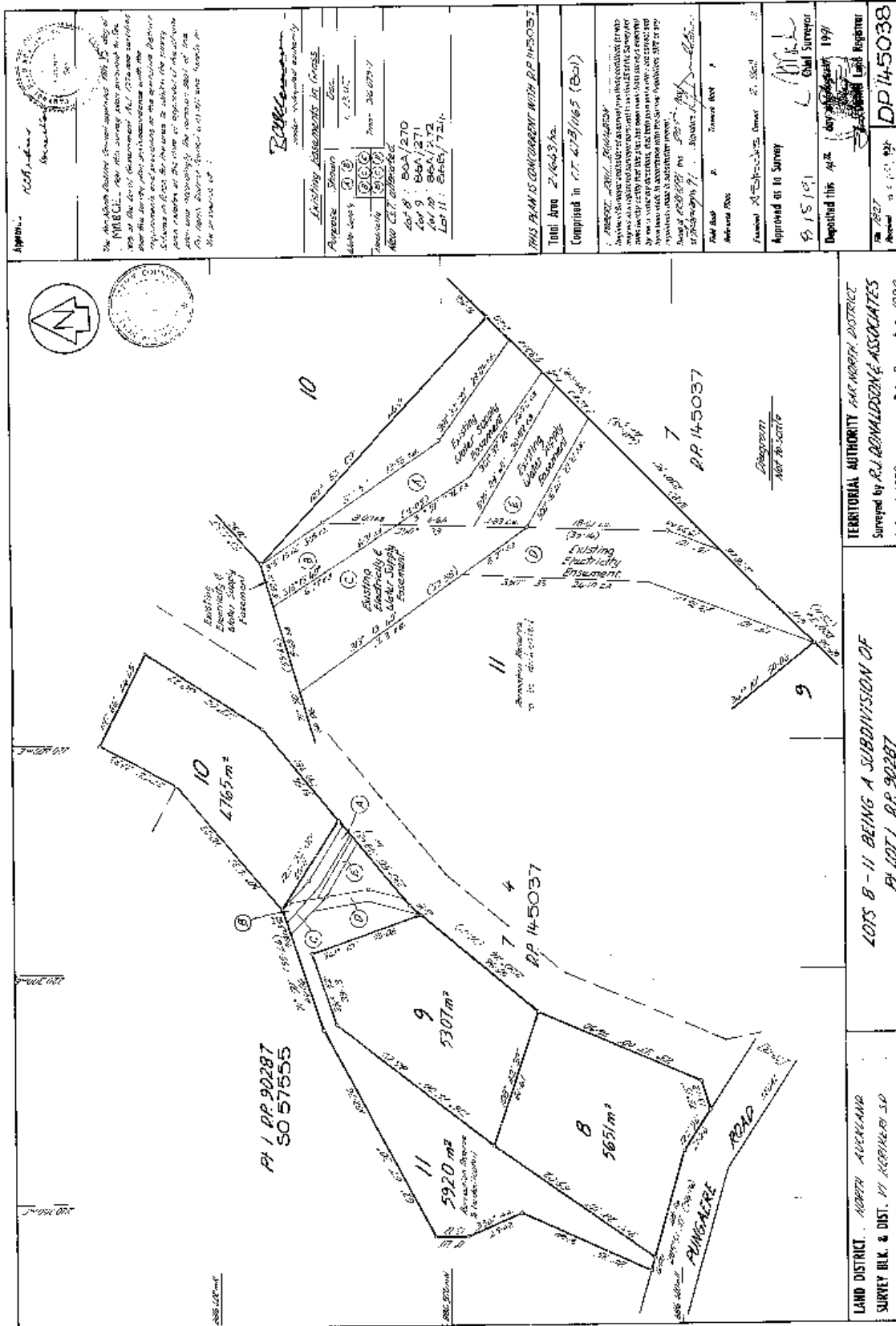
Identifier **NA86A/271**
Land Registration District **North Auckland**
Date Issued 14 August 1991

Prior References
NA47B/1165

Estate Fee Simple
Area 5307 square metres more or less
Legal Description Lot 9 Deposited Plan 145038
Registered Owners
Rebekah Leigh Polglaze and Regan Lance Polglaze

Interests

C294415.4 Resolution pursuant to Section 321(3)(c) Local Government Act 1974 - 14.8.1991 at 2:44 pm
C294415.8 Encumbrance to Far North District Council - 14.8.1991 at 2:44 pm
13047614.2 Mortgage to ANZ Bank New Zealand Limited - 27.6.2024 at 5:21 pm



Proposed Extension

Regan & Rebekah Polglaze
11 Ironbark Road
Waipapa
Lot 9 DP 145038

Construction Plans
Date: 29 July 2025
Job Number: 4196
Drawn by:



Designer Revision Sheet Index		
Sheet No.	Sheet Title	Rev
A01a, A01b	Wastewater field updated	N
A05a, A05b, A06, A07, A10, A11	Updated windows, workshop shower room revised, Skylight & sun tunnel added & various notes through the plans updated.	N
A09, A11	Piles under point loads & Kitchen roof beams revised	N
A12, A13	Bracing updated	N
A28, A29	Skylight / Sun tunnel detail pages added	N

Designer Sheet Index		
Sheet No.	Sheet Title	Rev
A01a	Site Location Plan	O
A01b	Site Plan	O
A01c	Site Plan	O
A01d	Wastewater Details	O
A02	Existing Floor Plan	O
A03	Existing Elevations	O
A04	Existing Elevations	O
A05a	Proposed Floor Plan 1	O
A05b	Proposed Floor Plan 2	O
A06	Proposed Elevations	O
A07	Proposed Elevations	O
A08	Drainage Plan	O
A09	Foundation Plan	O
A10	Roof Plan	O
A11	Framing & Lintel Plan	O
A12	Bracing Plan (Main dwelling)	O
A13	Bracing Plan (Garage)	O
A14	Section A	O
A15	Section B	O
A16	Section C	O
A17	Foundation Details	O
A18	Threshold Details	O
A19	Hold Down Details	O
A20	Hold Down Details	O
A21	Cladding Details	O
A22	Cladding Details	O
A23	Roof Details	O
A24	Roof Details	O
A25	Membrane Details	O
A26	Drainage Details	O
A27	Seismic Restraint Details	O
A28	Velux Skylight Details	O
A29	Velux Sun Tunnel Details	O

Engineer Sheet Index		
Sheet No.	Sheet Title	Rev
S01	Foundation Plan	1
S02	Typical Details	1
S03	Typical Details	1
S04	Typical Details	1
S05	Technical specifactions	1



Lot 9 DP 145038
Lot area: 5,307m²
Cladding weight: Light
Corrosion zone: C
Wind zone: High
Rural Production Zone
District plan compliance:

Residential intensity: Complies

Sunlight rule: Complies

Stormwater Management

(Impermeable surfaces):	452.7m ²
Existing metal driveway:	156.7m ²
Proposed concrete driveway:	48.1m ²
Proposed metal driveway:	61.0m ²
Existing office/future 2-bedroom sleepout:	439.1m ²
Existing dwelling & proposed extension:	130.0m ²
Future minor dwelling:	69.8m ²
Future metal driveway:	100.0m ²
Future pool:	1,457.4m ²
Total proposed:	

Total permitted = 15% of gross site area = 769.0m²
Total proposed = 1,457.4m² = 27.5% RC required

Setbacks to boundaries: 10m min.
Proposed works - complies.
Previous breaches addressed under
RC:2240317-RMALUC

Building height:
Permitted: 12m max
Proposed: 4.5m approx.

Building Coverage:

Office/future 2-bedroom sleepout:	46.0m ²
Existing dwelling & proposed extension:	362.2m ²
Future minor dwelling:	110.5m ²
Total proposed:	518.7m ²

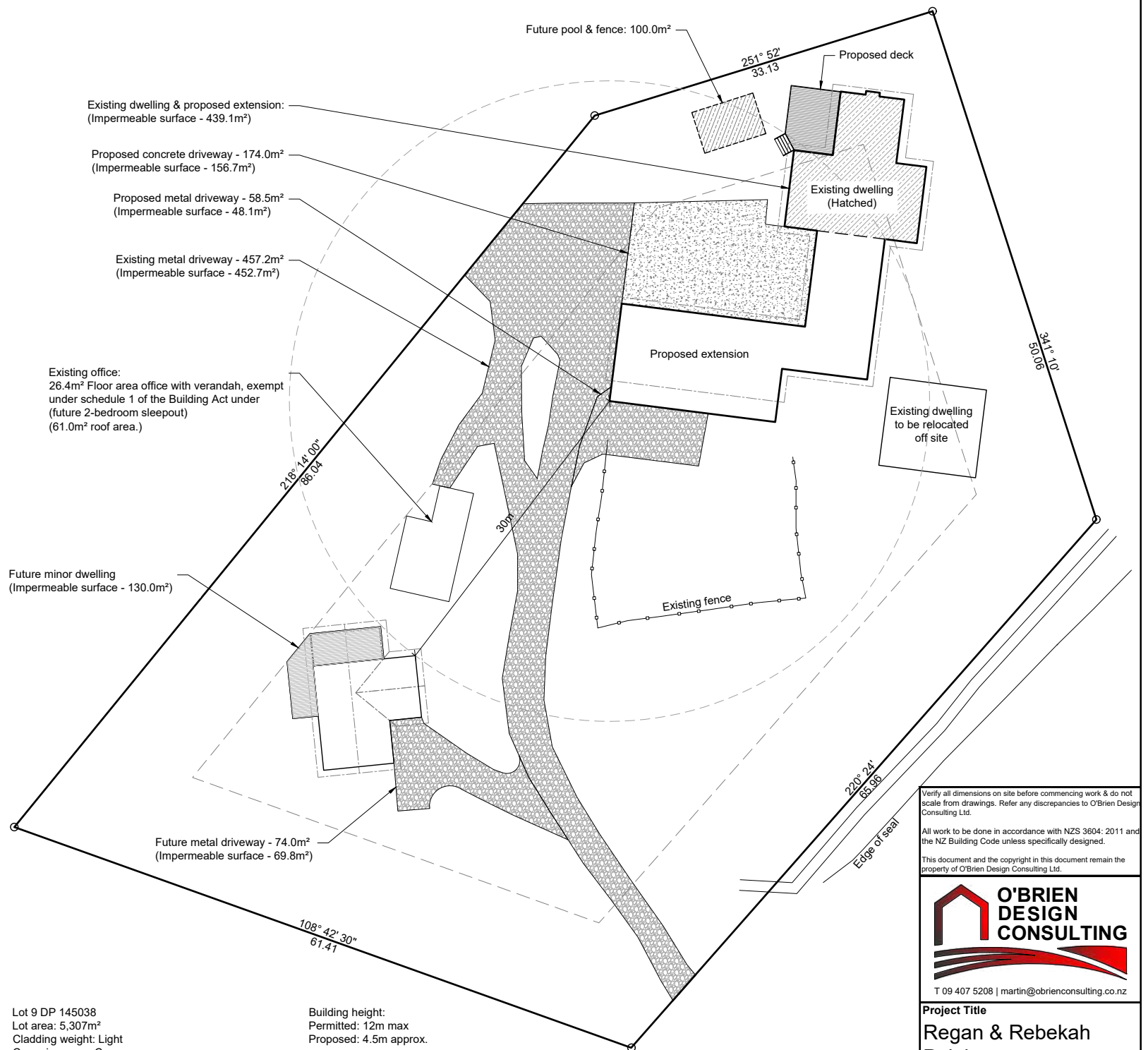
Total permitted = 12.5% of gross site area = 663.4m²
Total Proposed = 518.7 = 9.8% Complies

Earthworks

Main cut:	431.2m ³
Fill:	431.2m ³
Cut/fill:	862.4m ³

Earthworks cut height at 2.7m high, RC required

Wastewater for the future minor dwelling will require a resource consent as the volumes are greater than 2000ltrs.



Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Site Location Plan

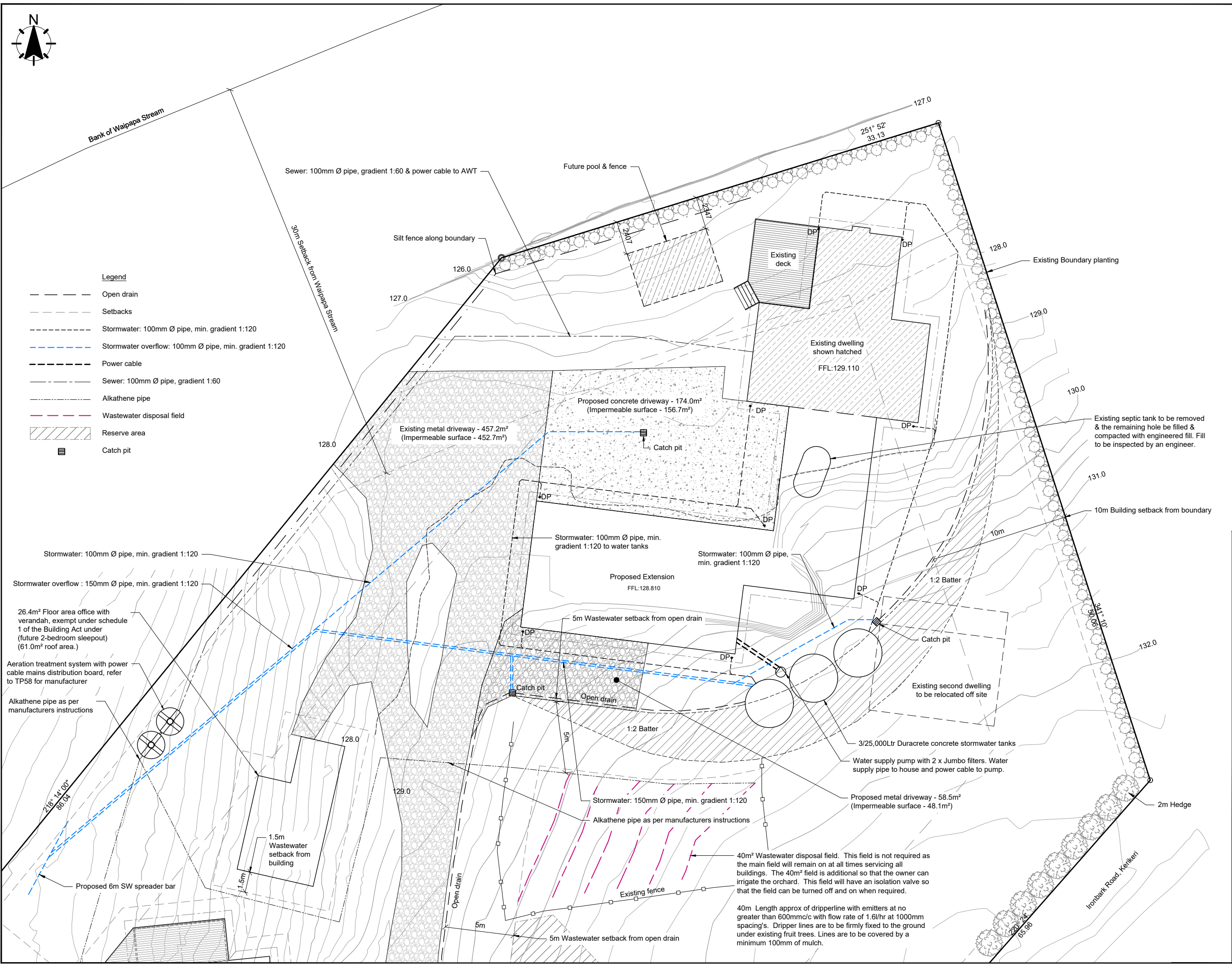
Drawn 29 July 2025

Project No 7989

Rev 0 Sheet A01a

Scale (A3 Original) 1: 500





- NOTES**
1. Contour lines at 1m increments, sourced from NRC .
 2. All drainage to comply with AS/NZS3500 & NZBC G13/AS1. All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
 3. Length of dripper lines to be no more than 100m between feed points.
 4. Dripper lines to follow contour lines
 5. Dripper lines to be setback:
 - 1.5m from buildings
 - 1.5m from property boundaries
 - 5m from any intermittent storm water flow path such as a drain or overland flow path down slope of the field.
 - 30m from any river.
 6. Smoke alarms to be installed to NZS 4514:2021, refer to TP58 report for details.
 7. The works which are being proposed will comply with Earthworks EW-S3 Accidental Discovery Protocol and Earthworks EW-S5 Erosion and Sediment Control - Auckland Council Guideline Document GD005 GD05 Erosion and Sediment Control.pdf (aucklanddesignmanual.co.nz)

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Project Title
Regan & Rebekah Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Site Plan

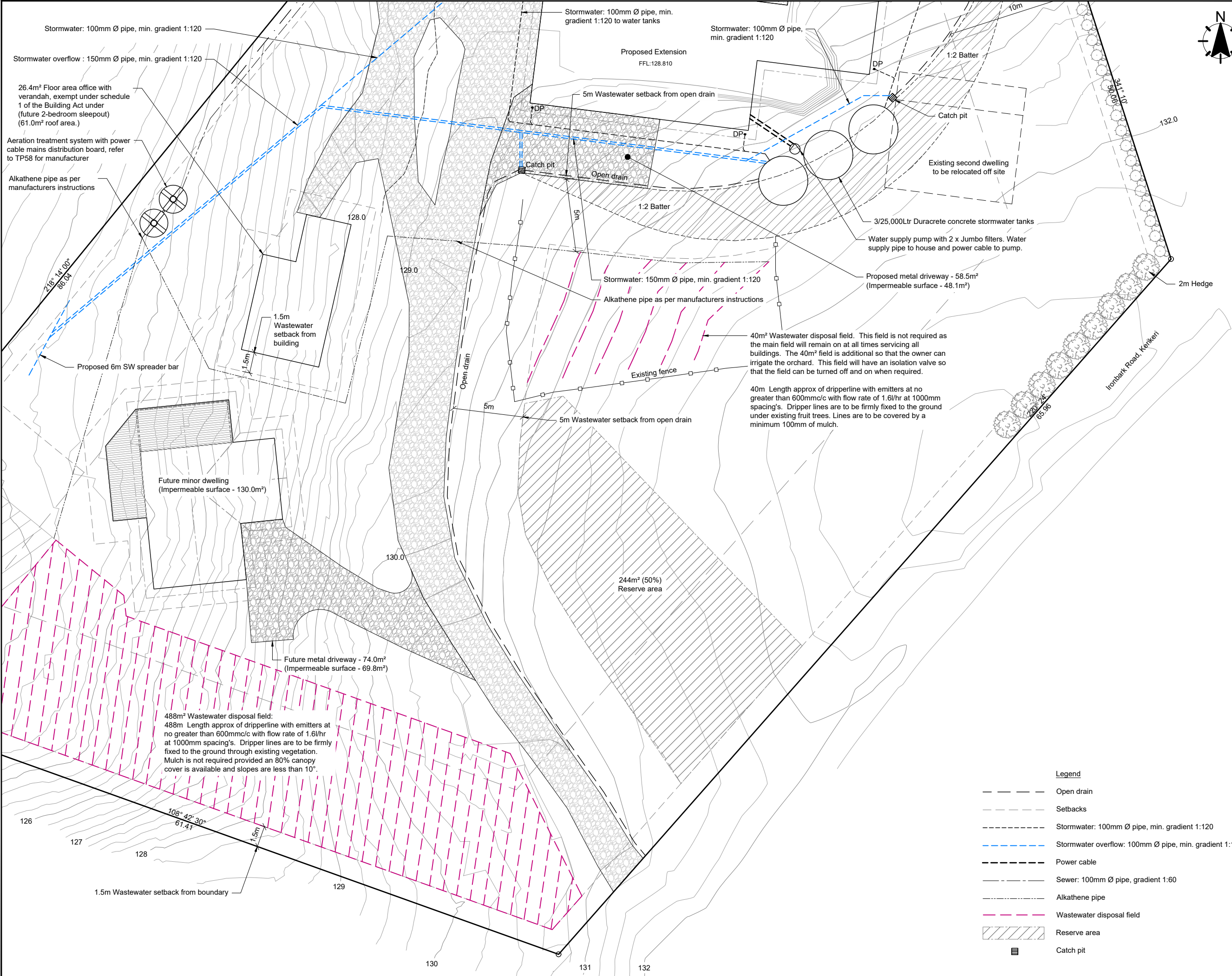
Drawn 29 July 2025

Project No 7989

Rev 0 **Sheet** A01b

Scale (A3 Original) 1: 250

2.5 1.25 0 2.5 5 m



- NOTES**
1. Contour lines at 1m increments, sourced from NRC .
 2. All drainage to comply with AS/NZS3500 & NZBC G13/AS1. All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
 3. Length of dripper lines to be no more than 100m between feed points.
 4. Dripper lines to follow contour lines
 5. Dripper lines to be setback:
 - 1.5m from buildings
 - 1.5m from property boundaries
 - 5m from any intermittent storm water flow path such as a drain or overland flow path down slope of the field.
 - 30m from any river.
 6. Smoke alarms are to be installed in accordance with the New Zealand Building Code Clause F7 Section 3.0:
 - Smoke alarms shall be installed on or near the ceiling in every sleeping space or within 3m of every sleeping space door.
 7. The works which are being proposed will comply with Earthworks EW-S3 Accidental Discovery Protocol and Earthworks EW-S5 Erosion and Sediment Control - Auckland Council Guideline Document GD005 GD05 Erosion and Sediment Control.pdf (aucklanddesignmanual.co.nz)

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Project Title
Regan & Rebekah Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Site Plan

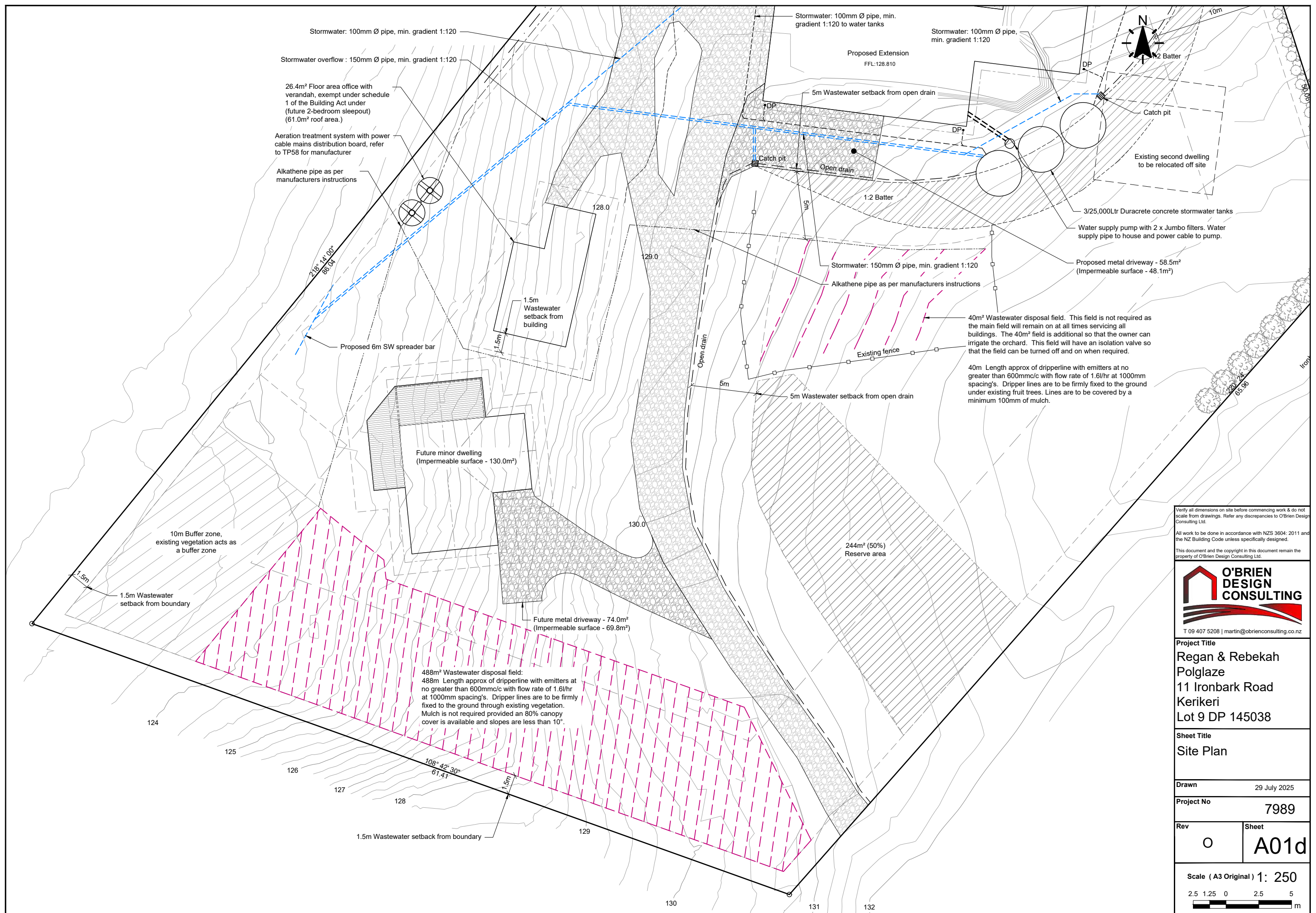
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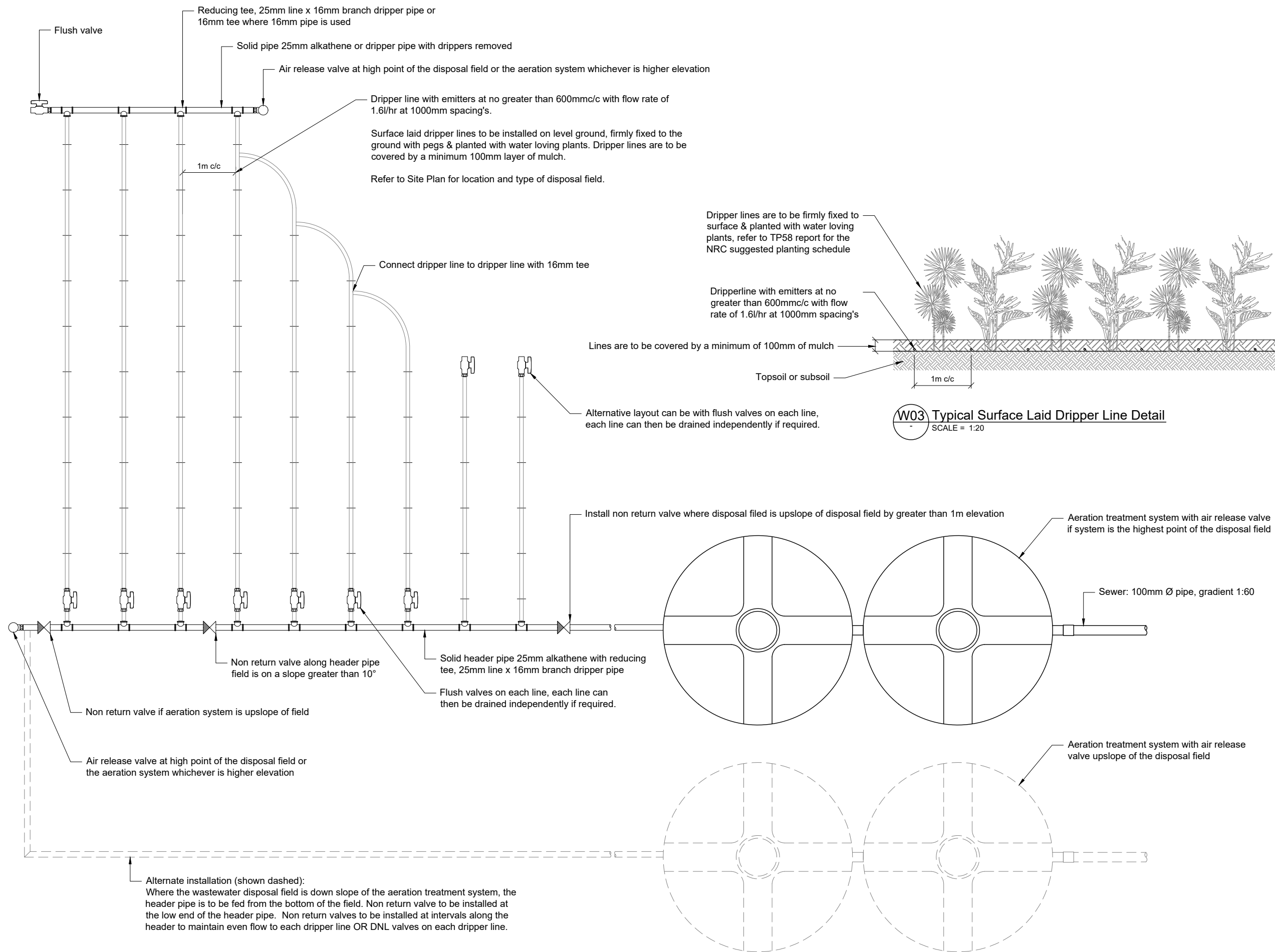
Project No 7989

Rev	Sheet
0	A01c

Scale (A3 Original) 1: 250

2.5 1.25 0 2.5 5 m





W01 Typical Wastewater Disposal Field Plan
SCALE = 1:20

NOTES

1. All drainage is diagrammatical, do not scale from drawing.
2. Length of dripper lines to be no more than 100m between feed points.
3. Driller lines to follow contour lines.
4. Driller lines to be laid on even ground, laying dripper lines on gully's or humps in the ground can cause ponding.
5. Air release valve to be at the high point in the disposal field or at the system if that is a higher elevation, locations shown on detail are indicative.
6. The works which are being proposed will comply with Earthworks EW-S3 Accidental Discovery Protocol and Earthworks EW-S5 Erosion and Sediment Control - Auckland Council Guideline Document GD005 GD05 Erosion and Sediment Control.pdf (aucklanddesignmanual.co.nz)

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Lot 9 DP 145038

Sheet Title

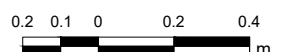
Wastewater Details

Drawn 29 July 2025

Project No 7989

Rev	Sheet
0	A01e

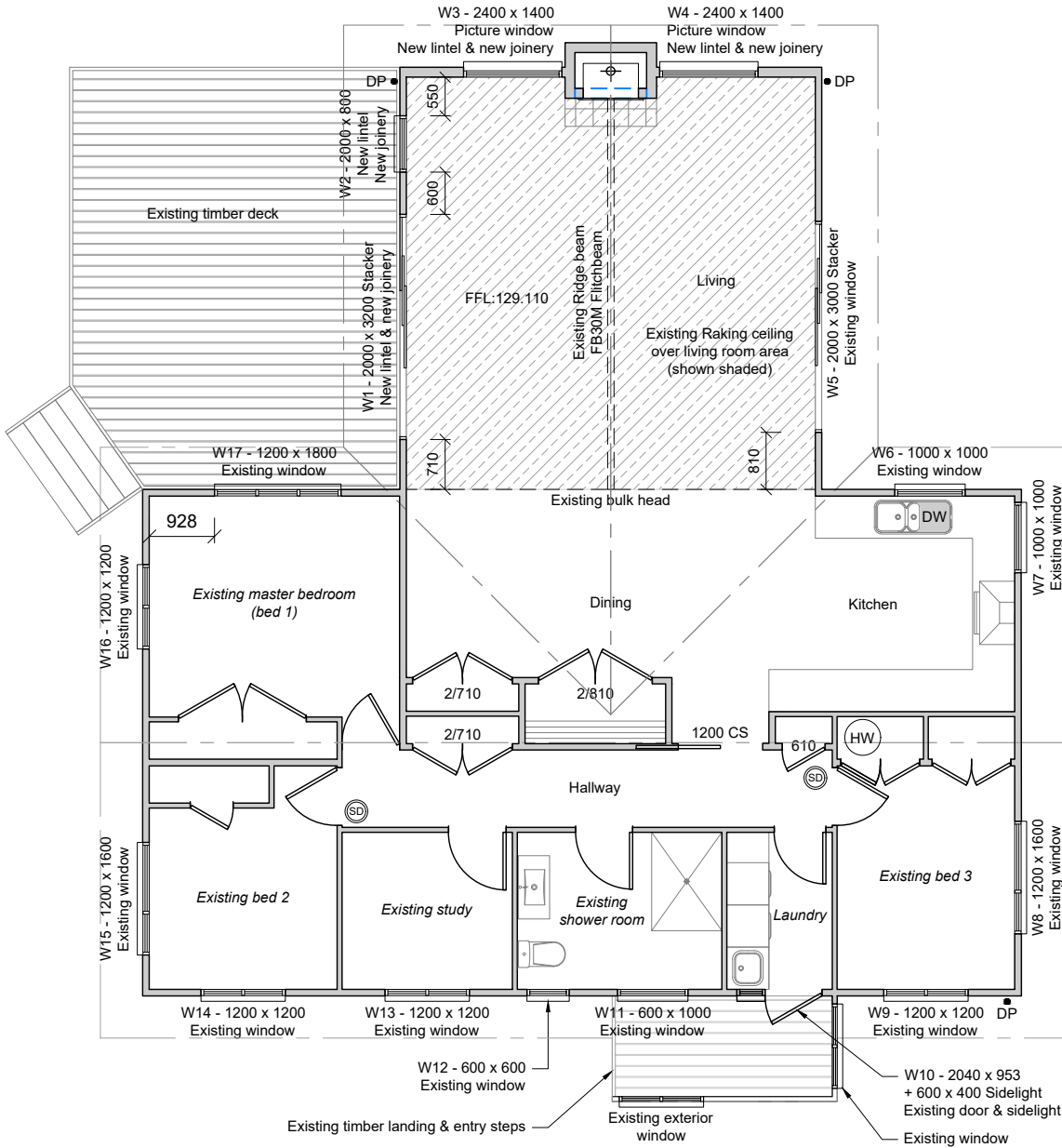
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SPECIFICATION:

- High wind zone
- Exposure zone C
- Existing timber foundations
- Proposed timber foundations
- 2.4m Stud height
- Existing Ultra board weatherboard cladding
- Existing Linea weatherboard cladding
- Existing corrugate roofing
- Existing 20° Roof pitch
- Existing 10mm GIB wall lining
- Existing 13mm GIB ceiling lining
- Existing R2.2 Wall insulation
- Existing R3.6 Ceiling batts
- Existing Hardieflex soffit lining
- Existing continuous external rainwater system & fascia with 80Ø downpipe, unless noted.



- LEGEND**
- Smoke Detector
 - Roof Line
 - New 90 x 45 SG8 H1.2 Timber framing walls
 - Existing Timber framing walls
 - Existing vinyl floor
 - Selected tiles on selected tile underlay to all wet areas installed to manufacturers specifications & Branz tiling good practice guide

BUILDING AREA:

Existing
Floor Area: 126.8m²
Roof Area: 161.2m²

FIXINGS:

Exposure Zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

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Project Title

Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title

Existing Floor Plan

Drawn 29 July 2025

Project No 7989

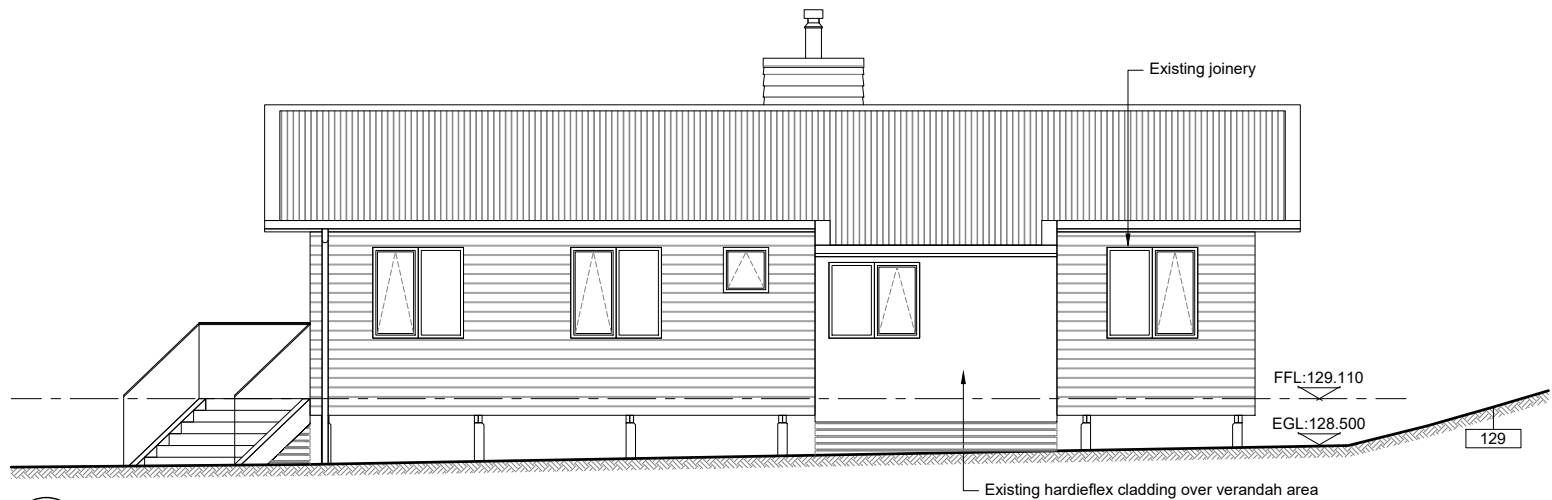
Rev 0 Sheet A02

Scale (A3 Original) 1: 100

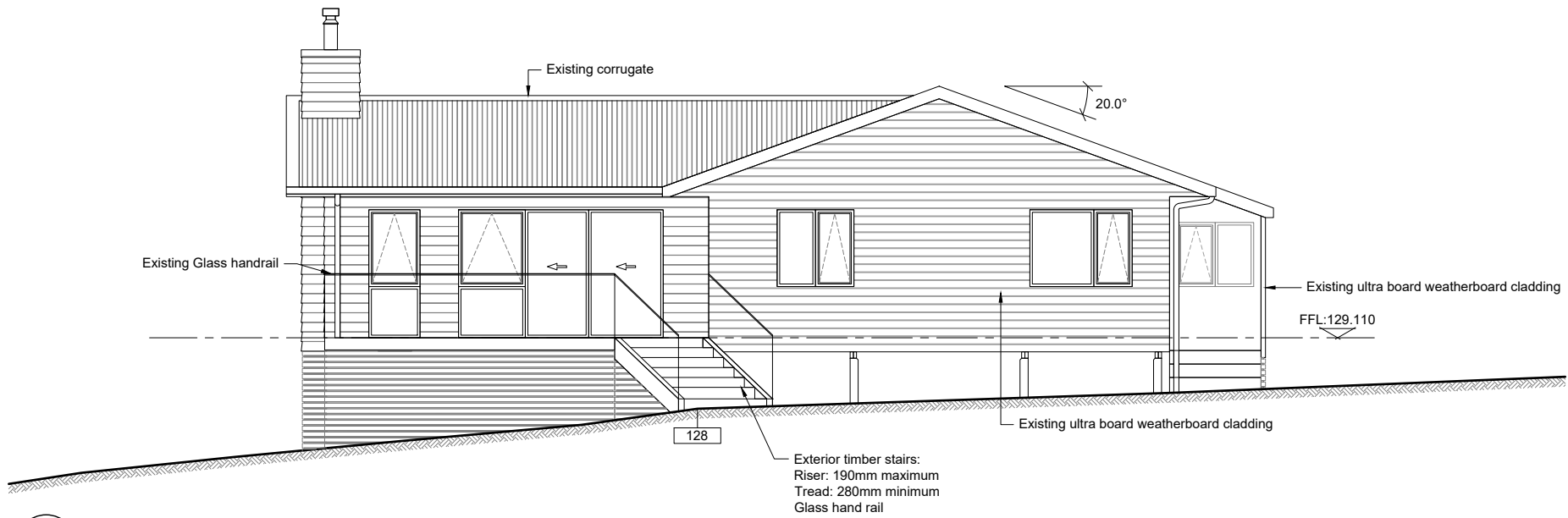


FIXINGS:

Exposure Zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1



A Elevation
A04 SCALE = 1:100 @ A3



B Elevation
A04 SCALE = 1:100 @ A3

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Project Title

Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title

Existing Elevations

Drawn 29 July 2025

Project No 7989

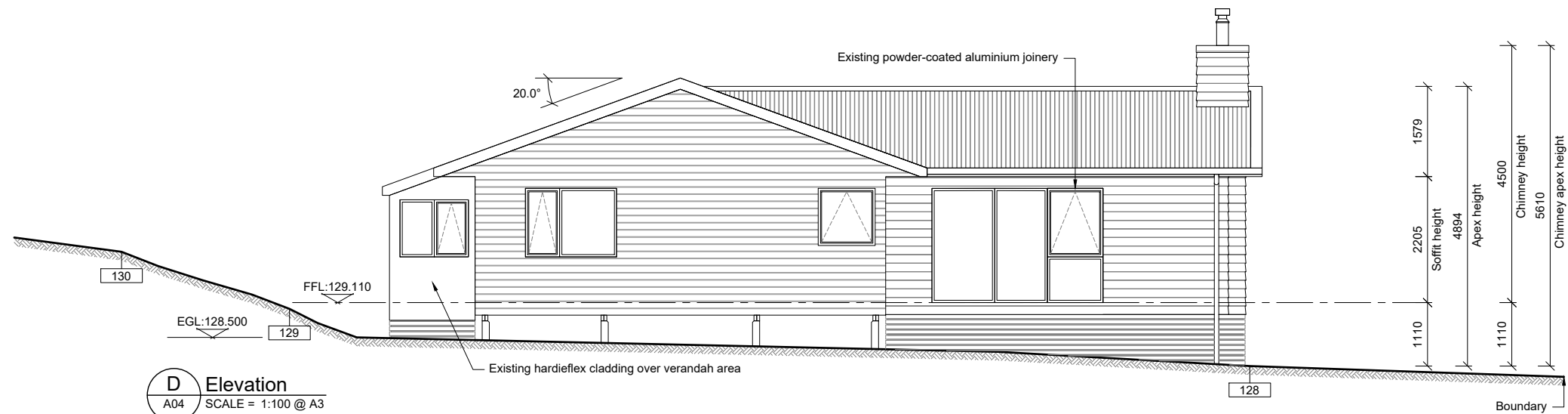
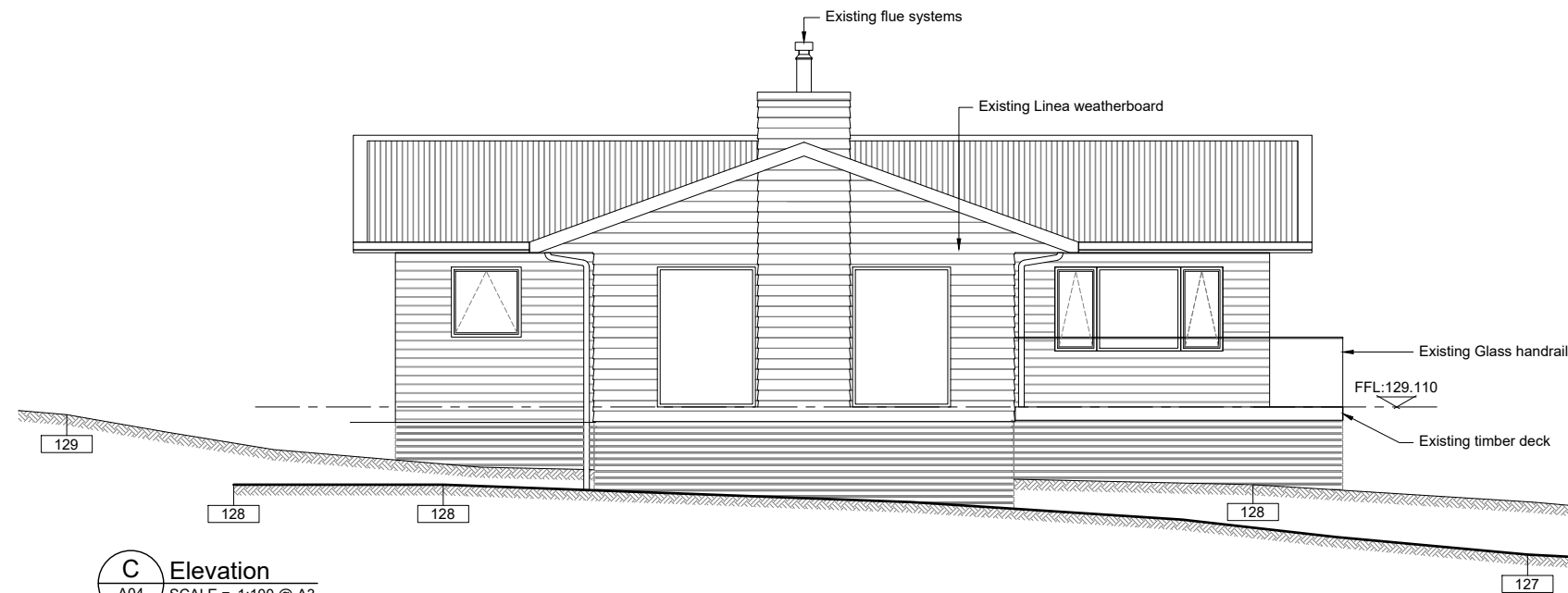
Rev	Sheet
0	A03

Scale (A3 Original) 1: 100



FIXINGS:

Exposure Zone: C
Durability of fixings to comply with NZS
3604:2011 Section 4 & NZBC B2/AS1



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Project Title

Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title

Existing Elevations

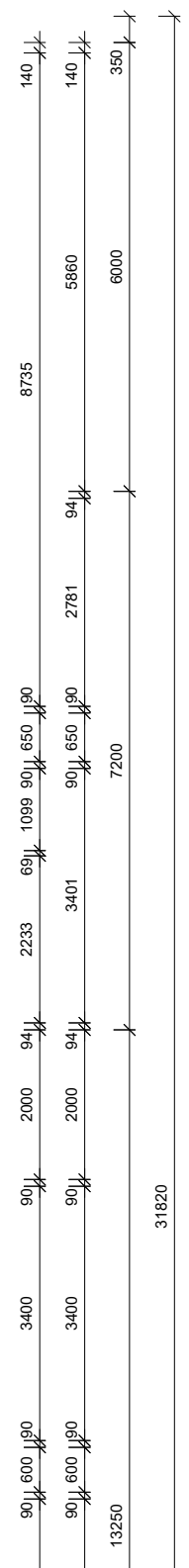
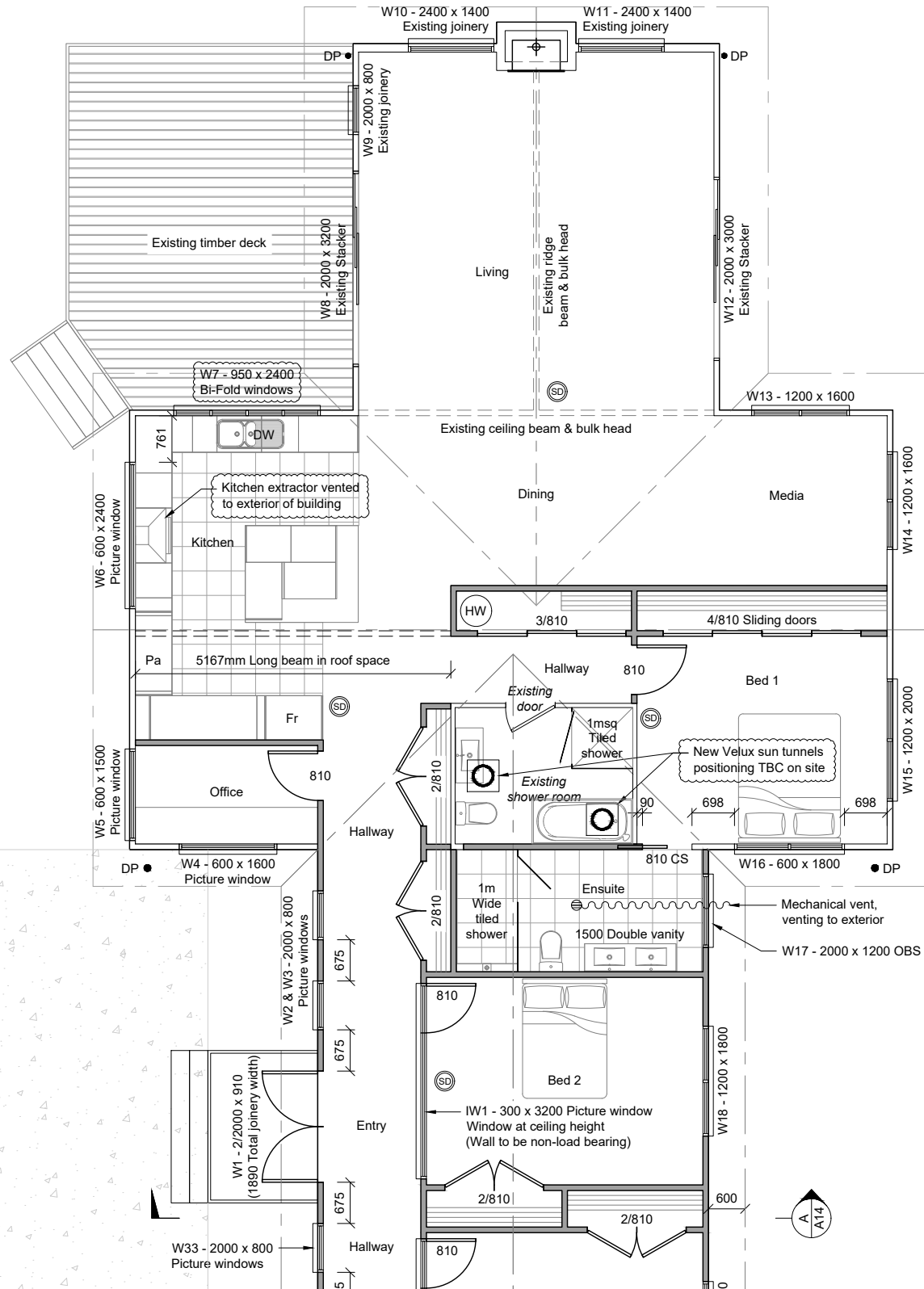
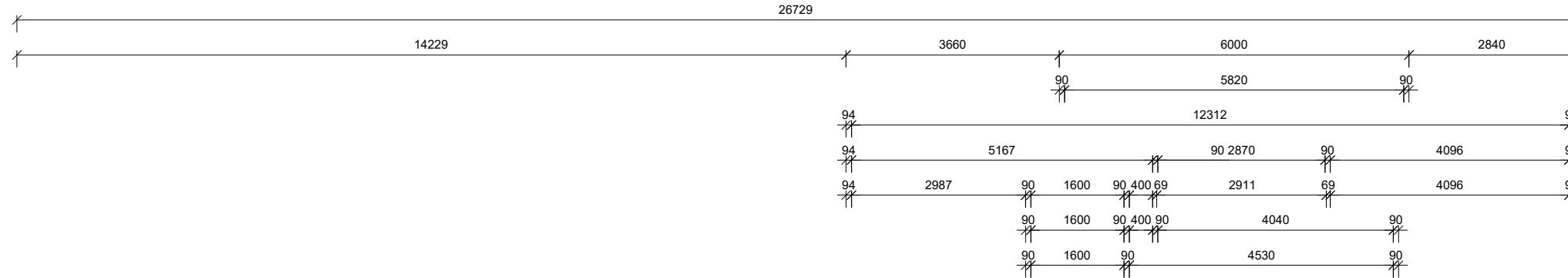
Drawn 29 July 2025

Project No 7989

Rev 0 Sheet A04

Scale (A3 Original) 1: 100





SPECIFICATION:

- High wind zone
- Exposure zone C
- Existing timber foundations
- Proposed concrete raft foundations
- 2.4m Stud height
- Existing ultra board weatherboard cladding
- Proposed Linea weatherboard cladding
- Existing & proposed corrugate roofing
- 20° Roof pitch
- 10mm GIB wall lining & 13mm GIB ceiling lining
- Triboard wall lining in garage
- R2.2 Wall insulation & R3.6 Ceiling batts
- Hardieflex soffit lining
- Continuous external rainwater system & fascia with 80Ø downpipe, unless noted.
- All windows and doors double glazed (low Xcel)
- Grade A safety glazing in bathroom window and all full height ranch sliders inline with NZS 4223.

- LEGEND**
- Smoke Detector
 - Roof Line
 - New 90 x 45 SG8 H1.2 timber framing walls
 - Existing timber framing walls
 - Selected tiles on selected tile underlay to all wet areas installed to manufacturers specifications & Branz tiling good practice guide
 - 180L Mains pressure hot water cylinder

Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

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Project Title
Regan & Rebekah Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Proposed Floor Plan 1

Drawn 29 July 2025

Project No 7989

Rev 0 **Sheet** A05a

Scale (A3 Original) 1: 100

1 0.5 0 1 2 m



LEGEND

- Smoke Detector
- Roof Line
- New 90 x 45 SG8 H1.2 timber framing walls
- Existing timber framing walls
- Selected tiles on selected tile underlay to all wet areas installed to manufacturers specifications & Branz tiling good practice guide
- 180L Mains pressure hot water cylinder

SPECIFICATION:

- High wind zone
- Exposure zone C
- Existing timber foundations
- Proposed concrete raft foundations
- 2.4m Stud height
- Existing ultra board weatherboard cladding
- Proposed Linea weatherboard cladding
- Existing & proposed corrugate roofing
- 20° Roof pitch
- 10mm GIB wall lining & 13mm GIB ceiling lining
- Triboard wall lining in garage
- R2.2 Wall insulation & R3.6 Ceiling batts
- Hardieflex soffit lining
- Continuous external rainwater system & fascia with 80Ø downpipe, unless noted.
- All windows and doors double glazed (low Xcel)
- Grade A safety glazing in bathroom window and all full height ranch sliders inline with NZS 4223.

600 nom. typ.

GD1 - 2500 x 3000
FB20M Fitch beam
Fixing type H

GD2 - 2500 x 3000
FB20M Fitch beam
Fixing type H

GD3 - 2500 x 3000
FB20M Fitch beam
Fixing type H

765

W30, W31 & W32 - 2000 x 800
Picture windows

810

810

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Garage bay 1

Garage bay 2

Garage bay 3

Workshop
(Non habitable)

780 x 1400 Velux Electric Skylight
installed to manufacturers specifications

90 1600 90 1400 90 4040 90

90 1600 90 2220 90 2220 90

90 1600 90 4530 90

90 1600 90 2600 90 600 90 3840 90

90 1600 90 3390 90

90 1600 90 8050 90

90 1600 90 23710 90

12000

12000

15660

23710



NOTE:

- All dimensions taken from the outside of pre-cut, please check all dimensions before construction commences.
- Refer to Section for lintel dimensions, stud spacing & external door offsets.
- Additional nogs to be installed at framing stage to allow for fixed shelves, wall mounted extractors, heat pump, A/C units & garage door components where required.
- Refer to attached sheet for cladding & roofing notes & details.
- All wall framing typically H1.2 treated unless specifically stated.
- All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
- Waterproof membrane under the tiles (or similar) is to extend 1.5m from bathroom & kitchen sanitary fixtures to comply with E3/AS1 3.0

BUILDING AREA:

Existing Areas

Floor Area: 126.8m²

Roof Area: 161.2m²

Extension Areas

Floor Area: 235.4m²

Roof Area: 277.9m²

Total Areas

Floor Area: 362.2m²

Roof Area: 439.1m²

FIXINGS:

Exposure Zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

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Project Title

Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title

Proposed Floor Plan 2

Drawn 29 July 2025

Project No 7989

Rev Sheet

0 A05b

Scale (A3 Original) 1: 100



H1 SPECIFICATION:

- Foundation: Poly Raft R1.5
- Existing Subfloor: Expol R2.5
- Walls: Pink batts R2.2
- Ceiling: Pink batts R3.6
- Double glazing low E Xcel R0.36

H1 Note:

Garage area not included in thermal envelope, insulate internal walls between garage & dwelling.

H1 calculations included in BC information.

SPECIFICATIONS					
Cladding Type	Linea & Vertical Shiplap				
Stud Height	2460 & 2760				
Roofing Type	Corrugate				
Roof Pitch	20°				
Joinery	Aluminum				
Wind Zone	High				
Earth Quake Zone	1				
RISK MATRIX					
Risk Factor	L	M	H	VH	Score
A. Wind Zone	0	0	1	2	1
B. Number of Storeys	0	1	2	4	0
C. Roof / Wall Intersection	0	1	3	5	3
D. Eave Width	0	1	2	5	0
E. Envelope Complexity	0	1	3	6	1
F. Deck Design	0	2	4	6	0
	Total				5

NOTE:

- All heights shown are existing ground heights.
- All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
- All windows and doors double glazed.
- Grade A safety glazing in bathrooms & tall windows and sliders inline with NZS 4223.

FIXINGS:

Exposure Zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

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Project Title
Regan & Rebekah Polglaze
11 Ironbark Road Kerikeri
Lot 9 DP 145038

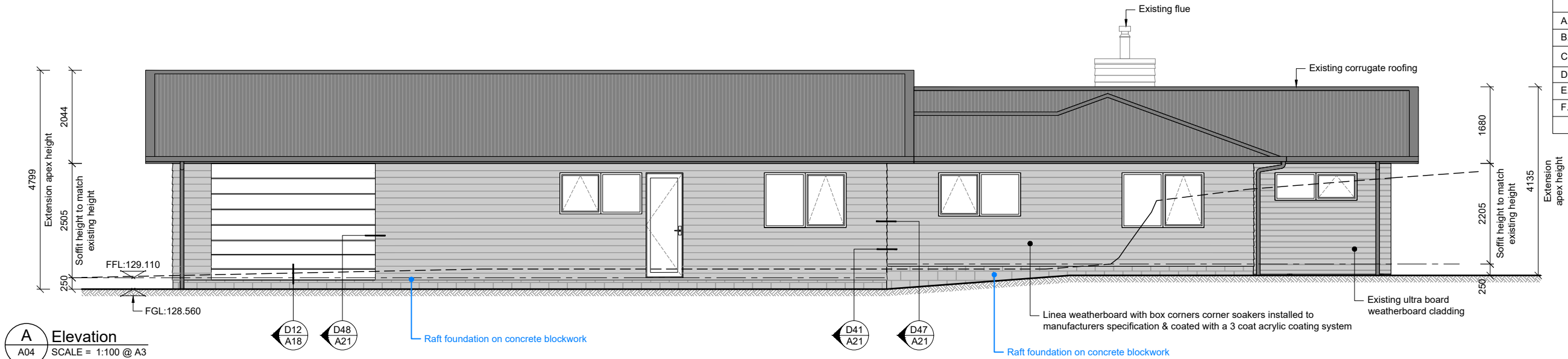
Sheet Title
Proposed Elevations

Drawn 29 July 2025

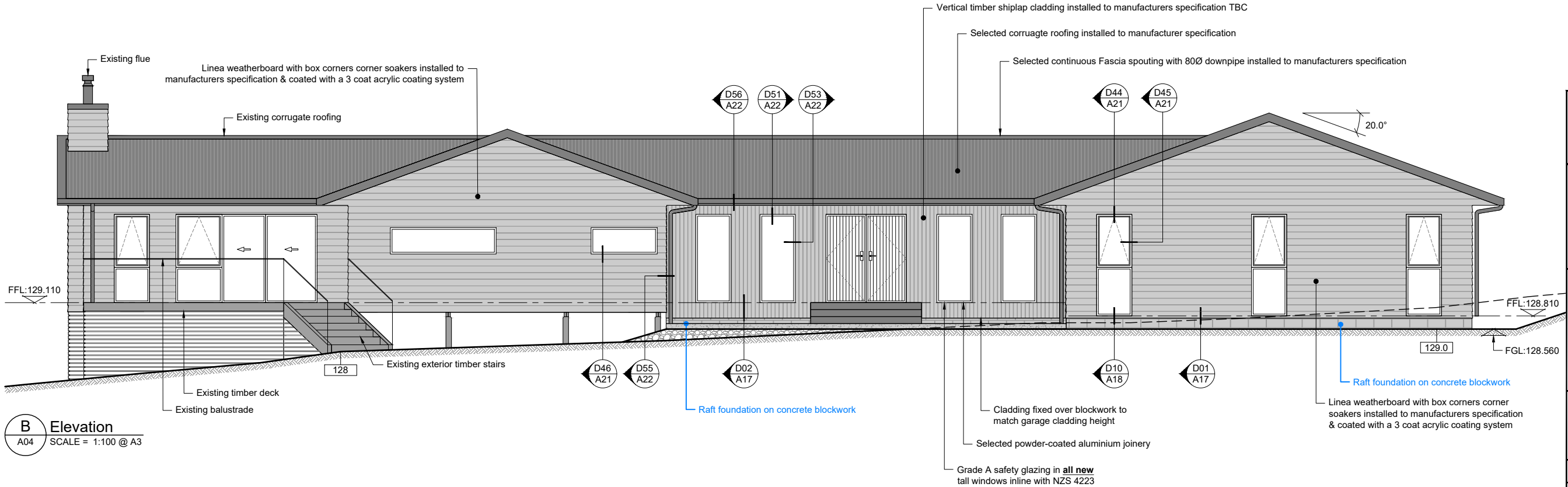
Project No 7989

Rev 0 Sheet A06

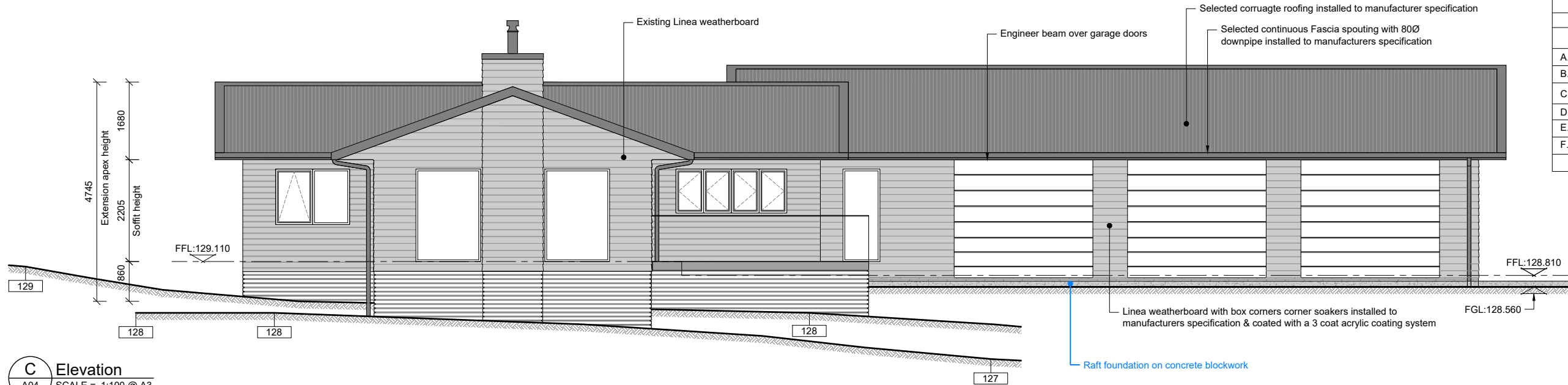
Scale (A3 Original) 1: 100



A Elevation
A04 SCALE = 1:100 @ A3



B Elevation
A04 SCALE = 1:100 @ A3



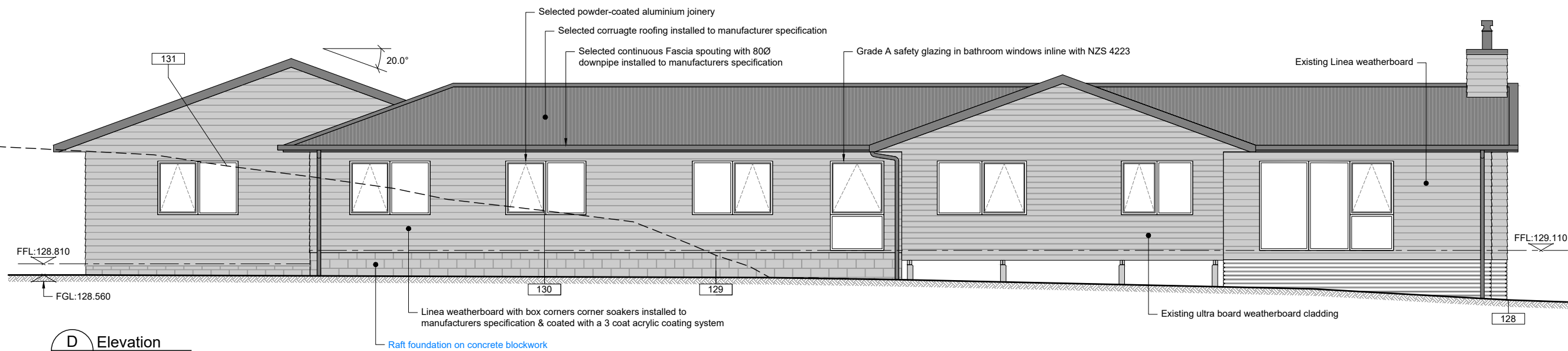
C Elevation
A04 SCALE = 1:100 @ A3

SPECIFICATIONS					
Cladding Type	Linea & Vertical Shiplap				
Stud Height	2460 & 2760				
Roofing Type	Corrugate				
Roof Pitch	20°				
Joinery	Aluminum				
Wind Zone	High				
Earth Quake Zone	1				
RISK MATRIX					
Risk Factor	L	M	H	VH	Score
A. Wind Zone	0	0	1	2	1
B. Number of Storeys	0	1	2	4	0
C. Roof / Wall Intersection	0	1	3	5	3
D. Eave Width	0	1	2	5	0
E. Envelope Complexity	0	1	3	6	1
F. Deck Design	0	2	4	6	0
Total					5

- NOTE:
- All heights shown are existing ground heights.
 - All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
 - All windows and doors double glazed.
 - Grade A safety glazing in bathrooms & tall windows and sliders inline with NZS 4223.

FIXINGS:

Exposure Zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1



D Elevation
A04 SCALE = 1:100 @ A3

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Proposed Elevations

Drawn 29 July 2025

Project No 7989

Rev 0 Sheet A07

Scale (A3 Original) 1: 100





1. All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
2. Number of downpipes required as per NZBC E1/AS1 1 x 74mmØ downpipe per 70m² roof plan area.
3. Stormwater: 100mm Ø UPVC pipe, minimum gradient 1:120.
4. Continuous fascia & spouting with 80Ø PVC downpipe with PVC spouting.
5. All drainage to comply with AS/NZS 3500 & NZBC G13/AS1.
6. All lateral drains under slab to be a minimum of 65Ø.
7. Provide seismic restraints & temperature valve to hot water cylinder as per NZBC G12/AS1. Refer to separate sheet for details.

Relief vent pipe shall be:

1. Discharged to a location easily visible and identifiable and unlikely to cause nuisance or damage to the building of injury to persons.
2. Each line shall fall continuously from valve to point of discharge.
3. Drain to terminate:
 - 3.1. Not lower than 200mm of higher than 300mm above an unpaved surface, or
 - 3.2. Not lower than 75mm or higher than 300mm above a gravel pit not less than 100mm in diameter in a paved surface.
4. Have air gaps as required.
5. Pipework downstream of the relief valve should be capable of carrying water exceeding 93°C.
6. Be located to discharge away from building where necessary so as to adversely effect slab, foundation of footing.

Waste Pipe Gradients (min)		
40Ø	1:40 Minimum Gradient	4DU
65Ø	1:40 Minimum Gradient	21DU
100Ø	1:60 Minimum Gradient	115DU
Waste Pipe & Discharge Units		
40Ø	Hand basin	1DU
40Ø	Kitchen Sink	3DU
40Ø	Dishwasher	3DU
40Ø	Laundry Tub	3DU
40Ø	Washing Machine	5DU
40Ø	Shower	2DU
40Ø	Bath	4DU
100Ø	WC Pan	4DU
Drainage Pipe Gradient		
65Ø	1:40 Minimum Gradient	25DU
85Ø	1:60 Minimum Gradient	61DU
100Ø	1:60 Minimum Gradient	205DU
150Ø	1:60 Minimum Gradient	1310DU
● TV	Terminal Vent	
● ORG	Overflow Relief Gully	
+ RE	Rooding Eye	
-----	Drainage - Waste Pipe	
-----	100mm Ø Stormwater Pipe	
-----	HWC Copper pipe	

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Project Title

Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title

Drainage Plan

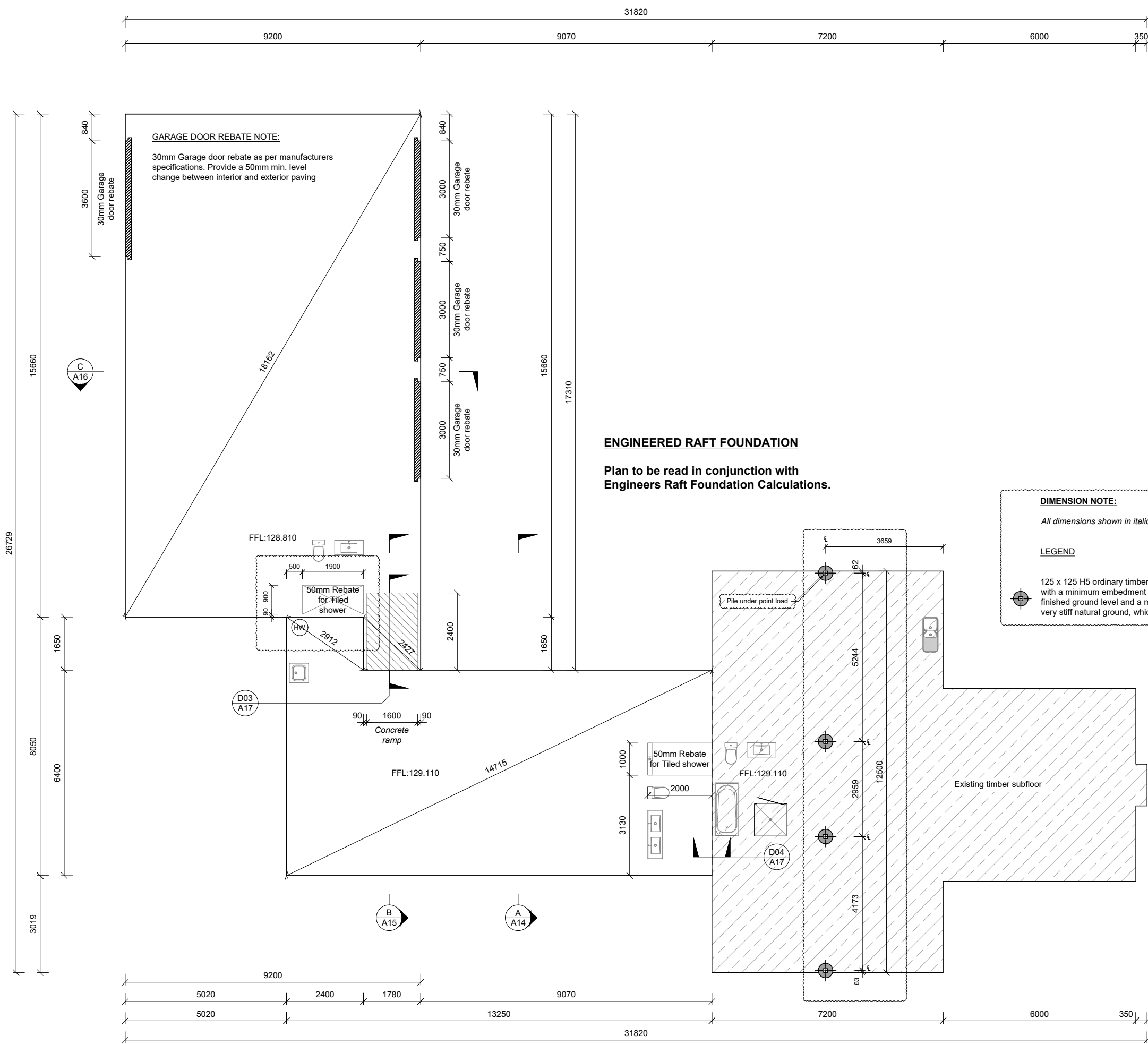
Drawn 29 July 2025

Project No 7989

Rev	Sheet
0	A08

Scale (A3 Original) 1:125





- NOTE:**
- All work to be done in accordance with NZS 3604: 2011 and the NZ Building Code unless specifically designed.
 - Check all existing drain locations and all dimensions on site before construction.
 - Refer to Engineers notes for concrete MPa & other details.
 - Plans to be read in conjunction with Engineers foundation design & PS1.
 - Local Authority should inspect the earthworks, building platform construction and foundation, prior to the concrete being poured to ensure that the design criteria has been met.
 - All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
 - Confirm rebate to slab for external doors with Designer or home builder before construction.
 - Granular fill to comply with NZS 3604:2011, greater than 600mm to be engineered. Fill to be compacted at 150mm intervals and tested at 300mm intervals. Do not build on uncertified fill.

FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

Exposed fixings to be type 304 stainless steel.
Sheltered fixings to be hot-dipped galvanize.
Closed in nail plates in roof space to be continuous coated galvanized steel.
Closed wire dogs and bolts to be hot dipped galvanized steel.
All other closed structural fixings to be mild steel (uncoated non galvanized)

DIMENSION NOTE:

All dimensions shown in italic to centre line of pile

LEGEND

125 x 125 H5 ordinary timber pile. 450Ø footing with a minimum embedment of 0.9m below finished ground level and a minimum of 0.3m into very stiff natural ground, whichever is deeper.

Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

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Project Title
Regan & Rebekah Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Foundation Plan

Drawn 29 July 2025

Project No 7989

Rev 0 **Sheet** A09

Scale (A3 Original) 1: 125

1.25 0.63 0 1.25 2.5 m

NOTE:

Unless specifically noted all internal loadbearing walls less than 10KN, so no thickening required

NOTE:

1. Kitchen extractor hood to be vented to exterior.
2. Roofing to be installed to New Zealand Metal Roofing Code of Practice and in accordance with manufacturers installation instructions.
3. All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
4. Number of downpipes required as per NZBC E1/AS1 1 x 100mmØ downpipe per 130m² roof plan area.
5. Stormwater: 100mm Ø UPVC pipe, minimum gradient 1:120.

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

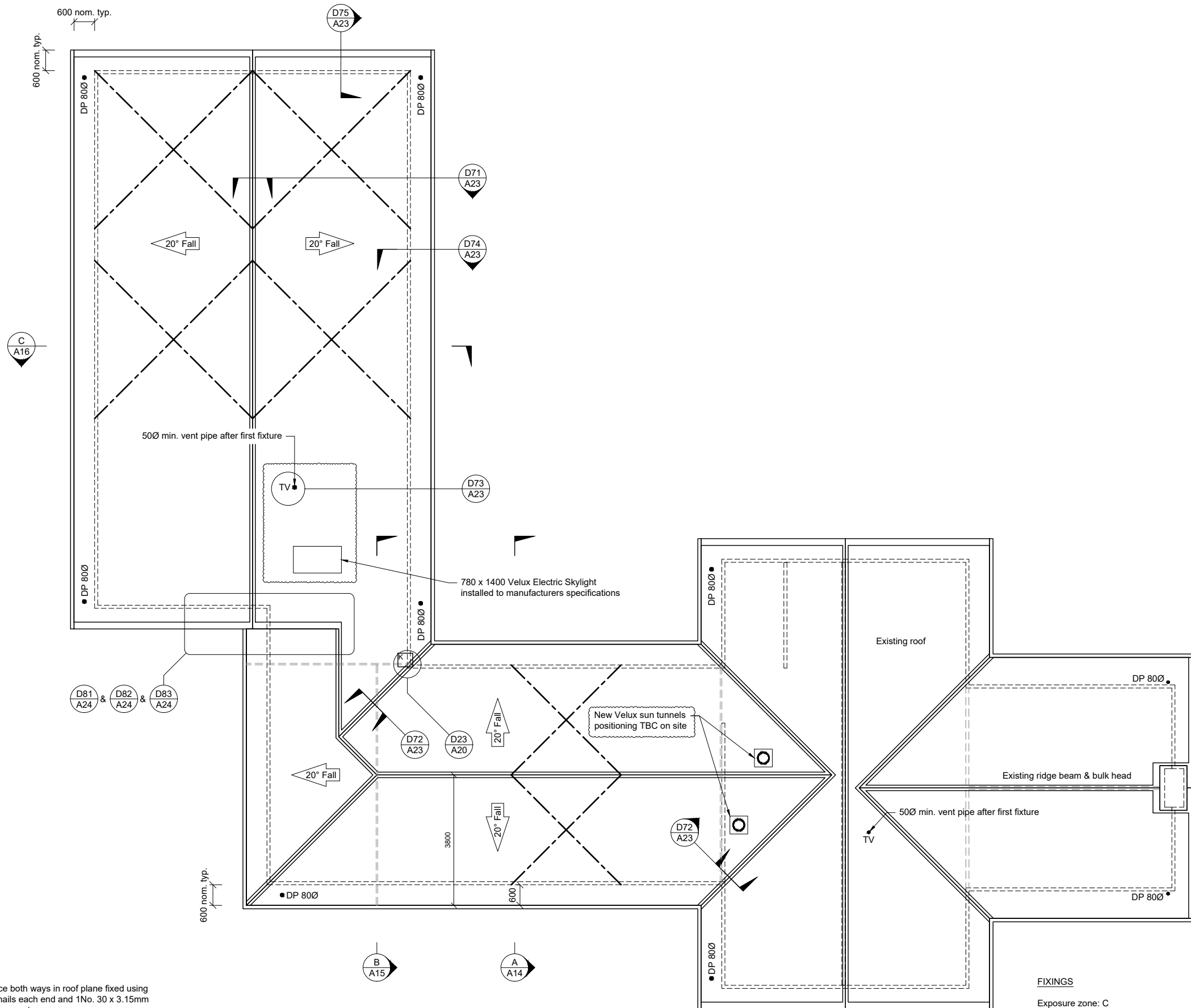
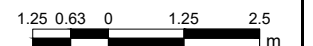
Sheet Title
Roof Plan

Drawn 29 July 2025

Project No 7989

Rev	Sheet
0	A10

Scale (A3 Original) 1: 125



LEGEND

- Roof Line
- Load bearing stud
- Girder truss
- Terminal vent
- Lumberlok strip brace both ways in roof plane fixed using 5No. 30 x 3.15mm nails each end and 1No. 30 x 3.15mm nails where brace crosses truss
- Fixings under truss point load as follows:
 - Stud to bottom plate connection use GIB HandiBrac fixed using 8 Tek screws & 1 Bowmac screw bolt.
 - Stud to top plate connection to Mitek internal loadbearing 16kN connection: Lumberlok CPC 80 each side (16kN pair) with Type 17 - 14g x 35 mm screws + 8Ø product nails

FIXINGS

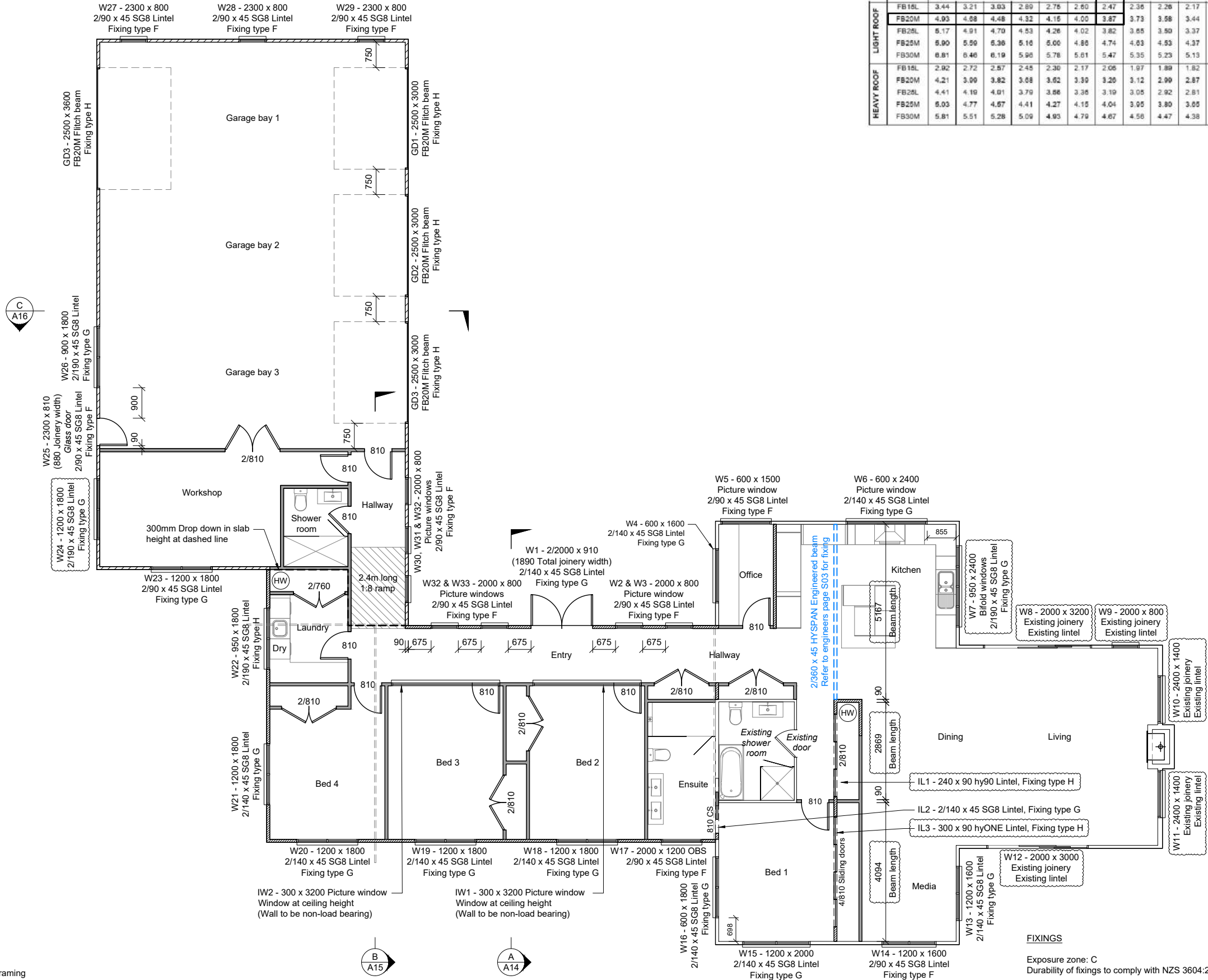
- Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1
- Exposed fixings to be type 304 stainless steel.
Sheltered fixings to be hot-dipped galvanize.
Closed in nail plates in roof space to be continuous coated galvanized steel.
Closed wire dogs and bolts to be hot dipped galvanized steel.
All other closed structural fixings to be mild steel (uncoated non galvanized)

TABLE 1: MSG8, VSG8, MSG6 or Unverified No. 1 Framing
LINTELS SUPPORTING ROOF AND CEILING ONLY

LINTEL SIZE	MAXIMUM LINTEL SPAN (m)														
	SUPPORTED ROOF SPAN 'S' (m)														
LIGHT ROOF	FB16L	3.44	3.21	3.03	2.89	2.76	2.60	2.47	2.36	2.28	2.17	2.10	2.03	1.96	
	FB20M	4.93	4.68	4.48	4.32	4.16	4.00	3.87	3.73	3.58	3.44	3.32	3.21	3.11	
	FB25L	5.17	4.91	4.70	4.53	4.36	4.20	3.82	3.65	3.50	3.37	3.25	3.14	3.04	
	FB25M	5.90	5.59	5.36	5.16	5.00	4.80	4.74	4.63	4.53	4.37	4.22	4.08	3.95	
HEAVY ROOF	FB30M	6.81	6.46	6.19	5.95	5.78	5.61	5.47	5.35	5.23	5.13	5.04	4.95	4.79	
	FB16L	2.92	2.72	2.57	2.45	2.30	2.17	2.06	1.97	1.89	1.82	1.75	1.69	1.64	
	FB20M	4.21	3.99	3.82	3.68	3.52	3.39	3.26	3.12	2.99	2.87	2.77	2.68	2.59	
	FB25L	4.41	4.19	4.01	3.79	3.66	3.35	3.19	3.05	2.92	2.81	2.71	2.62	2.54	
	FB25M	5.03	4.77	4.57	4.41	4.27	4.15	4.04	3.95	3.80	3.65	3.52	3.40	3.30	
	FB30M	5.81	5.51	5.28	5.09	4.93	4.79	4.67	4.56	4.47	4.38	4.27	4.13	4.00	

NOTE:

- For framing notes refer to separate detail sheet.
- For joinery notes refer to separate detail sheet.
- All internal walls non load bearing all loads less than 10KN.



LEGEND

- Existing timber framing
- 2.4m High load bearing stud: 90 x 45 SG8 H1.2 stud at 600 c/c
- 2.7m High load bearing stud: 90 x 45 SG8 H1.2 stud at 400 c/c
- 2.4m High non load bearing stud: 90 x 45 SG8 H1.2 stud at 600 c/c
- Girder truss

FIXINGS

- Exposure zone: C
- Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1
- Exposed fixings to be type 304 stainless steel.
- Sheltered fixings to be hot-dipped galvanize.
- Closed in nail plates in roof space to be continuous coated galvanized steel.
- Closed wire dogs and bolts to be hot dipped galvanized steel.
- All other closed structural fixings to be mild steel (uncoated non galvanized)

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Project Title

Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title

Framing & Lintel Plan

Drawn

29 July 2025

Project No

7989

Rev

0

Sheet

A11

Scale (A3 Original) 1: 125





- NOTE:**
- All work to be done in accordance with NZS 3604: 2011 and the NZ Building Code unless specifically designed.
 - All bracing elements to be installed to manufacturers specifications.
 - Aqualine GIB to all bathroom walls.

WALL BRACING

- GS1-N: 10mm GIB one face Min. 0.4m long, no hold downs.
- BL1-H: 10mm Braceline GIB one face min. 0.4m long, with hold downs.

Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Bracing Plan
(Main Dwelling)

Drawn 29 July 2025

Project No 7989

Rev	Sheet
0	A12

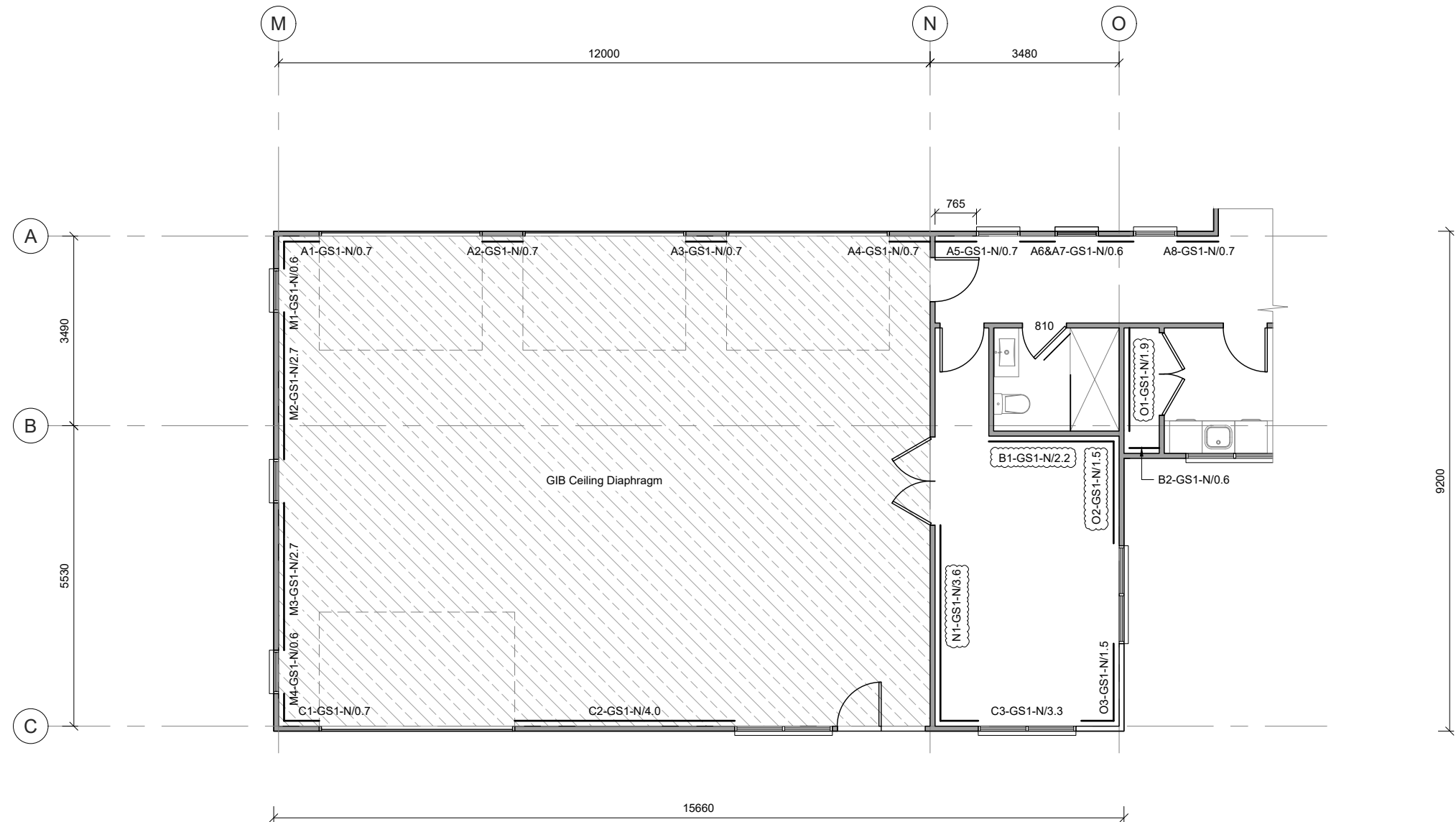
Scale (A3 Original) 1: 100



- NOTE:
- All work to be done in accordance with NZS 3604: 2011 and the NZ Building Code unless specifically designed.
 - All bracing elements to be installed to manufacturers specifications.
 - Aqualine GIB to all bathroom walls.

WALL BRACING

- GS1-N: 10mm GIB one face Min. 0.4m long, no hold downs.
- BL1-H: 10mm Braceline GIB one face min. 0.4m long, with hold downs.



Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Bracing Plan (Garage)

Drawn 29 July 2025

Project No 7989

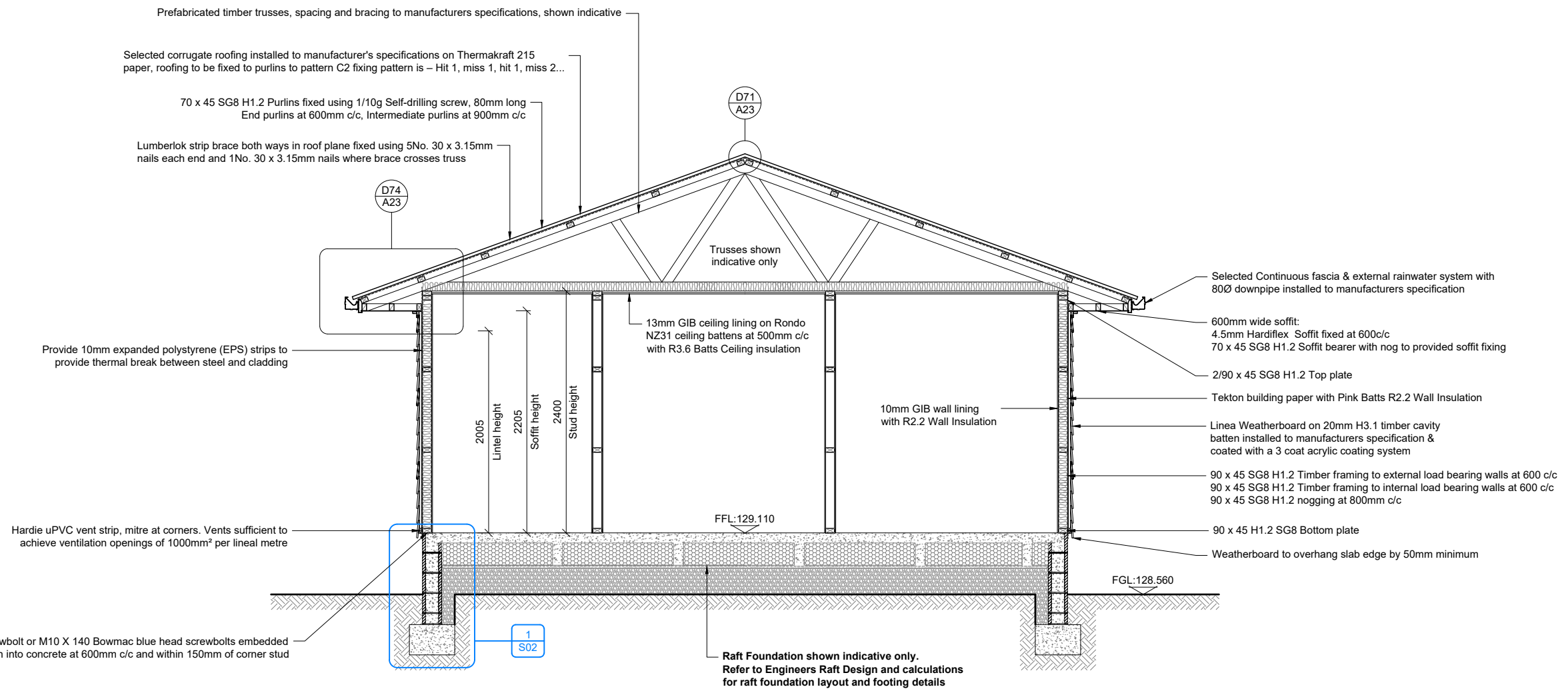
Rev 0 Sheet A13

Scale (A3 Original) 1: 100



LEGEND

GIB Ceiling diaphragm fixed to manufacturers installation instructions. Perimeter fixings at 100mm centres and each corner in line with GIB EzyBrace 2011 fastener pattern, refer to GIB site guide.



A Section A
A05 SCALE = 1:50 @ A3

FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

Fixings within 600mm of finished ground level to be 304 stainless steel.
Exposed fixings to be type 304 stainless steel.
Sheltered fixings to be hot-dipped galvanize.
Closed in nail plates in roof space to be continuous coated galvanized steel.
Closed wire dogs and bolts to be hot dipped galvanized steel.
All other closed structural fixings to be mild steel (uncoated non galvanized)

TIMBER WALL FRAMING NOTES

2.4m High load bearing stud: 90 x 45 SG8 H1.2 stud at 600 c/c
2.7m High load bearing stud: 90 x 45 SG8 H1.2 stud at 400 c/c
2.4m High non load bearing stud: 90 x 45 SG8 H1.2 stud at 600 c/c

- Section**
1. All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
 2. All wall framing typically H1.2 treated unless specifically stated.
 3. Refer to Framing & Lintel Plan for lintel dimensions, stud spacing & external door offsets.
 4. Where studs exceed 450mm c/c install polypropylene tape horizontally at 300mm c/c over building wrap.
 5. All wet areas to be provided with impervious linings as per NZBC E3/AS1.
 6. Aqualine GIB to all wet areas.
 7. All shower units to be tiled.
 8. Additional nogs to be installed at framing stage to allow for towel rails, wardrobe & fixed shelves, WC cistern, toilet roll holders & wall mounted extractors.

Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

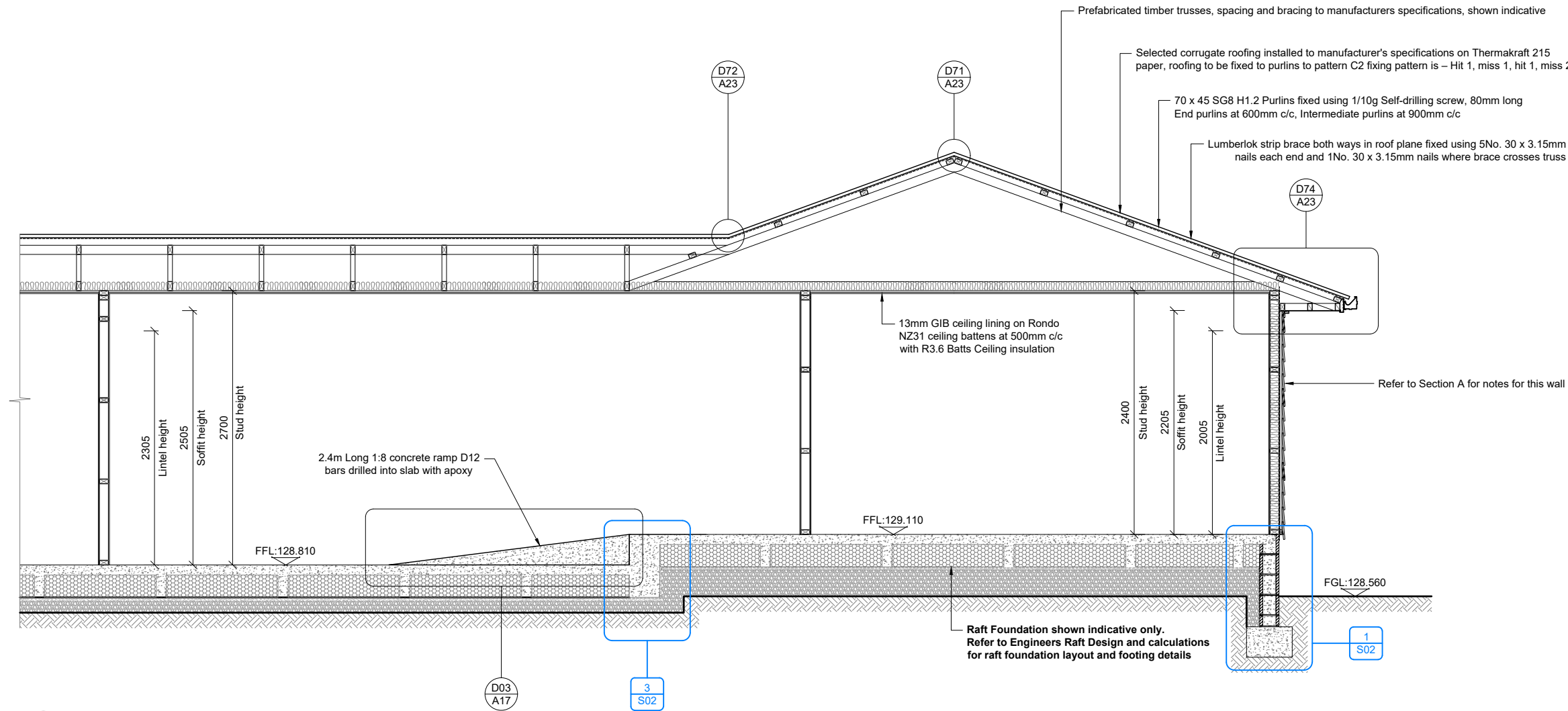
All work to be done in accordance with NZS 3604: 2011 and the NZ Building Code unless specifically designed.

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O'BRIEN DESIGN CONSULTING

T 09 407 5208 | martin@obrienconsulting.co.nz

Project Title Regan & Rebekah Polglaze 11 Ironbark Road Kerikeri Lot 9 DP 145038	
Sheet Title Section A	
Drawn 29 July 2025	
Project No 7989	
Rev 0	Sheet A14
Scale (A3 Original) 1: 50 0.5 0.25 0 0.5 1 m	



B Section B
A05 SCALE = 1:50 @ A3

- Section**
1. All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
 2. All wall framing typically H1.2 treated unless specifically stated.
 3. Refer to Framing & Lintel Plan for lintel dimensions, stud spacing & external door offsets.
 4. Where studs exceed 450mm c/c install polypropylene tape horizontally at 300mm c/c over building wrap.
 5. All wet areas to be provided with impervious linings as per NZBC E3/AS1.
 6. Aqualine GIB to all wet areas.
 7. All shower units to be tiled.
 8. Additional nogs to be installed at framing stage to allow for towel rails, wardrobe & fixed shelves, WC cistern, toilet roll holders & wall mounted extractors.

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Project Title Regan & Rebekah Polglaze 11 Ironbark Road Kerikeri Lot 9 DP 145038	
Sheet Title Section B	
Drawn 29 July 2025	
Project No 7989	
Rev 0	Sheet A15
Scale (A3 Original) 1: 50 0.5 0.25 0 0.5 1 m	

FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

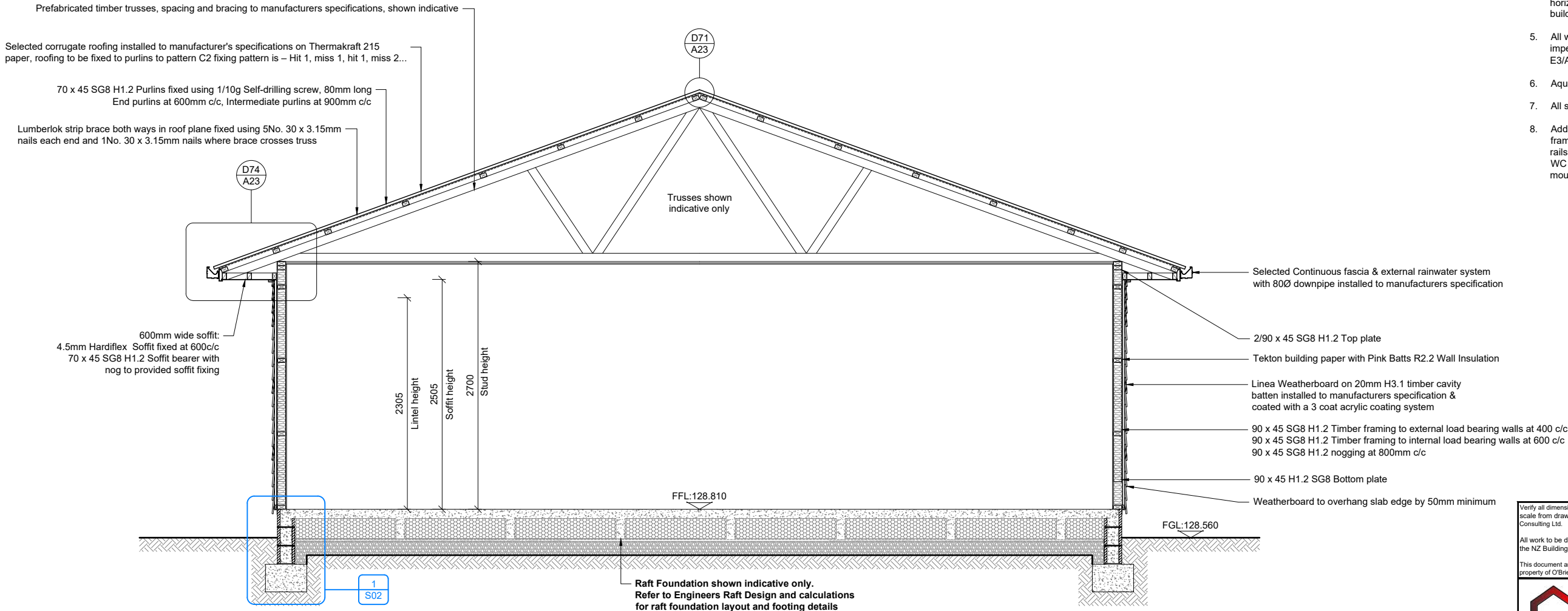
Fixings within 600mm of finished ground level to be 304 stainless steel.
Exposed fixings to be type 304 stainless steel.
Sheltered fixings to be hot-dipped galvanize.
Closed in nail plates in roof space to be continuous coated galvanized steel.
Closed wire dogs and bolts to be hot dipped galvanized steel.
All other closed structural fixings to be mild steel (uncoated non galvanized)

TIMBER WALL FRAMING NOTES

2.4m High load bearing stud: 90 x 45 SG8 H1.2 stud at 600 c/c
2.7m High load bearing stud: 90 x 45 SG8 H1.2 stud at 400 c/c
2.4m High non load bearing stud: 90 x 45 SG8 H1.2 stud at 600 c/c

Section

1. All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
2. All wall framing typically H1.2 treated unless specifically stated.
3. Refer to Framing & Lintel Plan for lintel dimensions, stud spacing & external door offsets.
4. Where studs exceed 450mm c/c install polypropylene tape horizontally at 300mm c/c over building wrap.
5. All wet areas to be provided with impervious linings as per NZBC E3/AS1.
6. Aqualine GIB to all wet areas.
7. All shower units to be tiled.
8. Additional nogs to be installed at framing stage to allow for towel rails, wardrobe & fixed shelves, WC cistern, toilet roll holders & wall mounted extractors.



C Section C
A05 SCALE = 1:50 @ A3

Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

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Project Title

Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title

Section C

Drawn 29 July 2025

Project No 7989

Rev 0 Sheet A16

Scale (A3 Original) 1: 50



FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

Fixings within 600mm of finished ground level to be 304 stainless steel.

Exposed fixings to be type 304 stainless steel.

Sheltered fixings to be hot-dipped galvanize.

Closed in nail plates in roof space to be continuous coated galvanized steel.

Closed wire dogs and bolts to be hot dipped galvanized steel.

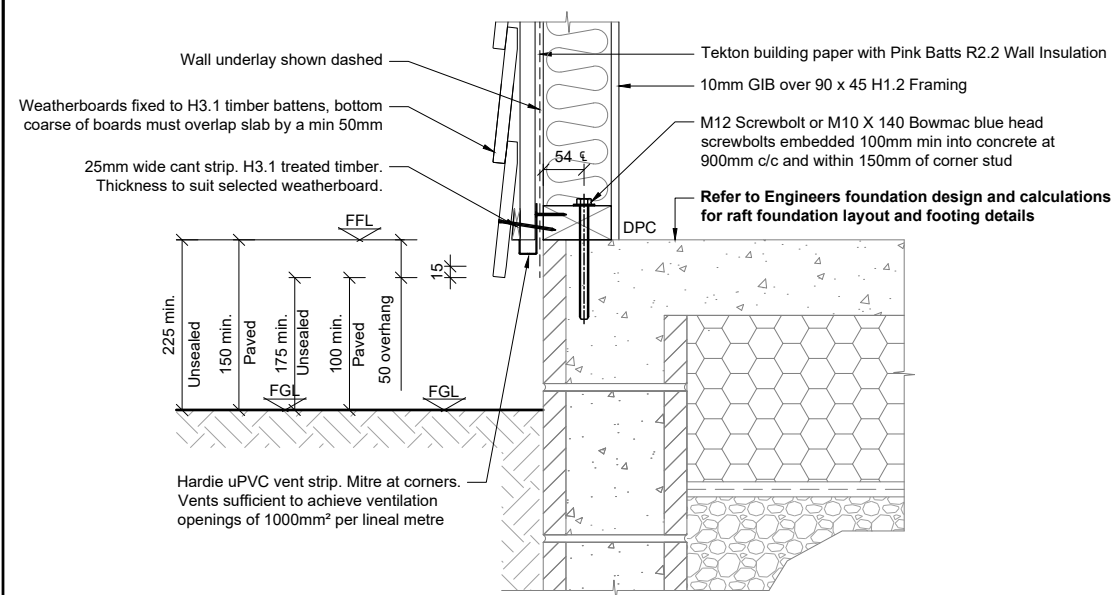
All other closed structural fixings to be mild steel (uncoated non galvanized)

TIMBER WALL FRAMING NOTES

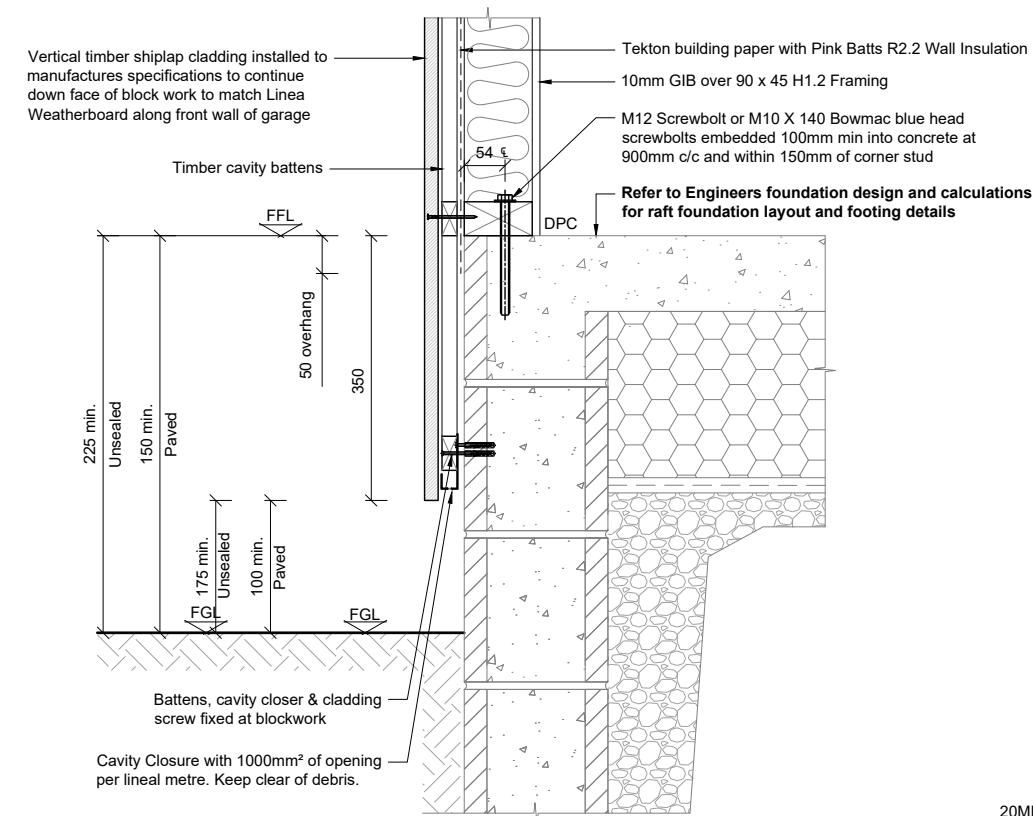
2.4m High load bearing stud: 90 x 45 SG8 H1.2 stud at 600 c/c

2.7m High load bearing stud: 90 x 45 SG8 H1.2 stud at 400 c/c

2.4m High non load bearing stud: 90 x 45 SG8 H1.2 stud at 600 c/c

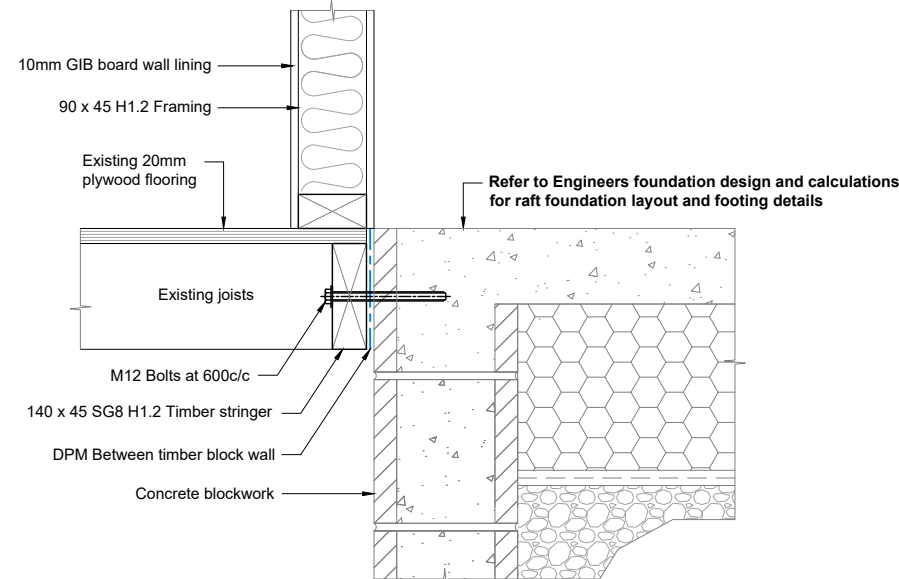
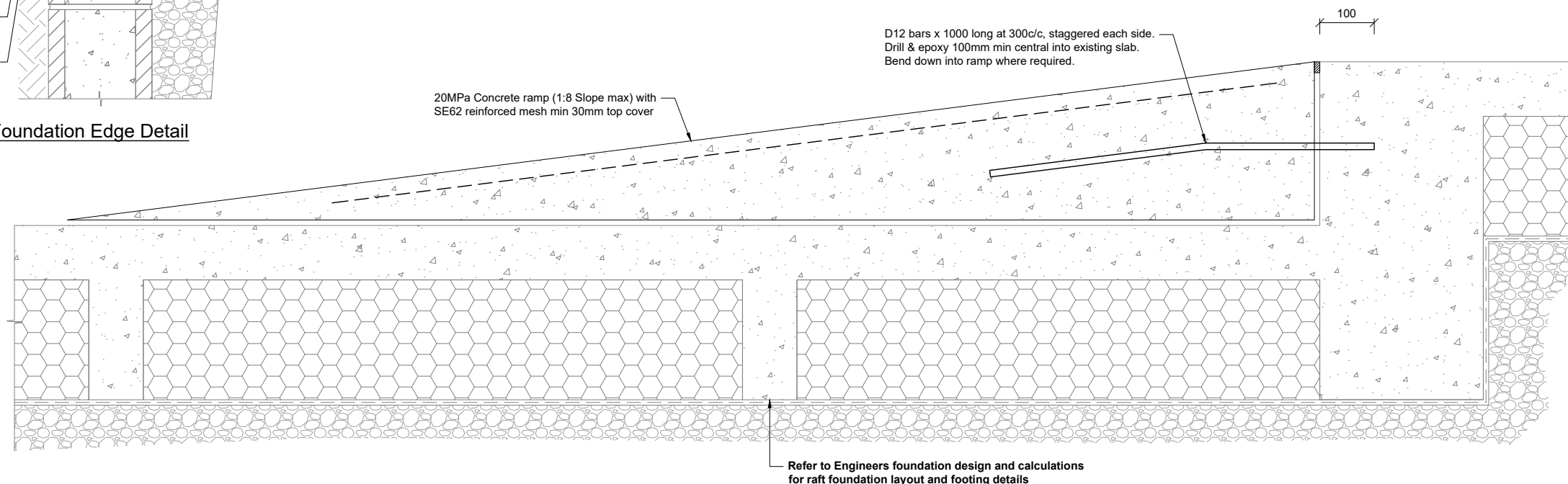


D01 Linea - Foundation Edge Detail
A06a SCALE = 1:10 @ A3



D02 Vertical Timber Shiplap - Foundation Edge Detail
A06a SCALE = 1:10 @ A3

D03 Concrete Ramp Detail
A09 SCALE = 1:10 @ A3



D04 Stringer to Concrete Blockwork Detail
A09 SCALE = 1:10 @ A3

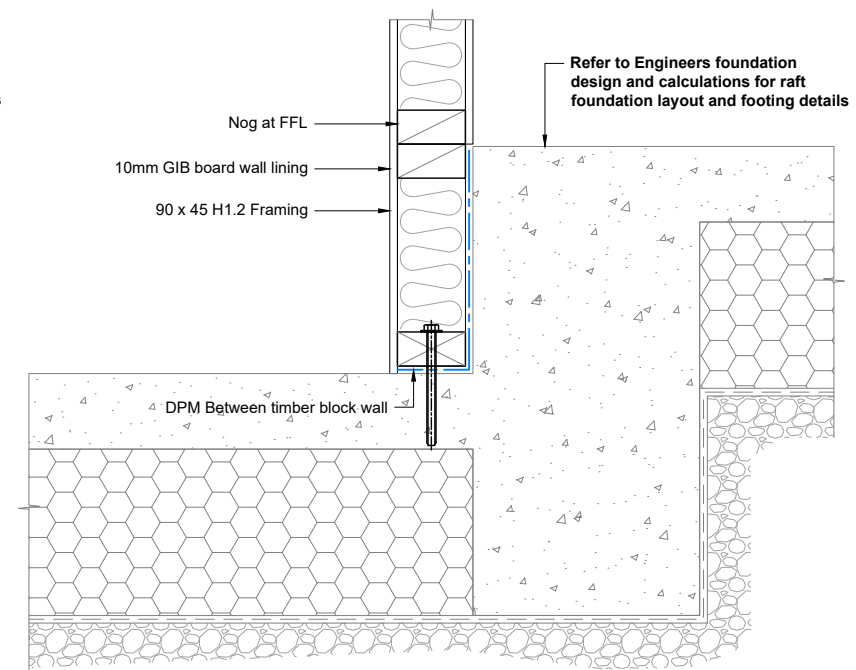
NOTE:

- All work to be done in accordance with NZS 3604: 2011 and the NZ Building Code unless specifically designed.
- Refer to NZS3604:2011 Section 4 for durability requirements.
- Do not scale from drawings.
- All wall framing typically H1.2 treated unless specifically stated.
- Designers connection details to be followed unless specifically design by precut manufacturer.
- Refer to Eave detail for stud, lintel and soffit framing heights.
- Precut manufacturer to provide truss fixings and Producer Statement.
- Refer to Framing & Lintel Plan for lintel to stud fixings.
- Plans to be read in conjunction with Engineers calculations and PS1.

FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

Fixings within 600mm of finished ground level to be 304 stainless steel.
Exposed fixings to be type 304 stainless steel.
Sheltered fixings to be hot-dipped galvanize.
Closed in nail plates in roof space to be continuous coated galvanized steel.
Closed wire dogs and bolts to be hot dipped galvanized steel.
All other closed structural fixings to be mild steel (uncoated non galvanized)



D05 Framing Along Slab Step-Down Detail
SCALE = 1:10 @ A3

NOTE:

Cladding must overhang the bottom plate by a minimum of 50mm

External Cover To Main Steel

75mm Min. To ground
30mm Min. Mesh top cover
50mm Min. To form

Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

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Project Title
Regan & Rebekah Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

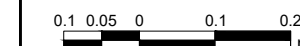
Sheet Title
Foundation Details

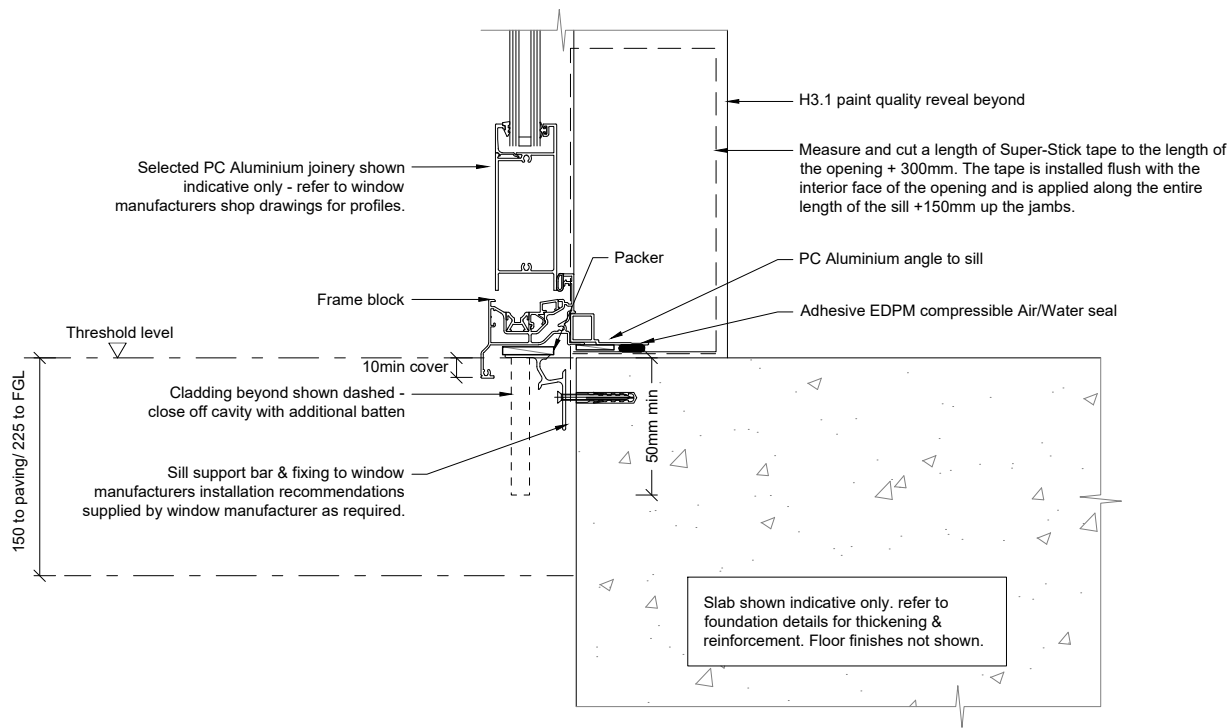
Drawn 29 July 2025

Project No 7989

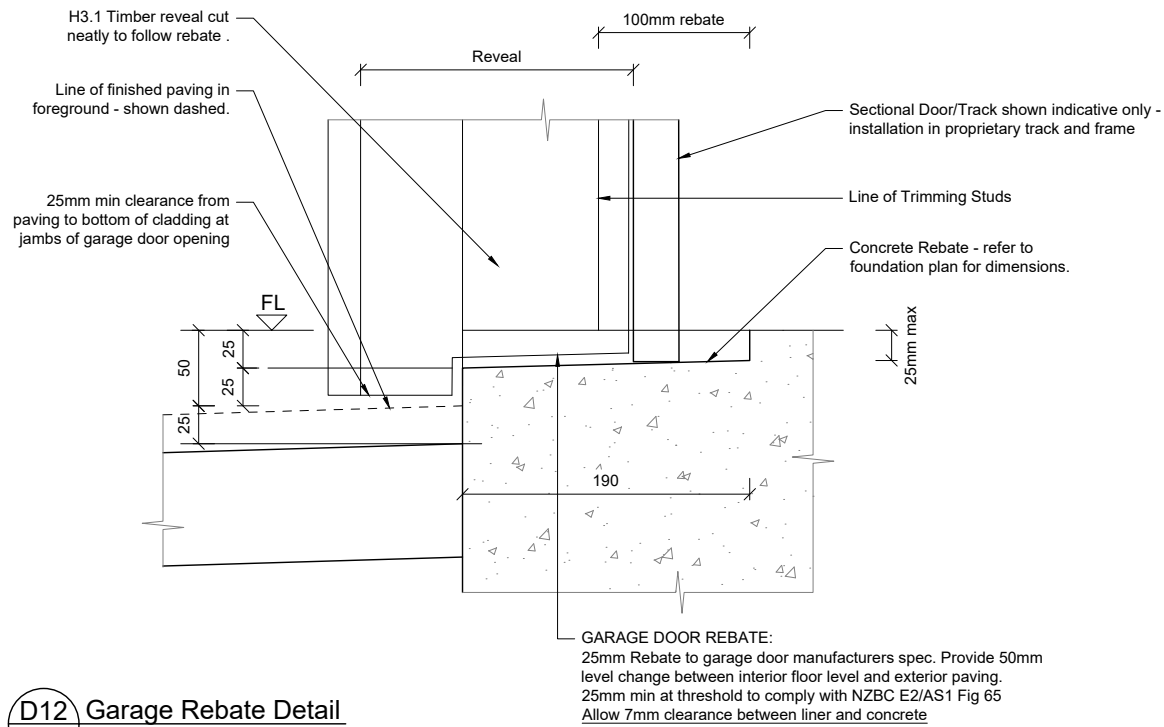
Rev 0 **Sheet** A17

Scale (A3 Original) 1: 10





D10 Standard Sill Detail
A06a SCALE = 1:5 @ A3



D12 Garage Rebate Detail
A06a SCALE = 1:5 @ A3

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Threshold Details

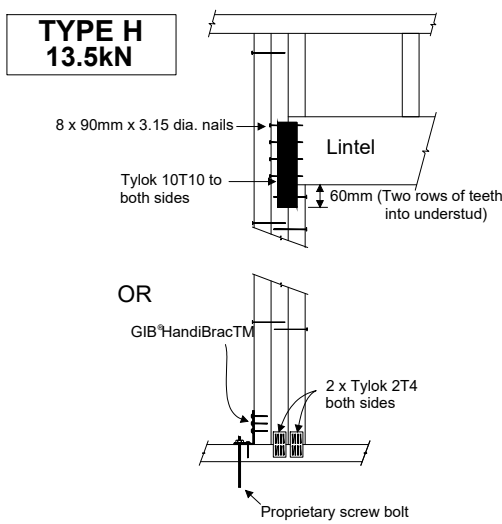
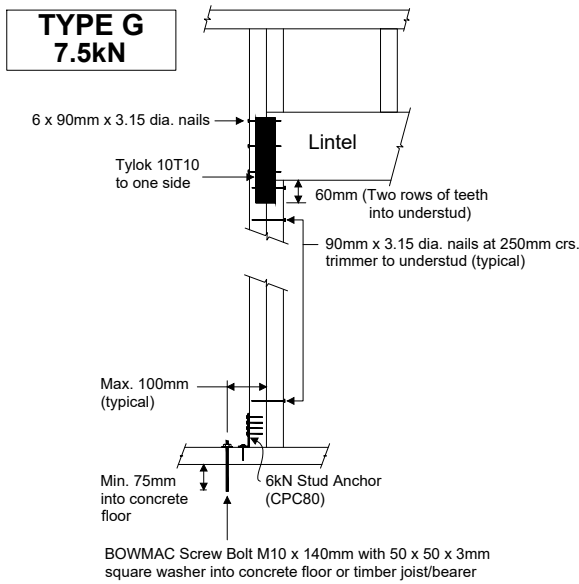
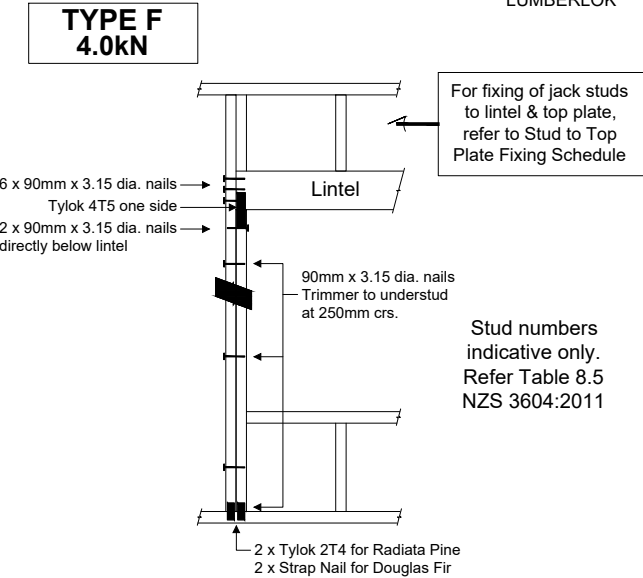
Drawn 29 July 2025

Project No 7989

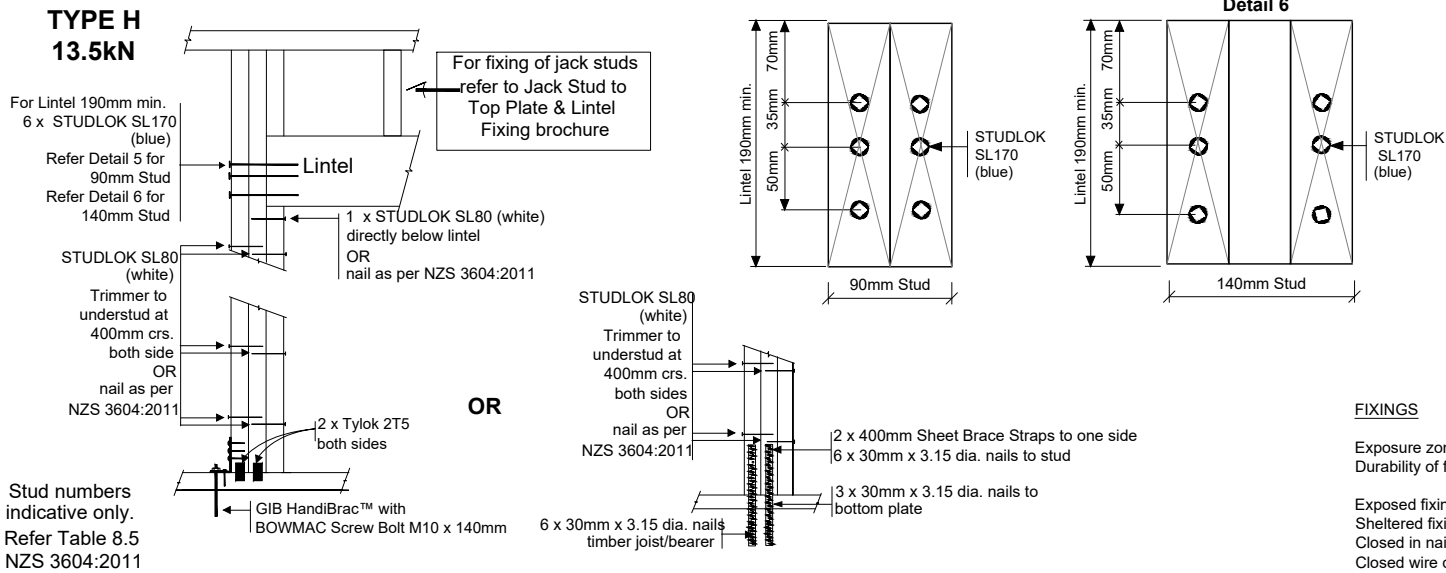
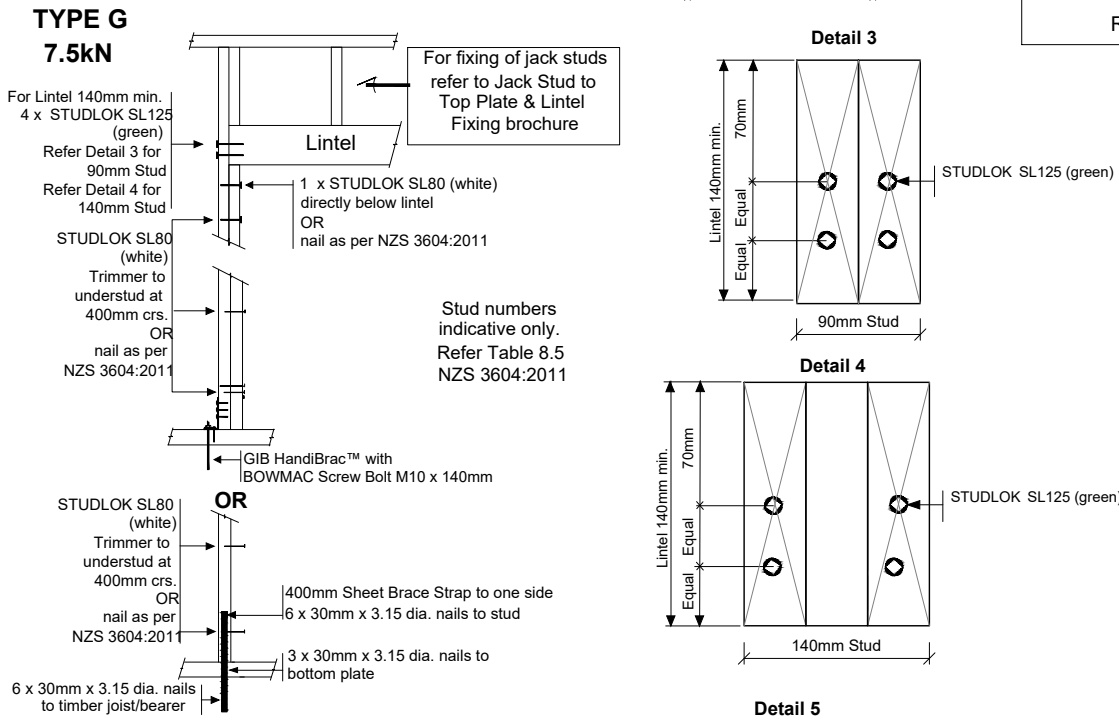
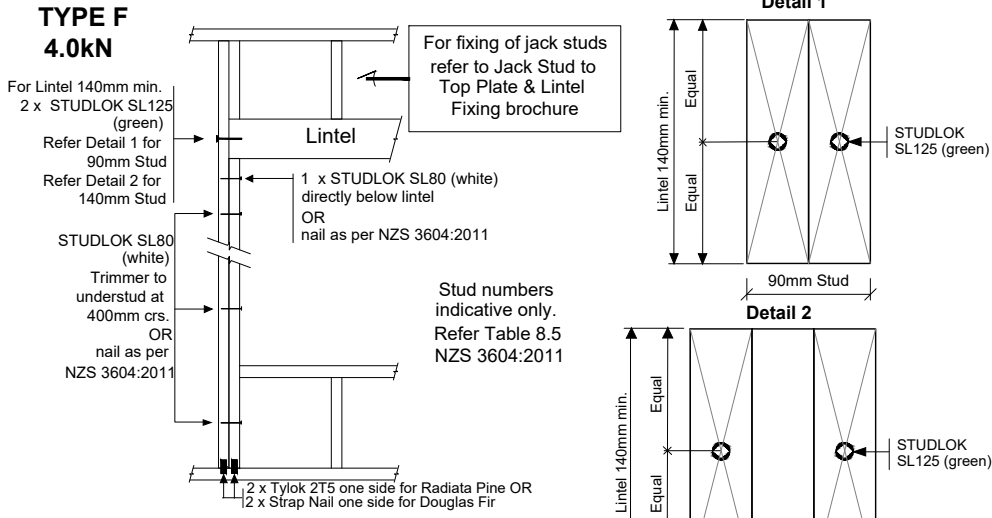
Rev 0 **Sheet** A18

Scale (A3 Original) 1: 5
0.05 0.03 0 0.05 0.1 m

LINTEL FIXING OPTIONS



STUDLOK LINTEL FIXING OPTIONS FOR ON-SITE

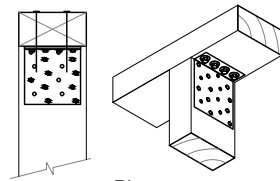


TOP PLATE CONNECTION OPTIONS:
Choose from the three connections below or refer to manufacturers information in specifications for Bowmac Stud-lok fixing

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

FIXING TYPE B: 4.7kN CHOOSE ANY OF THE 3 OPTIONS BELOW

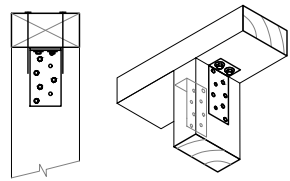
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
LUMBERLOK
6kN Stud Anchor (CPC80)

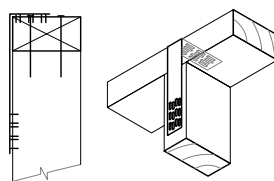
Recommended for internal wall options to avoid lining issues

2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
2 x **LUMBERLOK**
CPC40

2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
LUMBERLOK
Stud Strap (one face only)

FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

Exposed fixings to be type 304 stainless steel.
Sheltered fixings to be hot-dipped galvanize.
Closed in nail plates in roof space to be continuous coated galvanized steel.
Closed wire dogs and bolts to be hot dipped galvanized steel.
All other closed structural fixings to be mild steel (uncoated non galvanized)

Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Hold Down Details

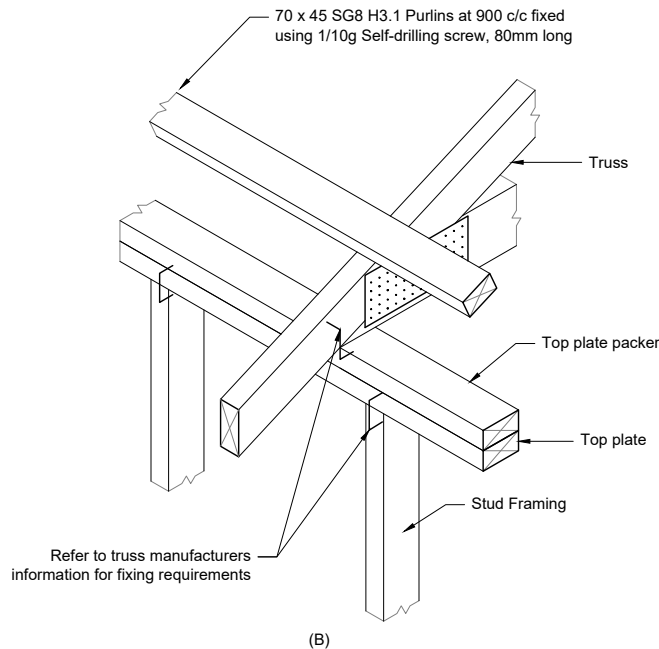
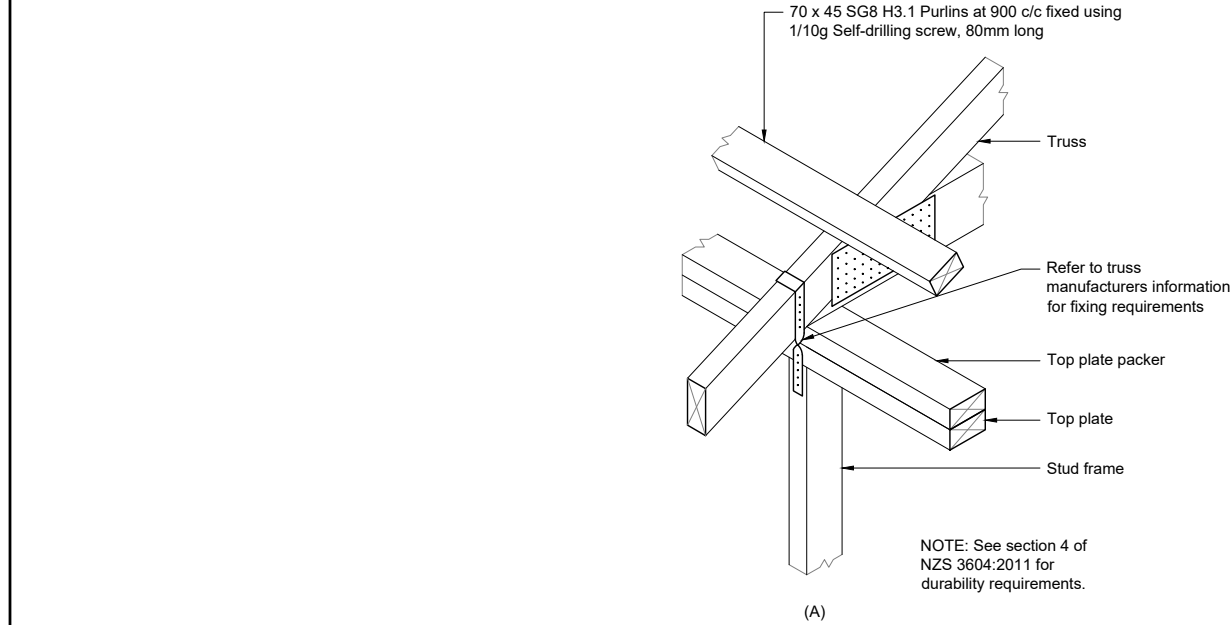
Drawn 29 July 2025

Project No 7989

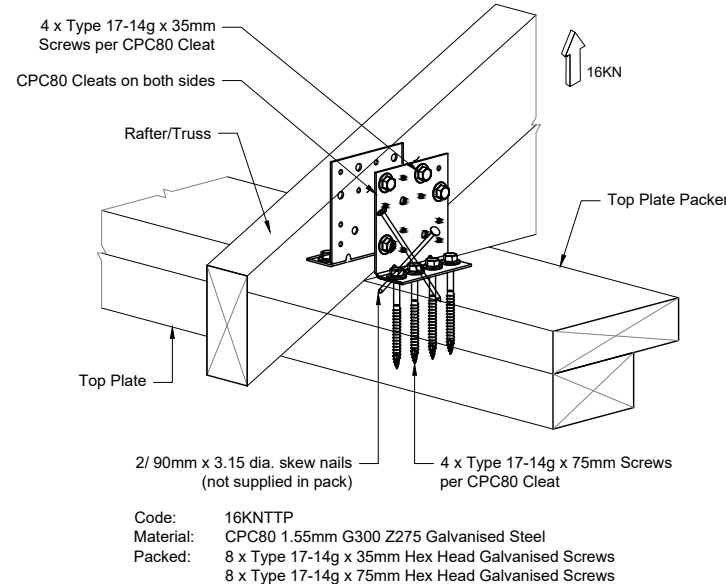
Rev 0 **Sheet** A19

Scale (A3 Original) 1: 10

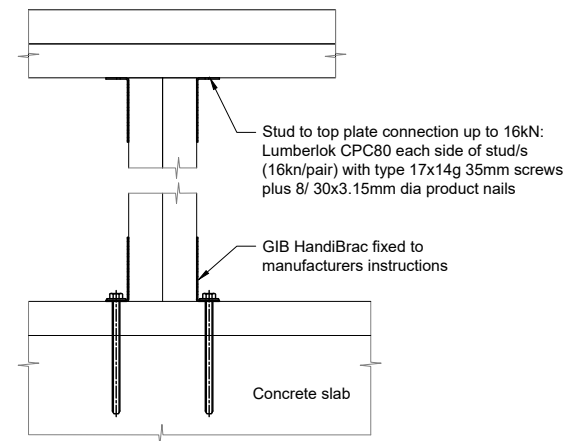




D22 Truss Top Plate Connection
SCALE = NTS



D23 P - 16kN Truss to Top Plate Connection
SCALE = NTS



D24 P - 16kN Stud to Top & Bottom Plate Detail
SCALE = 1:10 @ A3

FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

Fixings within 600mm of finished ground level to be 304 stainless steel.

Exposed fixings to be type 304 stainless steel.

Sheltered fixings to be hot-dipped galvanize.

Closed in nail plates in roof space to be continuous coated galvanized steel.

Closed wire dogs and bolts to be hot dipped galvanized steel.

All other closed structural fixings to be mild steel (uncoated non galvanized)

NOTE:

- All work to be done in accordance with NZS 3604: 2011 and the NZ Building Code unless specifically designed.
- Refer to NZS3604:2011 Section 4 for durability requirements.
- Do not scale from drawings.
- All wall framing typically H1.2 treated unless specifically stated.
- Designers connection details to be followed unless specifically design by precut manufacturer.
- Refer to Eave detail for stud, lintel and soffit framing heights.
- Precut manufacturer to provide truss fixings and Producer Statement.
- Refer to Framing & Lintel Plan for lintel to stud fixings.

Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

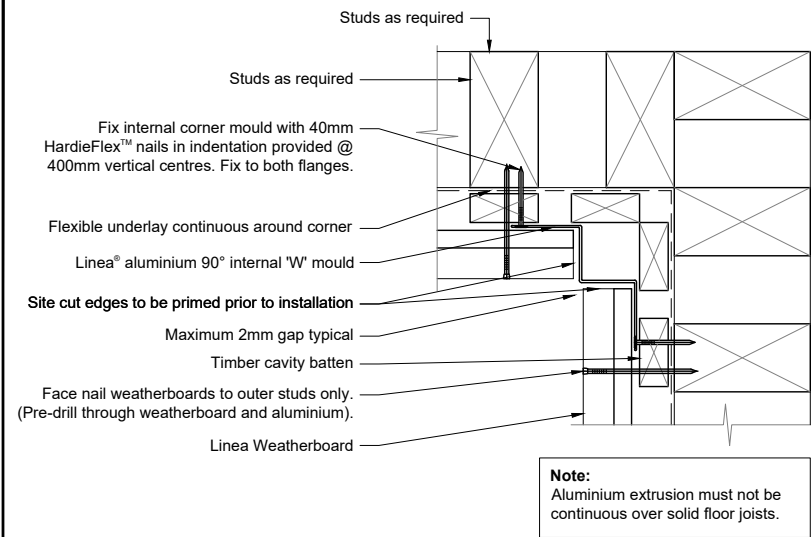
Sheet Title
Hold Down Details

Drawn 29 July 2025

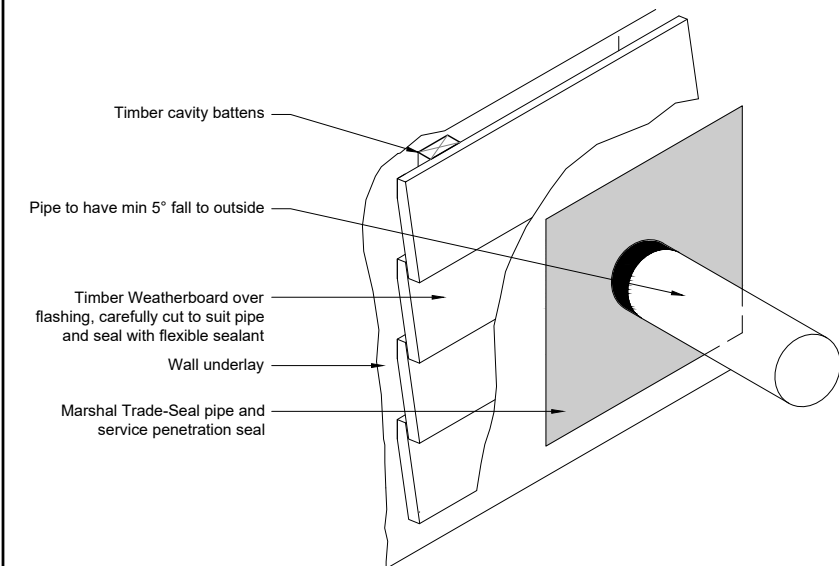
Project No 7989

Rev 0 **Sheet** A20

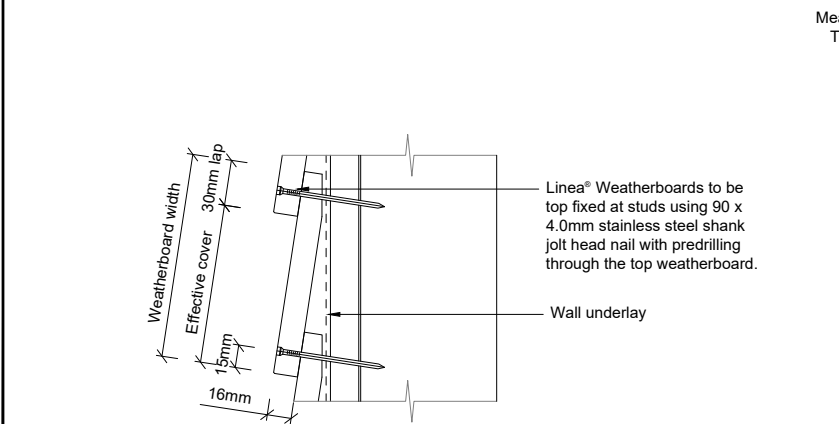
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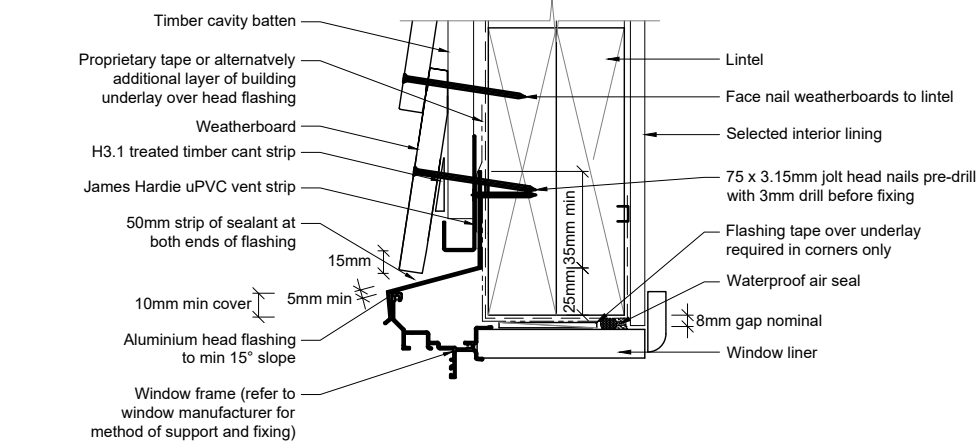
D41 Linea Weatherboard Internal Corner Detail
A06a SCALE = 1:5 @ A3



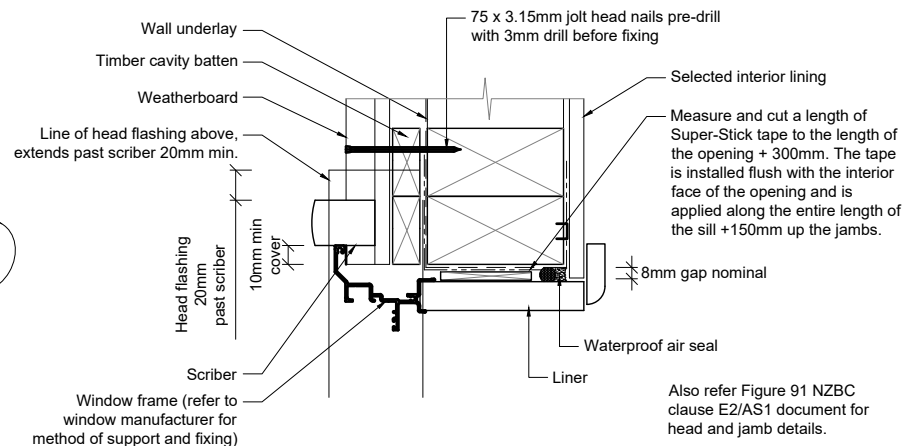
D42 Linea Weatherboard Plank Joint Detail
A06a SCALE = NTS @ A3



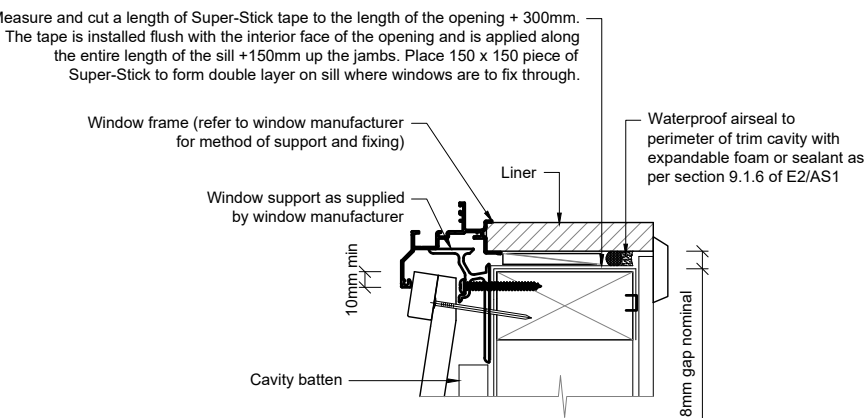
D43 Linea Weatherboard to Nail Fixing
A06a SCALE = 1:5 @ A3



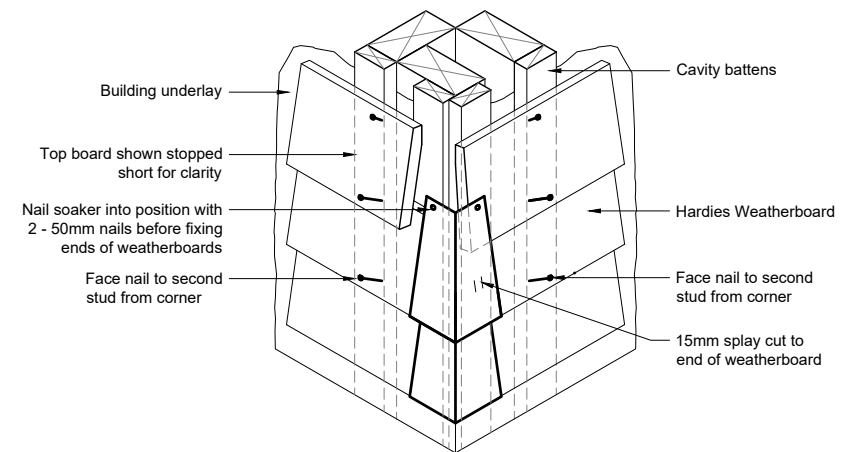
D44 Linea Weatherboard Window Head Detail
A06a SCALE = 1:5 @ A3



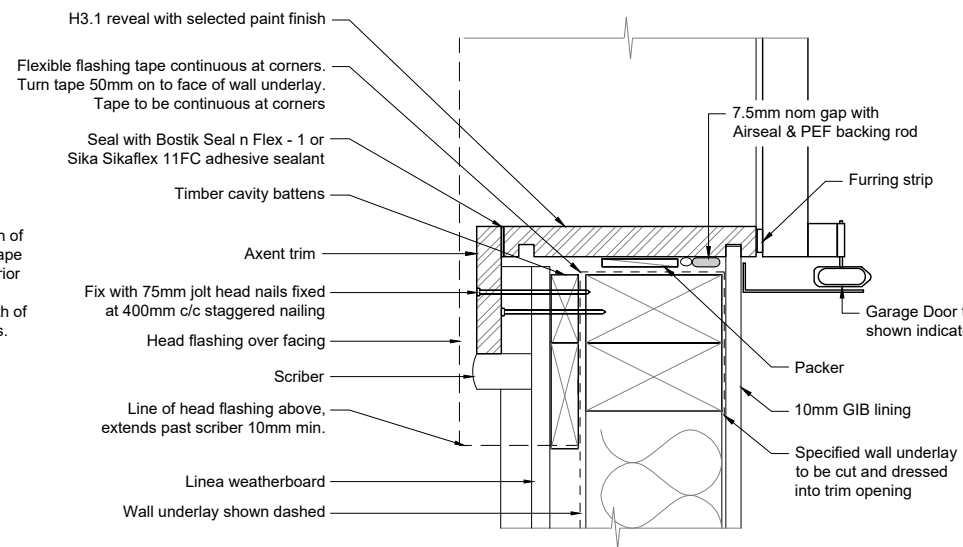
D45 Linea Weatherboard Window Jamb Detail
A06a SCALE = 1:5 @ A3



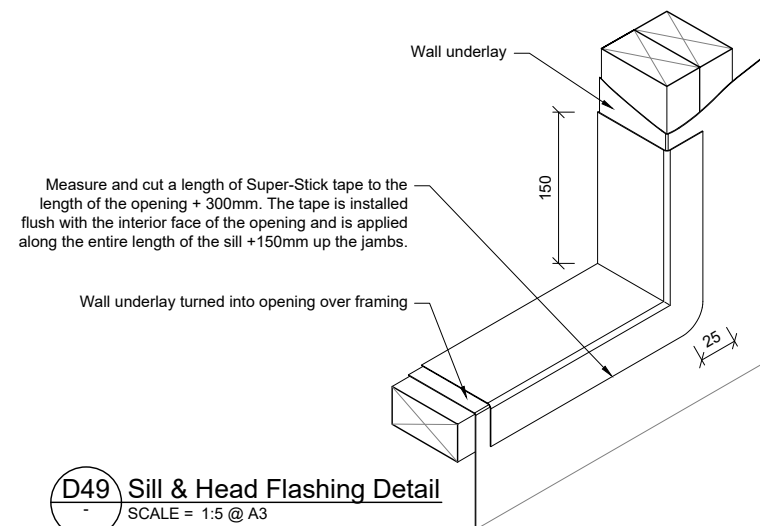
D46 Linea Weatherboard Window Sill Detail
A06a SCALE = 1:5 @ A3



D47 Linea Weatherboard Corner Soakers Detail
A06a SCALE = 1:5 @ A3



D48 Garage Jamb with Trim Detail
A06a SCALE = 1:5 @ A3



D49 Sill & Head Flashing Detail
A06a SCALE = 1:5 @ A3

- NOTE:**
1. Refer to NZS3604:2011 Section 4 for durability requirements.
 2. Flashing materials must be selected based on environmental exposure, refer to NZS 3604 and Table 20 of NZBC clause E2/AS1.
 3. Building underlay must comply with acceptable solution NZBC clause E2/AS1 and NZS 3604.
 4. Flashing tape must have proven compatibility with the selected building underlay and other materials with which it comes into contact as per Table 21 of NZBC clause E2/AS1.
 5. As per NZBC 9.1.10.8: Install windows & doors using pairs of min 75x3.15 jolt head nails through reveals into surrounding frame at
a) 450mm max c/c along sills, jambs & heads
b) 150mm max from ends of reveal
Install packers between reveals & framing at all fixing points, except between head reveals & lintels.
 6. All window joinery to comply with NZS 4211:2008
 7. All glazing to comply with NZS 4223
 8. All window and door openings to be checked on site prior to manufacture, any discrepancies to be reported to the Designer.
 9. Details to be read in conjunction with manufacturers installation instruction.
 10. Weatherboard cladding to be installed to manufacturers installation instructions.

FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC E2/AS1
All work to be done in accordance with NZS 3604: 2011 and the NZ Building Code unless specifically designed.
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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Cladding Details

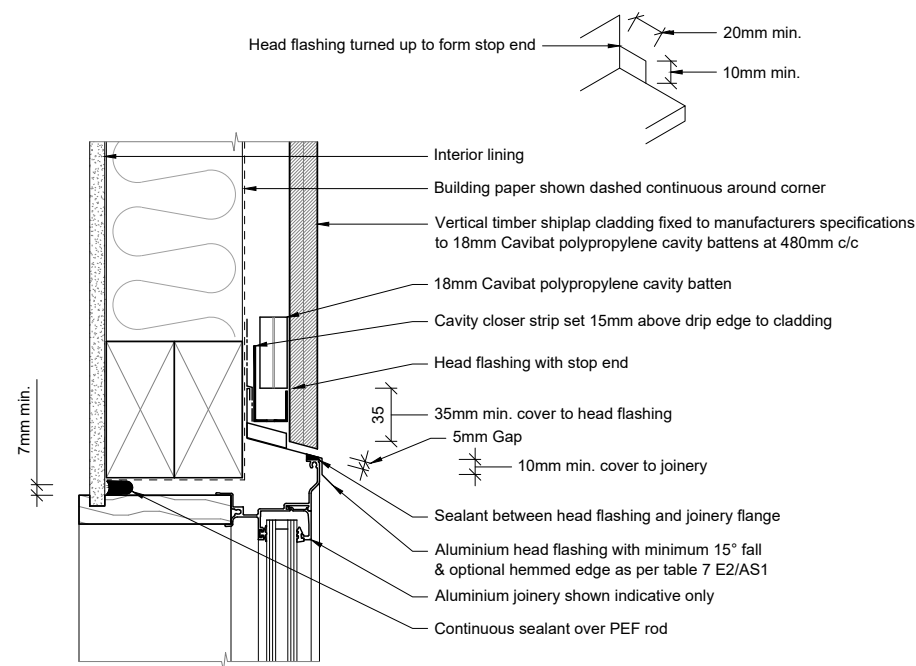
Drawn 29 July 2025

Project No 7989

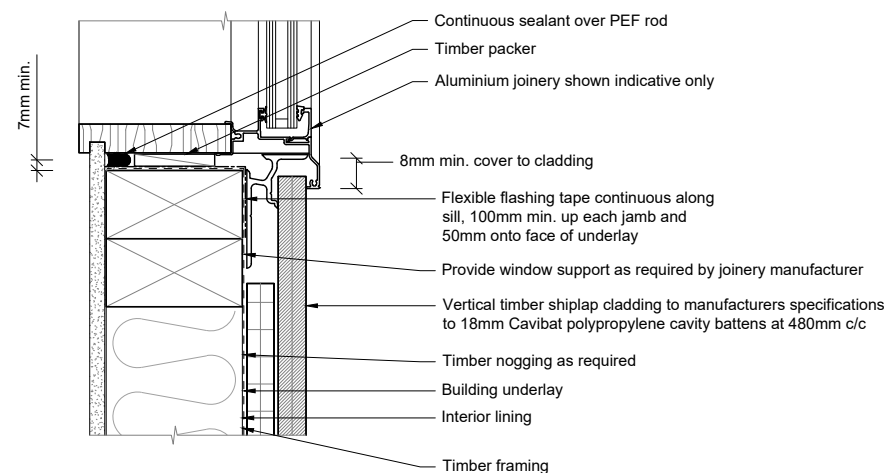
Rev 0 **Sheet** A21

Scale (A3 Original) 1: 5

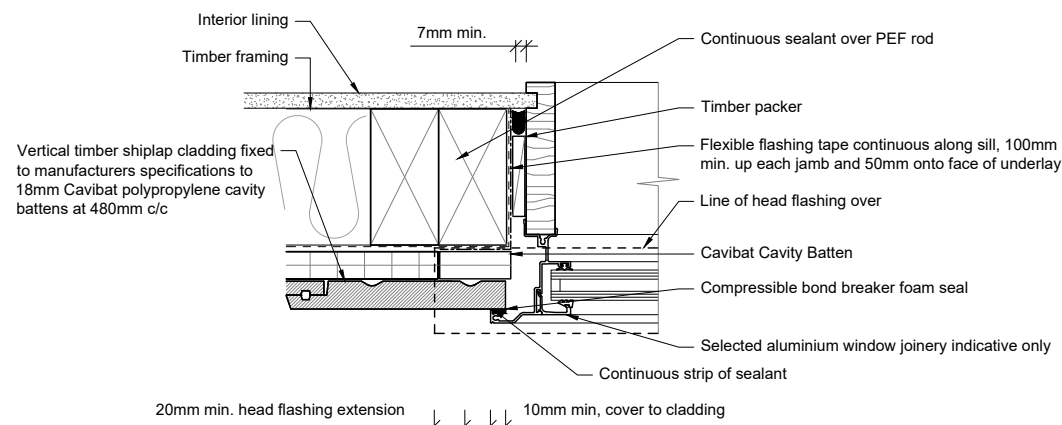
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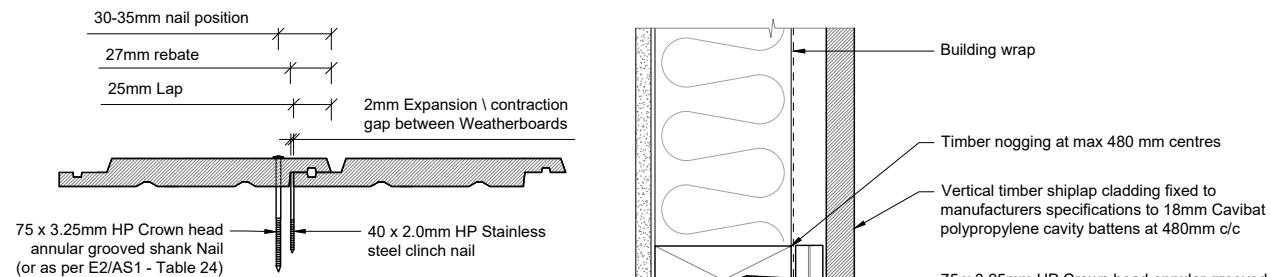
D51 Vertical Timber Shiplap - Head Flashing Detail
A06a SCALE = 1:2 @ A3



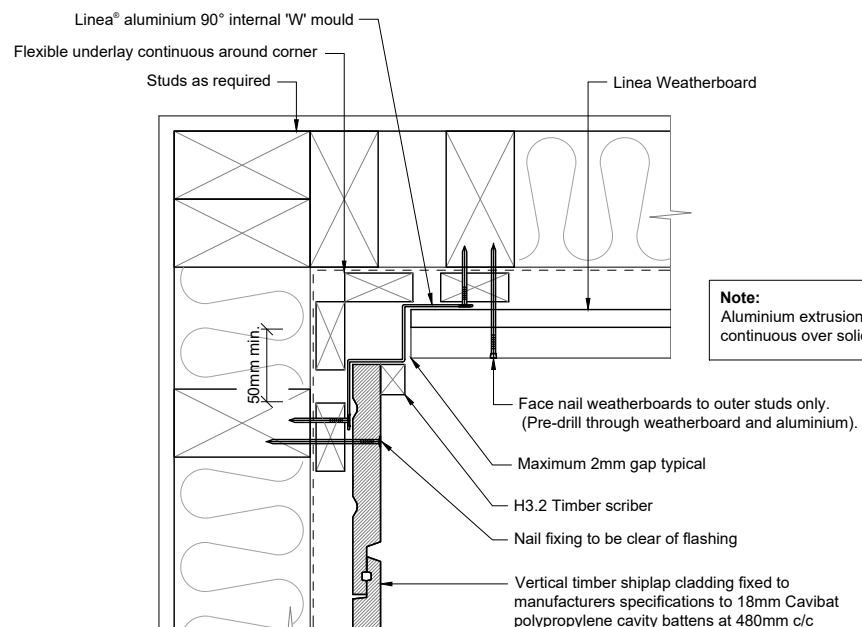
D52 Vertical Timber Shiplap - Sill Detail
SCALE = 1:2 @ A3



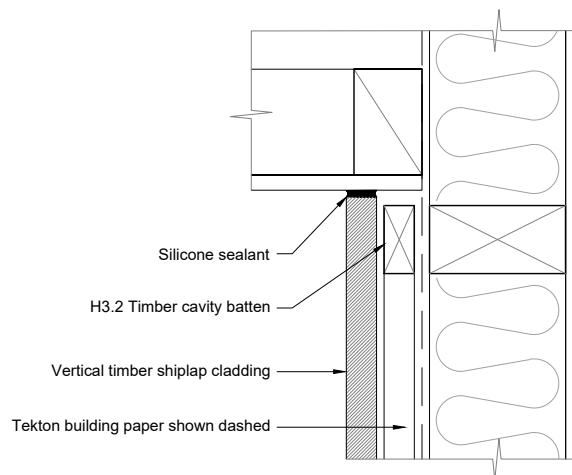
D53 Vertical Timber Shiplap - Jamb Detail
A06a SCALE = 1:2 @ A3



D54 Vertical Timber Shiplap - Fixing Detail
SCALE = 1:5 @ A3



D55 Internal Corner Between Linea & Vertical Timber Shiplap
A06a SCALE = 1:5 @ A3



D56 Vertical Timber Shiplap - Soffit Detail
A06a SCALE = 1:5 @ A3

INSULATION NOTE:

Insulation omitted from details for clarity

NOTE:

- Refer to NZS3604:2011 Section 4 for durability requirements.
- Flashing materials must be selected based on environmental exposure, refer to NZS 3604 and Table 20 of NZBC clause E2/AS1.
- Building underlay must comply with acceptable solution NZBC clause E2/AS1 and NZS 3604.
- Flashing tape must have proven compatibility with the selected building underlay and other materials with which it comes into contact as per Table 21 of NZBC clause E2/AS1.
- As per NZBC 9.1.10.8: Install windows & doors using pairs of min 75x3.15 jolt head nails through reveals into surrounding frame at
 - 450mm max c/c along sills, jambs & heads
 - 150mm max from ends of reveal
 Install packers between reveals & framing at all fixing points, except between head reveals & lintels.
- All window joinery to comply with NZS 4211:2008
- All glazing to comply with NZS 4223
- All window and door openings to be checked on site prior to manufacture, any discrepancies to be reported to the Designer.
- Details to be read in conjunction with manufacturers installation instruction.

These details are suitably fixed to allow for a theoretical thermal movement of up to 10mm. For thermal movement greater than this a clipping system should be considered.

Where CCA or ACQ treated cavity battens are installed a barrier between the batten and the cladding is required.

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Cladding Details

Drawn 29 July 2025

Project No 7989

Rev 0 **Sheet** A22

Scale (A3 Original) 1: 5



FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

Fixings within 600mm of finished ground level to be 304 stainless steel.

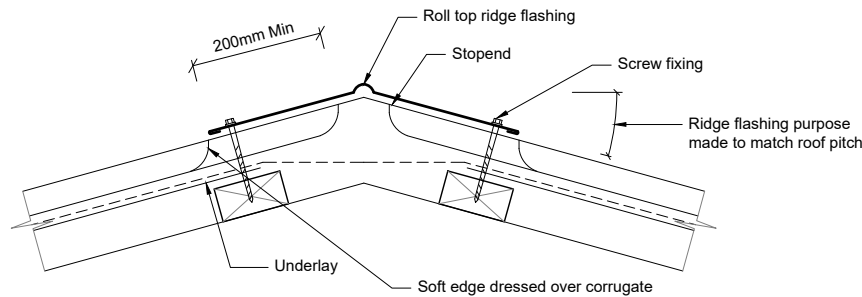
Exposed fixings to be type 304 stainless steel.

Sheltered fixings to be hot-dipped galvanize.

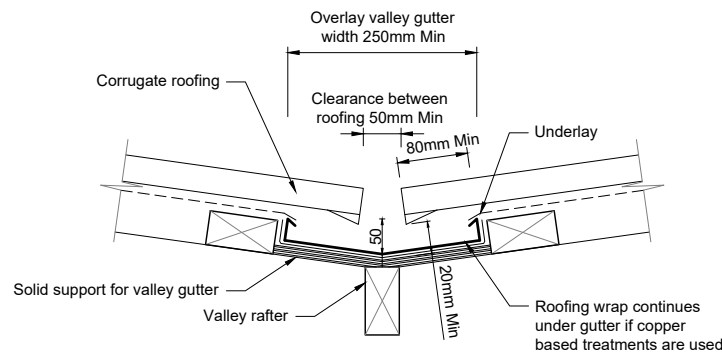
Closed in nail plates in roof space to be continuous coated galvanized steel.

Closed wire dogs and bolts to be hot dipped galvanized steel.

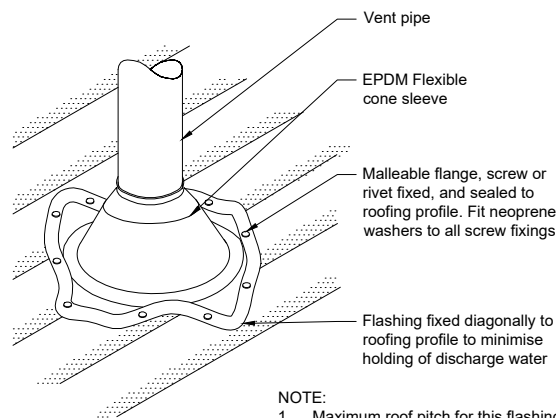
All other closed structural fixings to be mild steel (uncoated non galvanized)



D71 Ridge Flashing Detail
A10 SCALE = 1:10 @ A3



D72 Valley Flashing Detail
A10 SCALE = 1:10 @ A3



NOTE:

- Maximum roof pitch for this flashing 45°, minimum pitch 10° of base of flange covers one or more complete troughs.
- For pipes up to 85mm diameter.

D73 Vent Flashing Detail
A10 SCALE = 1:10 @ A3

Selected corrugate roofing installed to manufacturer's specifications on Thermakraft 215 paper, roofing to be fixed to purlins to pattern C2 fixing pattern is – Hit 1, miss 1, hit 1, miss 2...

70 x 45 SG8 H1.2 Purlins at 900 c/c fixed using 1/10g Self-drilling screw, 80mm long

Prefabricated timber trusses, spacing & roof bracing to manufacturers specifications, refer to PS1 document in specifications.

Selected Continuous fascia & external rainwater system with 80Ø downpipe installed to manufacturers specification

Linea Weatherboard on 20mm H3.1 timber cavity battens

13mm GIB ceiling lining on Rondo NZ31 ceiling battens at 500mm c/c with R3.6 Batts Ceiling insulation

90 x 45 SG8 H1.2 Top plate packer

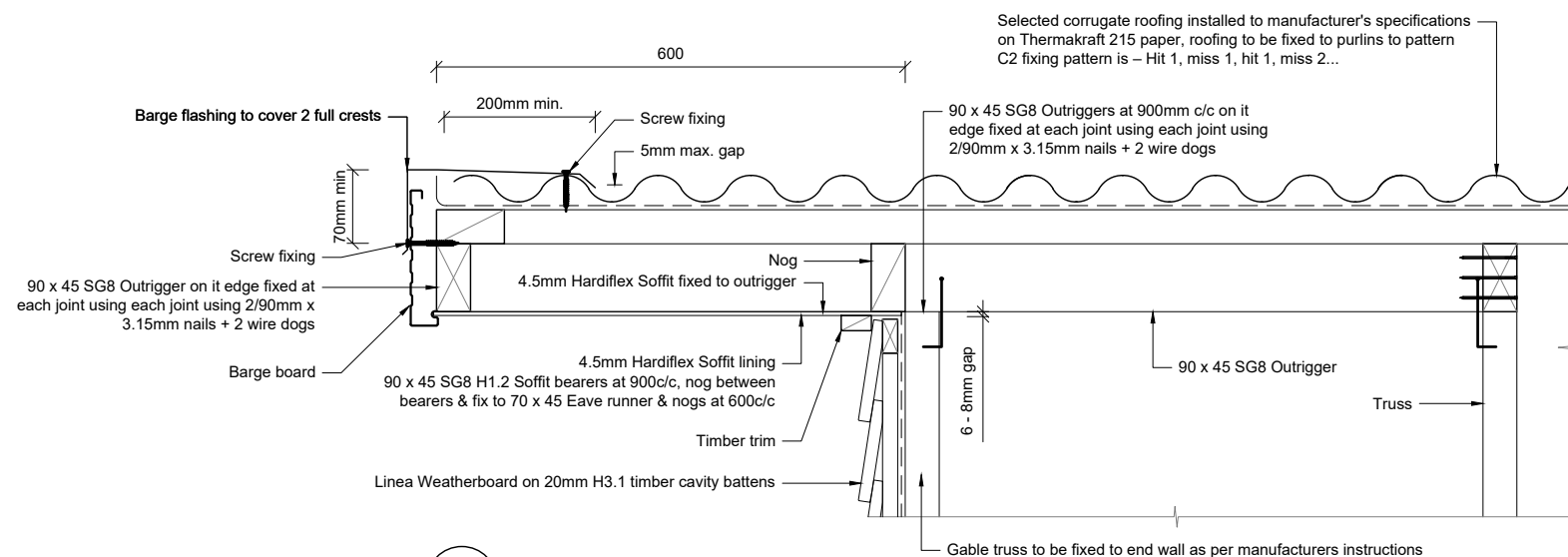
90 x 45 SG8 H1.2 Exterior framing

10mm GIB wall lining with R2.2 Wall Insulation excluding Garage

Top of cavity to be sealed with soffit lining

Wall underlay dashed

D74 Eave Detail
A10 SCALE = 1:10 @ A3



D75 Gable End Flashing Detail
A10 SCALE = 1:10 @ A3

NOTE:

- All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
- Number of downpipes required as per NZBC E1/AS1 1 x 74mmØ downpipe per 70m² roof plan area.
- Stormwater: 100mm Ø UPVC pipe, minimum gradient 1:120
- All drainage to comply with AS/NZS 3500 & NZBC G13/AS1.
- Roofing to be installed to New Zealand Metal Roofing Code of Practice and in accordance with manufacturers installation instructions.
- Number of downpipes required as per NZBC E1/AS1 1 x 74mmØ downpipe per 70m² roof plan area.
- Details to be read in conjunction with manufacturers specifications and installation requirements.

FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

Exposed fixings to be type 304 stainless steel.

Sheltered fixings to be hot-dipped galvanize.

Closed in nail plates in roof space to be continuous coated galvanized steel.

Closed wire dogs and bolts to be hot dipped galvanized steel.

All other closed structural fixings to be mild steel (uncoated non galvanized)

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Project Title
Regan & Rebekah Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

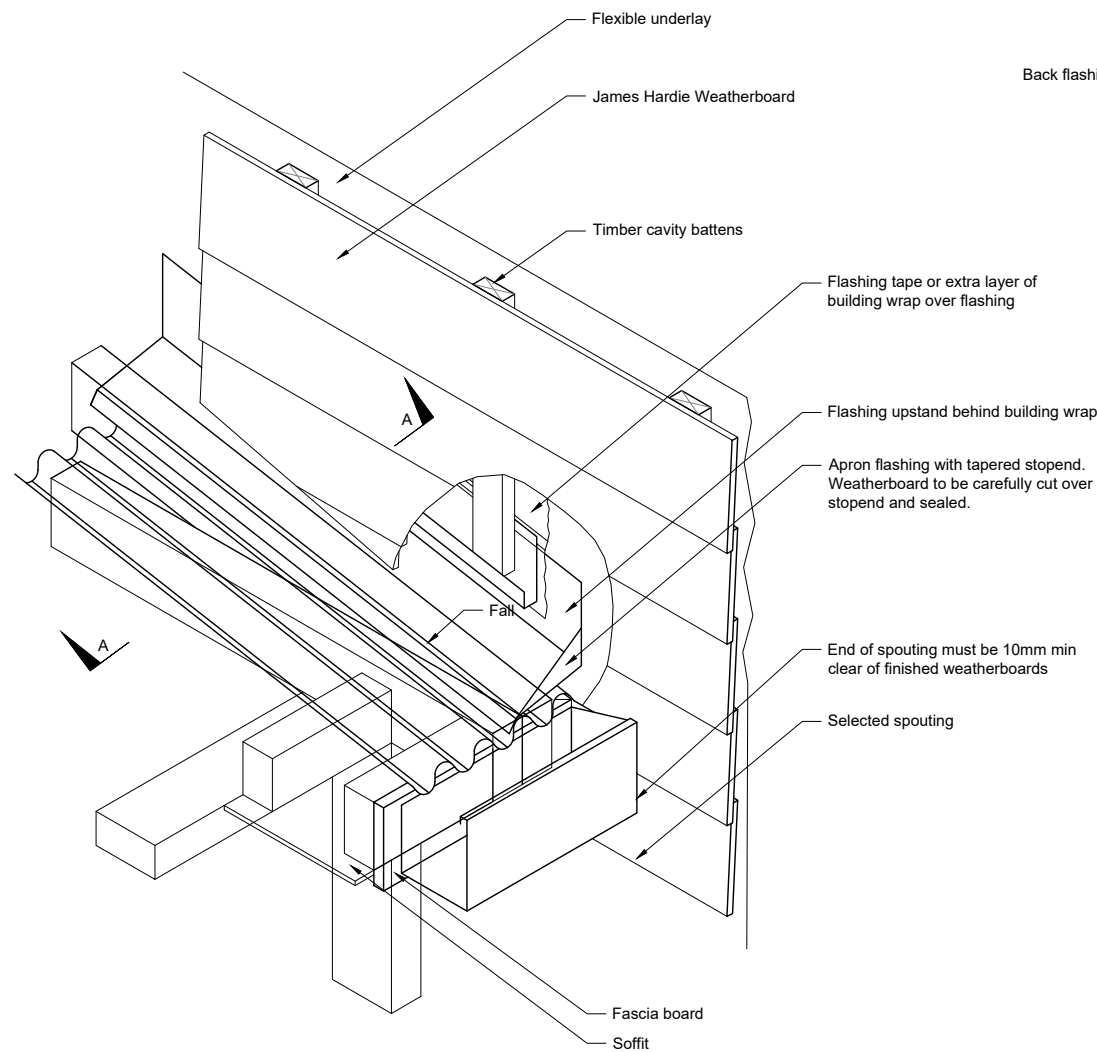
Sheet Title
Roof Details

Drawn 29 July 2025

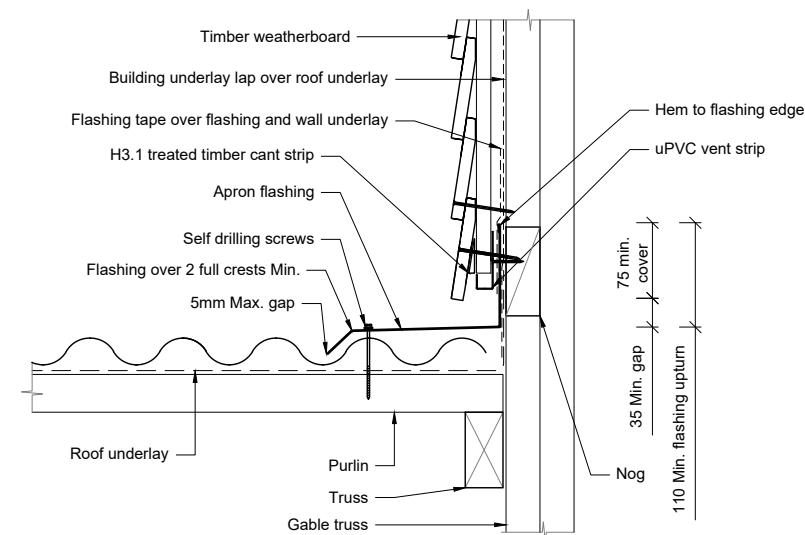
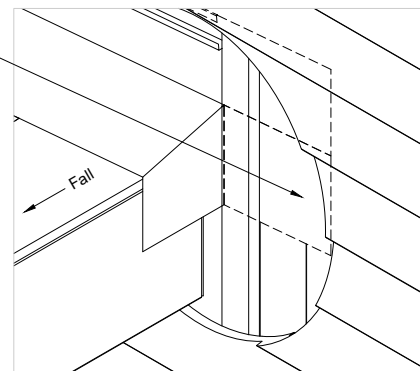
Project No 7989

Rev 0 **Sheet** A23

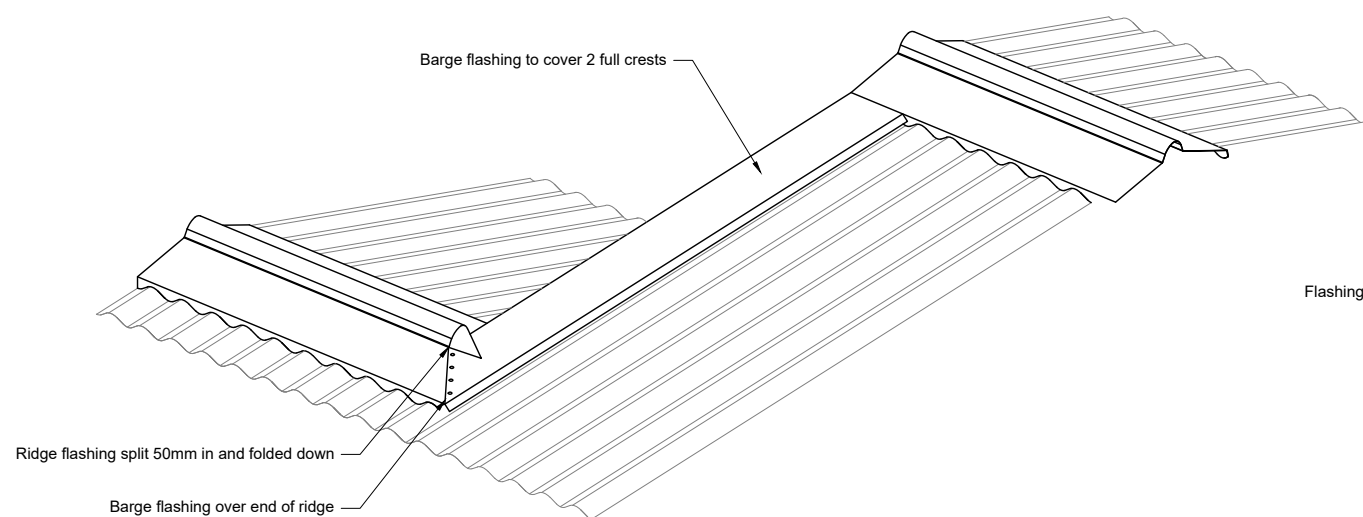
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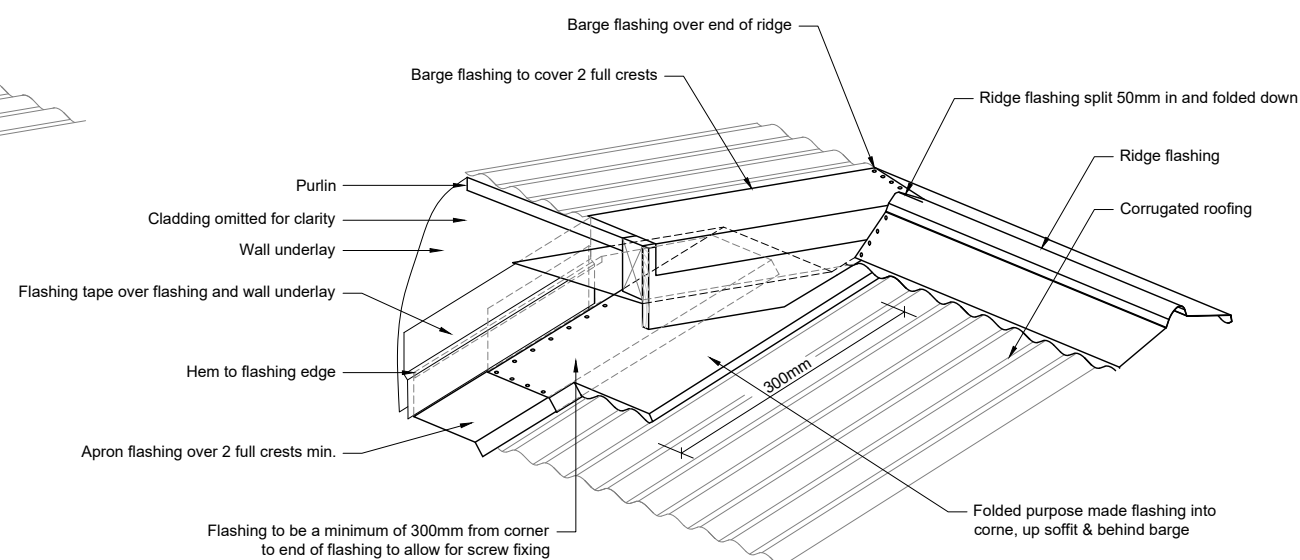
D81 Apron Flashing to Wall Intersection Detail
A10 SCALE = NTS



A-A Apron Flashing Detail
SCALE = 1:10 @ A3



D82 Ridge & Barge Flashing Detail
A10 SCALE = 1:10 @ A3



D83 Gable Roof Intersection Detail
A10 SCALE = 1:10 @ A3

NOTE:

1. All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
2. Number of downpipes required as per NZBC E1/AS1 1 x 74mmØ downpipe per 70m² roof plan area.
3. Stormwater: 100mm Ø UPVC pipe, minimum gradient 1:120
4. All drainage to comply with AS/NZS 3500 & NZBC G13/AS1.
5. Roofing to be installed to New Zealand Metal Roofing Code of Practice and in accordance with manufacturers installation instructions.
6. Number of downpipes required as per NZBC E1/AS1 1 x 74mmØ downpipe per 70m² roof plan area.
7. Details to be read in conjunction with manufacturers specifications and installation requirements.

FIXINGS

Exposure zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

Exposed fixings to be type 304 stainless steel.
Sheltered fixings to be hot-dipped galvanize.
Closed in nail plates in roof space to be continuous coated galvanized steel.
Closed wire dogs and bolts to be hot dipped galvanized steel.
All other closed structural fixings to be mild steel (uncoated non galvanized)

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11 Ironbark Road
Kerikeri
Lot 9 DP 145038

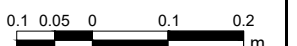
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Roof Details

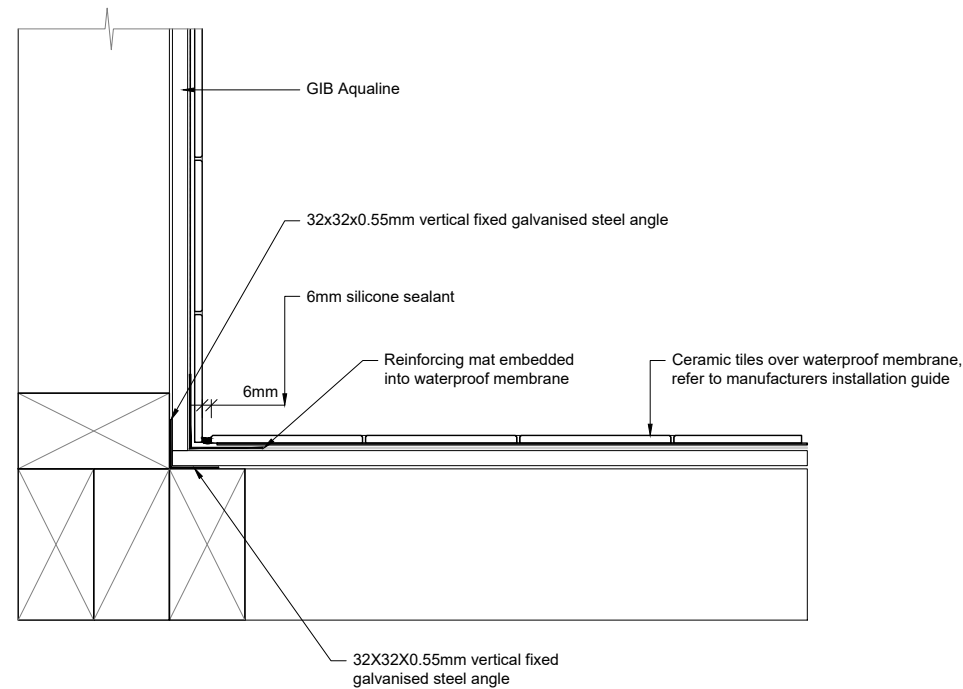
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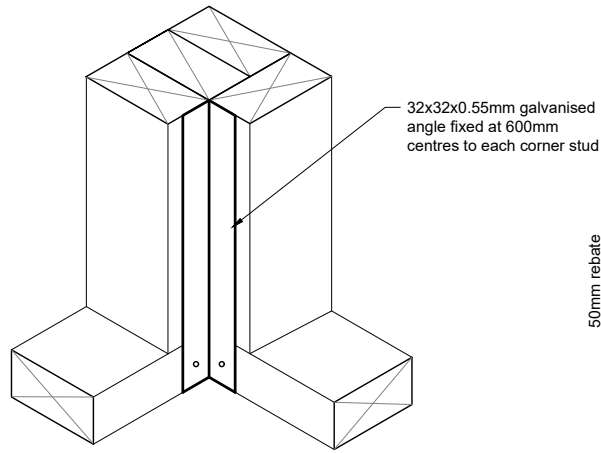
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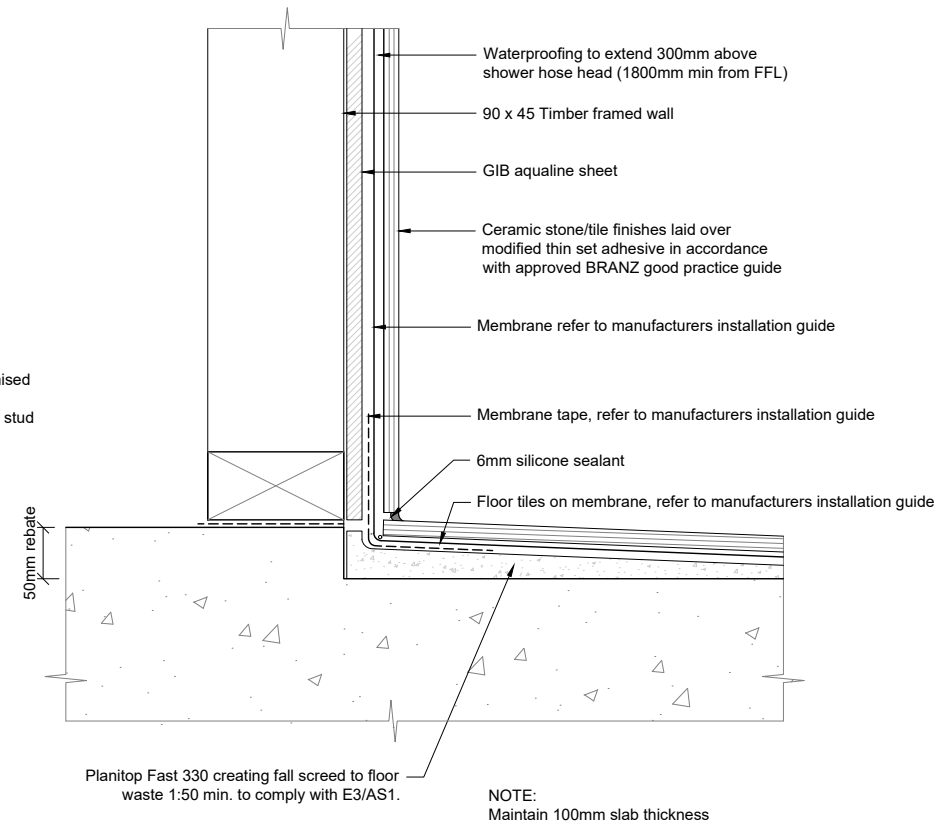




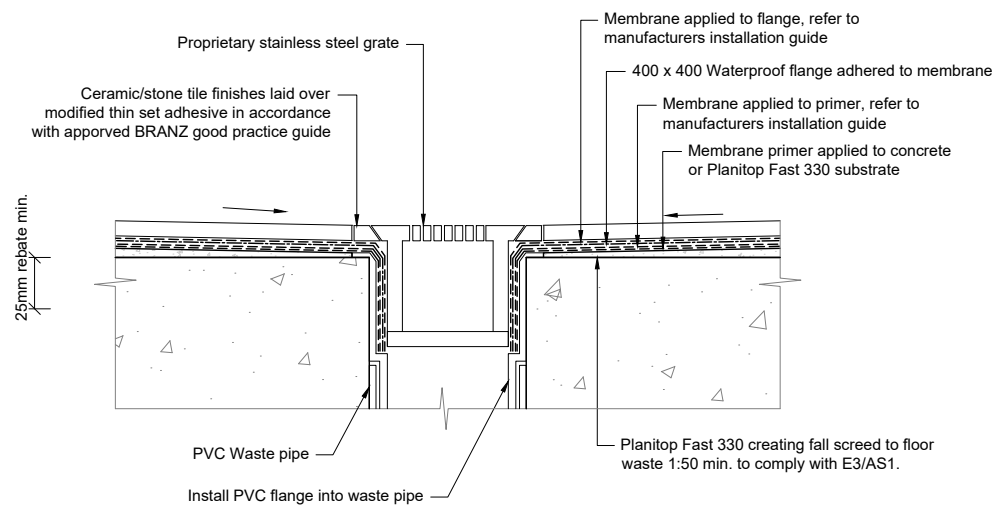
D80 Shower Wall Detail (Plan View)
SCALE = 1:5 @ A3



D81 Wet Area Tiled Walls and Base
SCALE = NTS

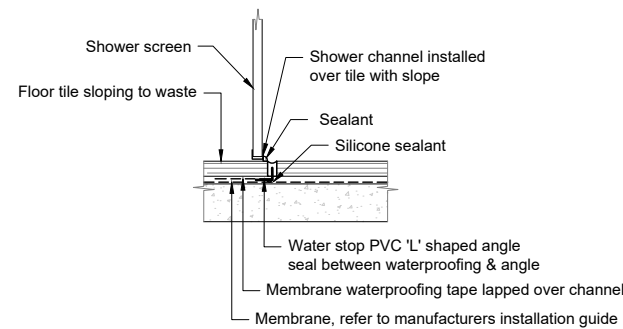


D82 Tiled Shower Tray Detail
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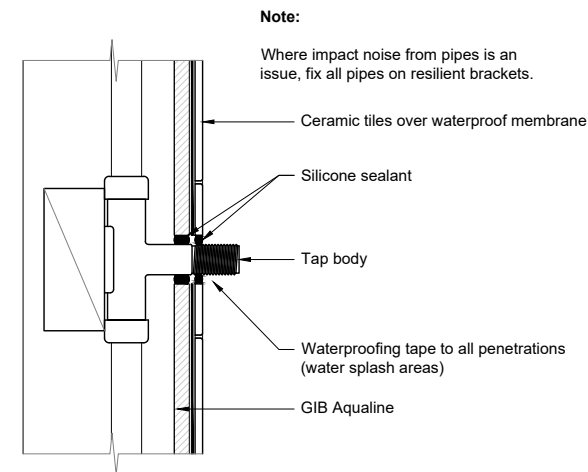


D83 Internal Wet Area Waste Detail
SCALE = 1:5 @ A3

NOTE:
Maintain 100mm slab thickness



D84 Section Channel Detail
SCALE = 1:5 @ A3



D85 Tile Penetration Detail
SCALE = 1:5 @ A3

Note:
Where impact noise from pipes is an issue, fix all pipes on resilient brackets.

Tiles to be installed in accordance with BRANZ Good Practice Guide

- NOTE:**
- All work to be done in accordance with NZS 3604: 2011 and the NZ Building Code unless specifically designed.
 - All construction materials fixings & fastenings to comply with NZS 3604:2011 Section 4 & NZBC B2.
 - Plumbing to be installed by registered Plumber.
 - Refer to Gib aqualine Wet Area Systems for manufacturers installation required for GIB lining to typical fixtures & installations.
 - Tiled showers to have membrane applied under tiling.
 - All wet areas to be provided with impervious linings as per NZBC E3/AS1.
 - Builder to refer to fixture manufacturers requirements for framing /nogging required for installations of all fixtures & fixings.
 - "Watersplash" Areas to E3/ AS1
 - Seal around all penetrations and at junctions of wall/floor tiles with approved mould resistant silicone sealant.
 - Watersplash areas & surfaces adjacent to sanitary & laundering facilities to be impervious to comply with NZBC E3.
 - Kitchen bench/ work surfaces 3.0 to comply with G3/ AS1.
 - Membrane used behind all sealant joints.

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11 Ironbark Road Kerikeri
Lot 9 DP 145038

Sheet Title
Membrane Details

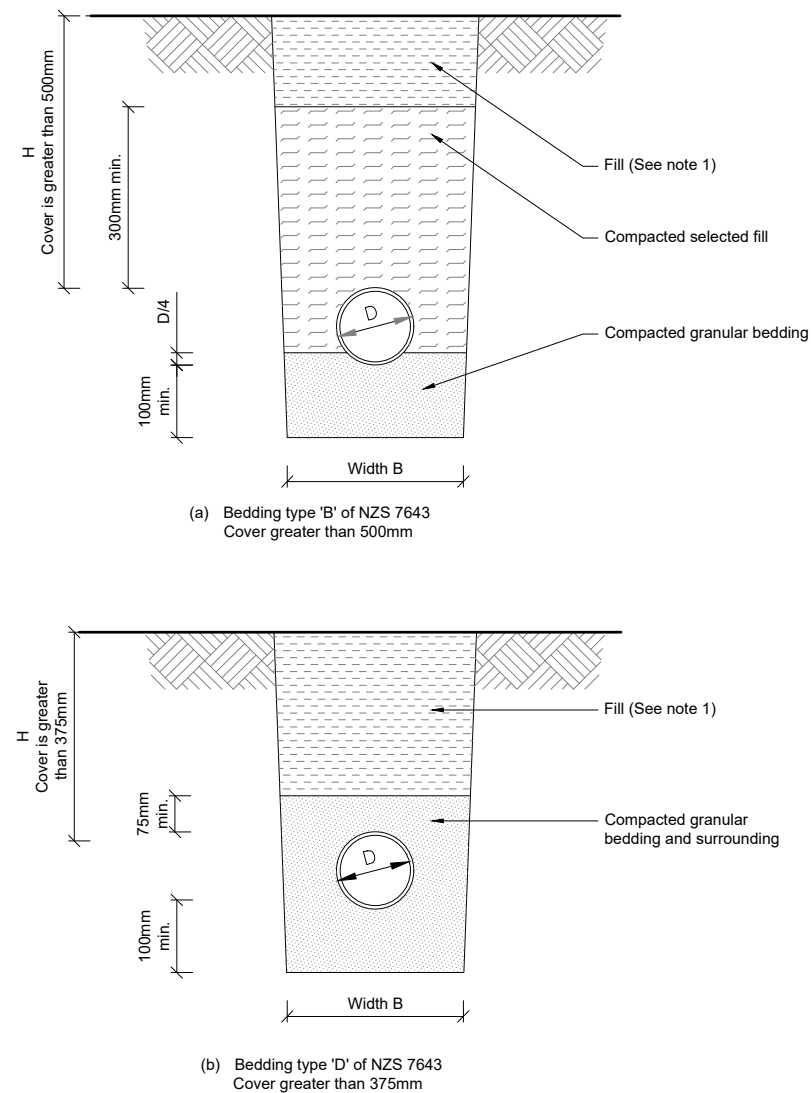
Drawn 29 July 2025

Project No 7989

Rev 0 **Sheet** A25

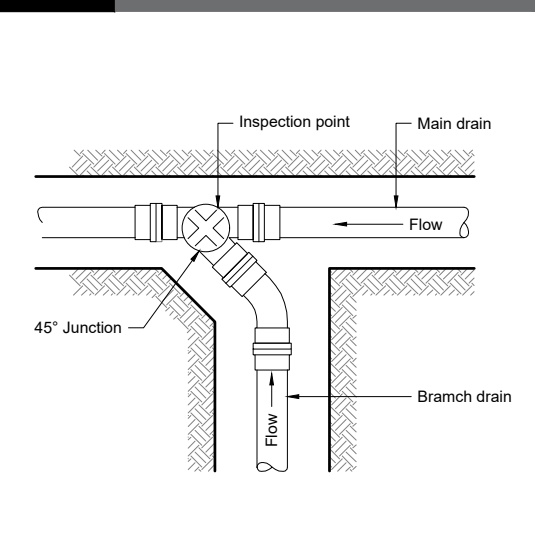
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Figure 7: Bedding and backfilling
Paragraphs 5.2.1, 5.3.1 and 5.4.1



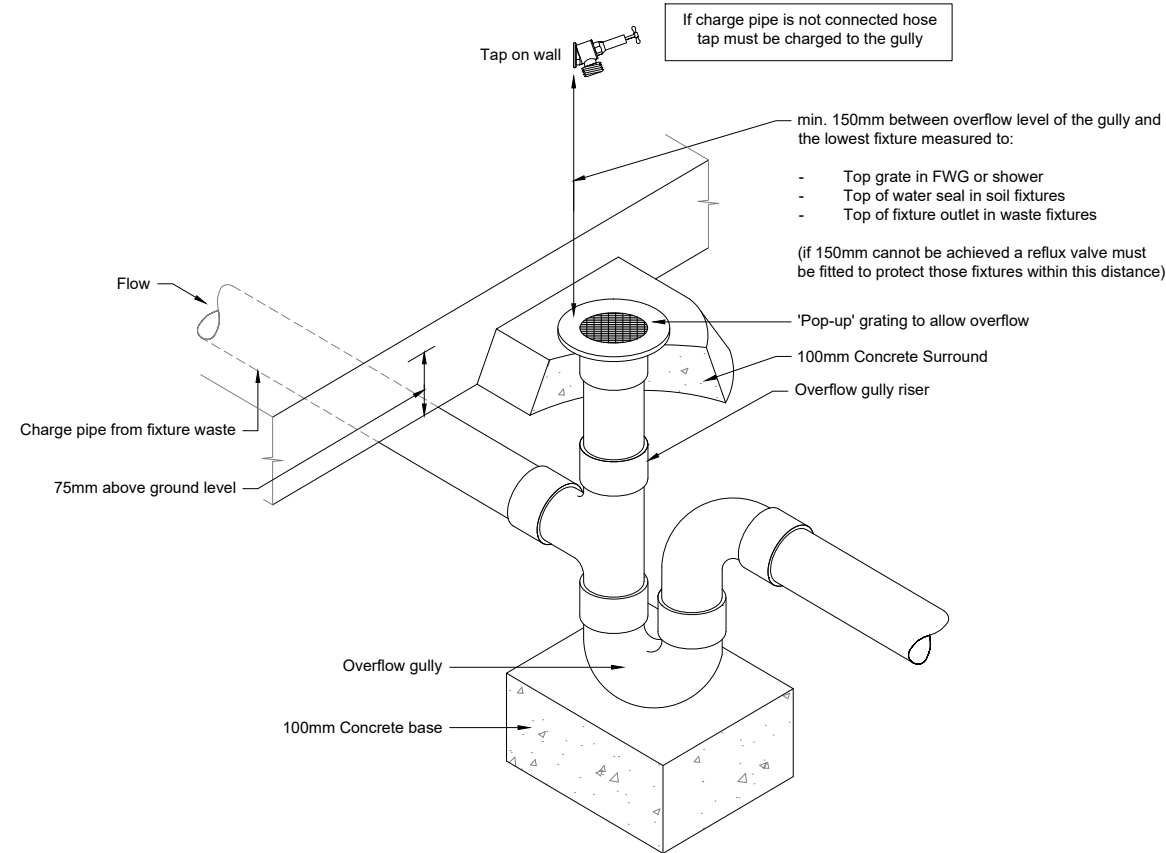
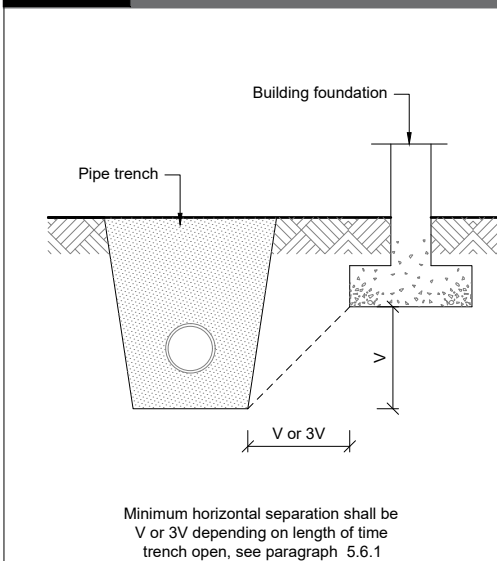
NOTE:
Fill shall be:
Ordinary fill where drains are located below gardens and open country.
Compacted selected fill where the drains are located below residential driveways and similar areas subject to light traffic.

Figure 9: Inspection points
Paragraph 5.7.3



101 Trench & Inspection Joint Details
SCALE = NTS

Figure 8: Relationship of pipe trench to building foundation
Paragraph 5.6.1



102 Overflow Relief Gully (ORG) Detail
SCALE = NTS

- NOTE:
1. All lateral drains under slab to be a minimum of 65Ø.
 2. All drainage to comply with AS/NZS3500 & NZBC E1/VM1.
 3. All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
 4. Provide seismic restraints & temperature valve to hot water cylinder as per NZBC G12/AS1. To be read in conjunction with manufacturers specifications.
 5. Downpipe's required as per NZBC E1/AS1 1x74mmØ (80mmØ nominal) downpipe per 70m² roof plan area.
 6. Stormwater: 110mm Ø UPVC pipe, min gradient 1:120

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Lot 9 DP 145038

Sheet Title
Drainage Details

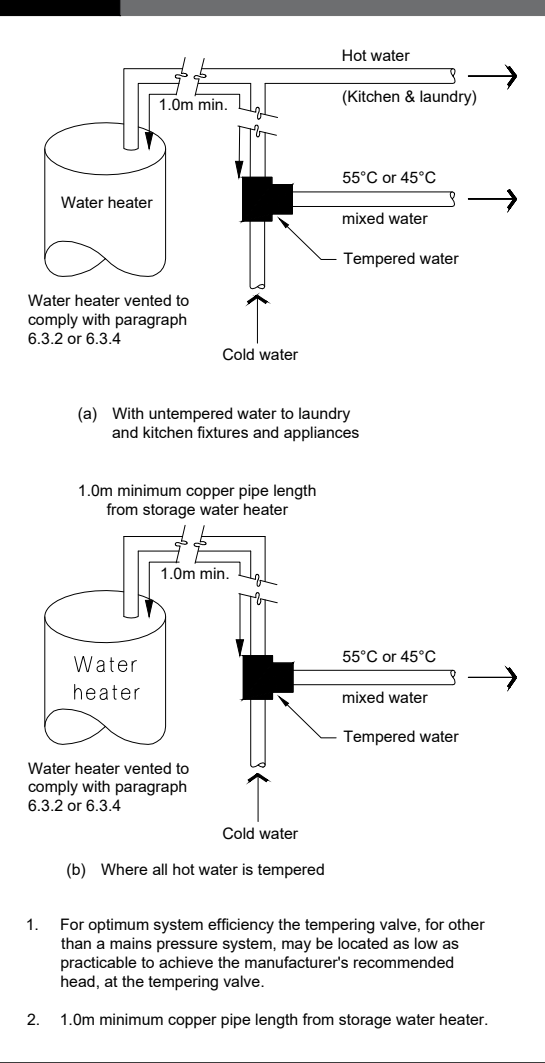
Drawn 29 July 2025

Project No 7989

Rev 0 Sheet A26

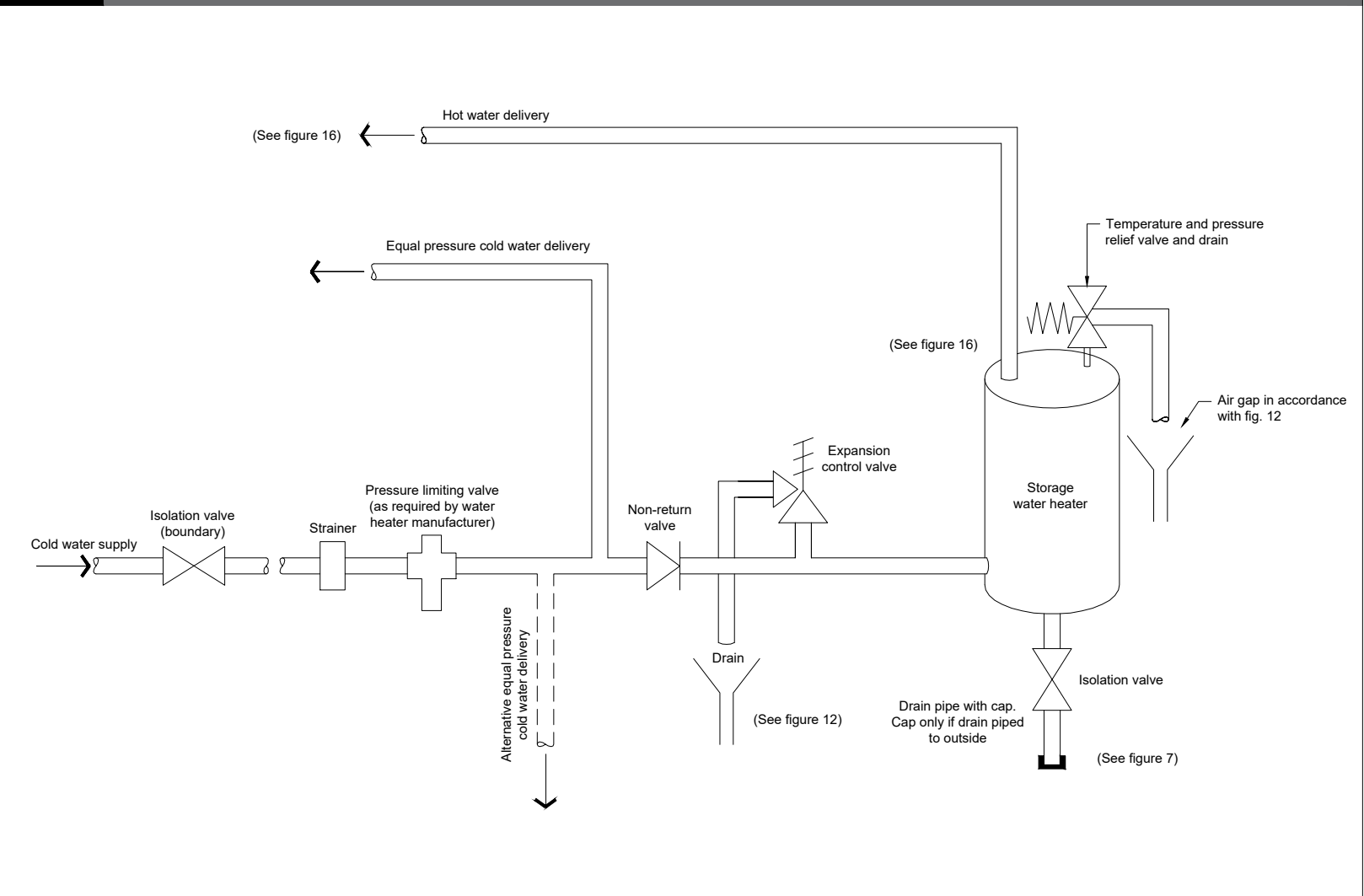
Scale (A3 Original) 1: 10
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Figure 16: Tempering Valve Installation
Paragraph 6.14.2 a)

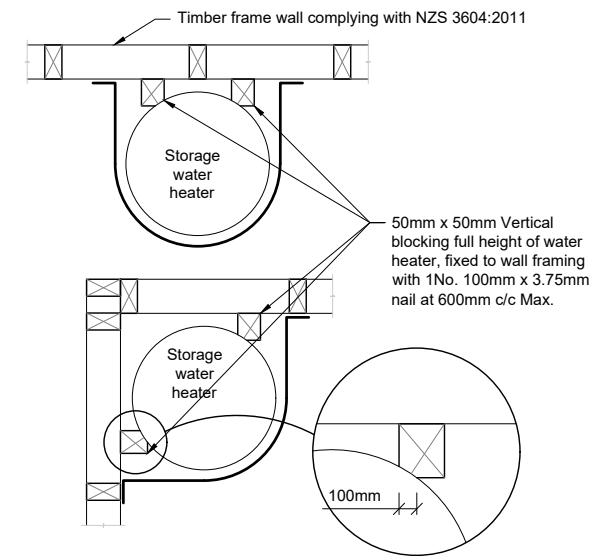


105 Tempering Valve Installation
SCALE = NTS

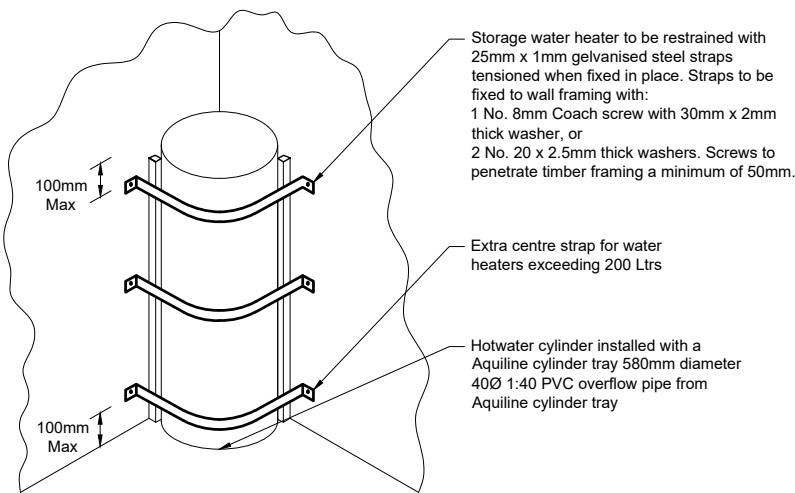
Figure 8: Mains Pressure Storage Water Heater System (unvented)
Paragraphs 6.1.2 and 6.2.1 b)



106 Hotwater Cylinder Schematic
SCALE = 1:10 @ A3



107 Seismic Restraint of Storage Water Heaters 90 - 360 Litre's
SCALE = 1:10 @ A3



- NOTE:**
- All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
 - Number of downpipes required as per NZBC E1/AS1 1 x 74mmØ downpipe per 70m² roof plan area.
 - Stormwater: 100mm Ø UPVC pipe, minimum gradient 1:120.
 - All drainage to comply with AS/NZS 3500 & NZBC G13/AS1.
 - Provide seismic restraints & temperature valve to hot water cylinder as per NZBC G12/AS1. Refer to separate sheet for details.

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Kerikeri
Lot 9 DP 145038

Sheet Title
Seismic Restraint
Details

Drawn 29 July 2025

Project No 7989

Rev 0 **Sheet** A27

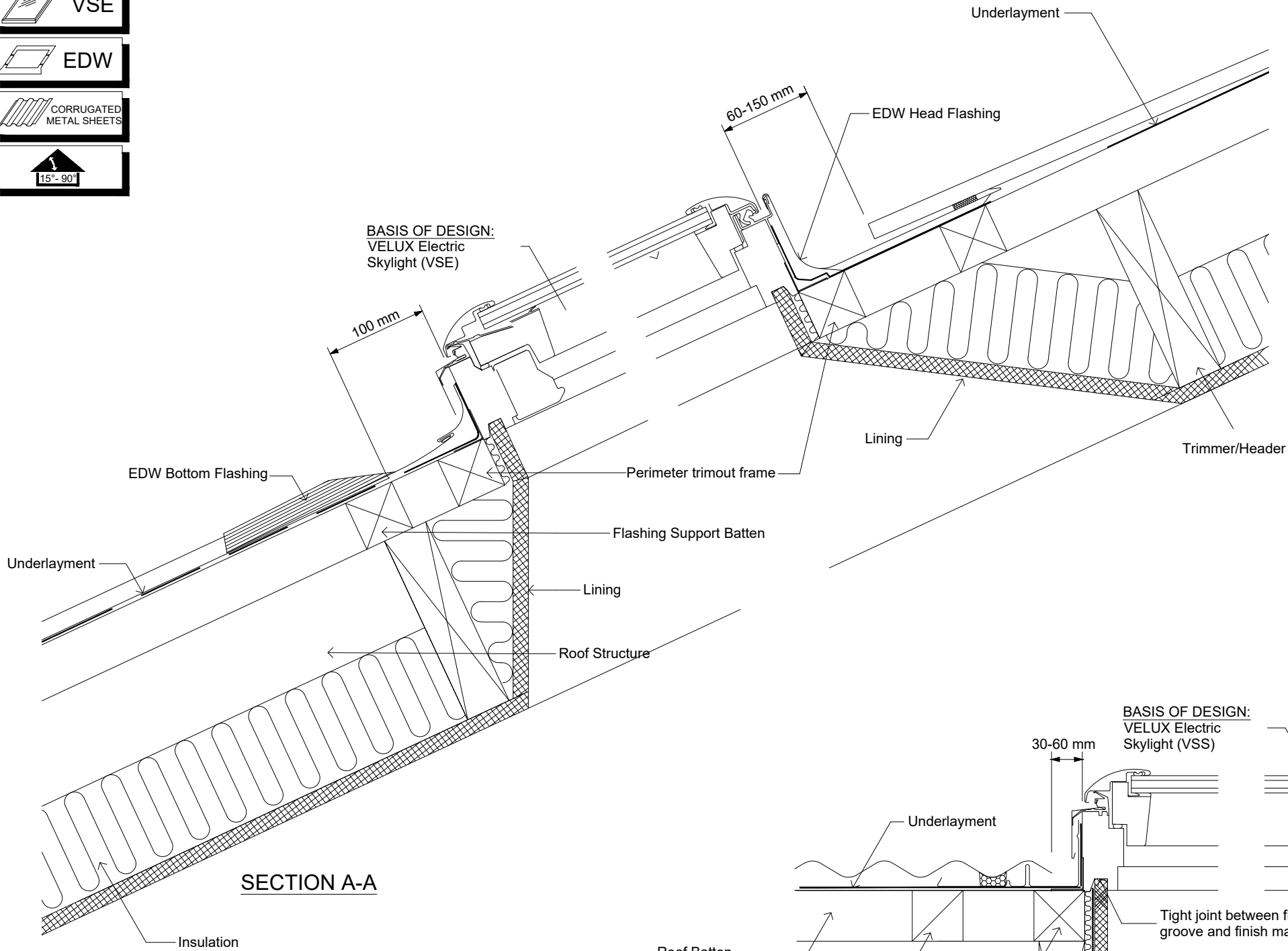
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VSE

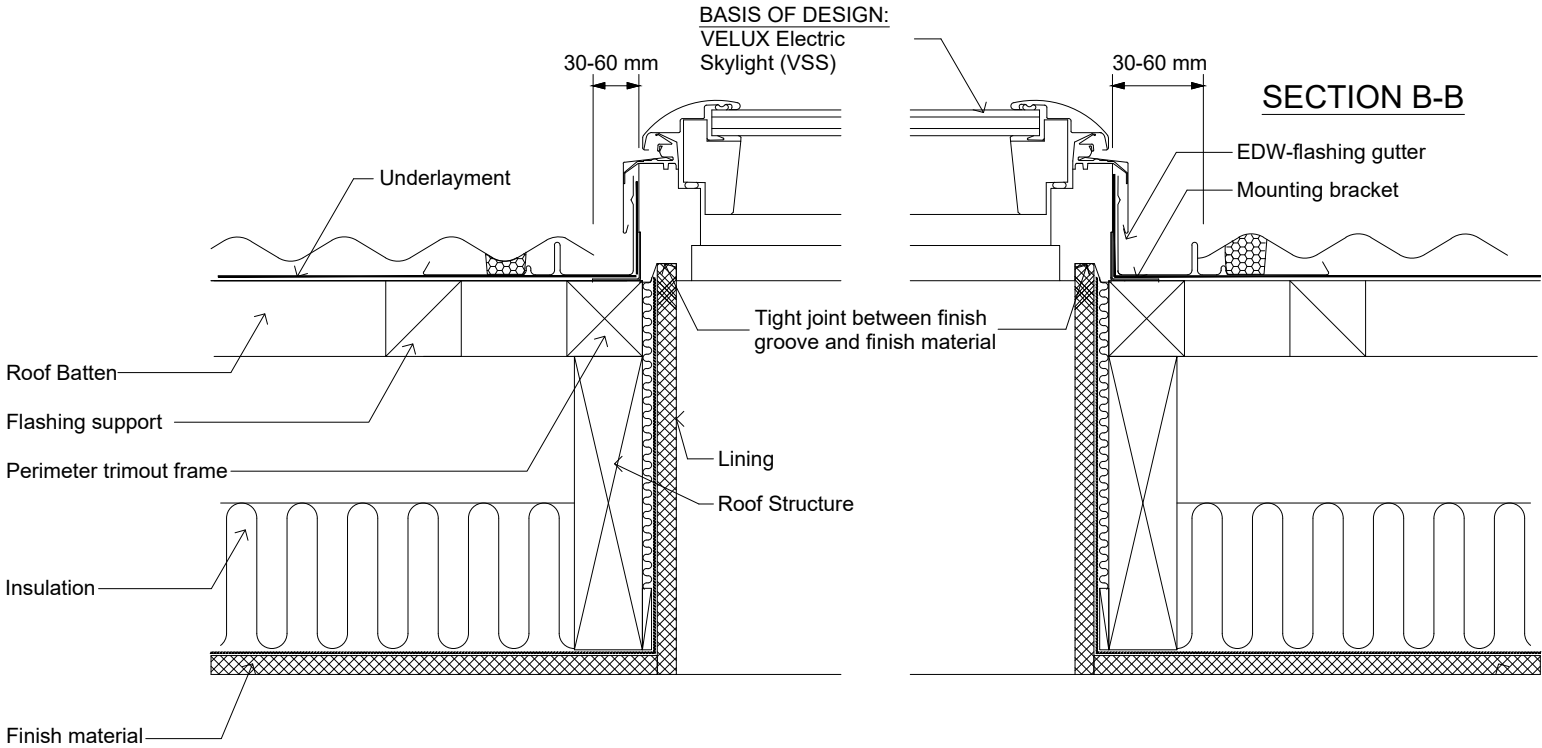
EDW

CORRUGATED METAL SHEETS

15°- 90°

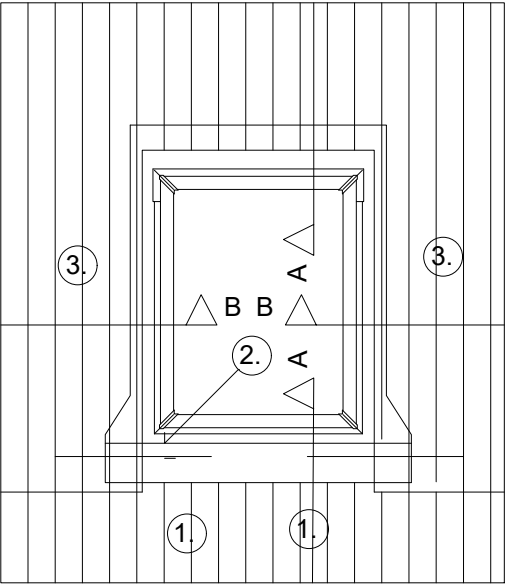


SECTION A-A



SECTION B-B

ELEVATION



VELUX Skylight installed in new metal roofing.

1. The sheets are fitted 100 mm from the bottom frame
2. The flashing is mounted
3. Fit the metal sheets

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Project Title
Regan & Rebekah Polglaze
11 Ironbark Road
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Lot 9 DP 145038

Sheet Title
VELUX Skylight Details

Drawn 29 July 2025

Project No 7989

Rev 0 Sheet A28

Scale (A3 Original) 1: 5

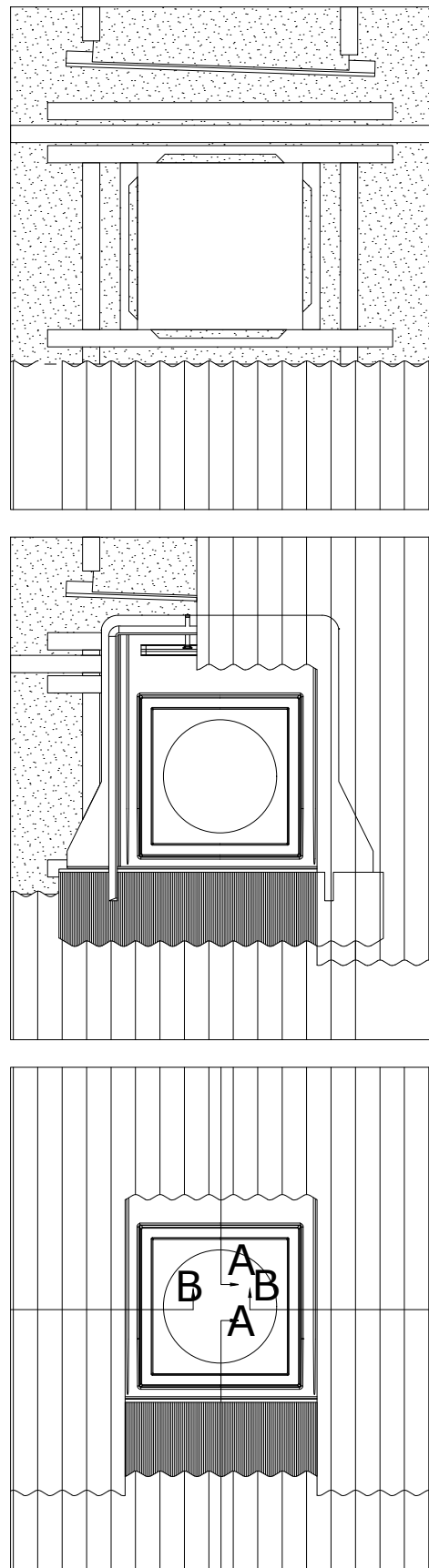


VSE- Electric Skylight and EDW Flashing in Corrugated Metal Roof

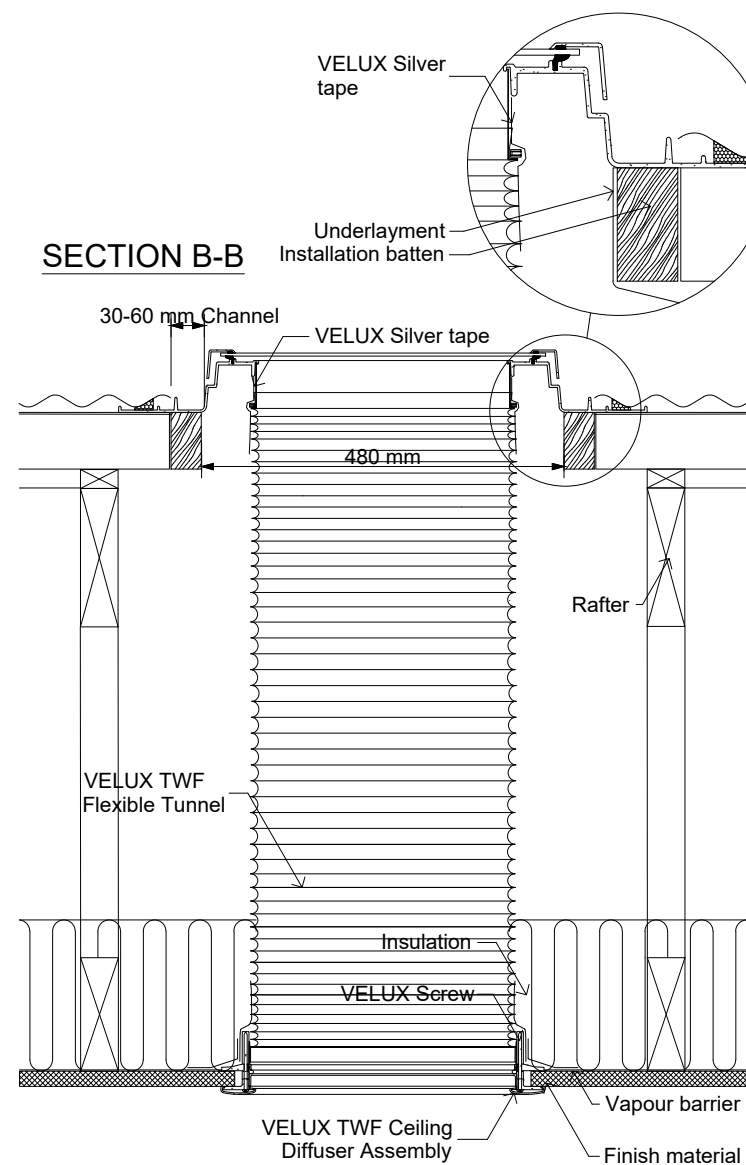
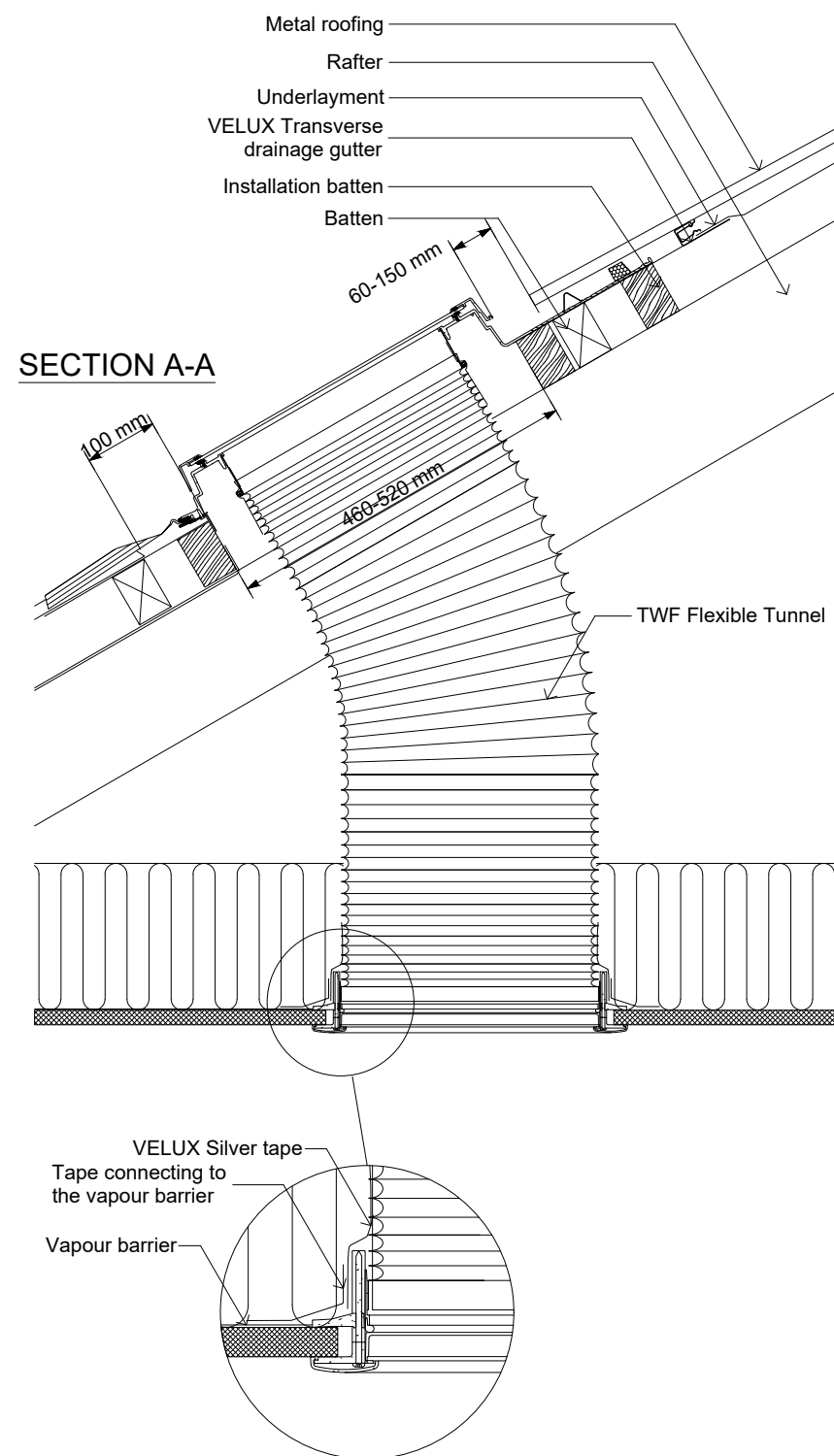
VELUX
Sky-Product Management

NEW ZEALAND LTD.
0800 650 445

Name	Date
Drawn by	Jan 18
Checked by	Jan 18
Drawing No.	



ELEVATION



<div>VELUX</div> <div>Sky-Product Management</div>	NEW ZEALAND LTD.		Name		Date
	0800 650 445		Drawn by		June 11
			Checked by		June 11
			Drawing No.		
TWF - Flexible Sun Tunnel in Profiled Metal Roof					



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11 Ironbark Road
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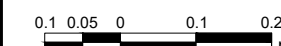
Sheet Title
VELUX Sun Tunnel
Details

Drawn 29 July 2025

Project No 7989

Rev 0 **Sheet** A28

Scale (A3 Original) 1: 10



PROJECT:

**PROPOSED HOUSE EXTENSION
STRUCTURAL DESIGN**

CLIENT:

REGAN & REBEKAH POLGLAZE

PROJECT ADDRESS:

11 IRONBARK ROAD, WAIPAPA
FAR NORTH

LEGAL DESCRIPTION:

LOT 9 DP 145038

JOB NO:

059-FND-25SD

DATE:

9 MAY 2025

REVISION:

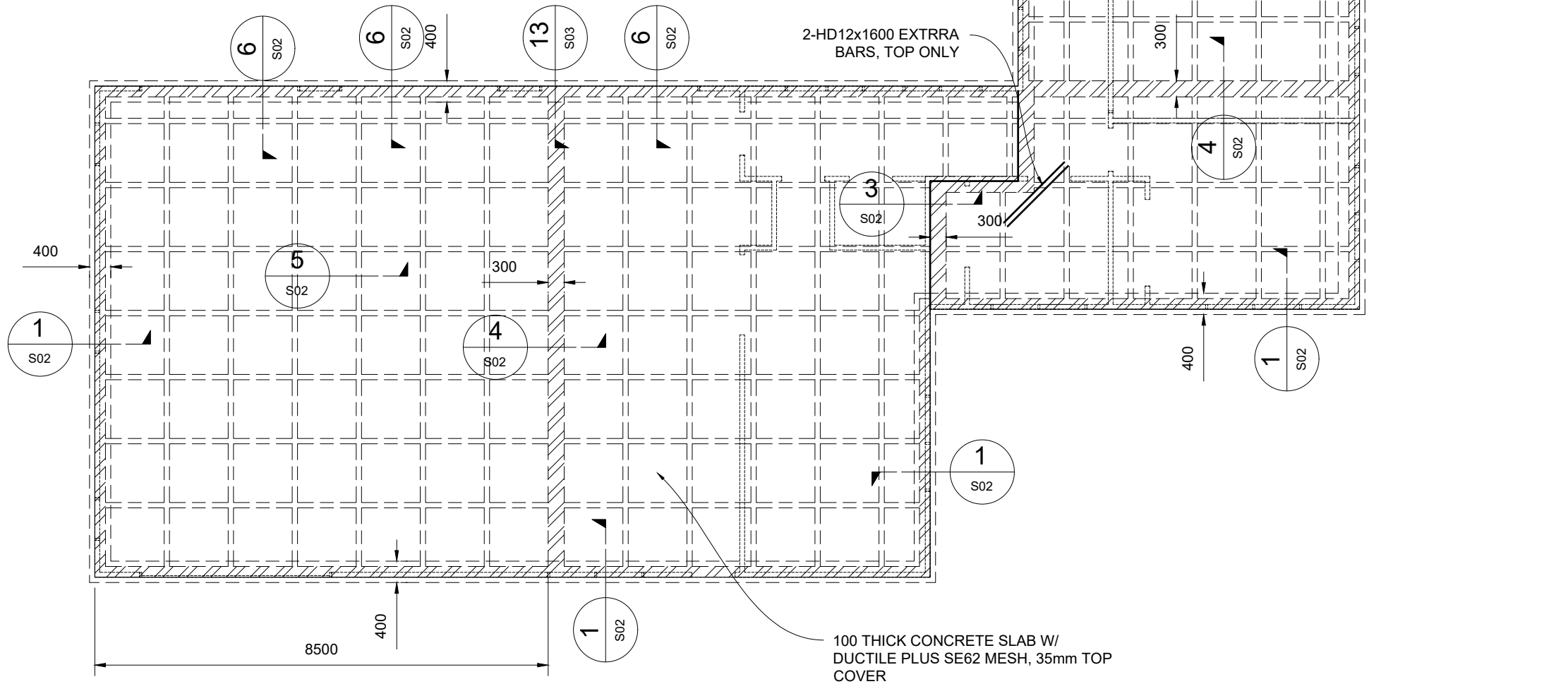
FOR CONSENT

DRAWING
INDEX:

S01	FOUNDATION PLAN
S02	TYPICAL DETAILS
S03	TYPICAL DETAILS
S04	TYPICAL DETAILS
S05	TECHNICAL SPECIFICATIONS

NOTES:

1. CONTRACTOR TO CHECK AND CONFIRM DIMENSIONS BEFORE COMMENCING ANY WORKS. REFER TO ARCHITECT'S DRAWINGS FOR DIMENSIONS.
2. ALL CONCRETE TO BE 25 MPA MINIMUM.
3. THE TOP 300 OF SOIL, INCLUDING TOPSOIL SHOULD BE TAKEN OUT AND BE REPLACED WITH COMPACTED HARDFILL, PREFERABLY GAP 65 OR 40, PLACED AND COMPACTED AT EVERY 150MM FILL LAYER.
4. SITE CUT SHALL BE INSPECTED BY THE ENGINEER. ANY SOFT OR ORGANIC SPOTS SHOULD BE OVER-EXCAVATED, AND THE OVER-EXCAVATED PORTION SHOULD BE FILLED WITH GAP 65 GRANULAR FILL, COMPACTED AT EVERY 150mm LAYER.
5. PROVIDE 25MM THICK SAND BLINDING ON TOP OF THE COMPACTED HARDFILL.
6. SAWCUT JOINTS ARE OPTIONAL.
7. EXTRA CORNER BARS ARE NOT NEEDED IF AT LEAST 1 BEAM IS GOING THROUGH.
8. SLAB THICKENING FOR LOAD-BEARING WALLS ARE NOT NEEDED IN RIBRAFT FLOORS.
9. INNER BEAMS ARE TYPICALLY 300MM WIDE AND 320MM DEEP.
10. RIBS ARE TYPICALLY 100MM WIDE AND 320MM DEEP.
11. ALL WORKS SHALL COMPLY WITH NZS 3604:2011, THESE DRAWINGS AND THE BUILDING CODE OF NEW ZEALAND.



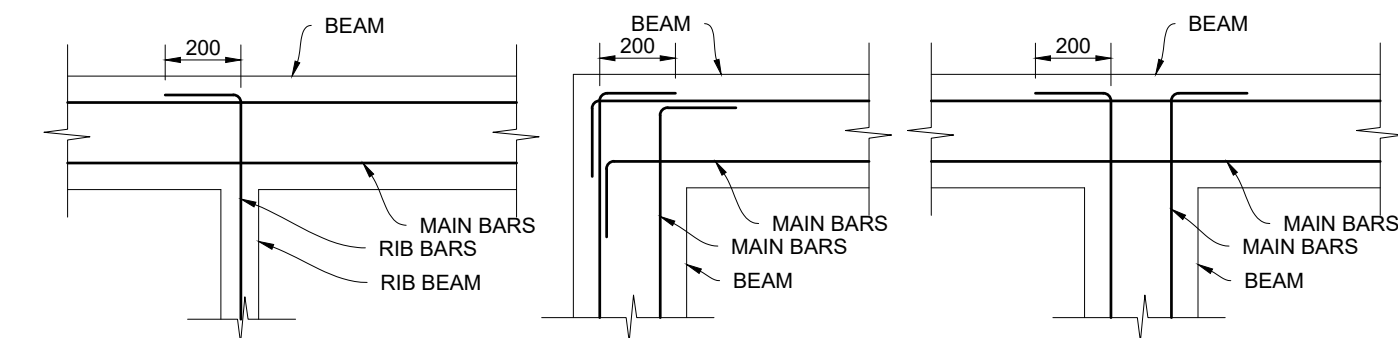
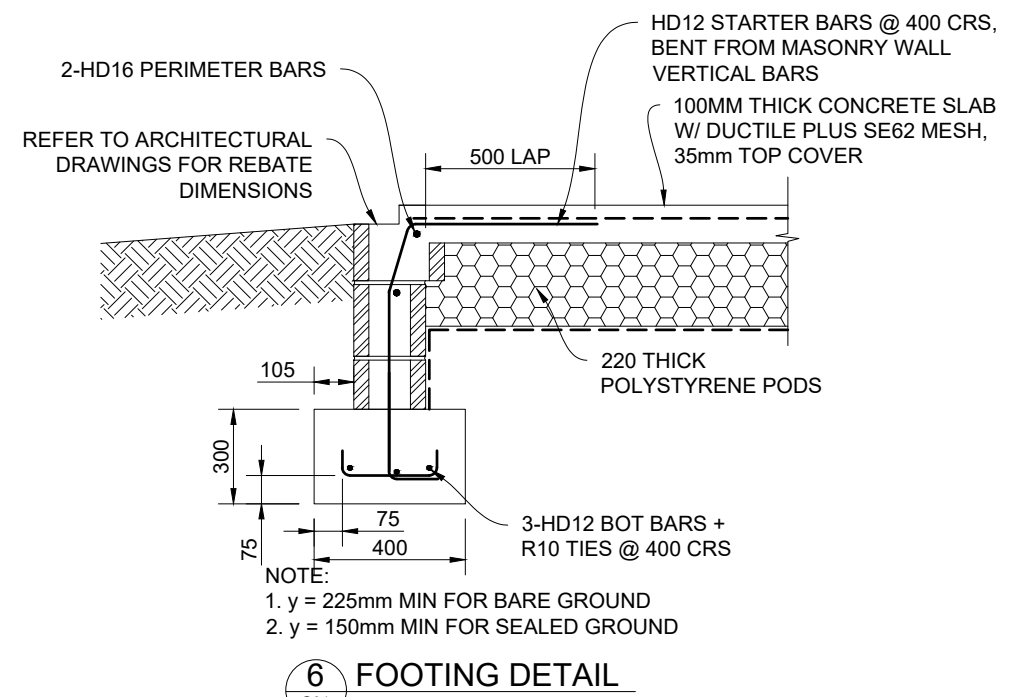
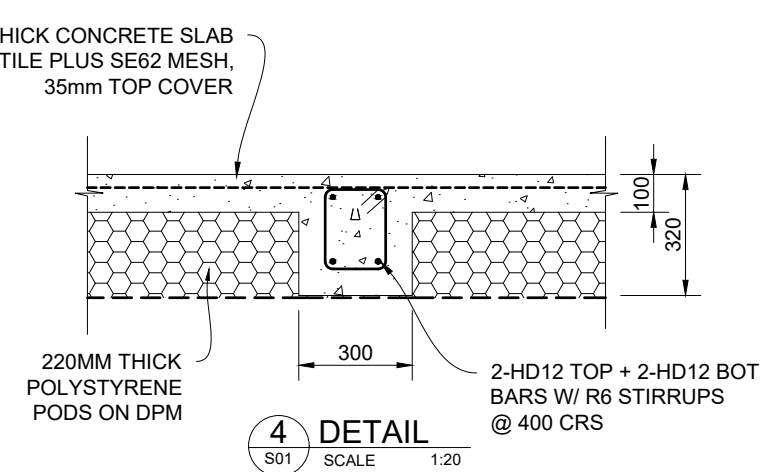
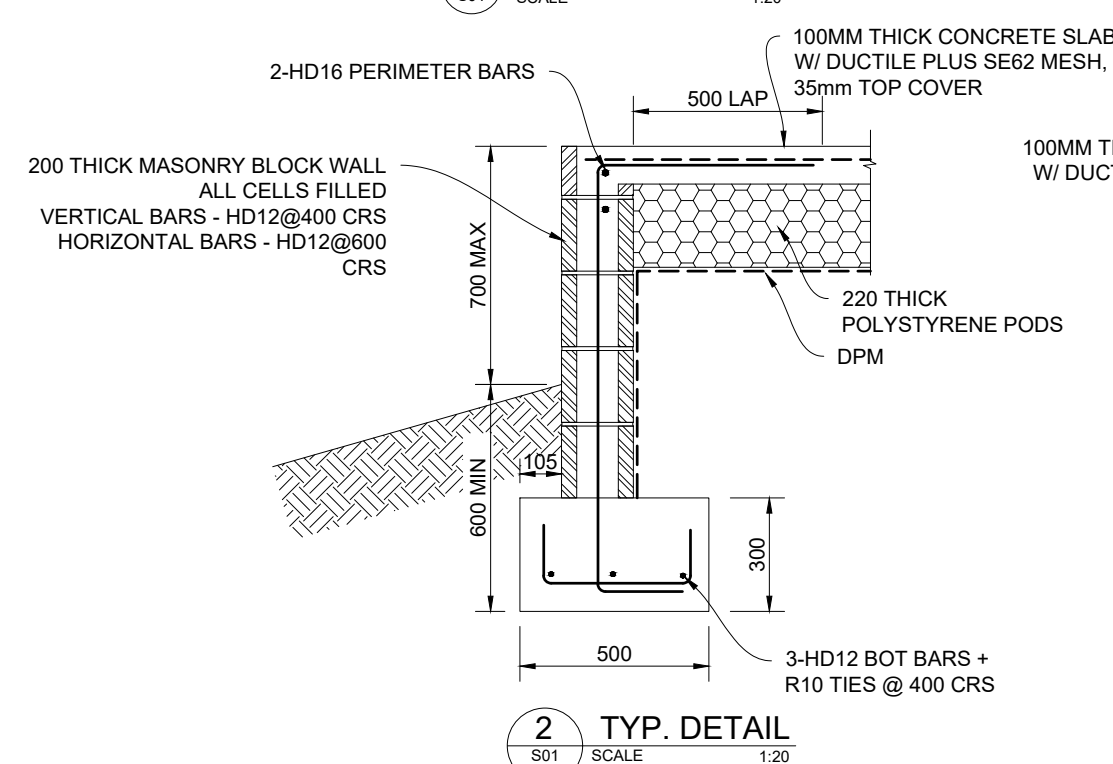
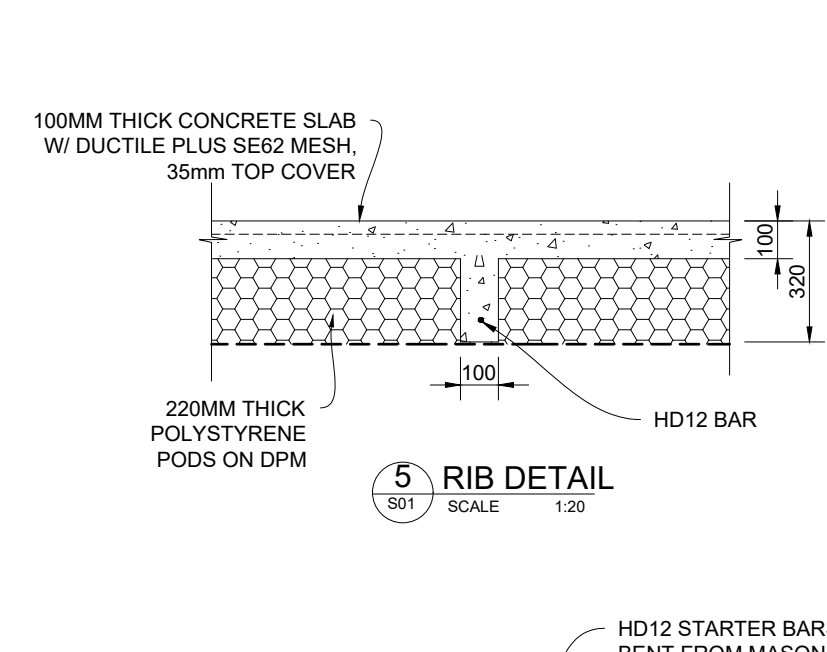
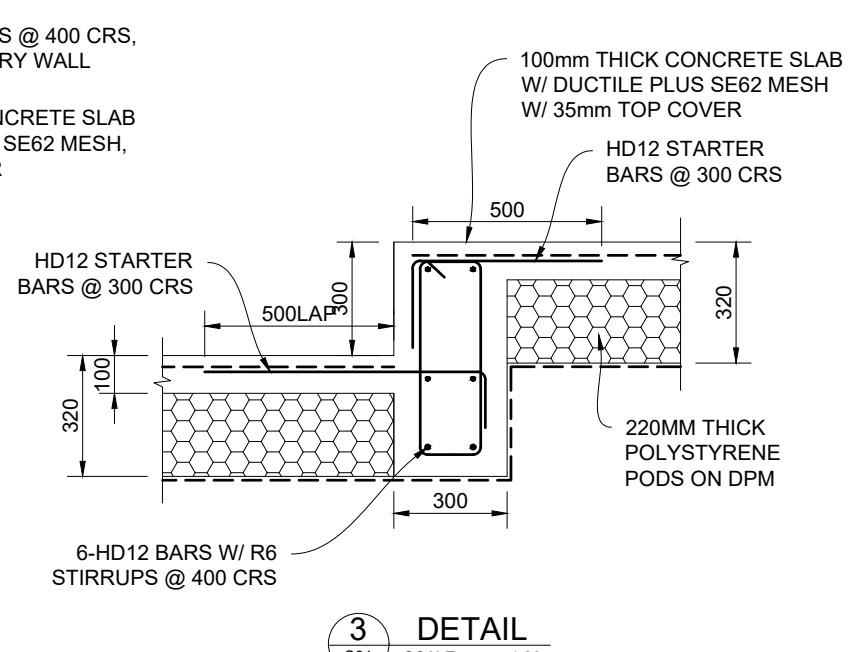
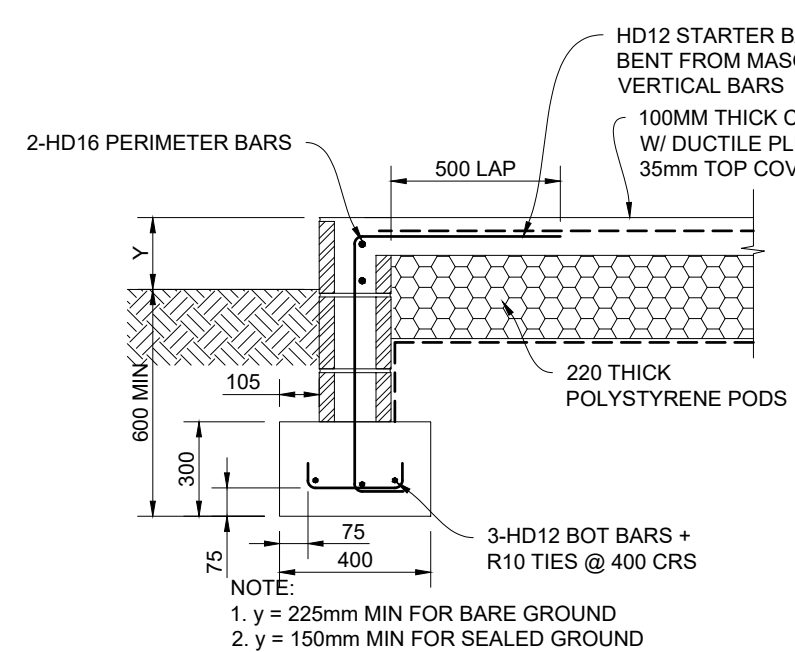
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			Designed	
			Drawn	
No.	Revisions	Date	Reviewed	
			Approved	

11 IRONBARK ROAD, WAIPAPA
PROPOSED HOUSE EXTENSION

FOUNDATION PLAN & DETAILS

Drawing Status	CONSENT	Drawing	S01
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100
50
30
10
0
ORIGINAL SIZE mm
A3



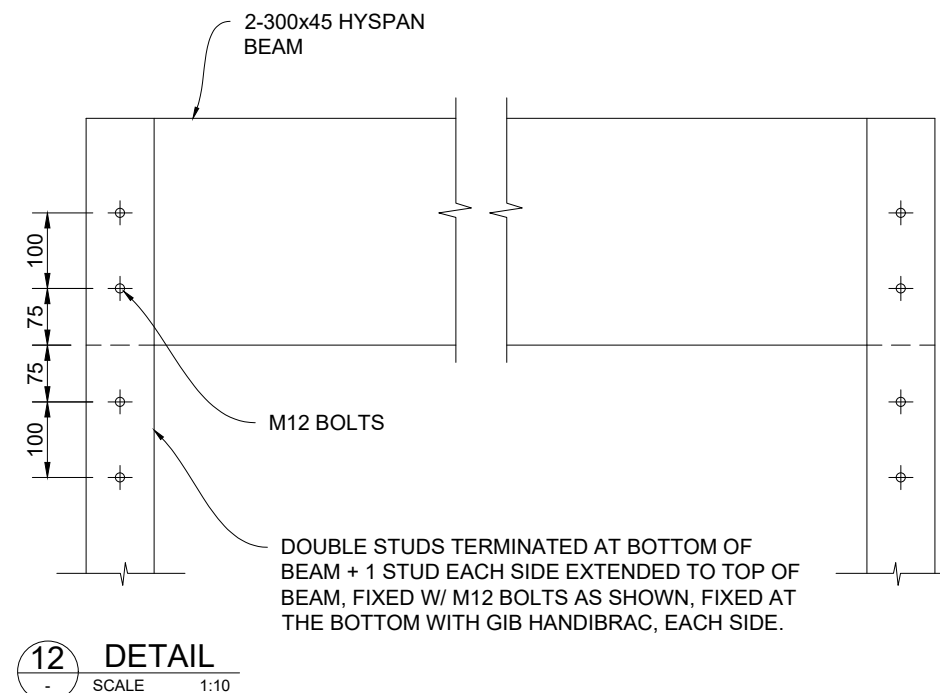
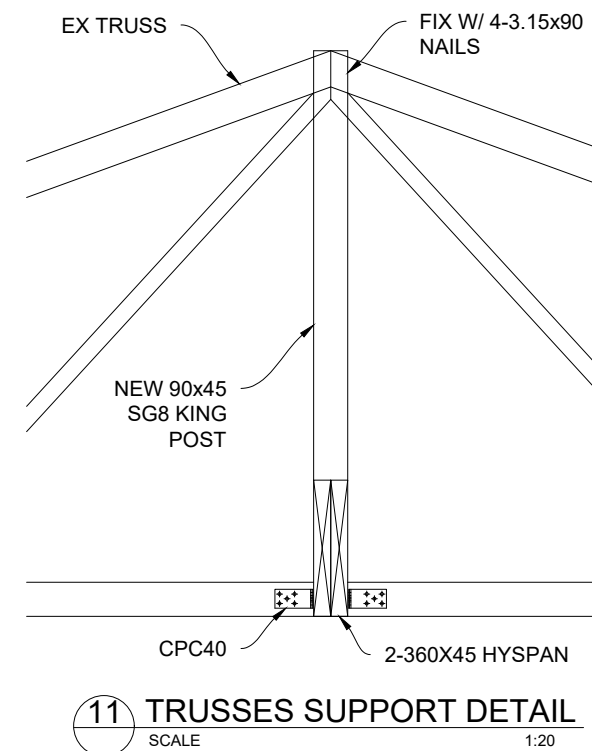
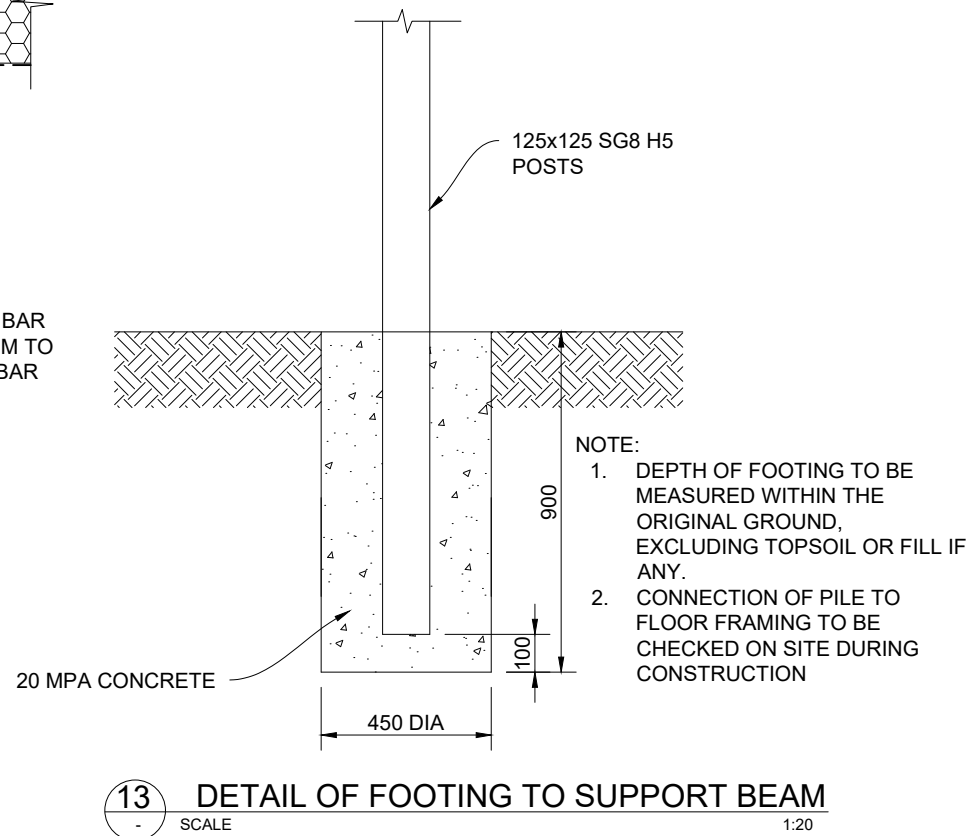
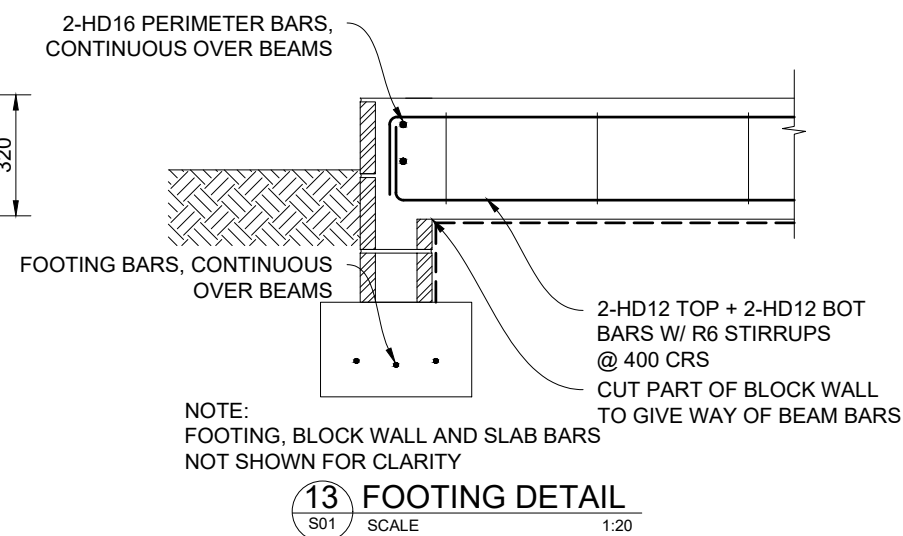
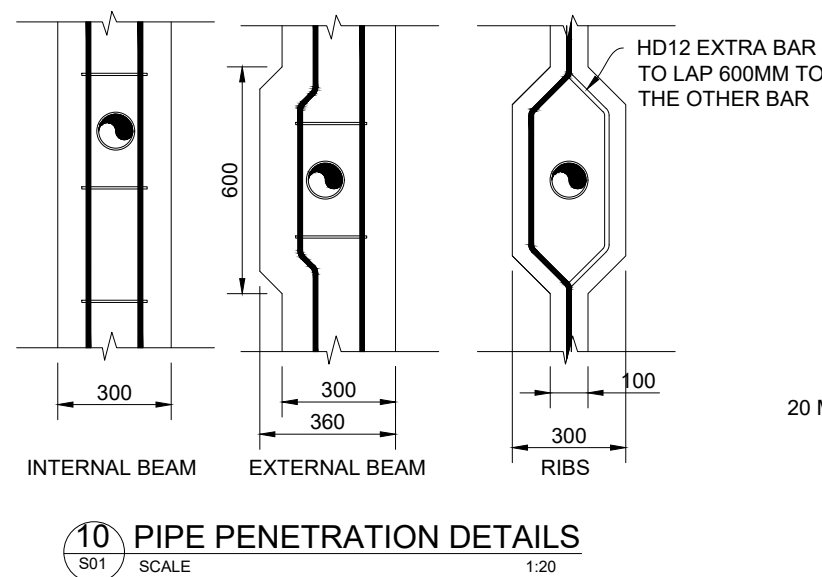
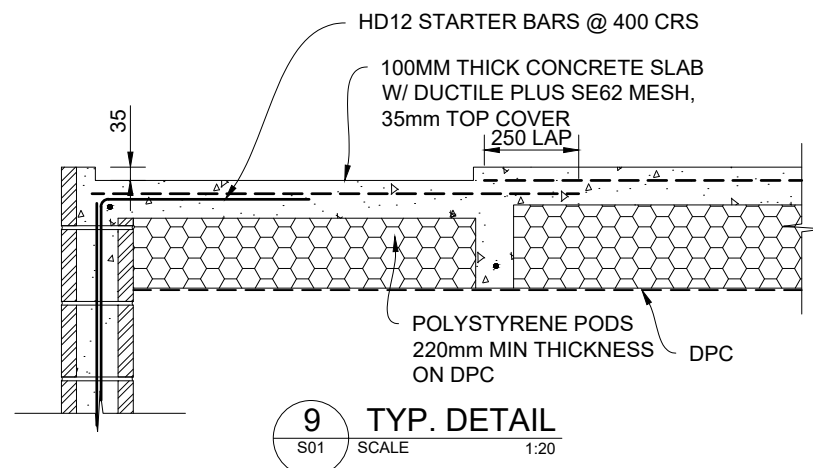
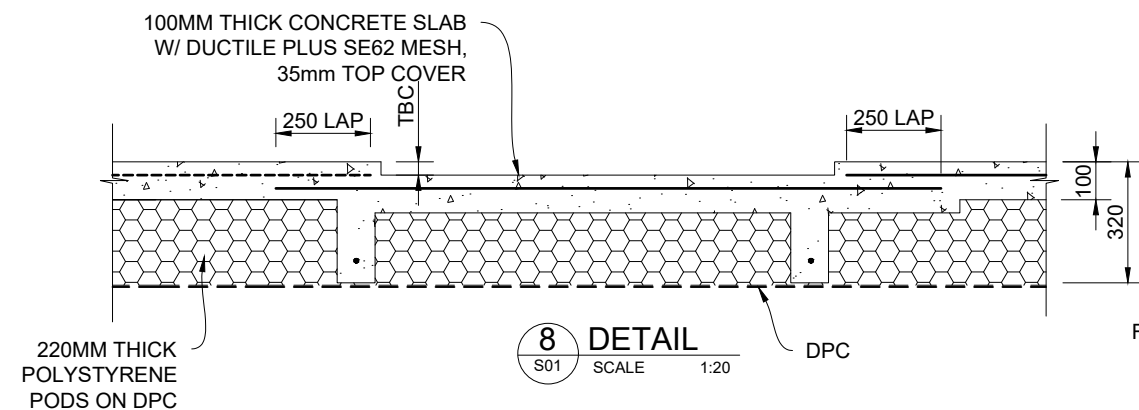
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			Designed		
			Drawn		
1	First Issue	9 May 2025	Reviewed		
No.	Revisions	Date	Approved		

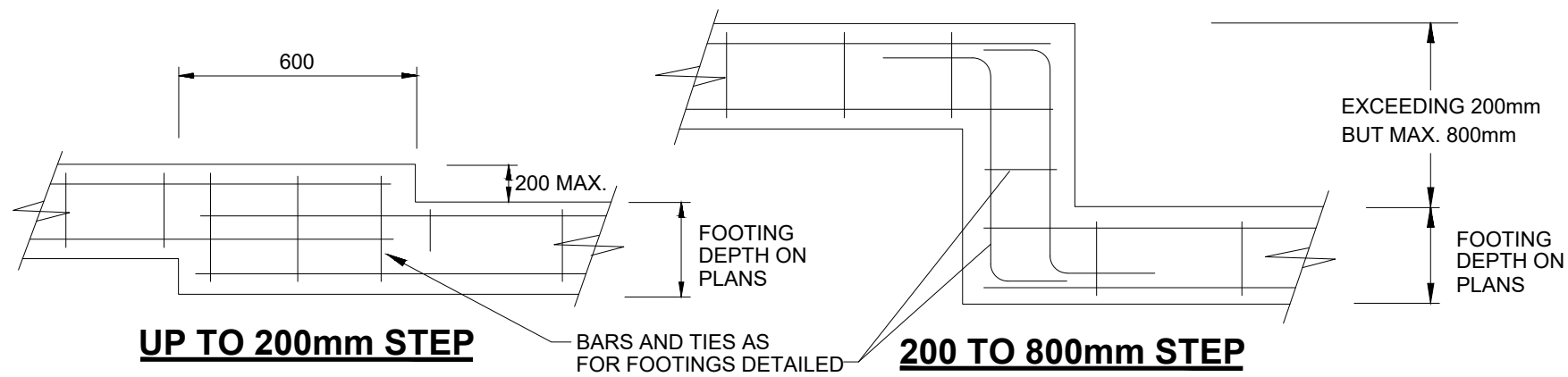
11 IRONBARK ROAD, WAIPAPA
PROPOSED HOUSE EXTENSION

Sheet Title
TYPICAL DETAILS

Drawing Status	CONSENT	Drawing	S02
Project No.:	059-FND-25SD	Revision	1
Scale	1:20 (A3)		

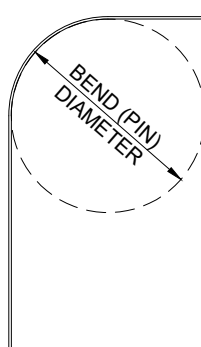
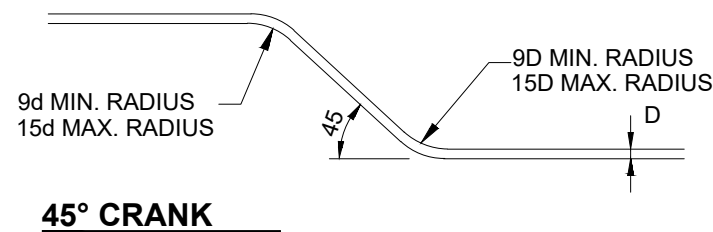
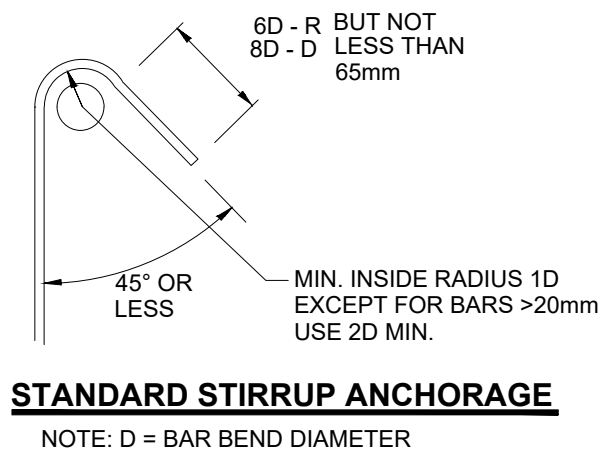
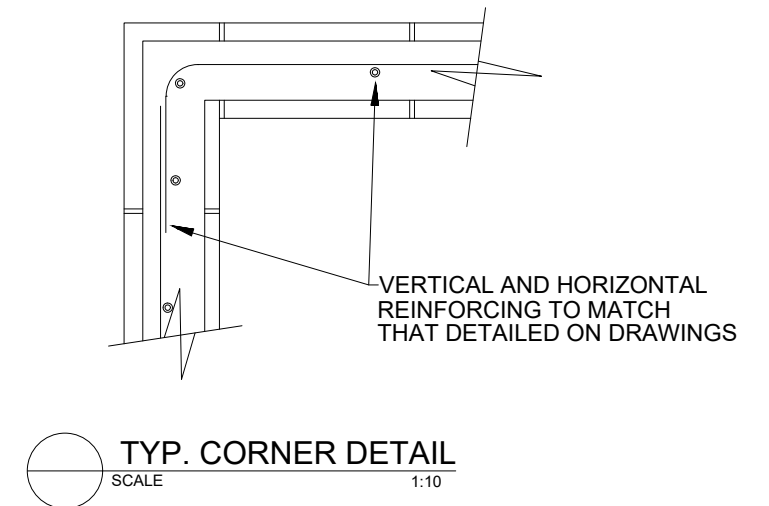
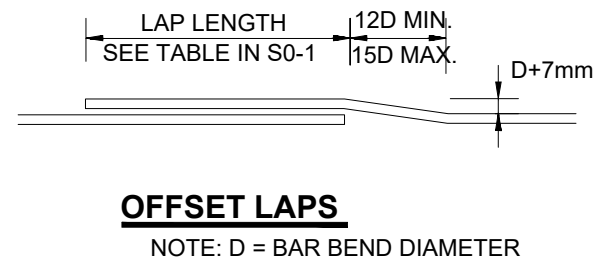
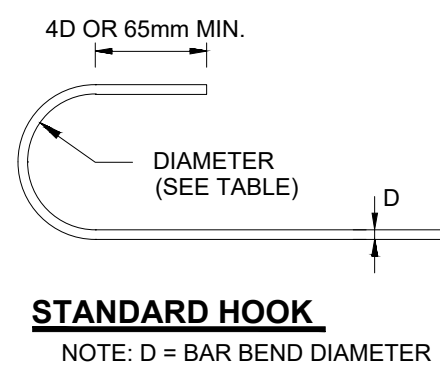
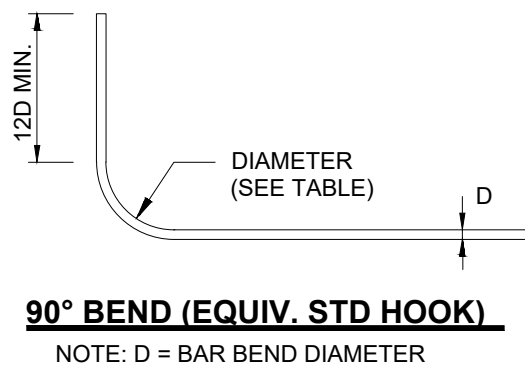
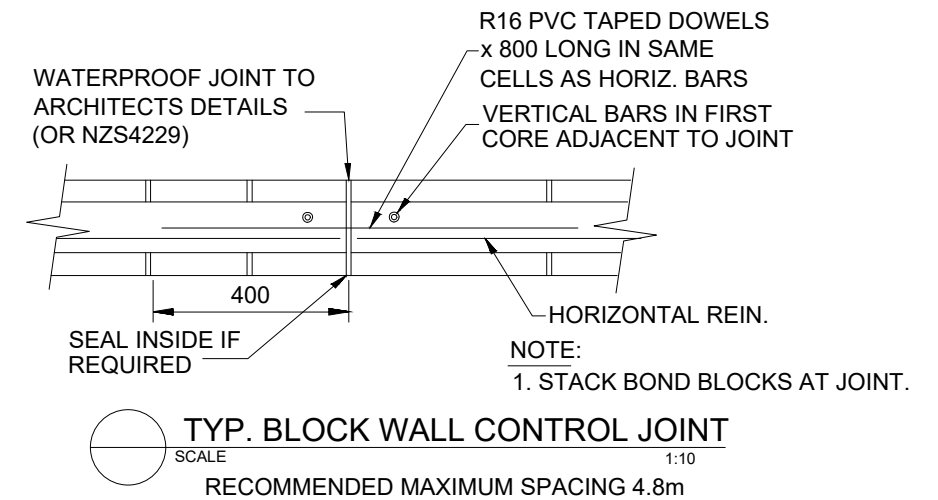
200
100
50
30
10
0
ORIGINAL SIZE mm
A3



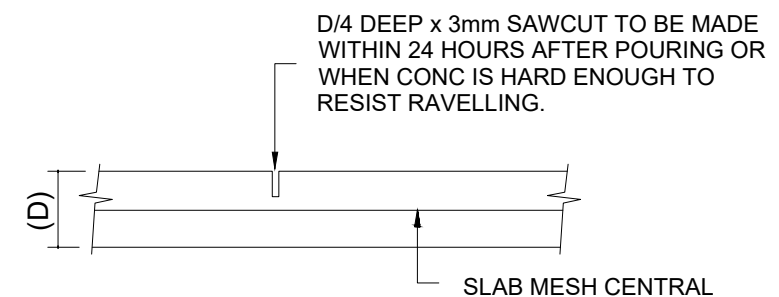


ALTERNATIVE FOUNDATION STEPPING DETAILS

TO BE USED WHERE FOUNDATION BEARING MATERIAL SLOPES



REBAR TYPE	BAR DIAMETER, "D" (MM)					
	6	10	12	16	20	25
PLAIN BARS	30	50	60	80	100	150
DEFORMED BARS	30	50	60	80	100	150
PLAIN BARS (STIRRUPS & TIES)	20	20	30	40	40	80
DEFORMED BARS (STIRRUPS & TIES)	30	40	50	70	80	150



SAWCUT JOINT - SC

1 MINIMUM RECOMMENDED BEND (PIN) DIAMETER

SCALE NTS

200
100
50
30
10
0
ORIGINAL SIZE mm
A3

GENERAL:

- G1. THESE DRAWINGS ARE NOT TO BE SCALED.
- G2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- G3. CONTRACTOR TO CONFIRM ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION.
- G4. ALL DISCREPANCIES IN REGARD TO THE FOUNDATIONS SHALL BE REFERRED TO THE ARCHITECT FOR DECISIONS BEFORE PROCEEDING.
- G5. ALL PROPRIETARY PRODUCTS TO BE INSTALLED AS PER MANUFACTURERS' RECOMMENDATIONS.

CONCRETE:

- C1: ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH NZS3109 AND NZS3101 SUBJECT TO RELEVANT SECTIONS OF THE SPECIFICATIONS.
- C2: NO CONCRETE SHALL BE PLACED UNTIL THE ENGINEER HAS HAD THE OPPORTUNITY TO OBSERVE THAT THE DRAWINGS AND SPECIFICATIONS HAVE BEEN COMPLIED WITH.
- C3: MINIMUM 28TH DAY CONCRETE COMPRESSIVE STRENGTH AS DEFINED IN NZS3109 SHALL BE 25MPA.
- C4: ALL CONCRETE SUPPLY AND PRODUCTION SHALL BE IN ACCORDANCE NZS 3104.
- C5: SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

TIMBER:

- T1: ALL CONSTRUCTION SHALL BE AS PER NZS 3604:2011 TIMBER FRAMED BUILDINGS (NON-SPECIFIC) AND NZS3603 TIMBER STRUCTURE STANDARD.
- T2: ALL TIMBER GRADE SHALL BE SG8 UNLESS NOTED OTHERWISE.

COMPACTED HARDFILL:

- CH1: WHERE EXCAVATION IS REQUIRED TO DEPTH GREATER THAN THAT REQUIRED DUE TO LOW BEARING CAPACITY, ORGANICS, ETC., A LEVEL BUILDING PLATFORM SHALL BE BUILT UP WITH COMPACTED HARDFILL, AP40.
- CH2: GRANULAR FILL SHALL BE COMPACTED IN ACCORDANCE WITH NZS4431:1989 WITH APPROPRIATE ON SITE QUALITY CONTROL. A MAXIMUM DRY DENSITY AT OPTIMUM WATER CONTENT OF AT LEAST 95% OF 2150 kg/m³ SHALL BE ACHIEVED IN ACCORDANCE

WITH THE NZS 4402:1986, TEST 4.1.1. ALTERNATIVELY, COMPACTED HARDFILL MAY BE TESTED FOR COMPACTION USING A CLEGG HAMMER, IN WHICH CASE, IT SHOULD ACHIEVE AN AVERAGE READING OF AT LEAST 25CIV WITH NO READING FALLING BELOW 20CIV.

CH3: WHERE HARDFILL THICKNESS EXCEEDS 600mm, THE CONTRACTOR SHALL PROVIDE COMPACTION TEST RESULTS.

REINFORCEMENT:

- R1: ALL GRADE 300E AND 500E REINFORCEMENT SHALL COMPLY WITH AS/NZS 4671. ALL GRADE 500 REINFORCEMENT BARS SHALL BE MANUFACTURED USING THE MICRO ALLOY PROCESS, UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE ENGINEER. QUENCH AND TEMPERED BARS SHALL NOT BE USED.
- R2: REINFORCEMENT BAR NOTATIONS SHALL BE AS FOLLOWS:
- D - GRADE 300E DEFORMED BARS
 - R- GRADE 300E PLAIN ROUND BARS
 - HD - GRADE 500E DEFORMED BARS
 - RH - GRADE 500E PLAIN ROUND BARS
 - RB - GRADE 500E 'REID BARS'
- R3: GRADE 500E REINFORCING BARS SHALL NOT BE STRAIGHTENED OR REBENT.
- R4: REINFORCEMENT SHALL BE CLEAN AND FREE FROM MUD, LOOSE RUST/MILL SCALE, CONCRETE LAITANCE OIL, ETC AT THE TIME CONCRETE IS PLACED.
- R5: ALL REINFORCEMENT SHALL BE ADEQUATELY SECURED AGAINST DISPLACEMENT AT INTERSECTIONS BY THE USE OF ANNEALED IRON WIRE TIES WITH A DIAMETER OF GREATER THAN 1.25MM, OR BY APPROVED CLIPS.
- R6: SUPPORTS SHALL BE USED TO MAINTAIN THE CORRECT POSITION OF REINFORCEMENT DURING THE PLACEMENT AND COMPACTION OF CONCRETE.
- R7: WHERE NOT SPECIFICALLY DESIGNATED, CLEAR COVER TO REINFORCEMENT SHALL BE IN ACCORDANCE WITH NZS 3101:
- THE MINIMUM CONCRETE COVER FOR CONCRETE CAST DIRECTLY ON OR AGAINST THE GROUND SHALL BE 75MM.
 - THE MINIMUM CONCRETE COVER WHEN A DAMP PROOF MEMBRANE IS USED BETWEEN BETWEEN THE GROUND AND THE CAST CONCRETE SHALL BE 50MM.
- R8: ALL HOOKS, LAPS AND BENDS ARE TO BE IN ACCORDANCE WITH NZS 3109 UNLESS NOTED OTHERWISE. ALL REINFORCING BARS SHALL BE COLD BENT USING PROPER BENDING TOOLS OF THE CORRECT DIAMETER TO GUARD AGAINST NOTCHING OF BARS.
- R9: STANDARD SPLICE LAP LENGTHS FOR DEFORMED BARS:
- D10 - 450MM HD10 - 600MM

D12 - 500MM HD12 - 720MM
D16 - 640MM HD16 - 960MM
D20 - 800MM HD20 - 1200MM
D25 - 1000MM HD25 - 1500MM
THESE VALUES ARE BASED ON 25MPA CONCRETE.

R10: WELDING OF REINFORCEMENT IS NOT PERMITTED UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.



T&A STRUCTURES LTD
CHARTERED PROFESSIONAL ENGINEERS
www.tastructures.co.nz info.tastructures@gmail.com

			Surveyed	
			Designed	
1	First Issue	9 May 2025	Drawn	
No.	Revisions	Date	Reviewed	
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11 IRONBARK ROAD, WAIPAPA
PROPOSED HOUSE EXTENSION

TECHNICAL SPECIFICATIONS

Drawing Status	CONSENT	
Project No.:	059-FND-25SD	Drawing S05
Scale	N.A.	Revision 1

Proposed Minor Dwelling

Regan & Rebekah Polglaze
11 Ironbark Road
Waipapa
Lot 9 DP 145038

Designer Sheet Index		
Sheet No.	Sheet Title	Rev
A01a	Site Location Plan	C
A01b	Site Plan	C
A01c	Site Plan	C
A01d	Site Plan	C
A01e	Wastewater Details	C
A02	Floor Plan	C
A03	Elevations	C

Concept Plans

Date: 17 July 2025

Job Number: 4196.2

Drawn by:





Lot 9 DP 145038
Lot area: 5,307m²
Cladding weight: Light
Corrosion zone: C
Wind zone: High
Rural Production Zone
District plan compliance:

Residential intensity: Complies

Sunlight rule: Complies

Stormwater Management

(Impermeable surfaces):	452.7m ²
Existing metal driveway:	156.7m ²
Proposed concrete driveway:	48.1m ²
Proposed metal driveway:	439.1m ²
Existing office/future 2-bedroom sleepout:	61.0m ²
Existing dwelling & proposed extension:	439.1m ²
Future minor dwelling:	130.0m ²
Future metal driveway:	69.8m ²
Future pool:	100.0m ²
Total proposed:	1,457.4m ²

Total permitted = 15% of gross site area = 769.0m²
Total proposed = 1,457.4m² = 27.5% RC required

Setbacks to boundaries: 10m min.
Proposed works - complies.
Previous breaches addressed under RC:2240317-RMALUC

Building height:
Permitted: 12m max
Proposed: 4.5m approx.

Building Coverage:

Office/future 2-bedroom sleepout:	46.0m ²
Existing dwelling & proposed extension:	362.2m ²
Future minor dwelling:	110.5m ²
Total proposed:	518.7m ²

Total permitted = 12.5% of gross site area = 663.4m²
Total Proposed = 518.7 = 9.8% Complies

Earthworks

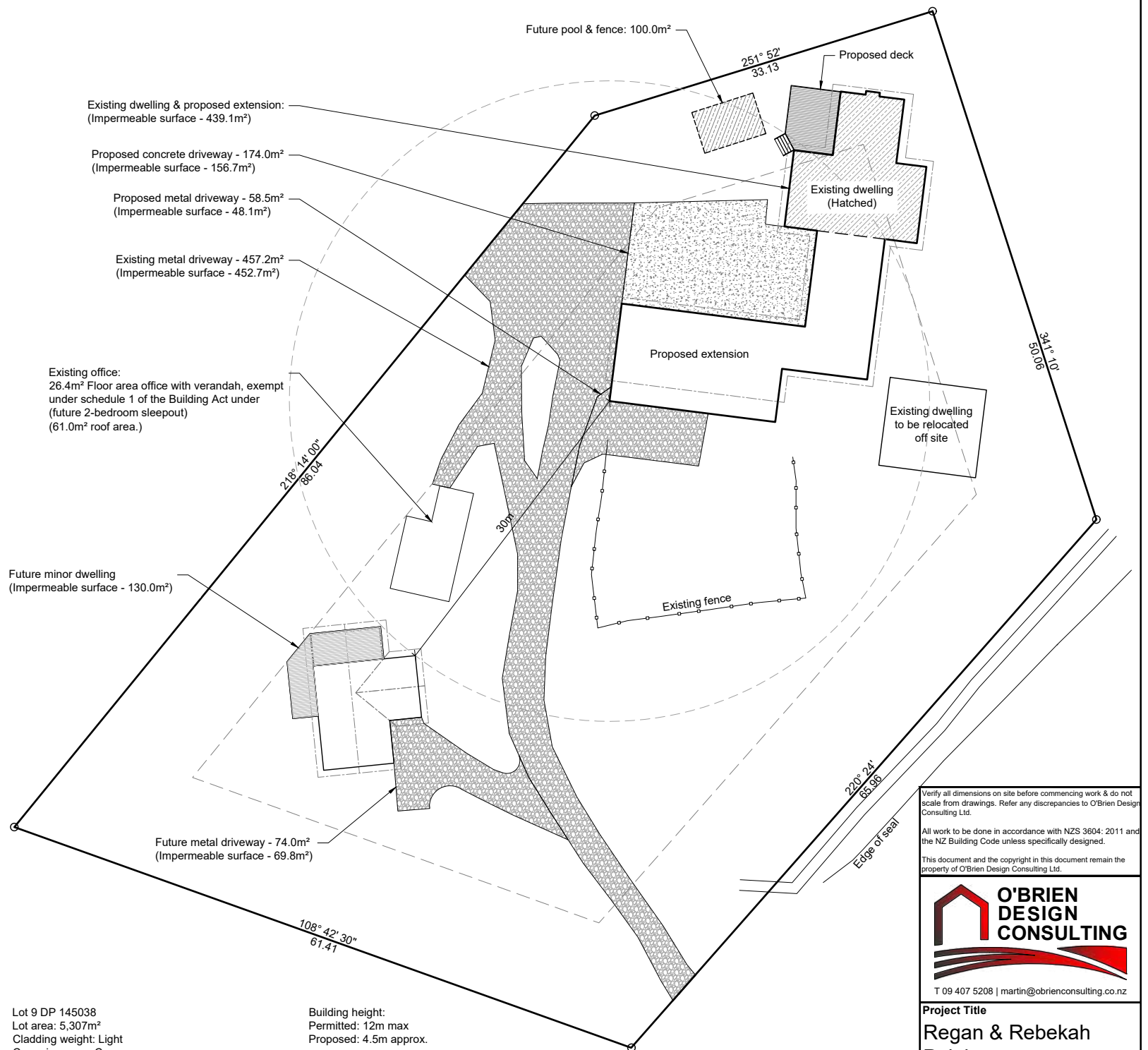
Main cut:	431.2m ³
Fill:	431.2m ³
Cut/fill:	862.4m ³

Earthworks cut height at 2.7m high, RC required

Wastewater for the future minor dwelling will require a resource consent as the volumes are greater than 2000ltrs.

MINOR DWELLING BUILDING AREA:

Minor dwelling floor area:	65.0m ²
Garage floor area:	17.4m ²
Total floor area:	82.4m ²
Roof area:	130.0m ²



Verify all dimensions on site before commencing work & do not scale from drawings. Refer any discrepancies to O'Brien Design Consulting Ltd.

All work to be done in accordance with NZS 3604: 2011 and the NZ Building Code unless specifically designed.

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Site Location Plan

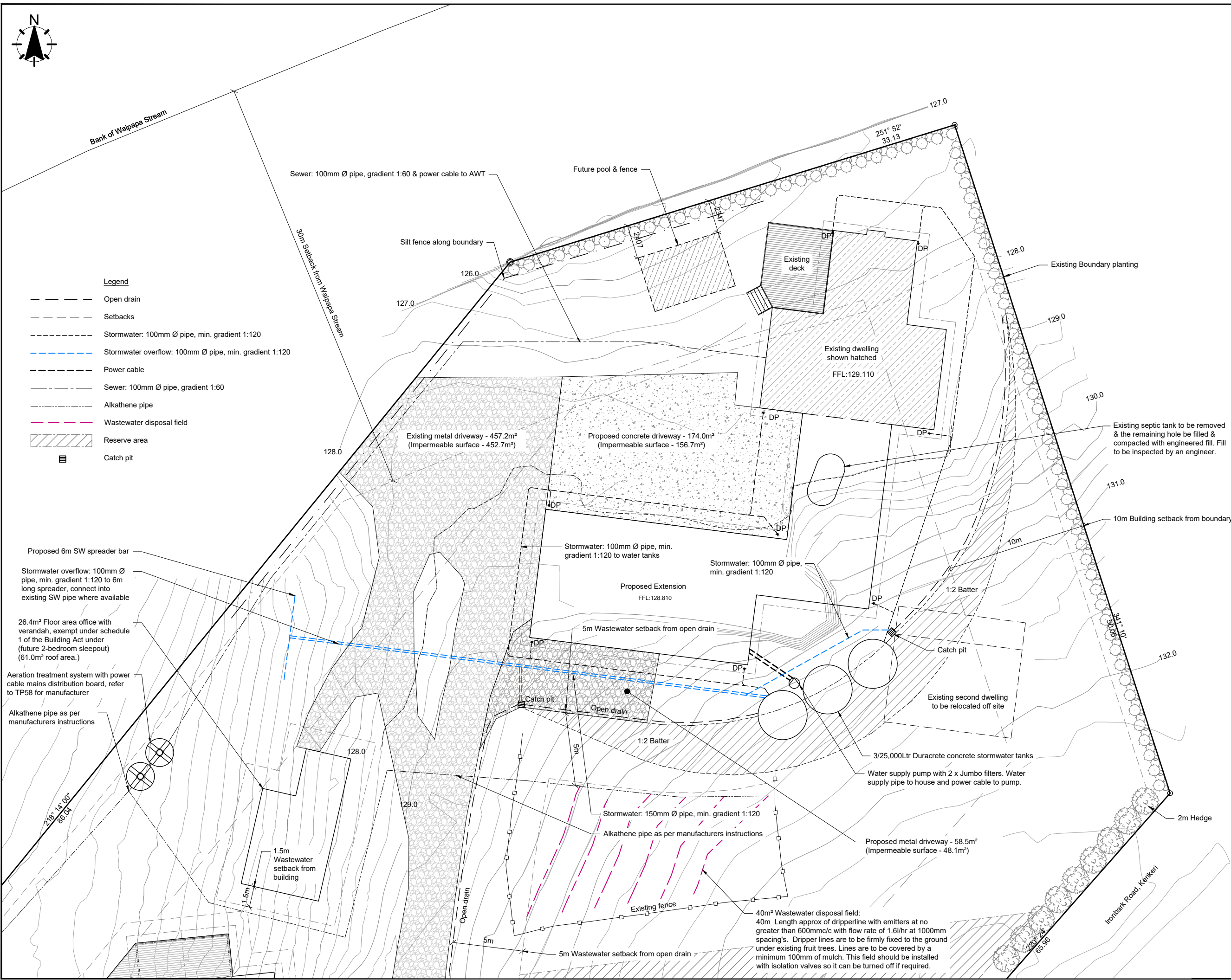
Drawn 17 July 2025

Project No 7989

Rev C Sheet A01a

Scale (A3 Original) 1: 500





- NOTES**
1. Contour lines at 1m increments, sourced from NRC .
 2. All drainage to comply with AS/NZS3500 & NZBC G13/AS1. All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
 3. Length of dripper lines to be no more than 100m between feed points.
 4. Dripper lines to follow contour lines
 5. Dripper lines to be setback:
 - 1.5m from buildings
 - 1.5m from property boundaries
 - 5m from any intermittent storm water flow path such as a drain or overland flow path down slope of the field.
 - 30m from any river.
 6. Smoke alarms to be installed to NZS 4514:2021, refer to TP58 report for details.
 7. The works which are being proposed will comply with Earthworks EW-S3 Accidental Discovery Protocol and Earthworks EW-S5 Erosion and Sediment Control - Auckland Council Guideline Document GD005 GD05 Erosion and Sediment Control.pdf (aucklanddesignmanual.co.nz)

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Project Title
Regan & Rebekah Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Site Plan

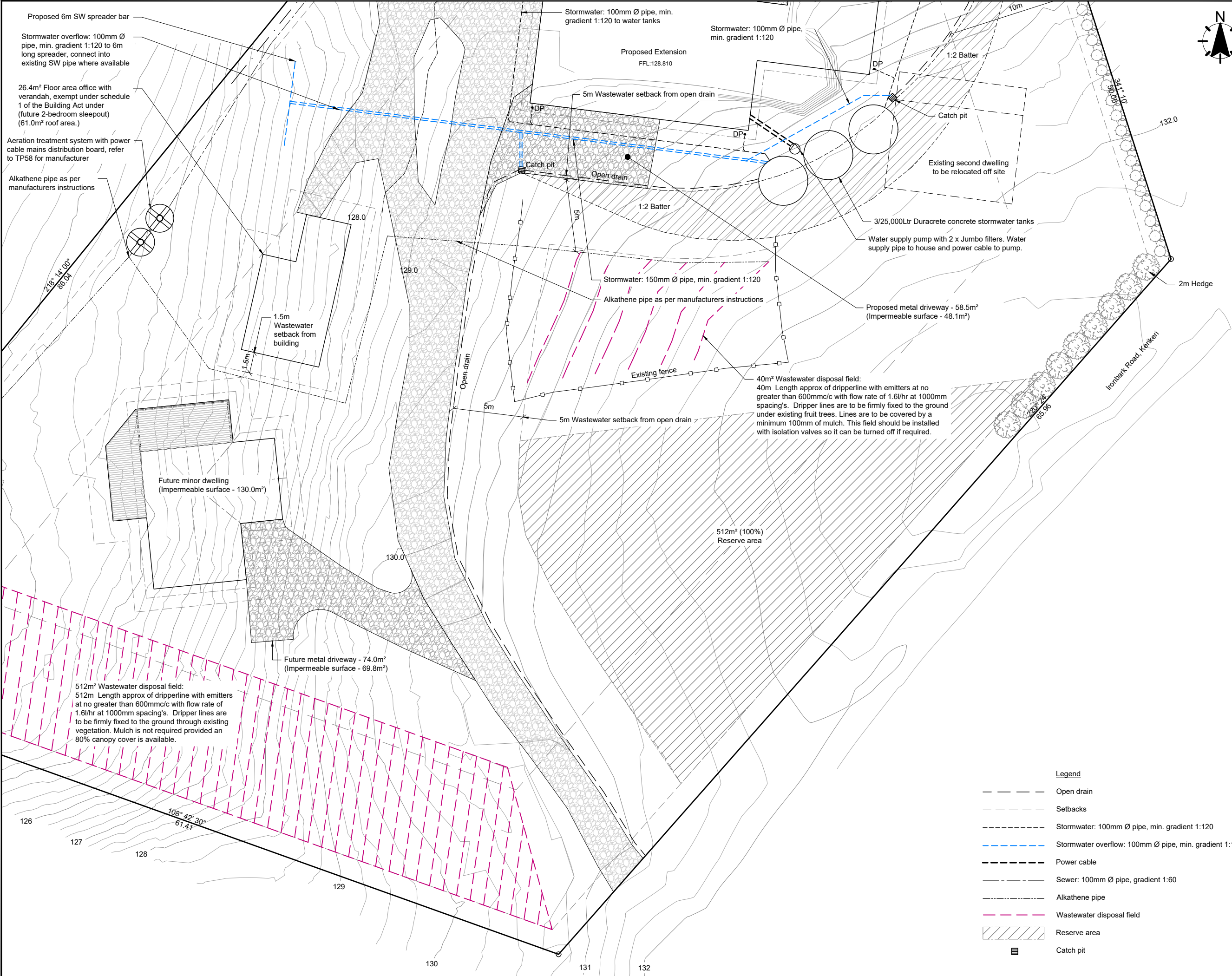
Drawn 17 July 2025

Project No 7989

Rev C **Sheet** A01b

Scale (A3 Original) 1: 250

2.5 1.25 0 2.5 5 m



- NOTES**
1. Contour lines at 1m increments, sourced from NRC .
 2. All drainage to comply with AS/NZS3500 & NZBC G13/AS1. All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
 3. Length of dripper lines to be no more than 100m between feed points.
 4. Dripper lines to follow contour lines
 5. Dripper lines to be setback:
 - 1.5m from buildings
 - 1.5m from property boundaries
 - 5m from any intermittent storm water flow path such as a drain or overland flow path down slope of the field.
 - 30m from any river.
 6. Smoke alarms are to be installed in accordance with the New Zealand Building Code Clause F7 Section 3.0:
 - Smoke alarms shall be installed on or near the ceiling in every sleeping space or within 3m of every sleeping space door.
 7. The works which are being proposed will comply with Earthworks EW-S3 Accidental Discovery Protocol and Earthworks EW-S5 Erosion and Sediment Control - Auckland Council Guideline Document GD005 GD05 Erosion and Sediment Control.pdf (aucklanddesignmanual.co.nz)

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Site Plan

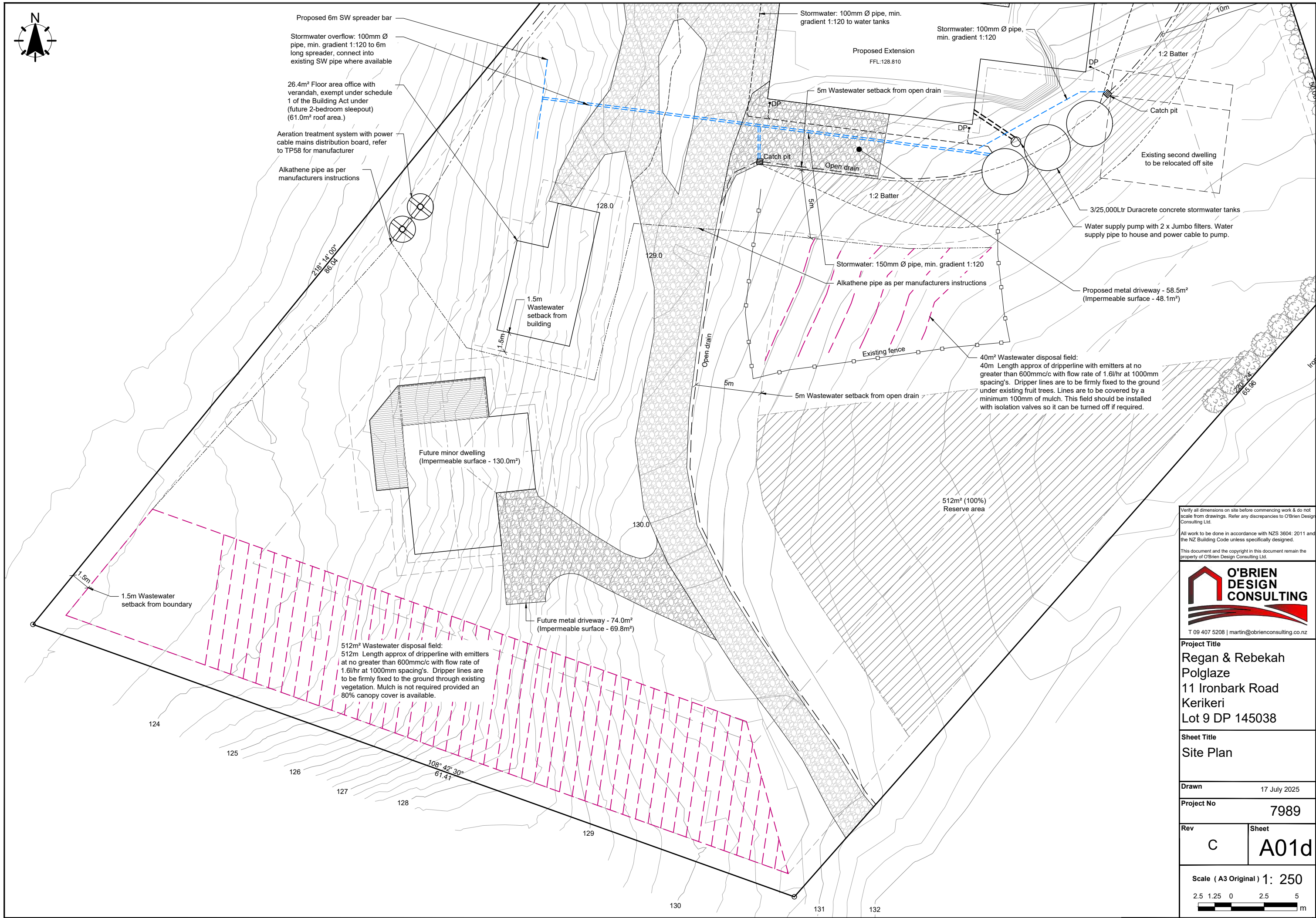
Drawn 17 July 2025

Project No 7989

Rev	Sheet
C	A01c

Scale (A3 Original) 1: 250

2.5 1.25 0 2.5 5 m



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Project Title	Regan & Rebekah Polglaze
	11 Ironbark Road Kerikeri
	Lot 9 DP 145038

Sheet Title
Site Plan


Drawn	17 July 2025
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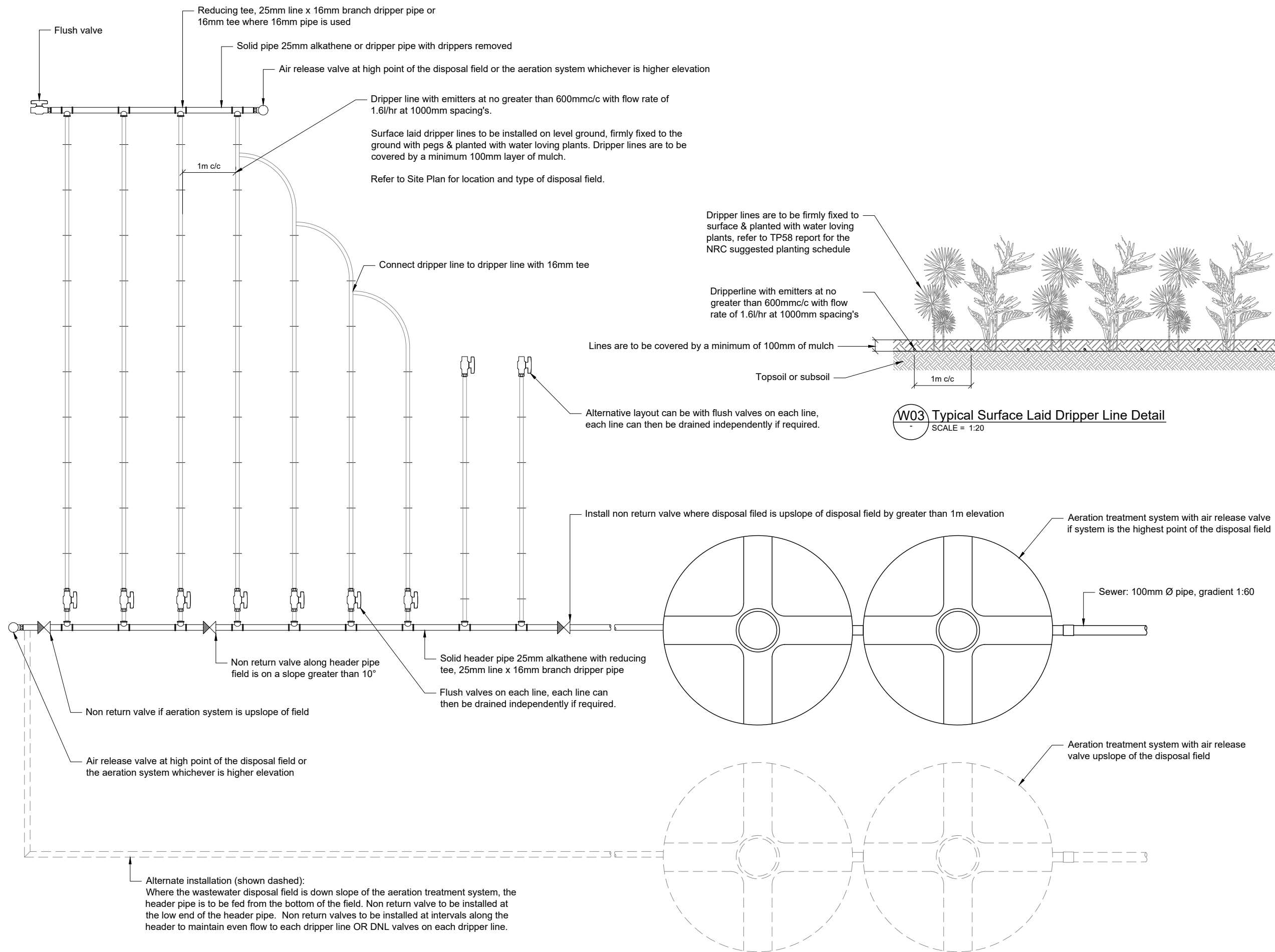
Project No	7989
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Rev	Sheet
C	A01d

Scale (A3 Original) 1: 250

2.5 1.25 0 2.5 5 m





- NOTES**
- All drainage is diagrammatical, do not scale from drawing.
 - Length of dripper lines to be no more than 100m between feed points.
 - Dripper lines to follow contour lines.
 - Dripper lines to be laid on even ground, laying dripper lines on gully's or humps in the ground can cause ponding.
 - Air release valve to be at the high point in the disposal field or at the system if that is a higher elevation, locations shown on detail are indicative.
 - The works which are being proposed will comply with Earthworks EW-S3 Accidental Discovery Protocol and Earthworks EW-S5 Erosion and Sediment Control - Auckland Council Guideline Document GD005 GD05 Erosion and Sediment Control.pdf (aucklanddesignmanual.co.nz)

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Project Title
Regan & Rebekah Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Wastewater Details

Drawn 17 July 2025

Project No 7989

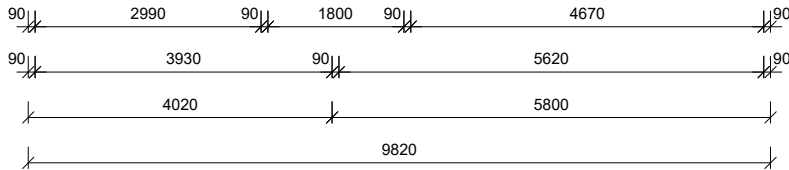
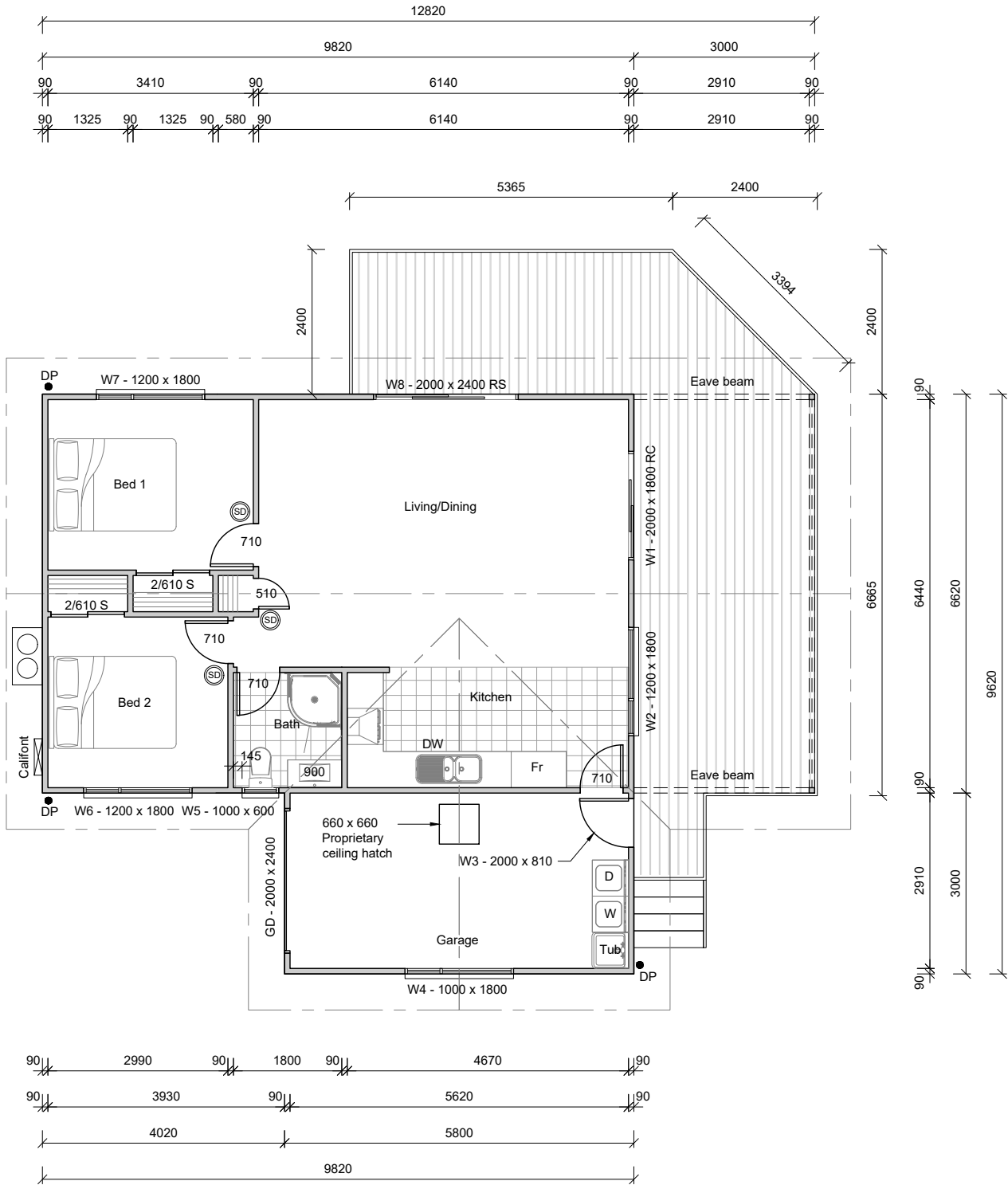
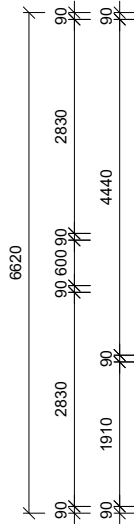
Rev C **Sheet** A01e

Scale (A3 Original) 1: 20
0.2 0.1 0 0.2 0.4 m



SPECIFICATION:

- High wind zone
- Exposure zone C
- Timber subfloor with pile foundations
- Block foundation under garage
- 2.4m Stud height
- Linea weatherboard cladding
- Corrugate roofing
- 20° Roof pitch
- 10mm GIB wall lining
- 13mm GIB ceiling lining
- R2.2 Wall insulation
- R3.6 Ceiling batts
- Hardieflex soffit lining
- Continuous external rainwater system & fascia with 80Ø downpipe, unless noted.



LEGEND

- Smoke Detector
- Roof Line
- 90 x 45 SG8 H1.2 Timber framing walls
- Selected tiles on selected tile underlay to all wet areas installed to manufacturers specifications & Branz tiling good practice guide
- Rinnai Infinity VT26 water heater installed to manufacturers instructions
- 45KG LPG Bottles, top of bottle to be 500mm min. from ignition source refer to LPG Association Code of Practice for clearances and seismic restraints.

MINOR DWELLING BUILDING AREA:

Minor dwelling floor area: 65.0m²
Garage floor area: 17.4m²
Total floor area: 82.4m²

Roof area: 130.0m²

NOTE:

- All dimensions taken from the outside of pre-cut, please check all dimensions before construction commences.
- Refer to Section for lintel dimensions, stud spacing & external door offsets.
- Additional nogs to be installed at framing stage to allow for fixed shelves, wall mounted extractors, heat pump, A/C units & garage door components where required.
- Refer to attached sheet for cladding & roofing notes & details.
- All wall framing typically H1.2 treated unless specifically stated.
- All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
- Waterproof membrane under the tiles (or similar) is to extend 1.5m from bathroom & kitchen sanitary fixtures to comply with E3/AS1 3.0
- Grade A safety glazing in shower screens inline with NZS 4223
- Artificial lighting to be provided inline with NZS 6703:1984 & G8/AS1.
- Interconnected Smoke alarms to be installed to NZS4514:2021 located in all bedrooms, living spaces, hallways, and landings within the building spaces. Where a kitchen is separated from the living spaces with a door a suitable kitchen smoke alarm shall be installed. This may be a heat alarm to avoid nuisance activations.

FIXINGS:

Exposure Zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Floor Plan

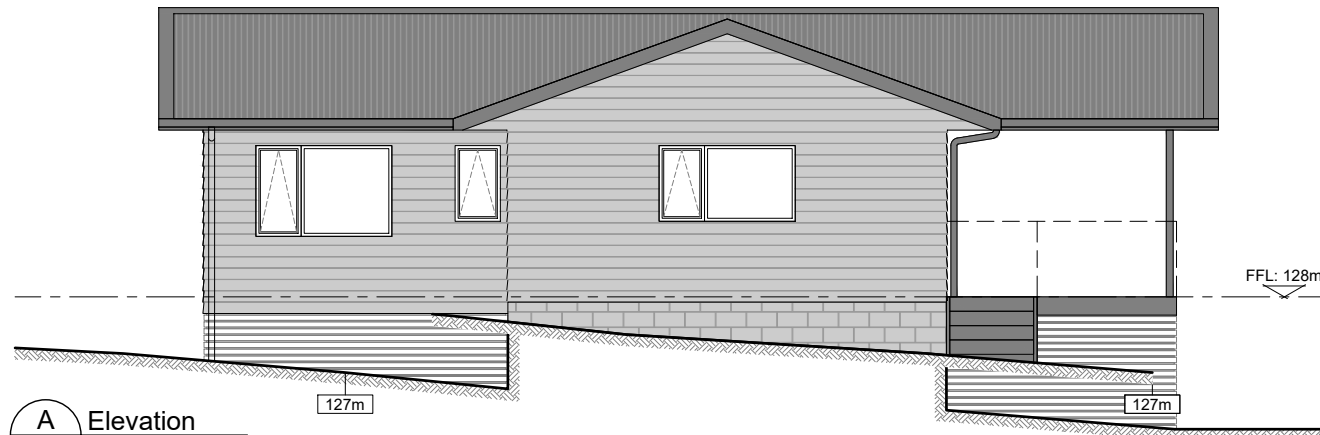
Drawn 17 July 2025

Project No 7989

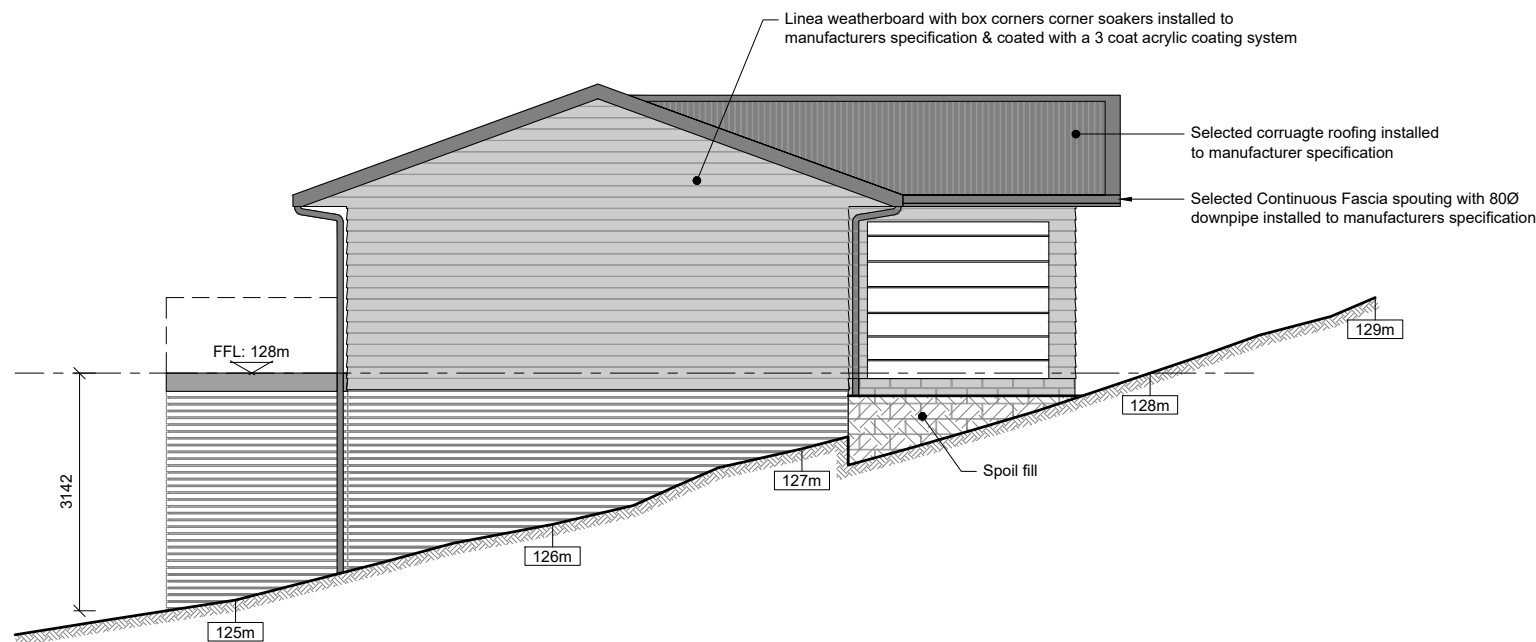
Rev C Sheet A02

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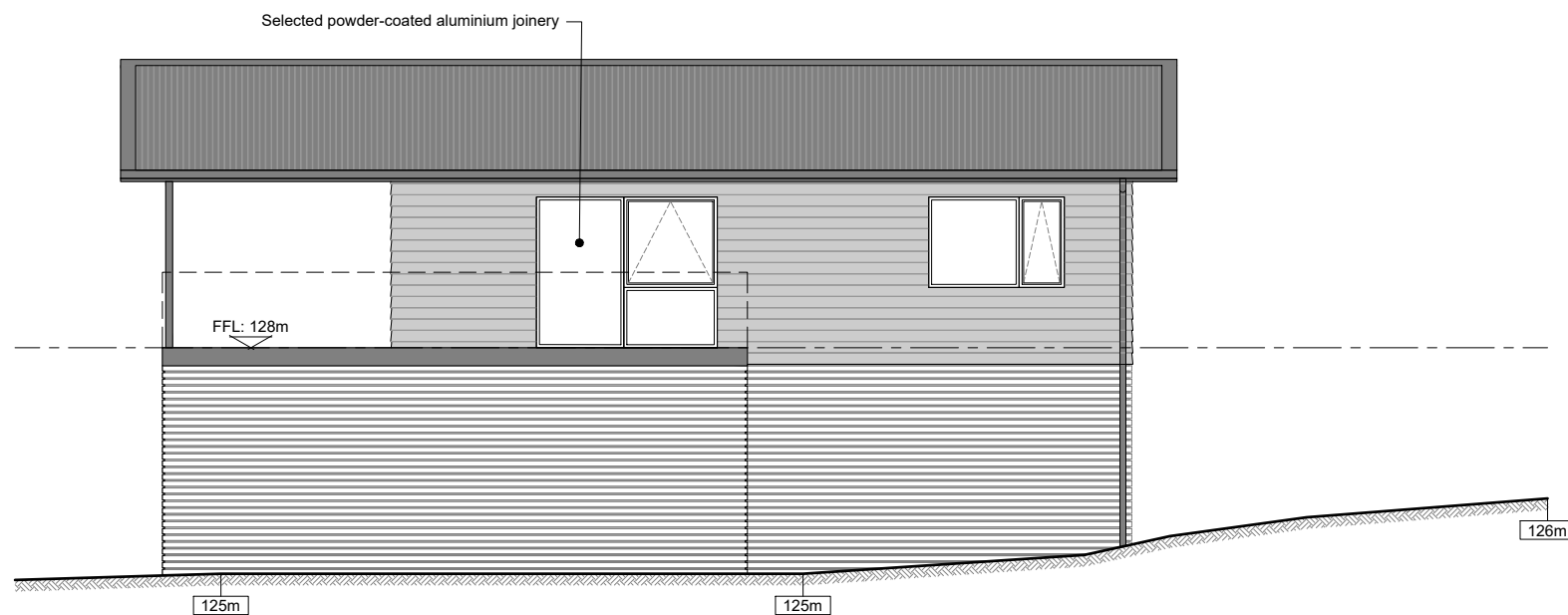




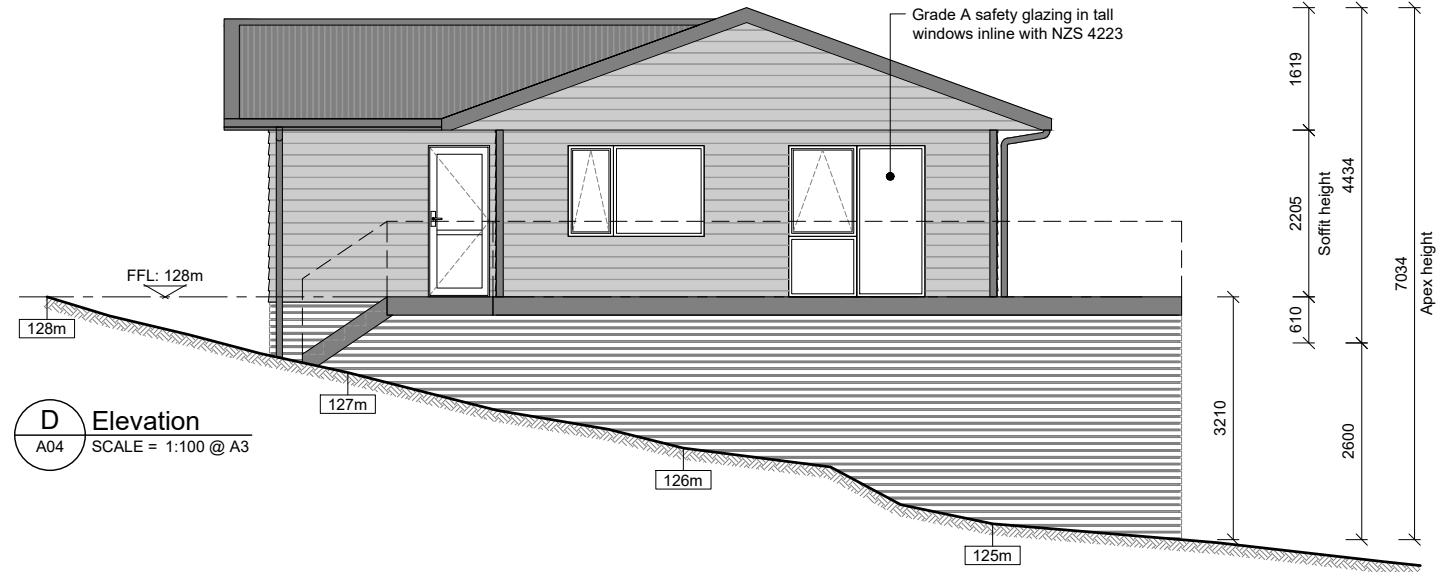
A Elevation
A04 SCALE = 1:100 @ A3



B Elevation
A04 SCALE = 1:100 @ A3



C Elevation
A04 SCALE = 1:100 @ A3



D Elevation
A04 SCALE = 1:100 @ A3

- NOTE:**
- All heights shown are existing ground heights.
 - All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
 - All windows and doors double glazed.
 - Grade A safety glazing in bathrooms & tall windows and sliders inline with NZS 4223.

FIXINGS:
Exposure Zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

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Project Title
Regan & Rebekah
Polglaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Elevations

Drawn 17 July 2025

Project No 7989

Rev C **Sheet** A03

Scale (A3 Original) 1: 100



Wilton Joubert Limited

09 527 0196

PO BOX 11-381

Ellerslie

Auckland 1524

SITE Lot 9 DP 145038, 11 Ironbark Road, Waipapa

PROJECT Proposed Residential Extension & Future Residential Extension and Pool

CLIENT Regan & Rebekah Polglaze




REFERENCE NO. 129385

DOCUMENT Stormwater Mitigation Report

STATUS/REVISION No. E

DATE OF ISSUE 18th August 2025

Report Prepared For	Attention	Email
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Authored by	G. Brant (BE(Hons) Civil)	Civil Design Engineer	Gustavo@wjl.co.nz	
Reviewed by	P. McSweeney (BE(Hons) Civil)	Civil Design Engineer	Patrick@wjl.co.nz	
Approved by	B. Steenkamp (CPEng, BEng Civil, CMEngNZ, BSc (Geology))	Senior Civil Engineer	BenS@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.

Legal Description:	Lot 9 DP 145038		
Site Area:	5,307 m ²		
Development Proposals Supplied:	Preliminary Concept Plans Provided		
Development Type:	Proposed Residential Extension & Future Residential Extension & Pool		
District Plan Zone:	Rural Production		
Permitted Activity Coverage:	<u>15%</u>		
	Post-development Impermeable Areas		
Impermeable Coverage:	Total Roof Areas	630.1 m ²	
	Total Uncovered Hardstand Areas	837.5 m ²	
	Post-Development Total = 1,467.6 m ² or 27.7% of the site area		
Activity Status:	<u>Discretionary Activity</u>		
Roof Attenuation:	Attenuation is to be provided in accordance with the requirements outlined in Section 5 via flow attenuated outlets in the proposed dwelling’s rainwater tanks.		
	Recommended Tank – 3 x 25,000L Rainwater Tanks		
	Dimensions - 3600mmØ (or greater) x 2600mm high (or greater)		
	10% AEP Control Orifice – 65mmØ orifice; located <u>>390mm below the overflow outlet</u>		
	1% AEP Control Orifice – 65mmØ orifice; located <u>270mm above the 10% AEP control orifice</u>		
	Overflow – 150mmØ; located <u>at the top of the tank</u>		
Driveway Mitigation:	It is recommended to shape the proposed / future hardstand areas to shed runoff to catchpits which are required to drain directly to the dispersal device via sealed pipes.		
Discharge Point:	It is recommended that discharge from the potable water / detention tanks be directed via sealed pipes to a 11m long above ground dispersal device near the lot’s western boundary.		

2. SCOPE OF WORK

Wilton Joubert Ltd. (WJL) was engaged by the client to produce a stormwater mitigation assessment at the above site.

At the time of report writing, the following documents were referred to for background data and details of the proposed development:

- Plan Set by O'Brien Design Consulting including site plan, floor plan and elevations (Ref No: 7989 Rev B, dated: 10.07.2025)

Any revision of these drawings and/or development proposals with stormwater management implications should be referred back to us for review.

3. SITE DESCRIPTION

The proposed development will be constructed within the following property, which is located off the north-western side of Ironbark Road, 110m northeast of the Pungaere Road intersection:

- 11 Ironbark Road, Waipapa, legally described as Lot 9 DP 145038.

The site is shown in Figure 1 below.



Figure 1: Aerial Snip from FNDC Maps Showing Site Boundaries (cyan), 1m Contours (yellow) and Proposed Development Location (red)

The surface area of the subject site encompasses 5,307m² and is accessed via a formed metalled driveway at the south-eastern boundary corner. The driveway traverses towards the northern corner of the property, providing access to an existing dwelling and garage. An existing cabin positioned near the western boundary is also accessed off the driveway.

A secondary dwelling, physically addressed as 17 Ironbark Road, is positioned at the north-eastern end of the property, and is accessed via a formed metalled driveway at the north-eastern boundary corner.

Topographically speaking, the site is predominantly located on a west facing, gently sloping, lawn covered crest that slopes at average grades of less than 8°. At the south-western quarter of the site, moderate grades ranging between 10° to 18° fall from the crest towards a bush covered environment, before ultimately flattening out to gentle grades that slope towards the Waipapa Stream.

The north-western boundary, downslope of the existing dwelling, is bordered by a timber pole retaining wall. The wall ranges in height between 0.90m (northeast) and 1.5m (southwest).

The land downslope of the wall to the west is covered by a moderate sloping garden. The land beyond the track falls to the outskirts of the Waipapa Stream environment.

The FNDC GIS Water Services Map indicates that reticulated wastewater, stormwater, and potable water connections are not available to the property.

4. DEVELOPMENT PROPOSALS

The development proposal, obtained from the client, is to construct an extension on the northern side of the existing northern residential dwelling. It is also anticipated that a future extension on the southern side of the northern residential dwelling and that a minor dwelling and a pool will be constructed under a separate consent(s). The impermeable surfaces resulting from these future developments as depicted in the supplied plans at the time of report-writing have been accounted for in the stormwater management system calculations herein. The principal objective of this assessment is to provide an indicative stormwater disposal design which will manage runoff generated from the increased impermeable areas resulting from the proposed development.

5. ASSESSMENT CRITERIA

Impermeable Areas

The calculations for the on-site primary stormwater management system for the proposed development are based on a gross site area of 5,307m² and the below areas *extracted from the supplied plans*:

	Post-Development
Roof Area	630.1 m²
Existing Dwelling & Proposed Extension	439.1 m ²
Existing Office / Future Sleepout	61 m ²
Future Minor Dwelling	130 m ²
Total Uncovered Hardstand	837.5 m²
Existing Metal Driveway	452.7 m ²
Proposed Concrete Driveway	156.7 m ²
Proposed Metal Driveway	48.1 m ²
Future Metal Driveway	69.8 m ²
Future Pool	100 m ²
Proposed Rainwater Tank	10.2 m
Pervious	3,839.4 m²

The total amount of impermeable area on-site, pre-development amounts to 952.8m². The total amount of impermeable area on site, post-development will be 1,467.6m² or 27.7% of the site area. The total increase in impermeable area on-site amounts to 514.8m². Should any changes be made to the current proposal, the on-site stormwater mitigation design must be reviewed.

District Plan Rules

The site is zoned Rural Production. The following rules apply under the FNDC District Plan:

8.6.5.1.3 – **Permitted Activities – Stormwater Management** - The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 15%.

8.6.5.2.1 – **Controlled Activities – Stormwater Management** - The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 20%.

The total proposed impermeable area for the development exceeds 20% of the site area and does not comply with Permitted Activity Rule (8.7.5.1.5) nor Controlled Activity Rule (8.7.5.2.2). Therefore, the proposals are considered to be a Discretionary Activity. Additional considerations for stormwater management as outlined in the FNDC District Plan Section 11.3 are required. A District Plan Assessment has been included in Section 8 of this report.

Design Requirements

The site is under the jurisdiction of the Far North District Council. The design has been completed in accordance with the recommendations and requirements contained within the Far North District Council Engineering Standards, the Far North District Council District Plan and Clause E1 of the New Zealand Building Code.

The total impermeable area in exceedance of Permitted Activity Rule 8.6.5.1.3 is **671.55m²**. Stormwater attenuation for the 10% AEP and 1% AEP storm events with an adjustment for climate change will therefore be provided for this excess impermeable area.

The Type IA storm profile was utilised for attenuation calculations in accordance with TR-55. HydroCAD® software has been utilised in design for a 10% AEP rainfall value of 229mm with a 24-hour duration and a 1% AEP rainfall value of 350mm with a 24-hour duration. Rainfall data was obtained from HIRDS and increased by 20% to account for climate change.

Provided that the recommendations within this report are adhered to, the effects of stormwater runoff resulting from the total permitted unattenuated impermeable area (796.05m² total) are considered to have less than minor effects on the receiving environment, equivalent to conditions that would result from development proposals falling within the Permitted Activity coverage threshold.

6. STORMWATER MITIGATION ASSESSMENT

Potable Water Supply & Roof Mitigation

It is recommended that rainwater tanks are utilised to provide the existing dwelling and future minor dwelling with a potable water supply. The tank type is at the discretion of the client. The existing rainwater tank on-site may be utilised if in good working condition. A proprietary guttering system is required to collect roof runoff from the existing dwelling and proposed extension and direct runoff to the potable water tanks. A first flush diverter and/or leaf filters may be installed in-line between the gutters and the tanks. The tank inlet level should be at least 600mm below the gutter inlet or any in-line filters. Any filters will require regular inspection and cleaning to ensure the effective operation of the system. The frequency of cleaning will depend on current and future plantings around the existing and proposed roof areas. Provision should be made by the homeowner for top-up of the tanks via water tankers in periods of low rainfall.

All potable tanks must be constructed level and fitted with minimum 100mmØ balancing pipes at the top and 2 x 100mmØ balancing pipes near the base of each tank to connect all potable water tanks to each other.

Partial burial of the tanks is at the discretion of the client. Due to inadequate water quality concerns, runoff from hardstand areas should not be allowed to drain to the potable water tanks.

The upper section of the potable water tanks is to act as a detention volume to achieve stormwater neutrality for the proposed impermeable areas exceeding the Permitted Activity coverage threshold. One of the tanks is to be fitted with a 150mmØ overflow outlet with flow attenuation outlets as specified below.

A proprietary guttering system is required to collect roof runoff from the remaining existing / future roof areas and direct runoff to the dispersal device specified below. A first flush diverter and/or leaf filters may be installed in-line between the gutters and the dispersal device. Any filters will require regular inspection and cleaning to ensure the effective operation of the system. The frequency of cleaning will depend on current and future plantings around the existing / future roof areas.

Potable Tanks Detention Volume

As per the attached design calculations, the design elements of the detention volume are as follows:

Proposed Tank	3 x 25,000 litre Rainwater Tanks
Tank dimensions	3600mm Ø (or greater) x 2600mm high (or greater)
Outlet orifice (10% AEP control)	65mm diameter orifice; located <u>>390mm below the Overflow Outlet</u> <ul style="list-style-type: none">- 263mm water elevation- 8.0m³ Storage
Outlet orifice (1% AEP control)	65mm diameter orifice; located <u>270mm above the 10% AEP Control Orifice</u> <ul style="list-style-type: none">- 389mm water elevation- 11.9m³ Storage
Overflow Outlet	150mm diameter; located at the top of the tank

Site Plan (129385-C200), Tank Detail (129385-C201) and supporting calculations are appended to this report for clarification. The overflow from the potable water / detention tanks must drain via sealed pipes to the discharge point specified below.

The tanks must be installed in accordance with the tank suppliers' details and specifications. Levels are to be confirmed by the contractor on-site prior to construction. Adequate fall (minimum 1% grade) from the tank's outlet to the discharge point is required. If this is not achievable, WJL must be contacted for review of the design.

Hardstand Areas

It is recommended to shape the proposed / future hardstand areas to shed runoff to catchpits which are required to drain directly to the dispersal device specified below via sealed pipes.

Stormwater catchpits and drainage piping should be in accordance with E1 Surface Water of the NZBC. The catchpits must have a suitable sump to serve as a pre-treatment device prior to discharging to the dispersal device.

Pool Overflows

To prevent the contamination of runoff, no pool overflows may be directed to any part of the stormwater management system. Pool overflows are to be managed by a separate system designed by a suitably qualified professional.

Discharge Outlet

It is recommended that discharge from the potable water / detention tanks be directed via sealed pipes to a 11m long above ground dispersal device near the lot's western boundary, as shown on the appended Site Plan (129385-C200) and Dispersal Device Detail (129385-C202).

The dispersal device must be installed parallel to the property's topography and a minimum of 3m downslope of any existing retaining walls.

Care should be taken when constructing the discharge point to avoid siphon or backflow effects within the stormwater system.

7. DISTRICT PLAN ASSESSMENT

As the proposed development is not compliant with Permitted Activity Rule 8.6.5.1.3, nor Controlled Activity Rule 8.6.5.2.1, it is therefore regarded as a Discretionary Activity.

In assessing an application under this provision, the Council will exercise its discretion to review the following matters below, (a) through (m) of FNDCCDP Section 11.3.

In respect of matters (a) through (m), we provide the following comments:

(a) the extent to which building site coverage and Impermeable Surfaces contribute to total catchment impermeability and the provisions of any catchment or drainage plan for that catchment;	Impermeable surfaces resulting from the development increase site impermeability. Through tank attenuation, runoff is to be attenuated to pre-development conditions for the proposed impermeable coverage exceeding the Permitted Activity threshold.
(b) the extent to which Low Impact Design principles have been used to reduce site impermeability;	The impermeable areas in exceedance of Permitted Activity Rule 8.6.5.1.3 have been attenuated back to pre-development flow rates for the 10% AEP and 1% AEP storm event, adjusted for climate change. Low impact design principles have been implemented via specifications for erosion protection at the system outfall.
(c) any cumulative effects on total catchment impermeability;	Impervious coverage on-site will increase by 514.8m ² including 299.8m ² of future proposed impervious areas.
(d) the extent to which building site coverage and Impermeable Surfaces will alter the natural contour or drainage patterns of the site or disturb the ground and alter its ability to absorb water;	Runoff from the existing / proposed roof areas is to be collected and directed to the discharge point via sealed pipes. Ponding is not anticipated to occur provided the recommendations within this report are adhered to, mitigating interference with natural water absorption.
(e) the physical qualities of the soil type;	Kerikeri Volcanic Group. Moderate drainage.

(f) any adverse effects on the life supporting capacity of soils;	Stormwater runoff from the existing / proposed impermeable roof areas is to be collected and directed to stormwater management devices via sealed pipes, mitigating the potential for contamination of surrounding soils and harm to life supporting capacity of soils.
(g) the availability of land for the disposal of effluent and stormwater on the site without adverse effects on the water quantity and water quality of water bodies (including groundwater and aquifers) or on adjacent sites;	Runoff resulting from the proposed roof areas and hardstand area is to be collected and directed to the discharge point via sealed pipes, mitigating the potential for runoff to pass over / saturate surrounding soils. The site is large enough for on-site stormwater and effluent disposal (i.e setbacks between water sources and effluent disposal comply with Table 9 of the PRPN).
(h) the extent to which paved, Impermeable Surfaces are necessary for the proposed activity;	Proposed hardstand areas are necessary to provide proposed & future structures with access and are no considered excessive
(i) the extent to which land scaping and vegetation may reduce adverse effects of run-off;	Existing vegetation and any plantings introduced by the homeowner during occupancy will aid in reducing surface water velocity and providing treatment. No specific landscaping scheme is proposed as part of the stormwater management system described herein.
(j) any recognised standards promulgated by industry groups;	Not applicable.
k) the means and effectiveness of mitigating stormwater runoff to that expected by permitted activity threshold;	The impermeable areas in exceedance of Permitted Activity Rule 8.6.5.1.3 have been attenuated back to pre-development flow rates for the 10% AEP and 1% AEP storm event, adjusted for climate change.
(l) the extent to which the proposal has considered and provided for climate change;	Rainfall data was obtained from HIRDS and increased by 20% to account for climate change.
(m) the extent to which stormwater detention ponds and other engineering solutions are used to mitigate any adverse effects.	The impermeable areas in exceedance of Permitted Activity Rule 8.6.5.1.3 have been attenuated back to pre-development flow rates for the 10% AEP and 1% AEP storm event, adjusted for climate change.

8. NOTES

If any of the design specifications mentioned in the previous sections are altered or found to be different than what is described in this report, Wilton Joubert Ltd will be required to review this report. Indicative system details have been provided in the appendices of this report (129385-C200, 129385-C201 & 129385-C202).

Subsequent to construction, a programme of regular inspection / maintenance of the system should be initiated by the Owner to ensure the continuance of effective function, and if necessary, the instigation of any maintenance required.

Wilton Joubert Ltd recommends that all contractors keep a photographic record of their work.

9. LIMITATIONS

The recommendations and opinions contained in this report are based on information received and available from the client at the time of report writing.

This assignment only considers the primary stormwater system. The secondary stormwater system, Overland Flow Paths (OLFP), vehicular access and the consideration of road/street water flooding is all assumed to be undertaken by a third party.

All drainage design is up to the connection point for each building face of any new structures/slabs; no internal building plumbing or layouts have been undertaken.

During construction, an engineer competent to judge whether the conditions are compatible with the assumptions made in this report should examine the site. In all circumstances, if variations occur which differ from that described or that are assumed to exist, then the matter should be referred to a suitably qualified and experienced engineer.

The performance behaviour outlined by this report is dependent on the construction activity and actions of the builder/contractor. Inappropriate actions during the construction phase may cause behaviour outside the limits given in this report.

This report has been prepared for the particular project described to us and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose.

Wilton Joubert Ltd.



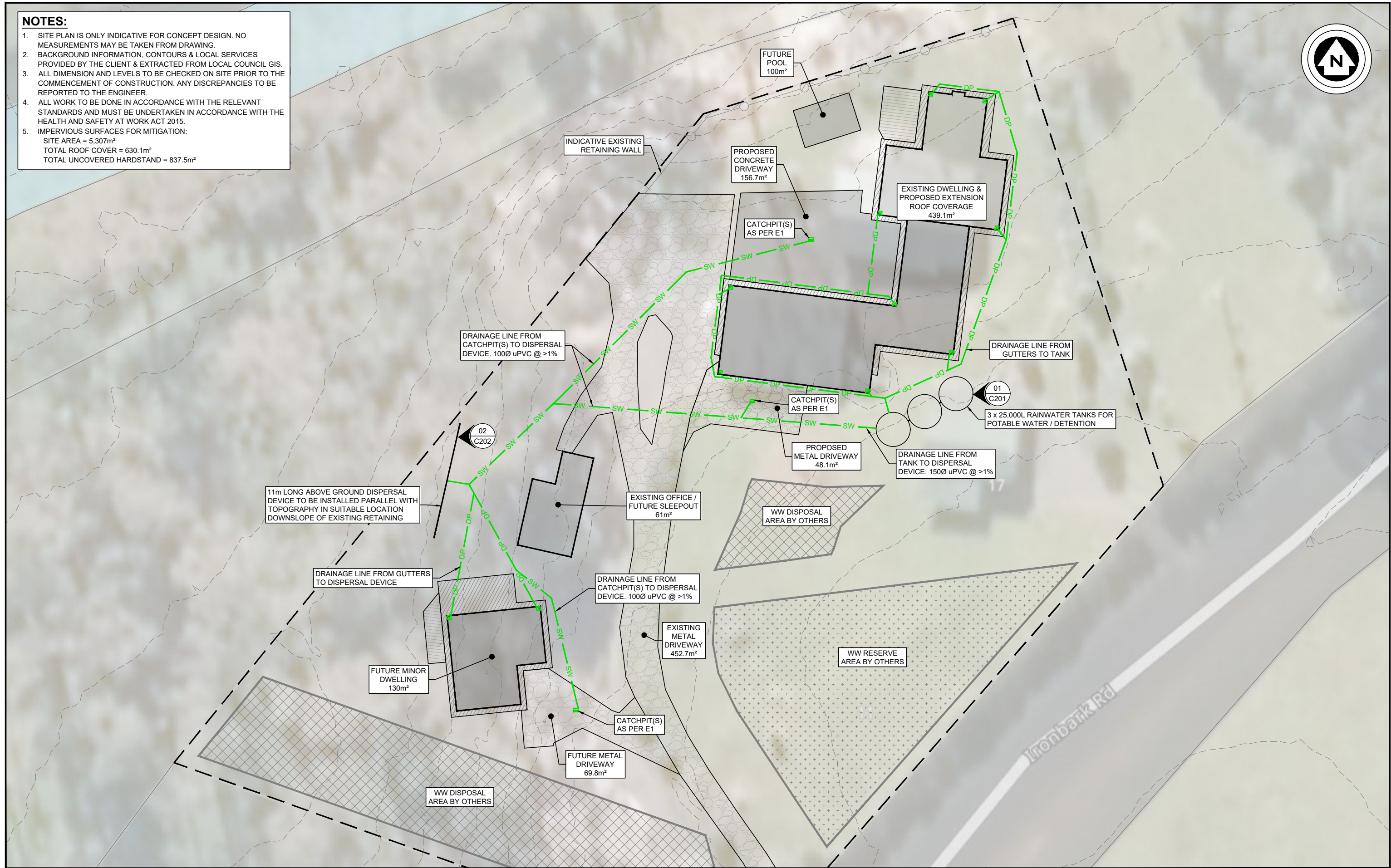
Gustavo Medina Brant
BE(Hons)


REPORT ATTACHMENTS

1. Site Plan - C200 (1 sheet)
2. Tank Detail - C201 (1 sheet)
3. Dispersal Device Detail – C202 (1 sheet)
4. Calculation Set

NOTES:

1. SITE PLAN IS ONLY INDICATIVE FOR CONCEPT DESIGN. NO MEASUREMENTS MAY BE TAKEN FROM DRAWING.
2. BACKGROUND INFORMATION, CONTOURS & LOCAL SERVICES PROVIDED BY THE CLIENT & EXTRACTED FROM LOCAL COUNCIL GIS.
3. ALL DIMENSION AND LEVELS TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER.
4. 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.
5. IMPERVIOUS SURFACES FOR MITIGATION:
SITE AREA = 5,307m²
TOTAL ROOF COVER = 630.1m²
TOTAL UNCOVERED HARDSTAND = 837.5m²





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

ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
A	OCT '23	GB	STORMWATER MITIGATION REPORT
B	DEC '23	GB	STORMWATER MITIGATION REPORT REV B
GB	FEB '24	GB	STORMWATER MITIGATION REPORT REV C
D	JUL '25	GMB	STORMWATER MITIGATION REPORT REV D
E	AUG '25	GMB	STORMWATER MITIGATION REPORT REV E

DESIGNED BY: GB

DRAWN BY: GB

CHECKED BY: BGS

SURVEYED BY: N/A

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BUILDING CONSENT

DESIGN / DRAWING SUBJECT TO ENGINEERS APPROVAL

DRAWING TITLE:

SITE PLAN

PROJECT DESCRIPTION:

STORMWATER MITIGATION REPORT

PROJECT TITLE:

**LOT 9 DP 145038
11 IRONBARK ROAD
WAIPAPA
NORTHLAND**

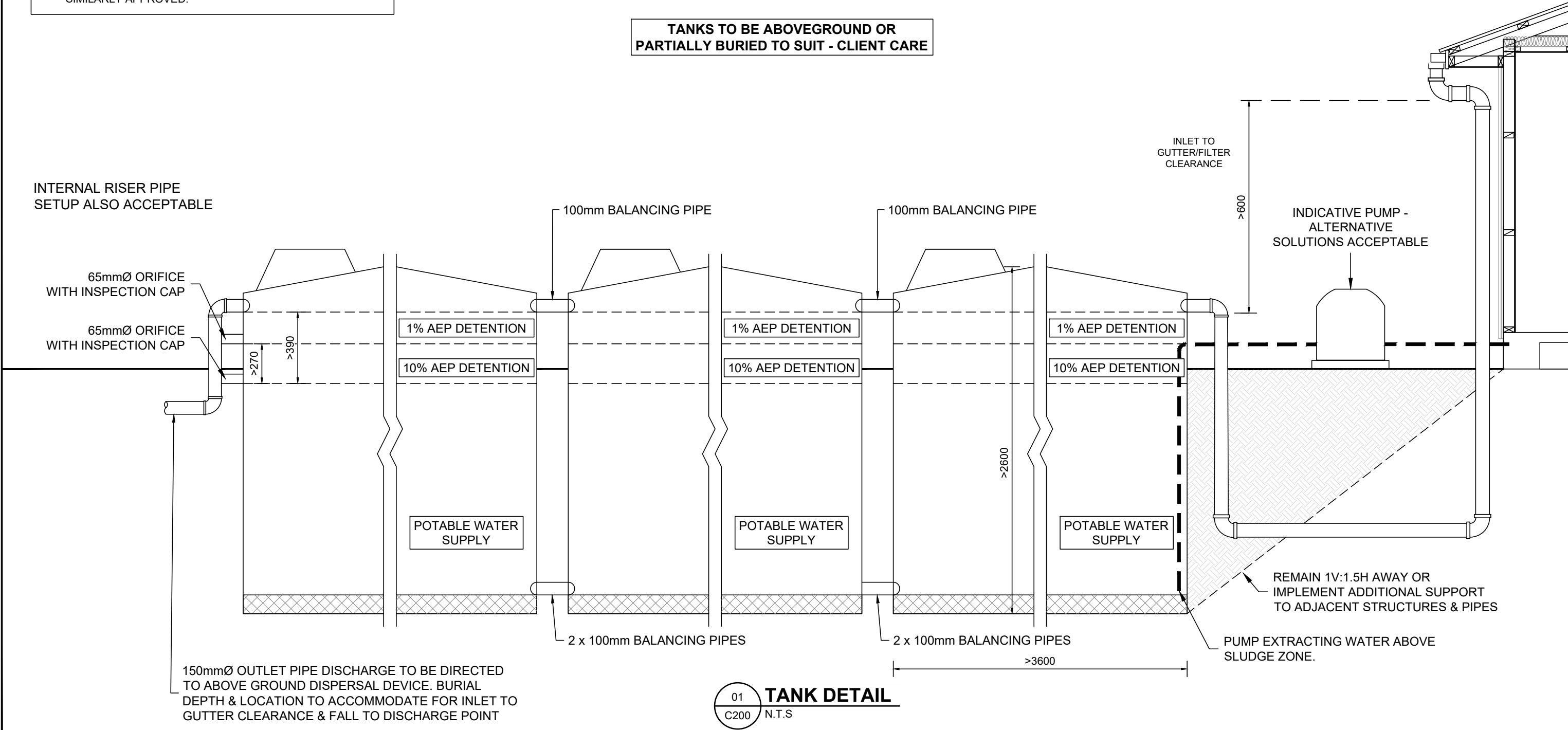
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NOTES:


- 1. NOT TO SCALE. DRAWN INDICATIVELY ONLY.
- 2. ALL LEVELS & DIMENSIONS TO BE CONFIRMED ON SITE & ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- 3. TANKS TO BE INSTALLED AS PER MANUFACTURERS SPECIFICATIONS & RELEVANT COUNCIL STANDARDS.
- 4. REGULAR INSPECTION & CLEANING IS REQUIRED TO ENSURE THE EFFECTIVE OPERATION OF THE SYSTEM.
- 5. ASSUMED USE OF 3 x 25,000L DURACRETE TANKS OR SIMILARLY APPROVED.

TANKS TO BE ABOVEGROUND OR PARTIALLY BURIED TO SUIT - CLIENT CARE

INTERNAL RISER PIPE SETUP ALSO ACCEPTABLE



01 TANK DETAIL
C200 N.T.S



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E	AUG '25	GMB	STORMWATER MITIGATION REPORT REV E

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DESIGN / DRAWING SUBJECT TO ENGINEERS APPROVAL

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TANK DETAIL

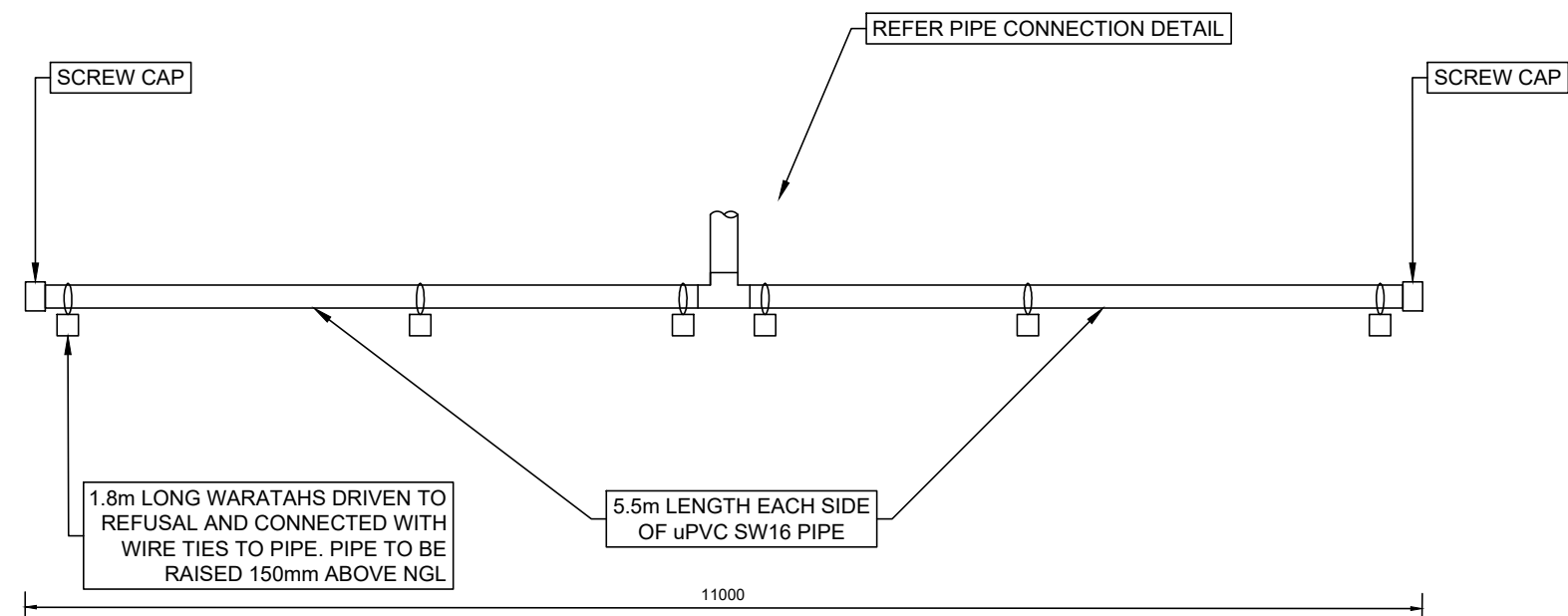
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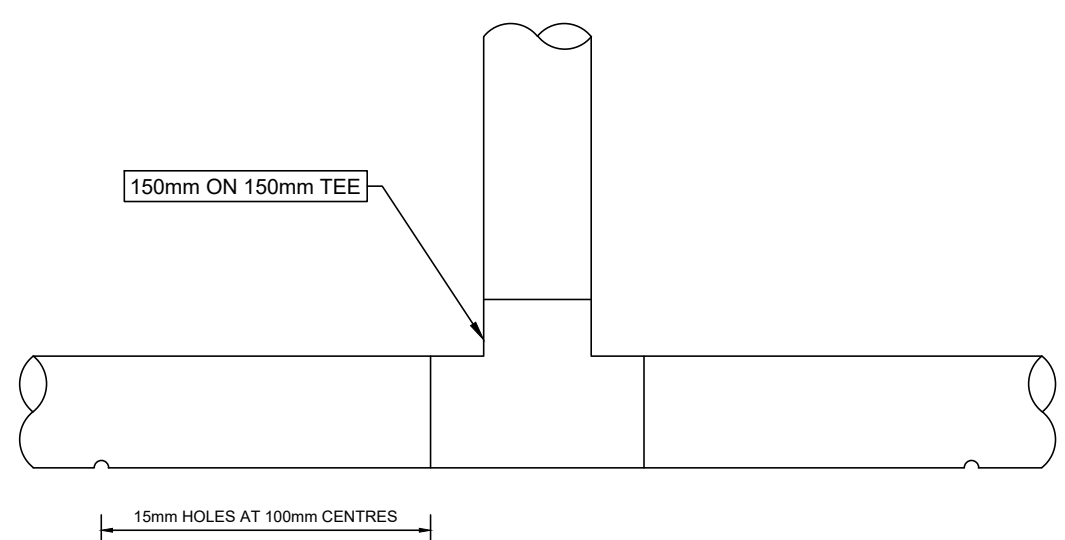
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**LOT 9 DP 145038
11 IRONBARK ROAD
WAIPAPA
NORTHLAND**

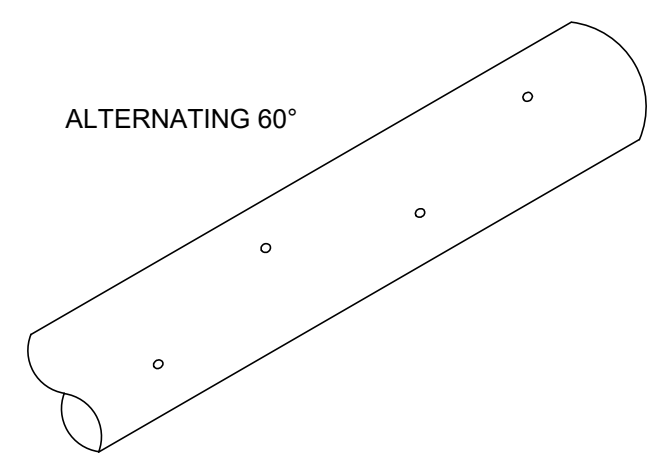
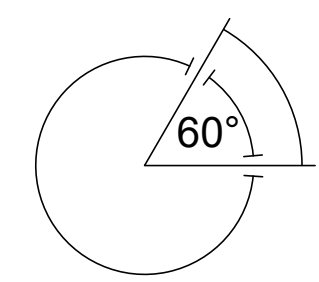
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PLAN



PIPE CONNECTION DETAIL



PIPE OUTLET HOLE ARRANGEMENT DETAIL

02
C200

DISPERSAL DEVICE DETAIL
N.T.S

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A	OCT '23	GB	STORMWATER MITIGATION REPORT	
B	DEC '23	GB	STORMWATER MITIGATION REPORT REV B	
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E	AUG '25	GMB	STORMWATER MITIGATION REPORT REV E	

DESIGNED BY:	GB
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BUILDING CONSENT

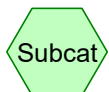
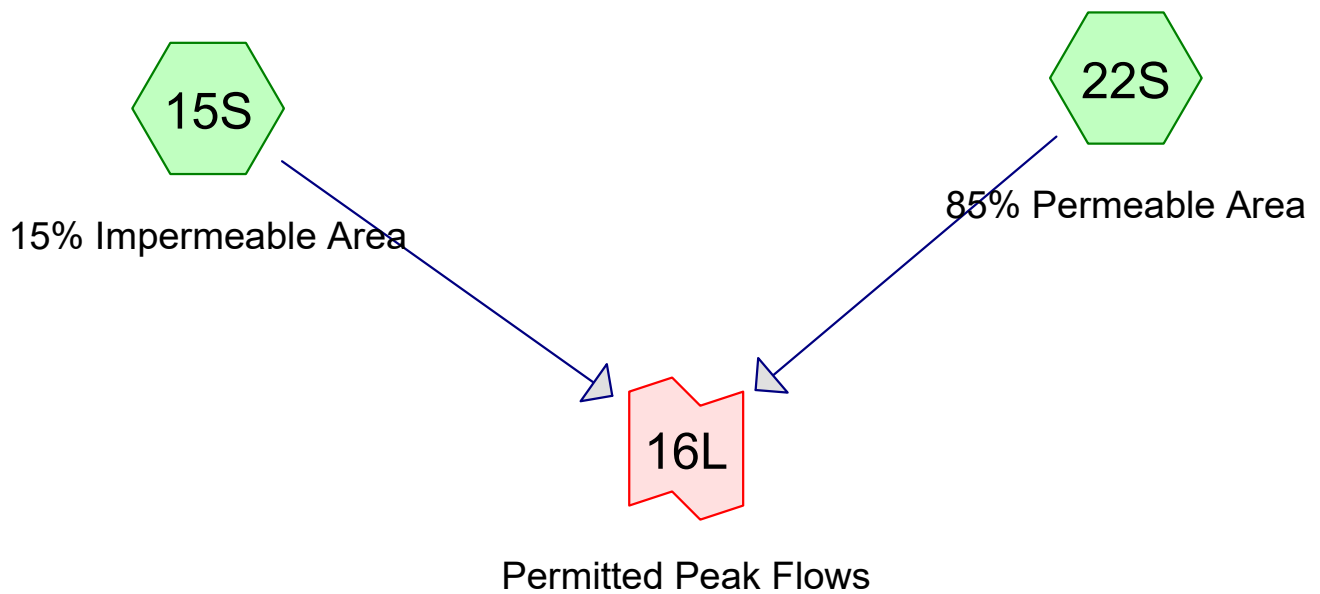
DESIGN / DRAWING SUBJECT TO ENGINEERS APPROVAL

DRAWING TITLE:	DISPERSAL DEVICE DETAIL
PROJECT DESCRIPTION:	STORMWATER MITIGATION REPORT

PROJECT TITLE:	LOT 9 DP 145038 11 IRONBARK ROAD WAIPAPA NORTHLAND
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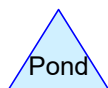
Permitted Peak Flows



Subcat



Reach



Pond



Link

Routing Diagram for 129385

Prepared by Wilton Joubert Limited, Printed 18/08/2025
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129385

Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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Page 2

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 15S: 15% Impermeable Runoff Area=796.0 m² 100.00% Impervious Runoff Depth>341 mm
Tc=10.0 min CN=98 Runoff=18.38 l/s 271.4 m³

Subcatchment 22S: 85% Permeable Runoff Area=4,510.9 m² 100.00% Impervious Runoff Depth>341 mm
Tc=10.0 min CN=98 Runoff=104.15 l/s 1,538.3 m³

Link 16L: Permitted Peak Flows

Inflow=122.53 l/s 1,809.7 m³
Primary=122.53 l/s 1,809.7 m³

129385

Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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Page 3

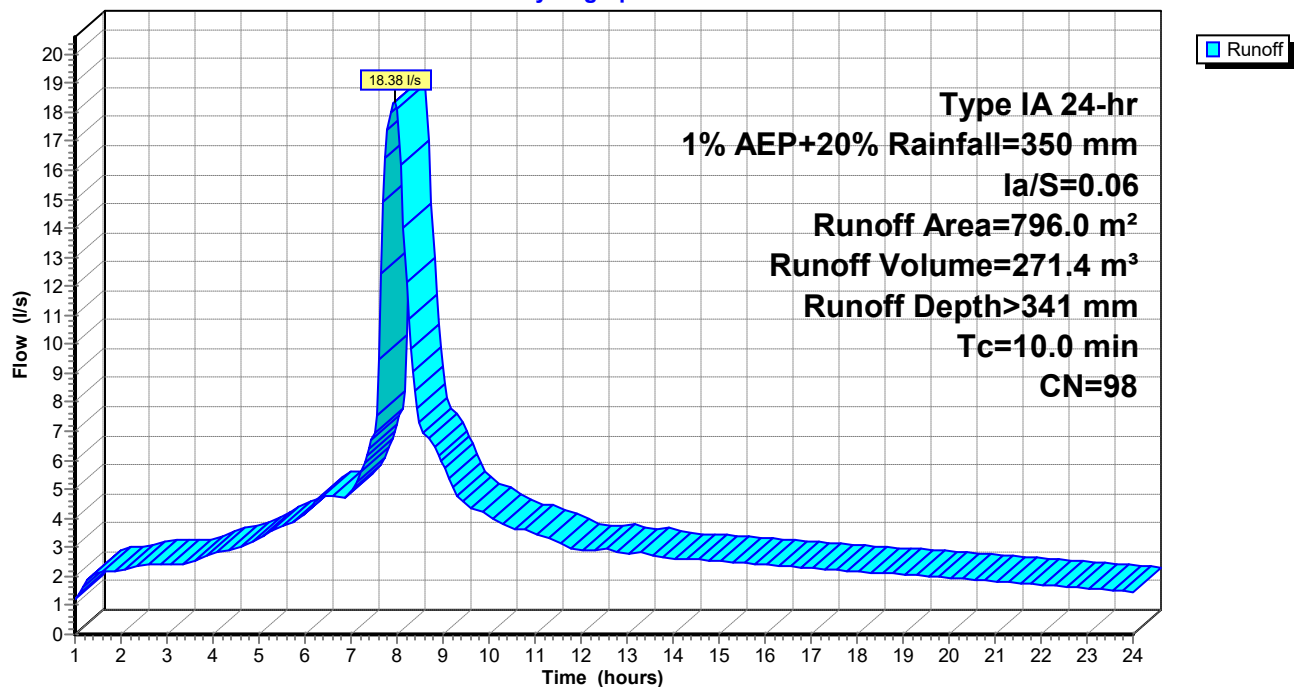
Summary for Subcatchment 15S: 15% Impermeable AreaRunoff = 18.38 l/s @ 7.94 hrs, Volume= 271.4 m³, Depth> 341 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
796.0	98	Roofs, HSG C
796.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 15S: 15% Impermeable Area

Hydrograph



129385

Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $Ia/S=0.06$

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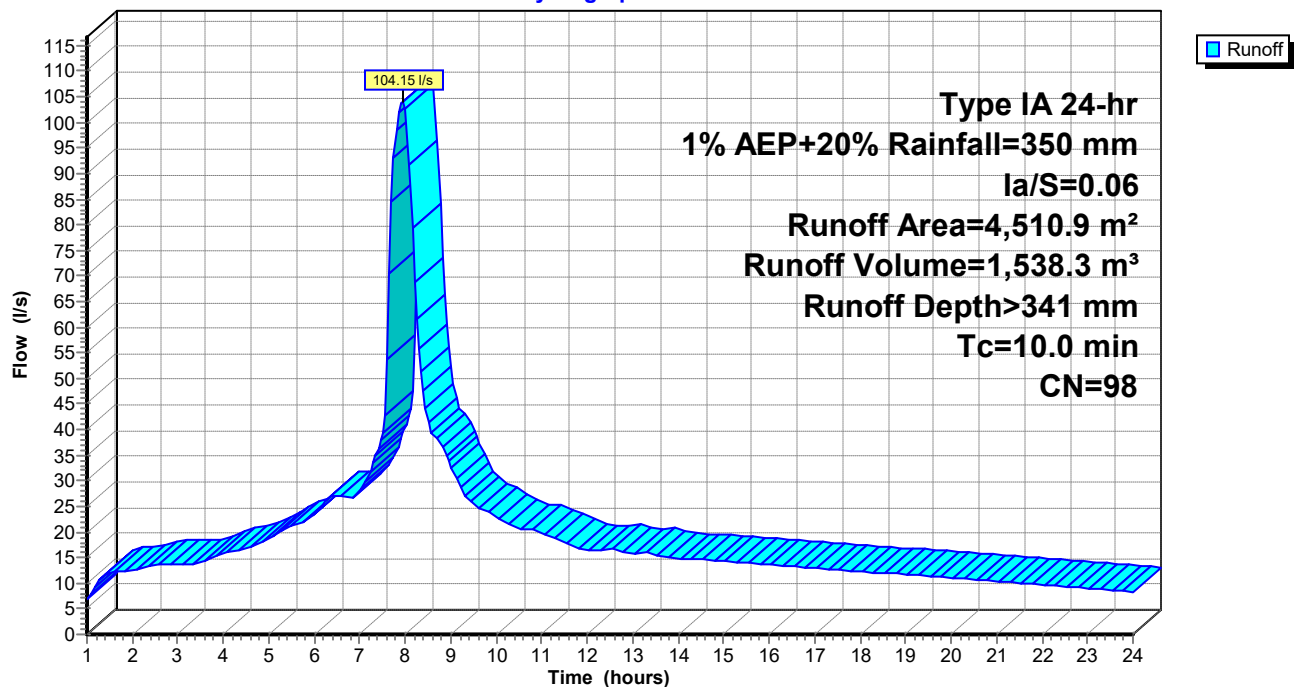
Summary for Subcatchment 22S: 85% Permeable AreaRunoff = 104.15 l/s @ 7.94 hrs, Volume= 1,538.3 m³, Depth> 341 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
4,510.9	98	Roofs, HSG C
4,510.9		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 22S: 85% Permeable Area

Hydrograph



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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $I_a/S=0.06$

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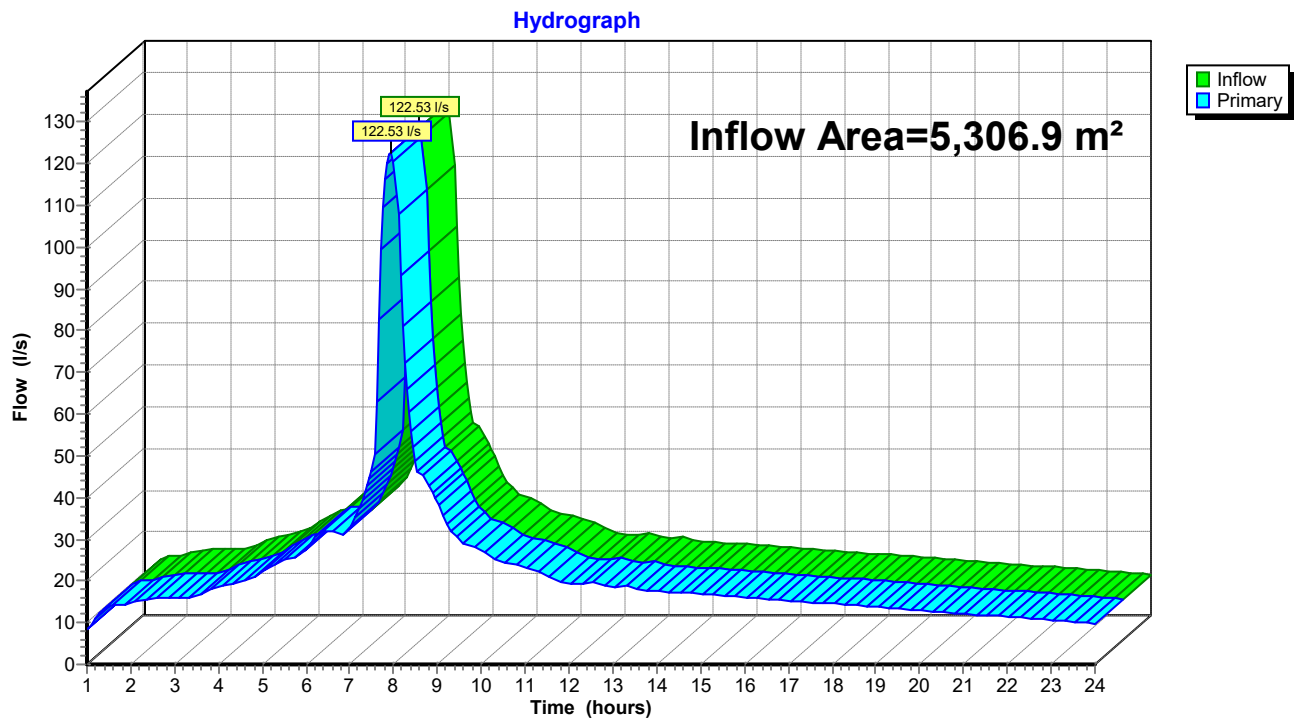
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Summary for Link 16L: Permitted Peak Flows

Inflow Area = 5,306.9 m², 100.00% Impervious, Inflow Depth > 341 mm for 1% AEP+20% event
Inflow = 122.53 l/s @ 7.94 hrs, Volume= 1,809.7 m³
Primary = 122.53 l/s @ 7.94 hrs, Volume= 1,809.7 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Link 16L: Permitted Peak Flows



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Type IA 24-hr 10% AEP+20% Rainfall=229 mm, Ia/S=0.06

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 15S: 15% Impermeable Runoff Area=796.0 m² 100.00% Impervious Runoff Depth>222 mm
Tc=10.0 min CN=98 Runoff=12.00 l/s 176.5 m³

Subcatchment 22S: 85% Permeable Runoff Area=4,510.9 m² 100.00% Impervious Runoff Depth>222 mm
Tc=10.0 min CN=98 Runoff=68.02 l/s 1,000.2 m³

Link 16L: Permitted Peak Flows

Inflow=80.03 l/s 1,176.6 m³
Primary=80.03 l/s 1,176.6 m³

129385Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

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Summary for Subcatchment 15S: 15% Impermeable AreaRunoff = 12.00 l/s @ 7.94 hrs, Volume= 176.5 m³, Depth> 222 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

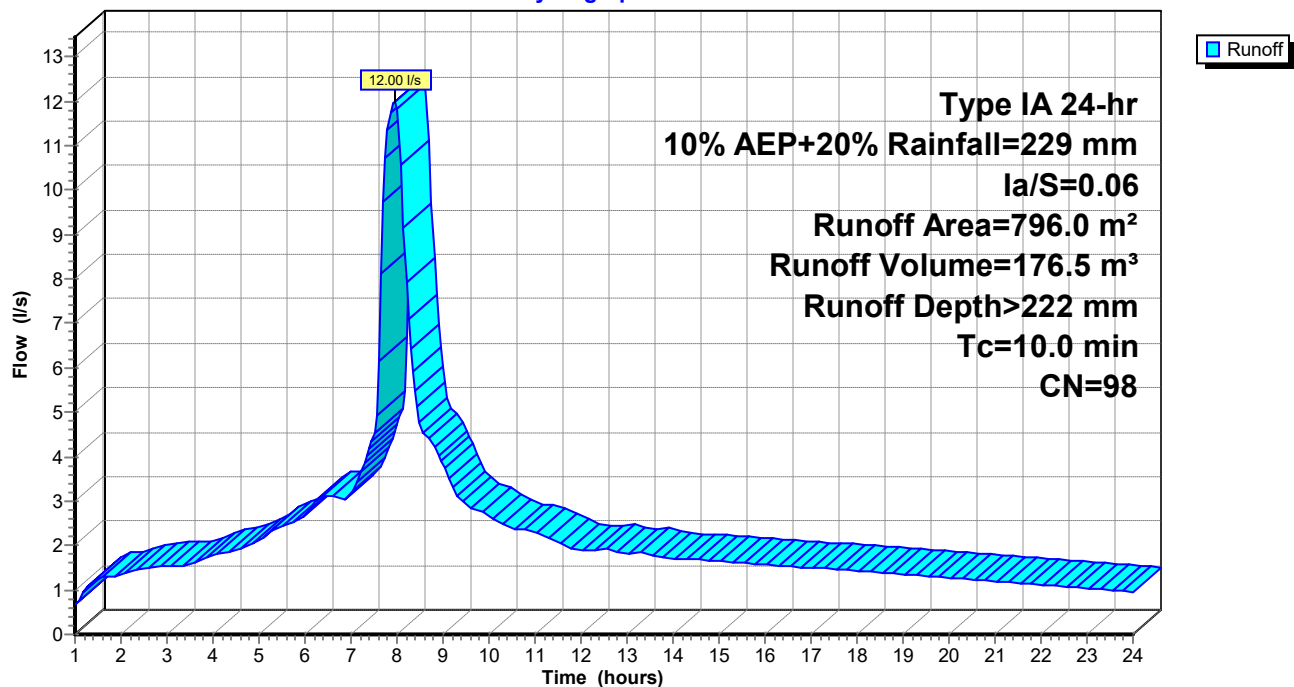
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
796.0	98	Roofs, HSG C
796.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 15S: 15% Impermeable Area

Hydrograph



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Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

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Summary for Subcatchment 22S: 85% Permeable AreaRunoff = 68.02 l/s @ 7.94 hrs, Volume= 1,000.2 m³, Depth> 222 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

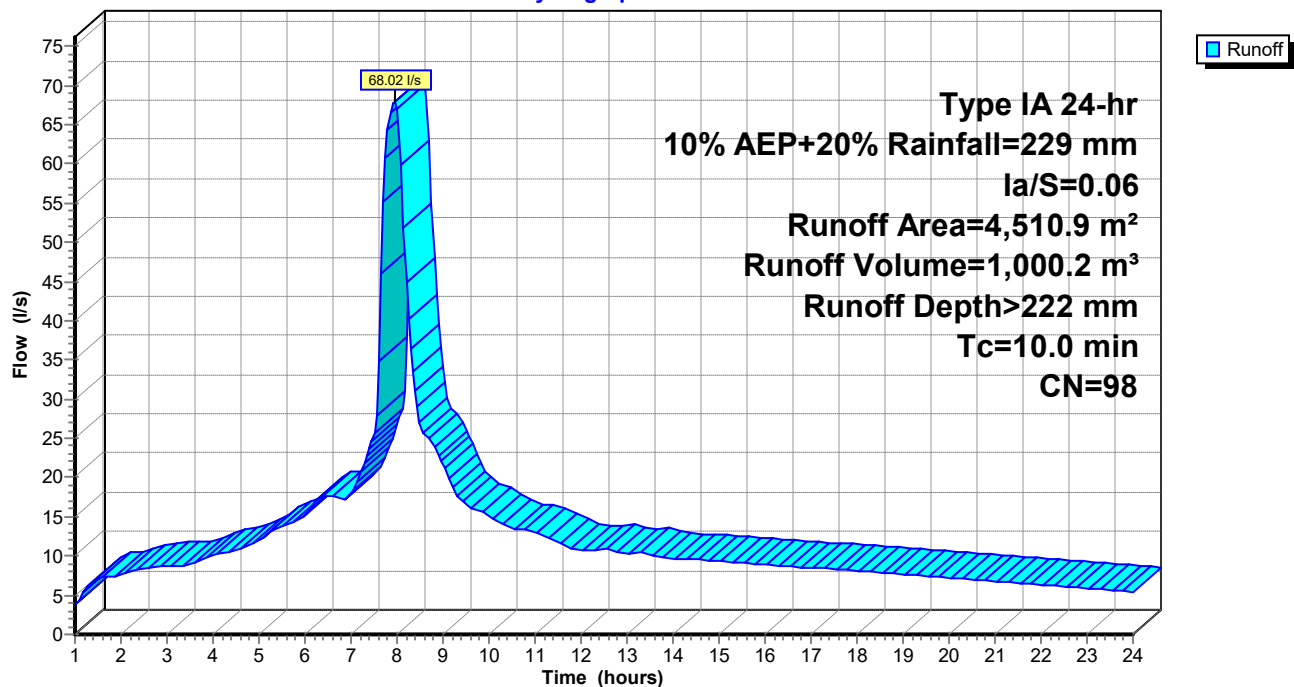
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
4,510.9	98	Roofs, HSG C
4,510.9		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 22S: 85% Permeable Area

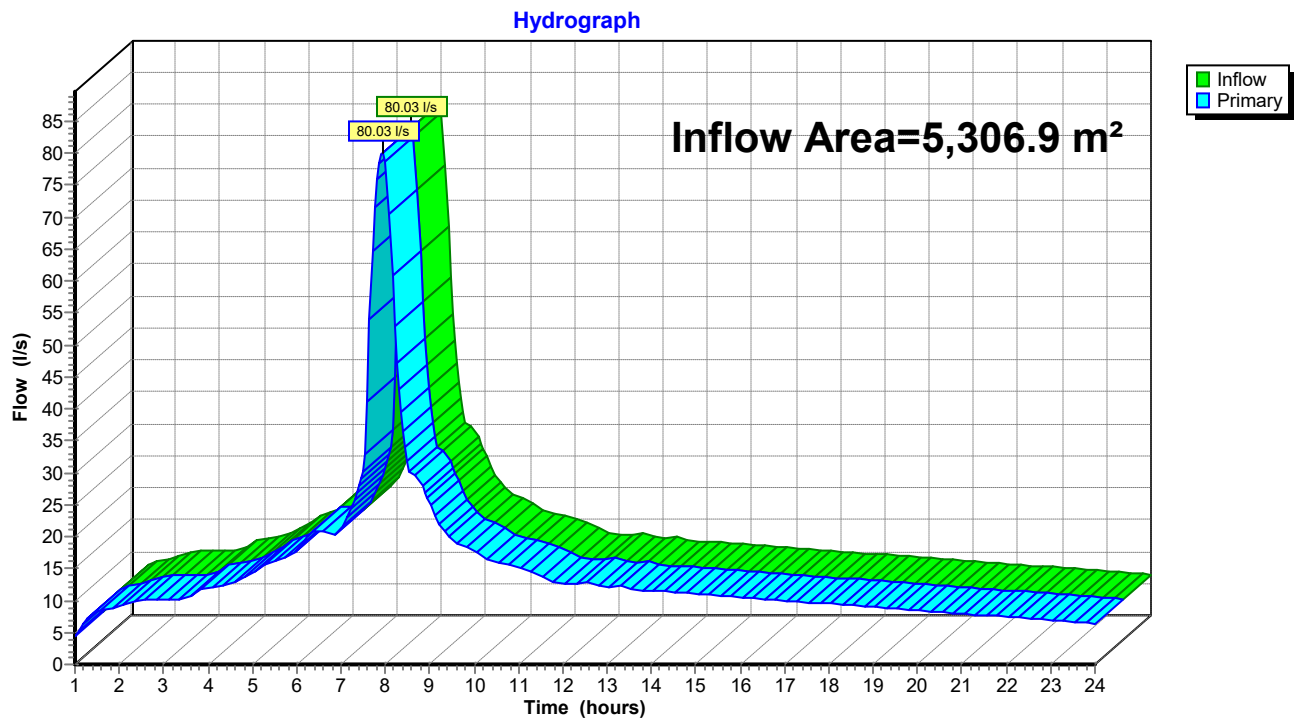
Hydrograph

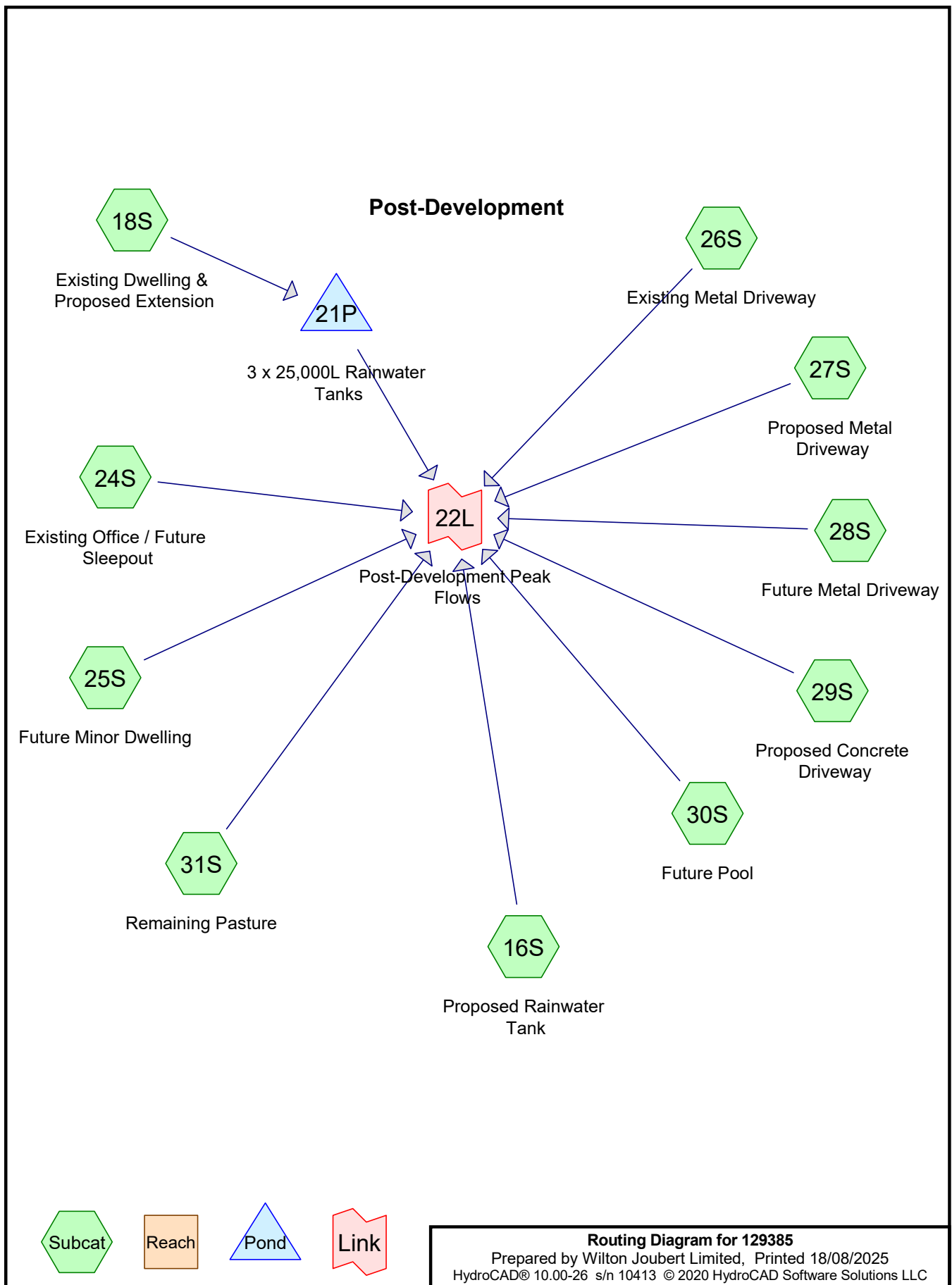


Summary for Link 16L: Permitted Peak Flows

Inflow Area = 5,306.9 m², 100.00% Impervious, Inflow Depth > 222 mm for 10% AEP+20% event
Inflow = 80.03 l/s @ 7.94 hrs, Volume= 1,176.6 m³
Primary = 80.03 l/s @ 7.94 hrs, Volume= 1,176.6 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Link 16L: Permitted Peak Flows



129385*Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06*

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 16S: Proposed	Runoff Area=10.2 m ² 100.00% Impervious Runoff Depth>341 mm Tc=10.0 min CN=98 Runoff=0.24 l/s 3.5 m ³
Subcatchment 18S: Existing Dwelling	Runoff Area=439.1 m ² 100.00% Impervious Runoff Depth>341 mm Tc=10.0 min CN=98 Runoff=10.14 l/s 149.7 m ³
Subcatchment 24S: Existing Office /	Runoff Area=61.0 m ² 100.00% Impervious Runoff Depth>341 mm Tc=10.0 min CN=98 Runoff=1.41 l/s 20.8 m ³
Subcatchment 25S: Future Minor	Runoff Area=130.0 m ² 100.00% Impervious Runoff Depth>341 mm Tc=10.0 min CN=98 Runoff=3.00 l/s 44.3 m ³
Subcatchment 26S: Existing Metal	Runoff Area=452.7 m ² 0.00% Impervious Runoff Depth>318 mm Tc=10.0 min CN=89 Runoff=10.07 l/s 144.0 m ³
Subcatchment 27S: Proposed Metal	Runoff Area=48.1 m ² 0.00% Impervious Runoff Depth>318 mm Tc=10.0 min CN=89 Runoff=1.07 l/s 15.3 m ³
Subcatchment 28S: Future Metal Driveway	Runoff Area=69.8 m ² 0.00% Impervious Runoff Depth>318 mm Tc=10.0 min CN=89 Runoff=1.55 l/s 22.2 m ³
Subcatchment 29S: Proposed	Runoff Area=156.7 m ² 100.00% Impervious Runoff Depth>341 mm Tc=10.0 min CN=98 Runoff=3.62 l/s 53.4 m ³
Subcatchment 30S: Future Pool	Runoff Area=100.0 m ² 100.00% Impervious Runoff Depth>341 mm Tc=10.0 min CN=98 Runoff=2.31 l/s 34.1 m ³
Subcatchment 31S: Remaining Pasture	Runoff Area=3,839.4 m ² 0.00% Impervious Runoff Depth>273 mm Tc=10.0 min CN=74 Runoff=73.64 l/s 1,047.9 m ³
Pond 21P: 3 x 25,000L Rainwater Tanks	Peak Elev=0.389 m Storage=11.9 m ³ Inflow=10.14 l/s 149.7 m ³ Outflow=7.85 l/s 148.5 m ³
Link 22L: Post-Development Peak Flows	Inflow=103.86 l/s 1,534.1 m ³ Primary=103.86 l/s 1,534.1 m ³

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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $Ia/S=0.06$

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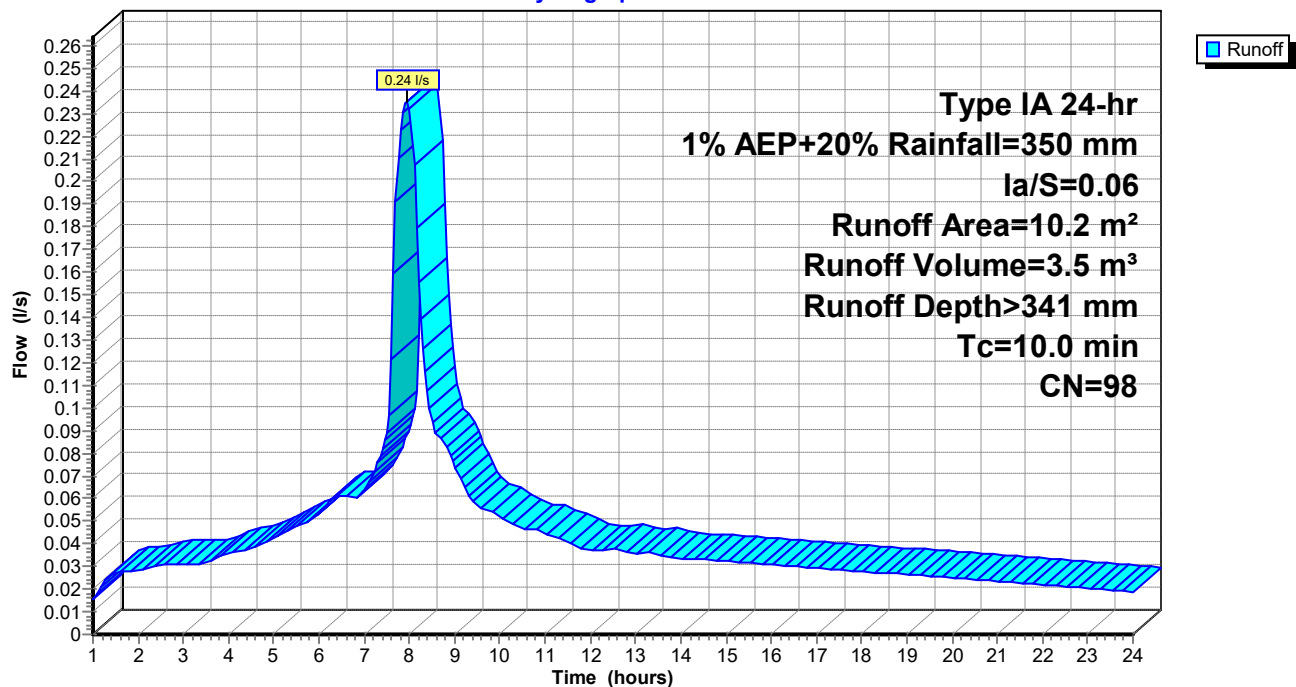
Summary for Subcatchment 16S: Proposed Rainwater TankRunoff = 0.24 l/s @ 7.94 hrs, Volume= 3.5 m³, Depth> 341 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
10.2	98	Paved roads w/curbs & sewers, HSG C
10.2		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 16S: Proposed Rainwater Tank

Hydrograph



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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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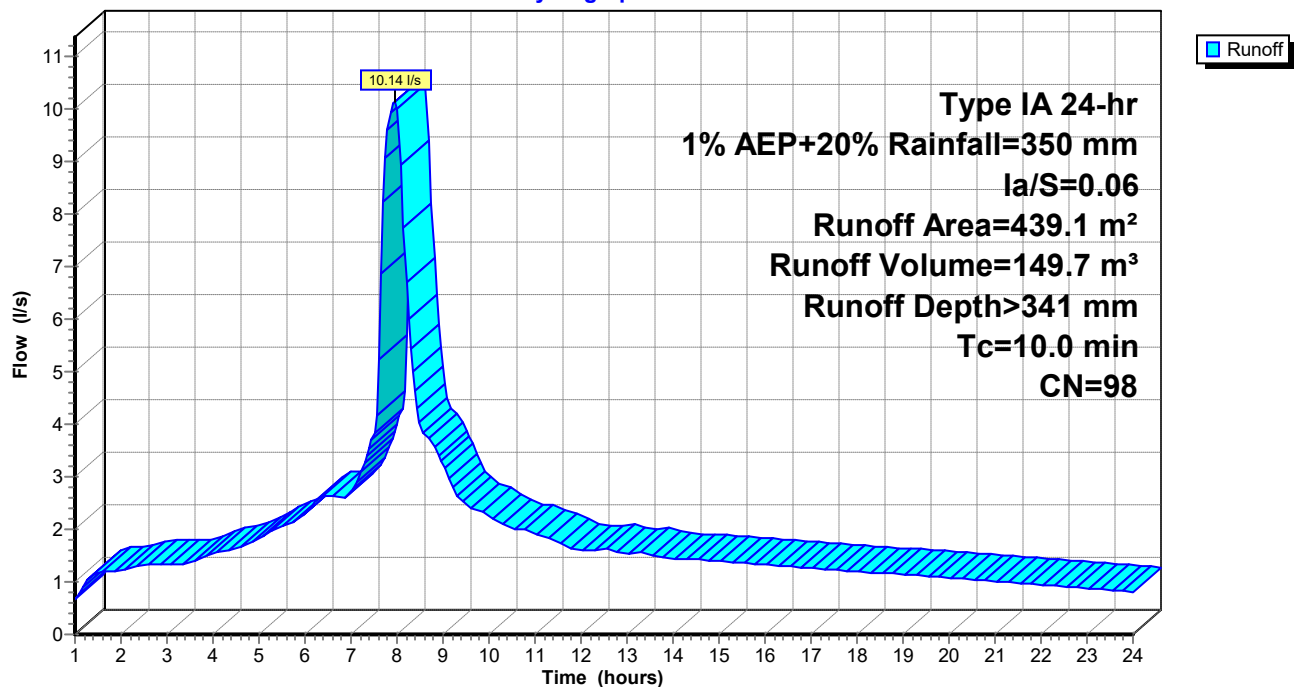
Summary for Subcatchment 18S: Existing Dwelling & Proposed ExtensionRunoff = 10.14 l/s @ 7.94 hrs, Volume= 149.7 m³, Depth> 341 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
439.1	98	Roofs, HSG C
439.1		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 18S: Existing Dwelling & Proposed Extension

Hydrograph



129385

Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $Ia/S=0.06$

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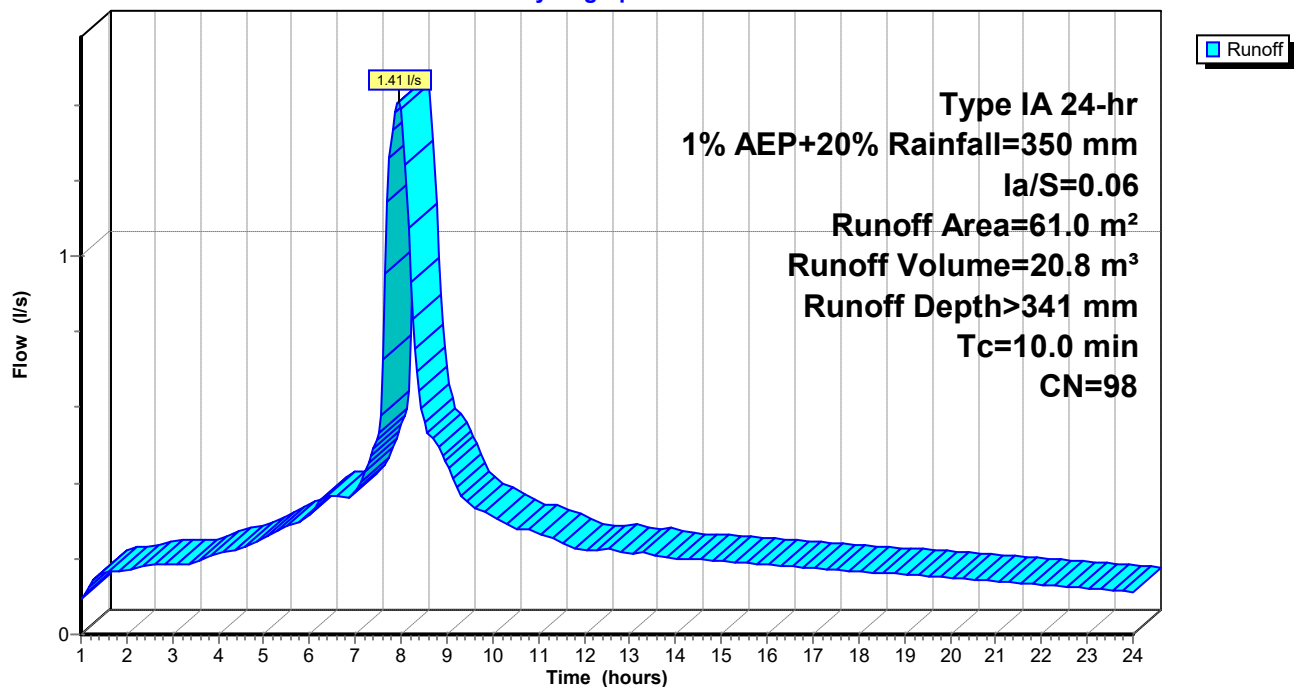
Summary for Subcatchment 24S: Existing Office / Future SleepoutRunoff = 1.41 l/s @ 7.94 hrs, Volume= 20.8 m³, Depth> 341 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
61.0	98	Roofs, HSG C
61.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 24S: Existing Office / Future Sleepout

Hydrograph



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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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Summary for Subcatchment 25S: Future Minor DwellingRunoff = 3.00 l/s @ 7.94 hrs, Volume= 44.3 m³, Depth> 341 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

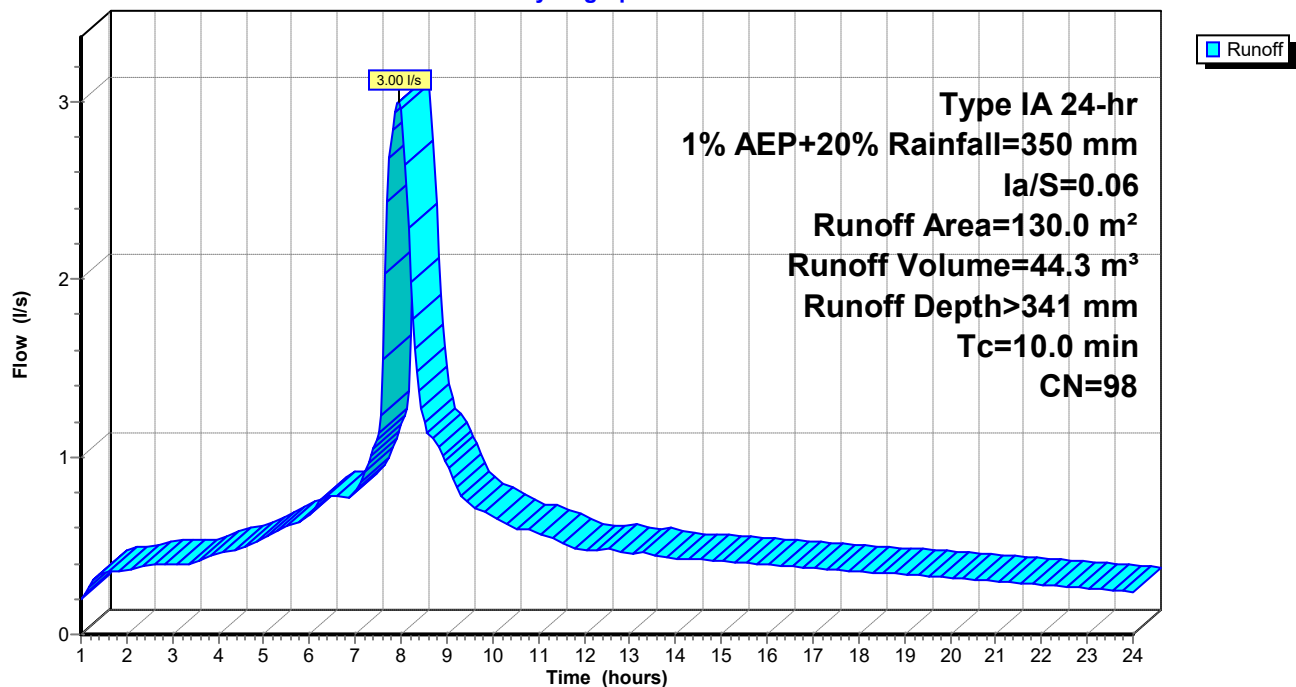
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
130.0	98	Roofs, HSG C
130.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 25S: Future Minor Dwelling

Hydrograph



129385

Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $Ia/S=0.06$

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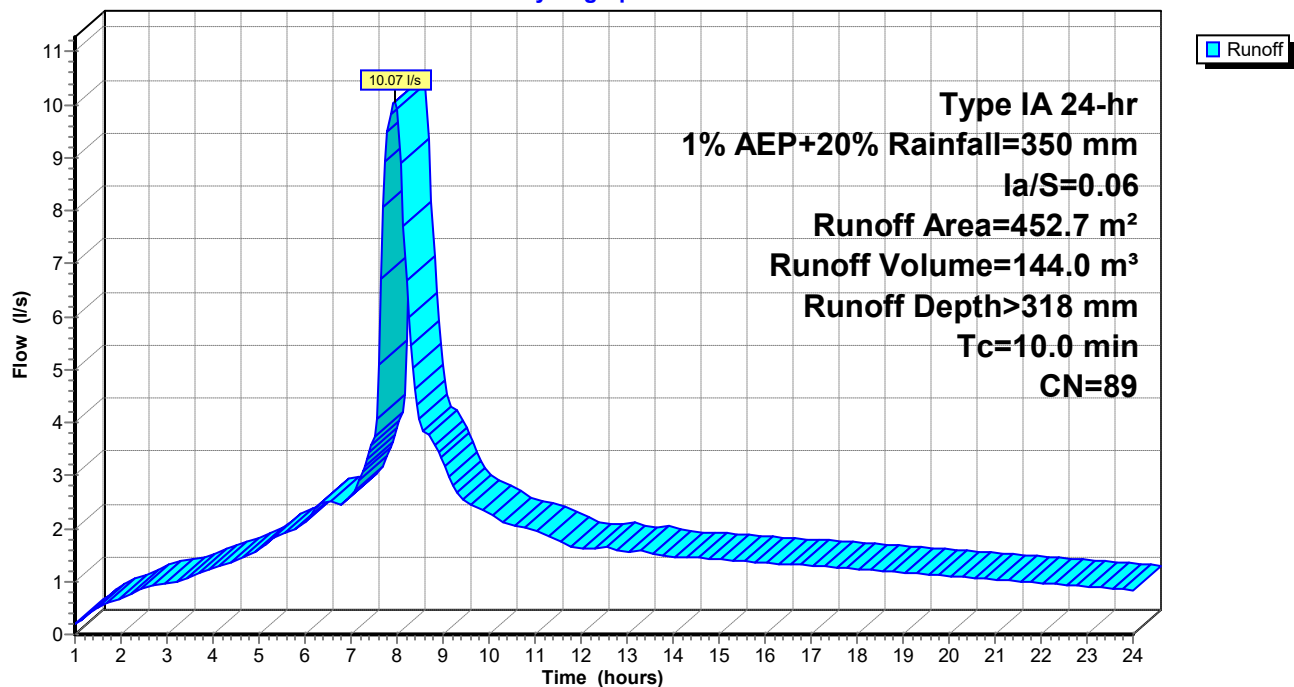
Summary for Subcatchment 26S: Existing Metal DrivewayRunoff = 10.07 l/s @ 7.95 hrs, Volume= 144.0 m³, Depth> 318 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
452.7	89	Gravel roads, HSG C
452.7		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 26S: Existing Metal Driveway

Hydrograph



129385

Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $Ia/S=0.06$

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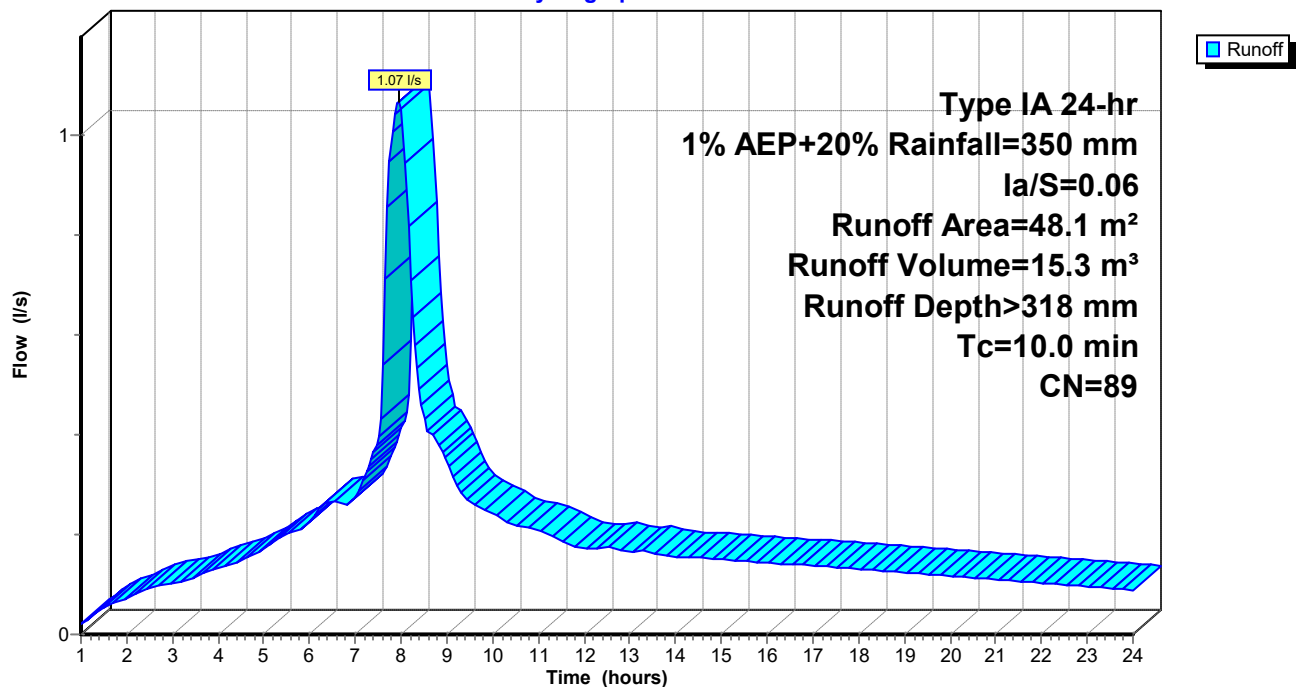
Summary for Subcatchment 27S: Proposed Metal DrivewayRunoff = 1.07 l/s @ 7.95 hrs, Volume= 15.3 m³, Depth> 318 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
48.1	89	Gravel roads, HSG C
48.1		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 27S: Proposed Metal Driveway

Hydrograph



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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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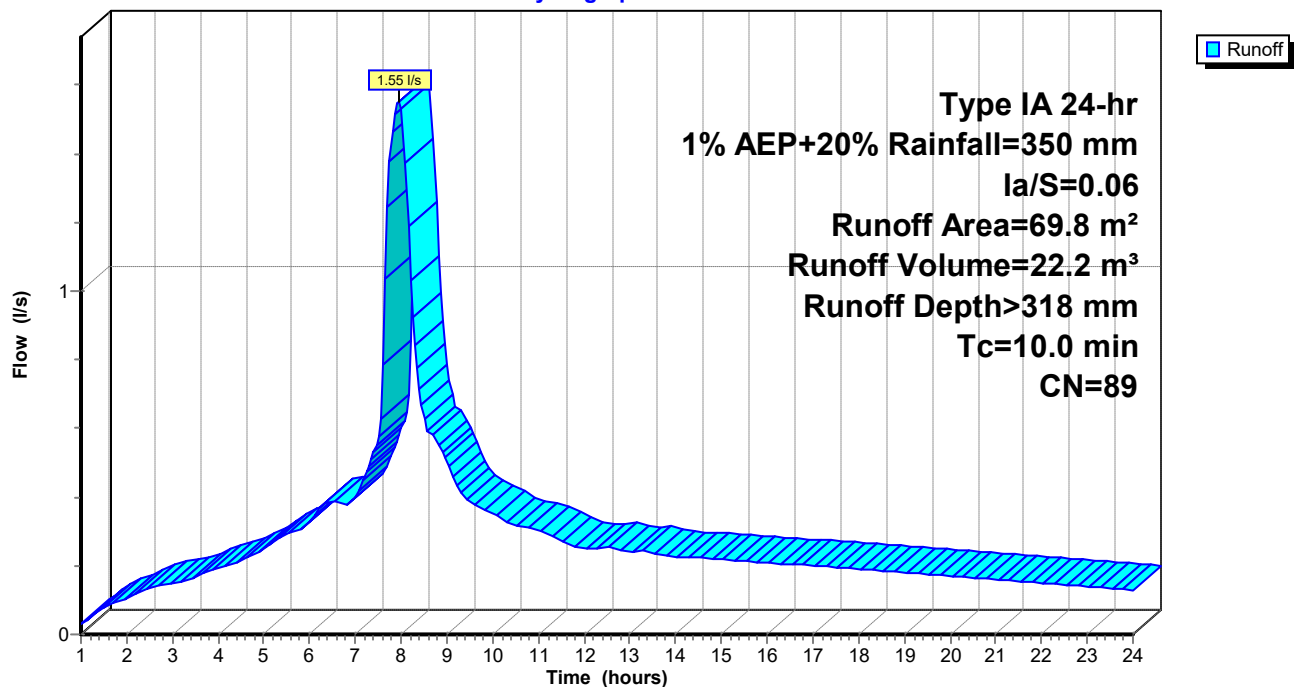
Summary for Subcatchment 28S: Future Metal DrivewayRunoff = 1.55 l/s @ 7.95 hrs, Volume= 22.2 m³, Depth> 318 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
69.8	89	Gravel roads, HSG C
69.8		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 28S: Future Metal Driveway

Hydrograph



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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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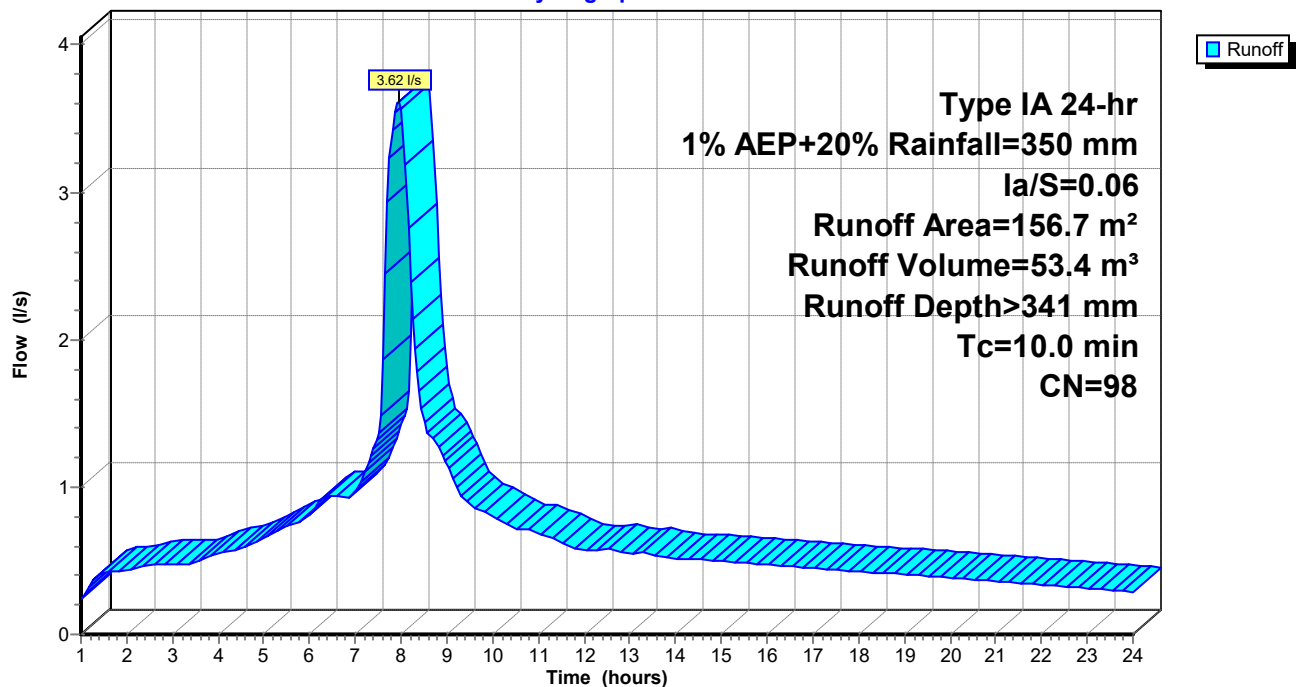
Summary for Subcatchment 29S: Proposed Concrete DrivewayRunoff = 3.62 l/s @ 7.94 hrs, Volume= 53.4 m³, Depth> 341 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
156.7	98	Paved roads w/curbs & sewers, HSG C
156.7		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 29S: Proposed Concrete Driveway

Hydrograph



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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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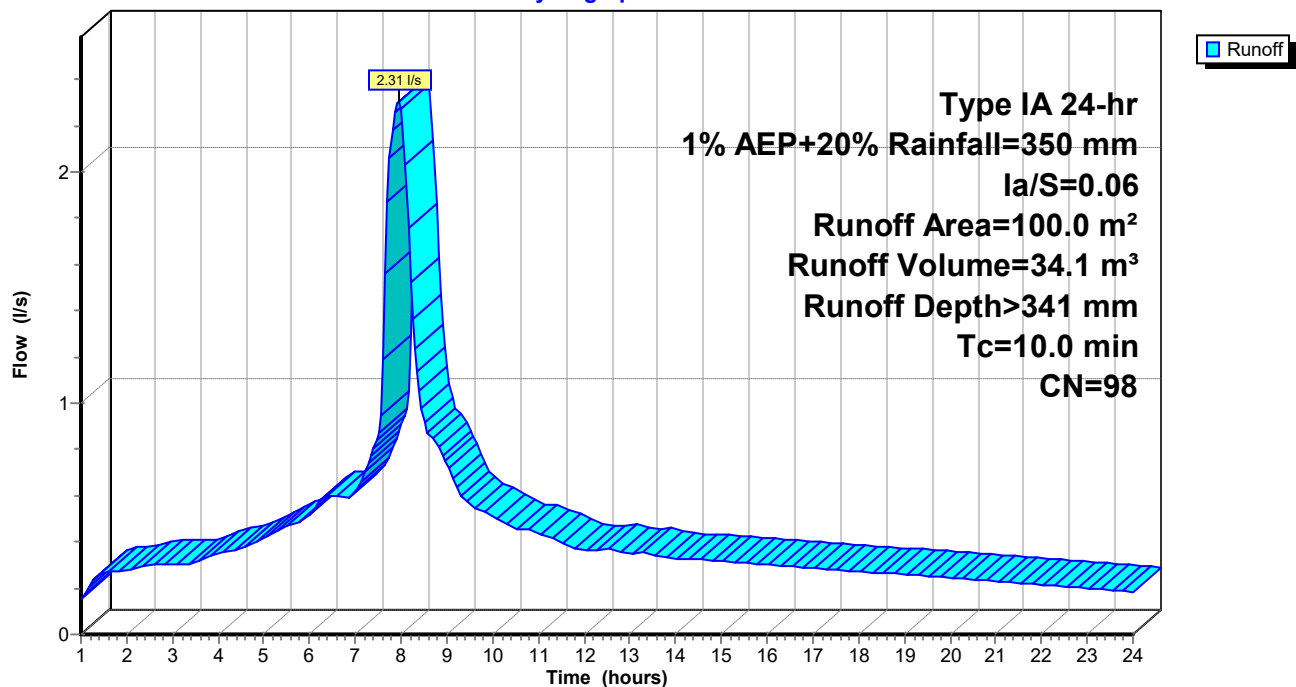
Summary for Subcatchment 30S: Future PoolRunoff = 2.31 l/s @ 7.94 hrs, Volume= 34.1 m³, Depth> 341 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
100.0	98	Paved roads w/curbs & sewers, HSG C
100.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 30S: Future Pool

Hydrograph



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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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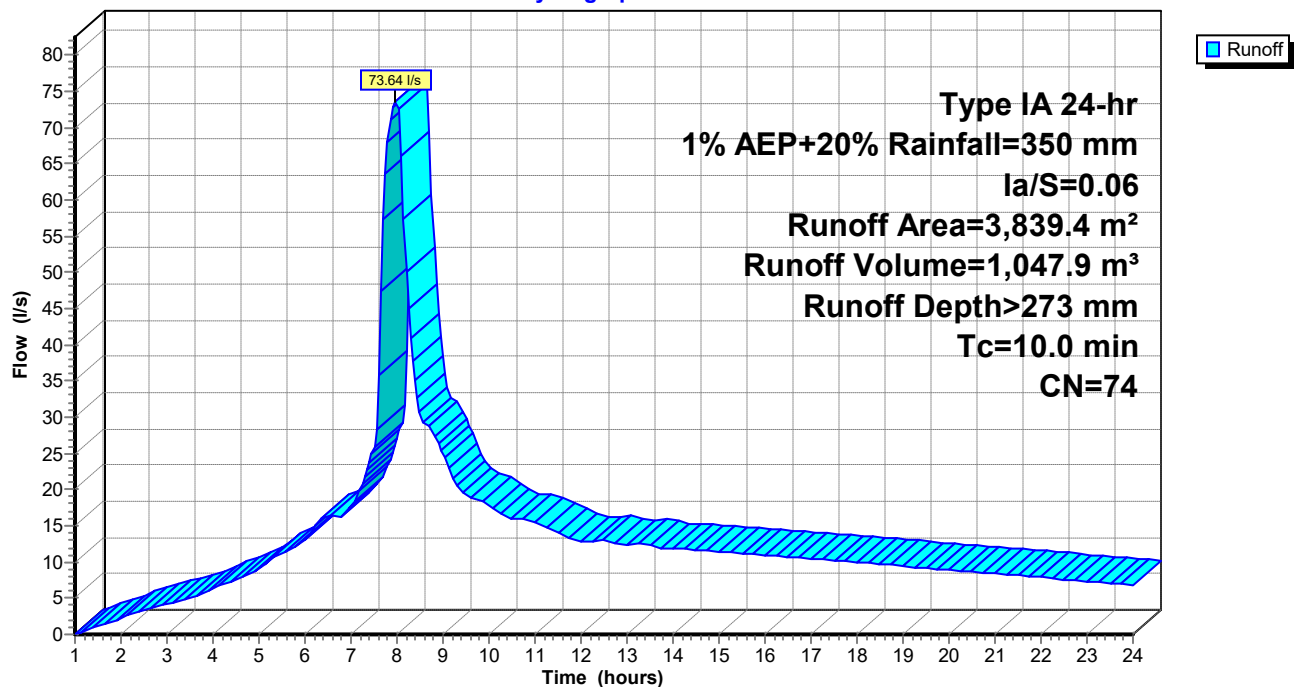
Summary for Subcatchment 31S: Remaining PastureRunoff = 73.64 l/s @ 7.97 hrs, Volume= 1,047.9 m³, Depth> 273 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
3,839.4	74	>75% Grass cover, Good, HSG C
3,839.4		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 31S: Remaining Pasture

Hydrograph



Summary for Pond 21P: 3 x 25,000L Rainwater Tanks

Inflow Area = 439.1 m², 100.00% Impervious, Inflow Depth > 341 mm for 1% AEP+20% event
 Inflow = 10.14 l/s @ 7.94 hrs, Volume= 149.7 m³
 Outflow = 7.85 l/s @ 8.15 hrs, Volume= 148.5 m³, Atten= 23%, Lag= 12.6 min
 Primary = 7.85 l/s @ 8.15 hrs, Volume= 148.5 m³

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 0.389 m @ 8.15 hrs Surf.Area= 30.5 m² Storage= 11.9 m³

Plug-Flow detention time= 24.2 min calculated for 148.1 m³ (99% of inflow)

Center-of-Mass det. time= 17.2 min (663.5 - 646.3)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	79.4 m ³	3.60 mD x 2.60 mH Vertical Cone/Cylinder x 3

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	65 mm Vert. Orifice/Grate C= 0.600
#2	Primary	0.270 m	65 mm Vert. Orifice/Grate C= 0.600

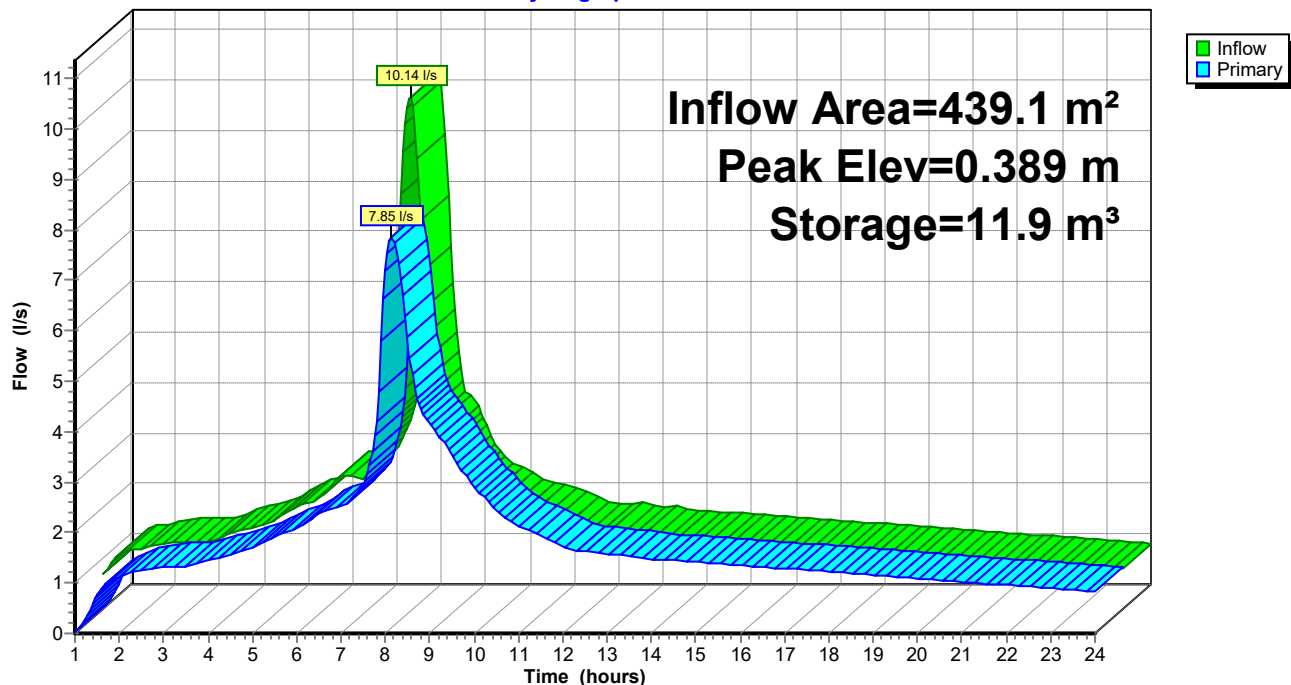
Primary OutFlow Max=7.85 l/s @ 8.15 hrs HW=0.388 m (Free Discharge)

1=Orifice/Grate (Orifice Controls 5.26 l/s @ 1.59 m/s)

2=Orifice/Grate (Orifice Controls 2.59 l/s @ 0.78 m/s)

Pond 21P: 3 x 25,000L Rainwater Tanks

Hydrograph



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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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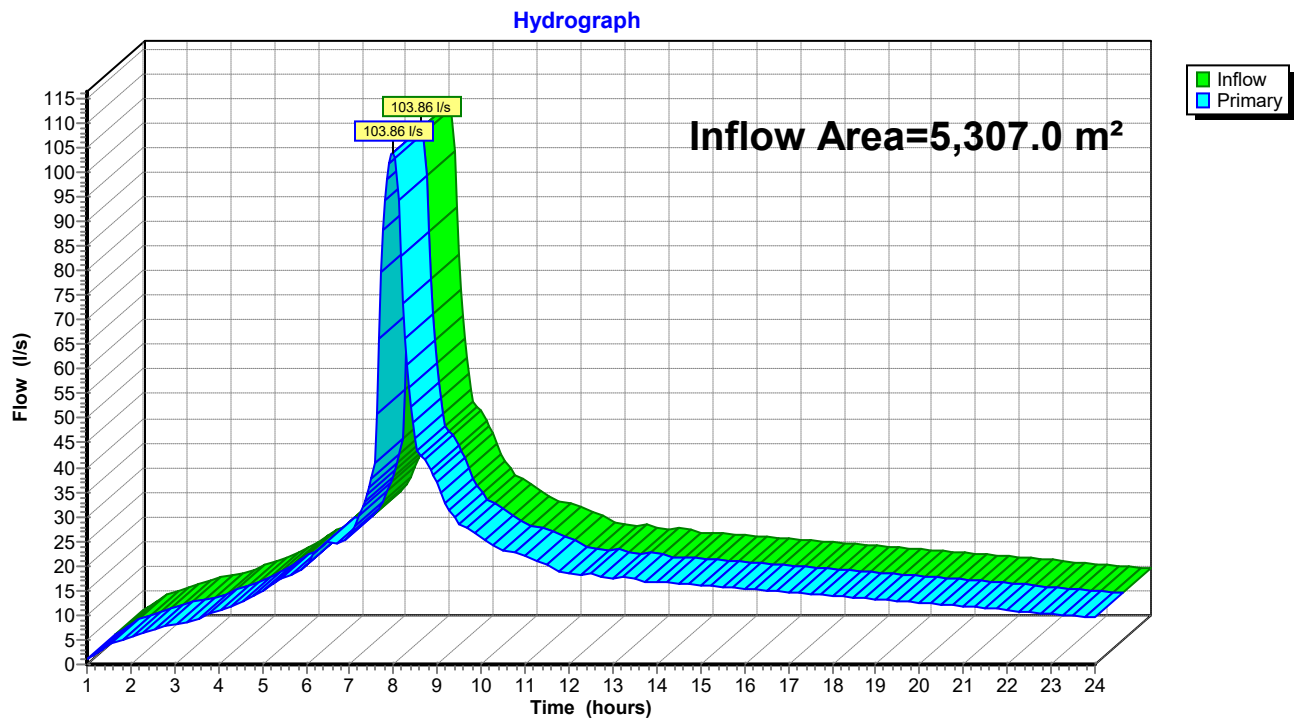
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Summary for Link 22L: Post-Development Peak Flows

Inflow Area = 5,307.0 m², 16.90% Impervious, Inflow Depth > 289 mm for 1% AEP+20% event
Inflow = 103.86 l/s @ 7.98 hrs, Volume= 1,534.1 m³
Primary = 103.86 l/s @ 7.98 hrs, Volume= 1,534.1 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Link 22L: Post-Development Peak Flows



Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 16S: Proposed	Runoff Area=10.2 m ² 100.00% Impervious Runoff Depth>222 mm Tc=10.0 min CN=98 Runoff=0.15 l/s 2.3 m ³
Subcatchment 18S: Existing Dwelling	Runoff Area=439.1 m ² 100.00% Impervious Runoff Depth>222 mm Tc=10.0 min CN=98 Runoff=6.62 l/s 97.4 m ³
Subcatchment 24S: Existing Office /	Runoff Area=61.0 m ² 100.00% Impervious Runoff Depth>222 mm Tc=10.0 min CN=98 Runoff=0.92 l/s 13.5 m ³
Subcatchment 25S: Future Minor	Runoff Area=130.0 m ² 100.00% Impervious Runoff Depth>222 mm Tc=10.0 min CN=98 Runoff=1.96 l/s 28.8 m ³
Subcatchment 26S: Existing Metal	Runoff Area=452.7 m ² 0.00% Impervious Runoff Depth>199 mm Tc=10.0 min CN=89 Runoff=6.34 l/s 90.0 m ³
Subcatchment 27S: Proposed Metal	Runoff Area=48.1 m ² 0.00% Impervious Runoff Depth>199 mm Tc=10.0 min CN=89 Runoff=0.67 l/s 9.6 m ³
Subcatchment 28S: Future Metal Driveway	Runoff Area=69.8 m ² 0.00% Impervious Runoff Depth>199 mm Tc=10.0 min CN=89 Runoff=0.98 l/s 13.9 m ³
Subcatchment 29S: Proposed	Runoff Area=156.7 m ² 100.00% Impervious Runoff Depth>222 mm Tc=10.0 min CN=98 Runoff=2.36 l/s 34.7 m ³
Subcatchment 30S: Future Pool	Runoff Area=100.0 m ² 100.00% Impervious Runoff Depth>222 mm Tc=10.0 min CN=98 Runoff=1.51 l/s 22.2 m ³
Subcatchment 31S: Remaining Pasture	Runoff Area=3,839.4 m ² 0.00% Impervious Runoff Depth>159 mm Tc=10.0 min CN=74 Runoff=42.28 l/s 611.8 m ³
Pond 21P: 3 x 25,000L Rainwater Tanks	Peak Elev=0.263 m Storage=8.0 m ³ Inflow=6.62 l/s 97.4 m ³ Outflow=4.23 l/s 96.4 m ³
Link 22L: Post-Development Peak Flows	Inflow=60.95 l/s 923.2 m ³ Primary=60.95 l/s 923.2 m ³

129385

Type IA 24-hr 10% AEP+20% Rainfall=229 mm, Ia/S=0.06

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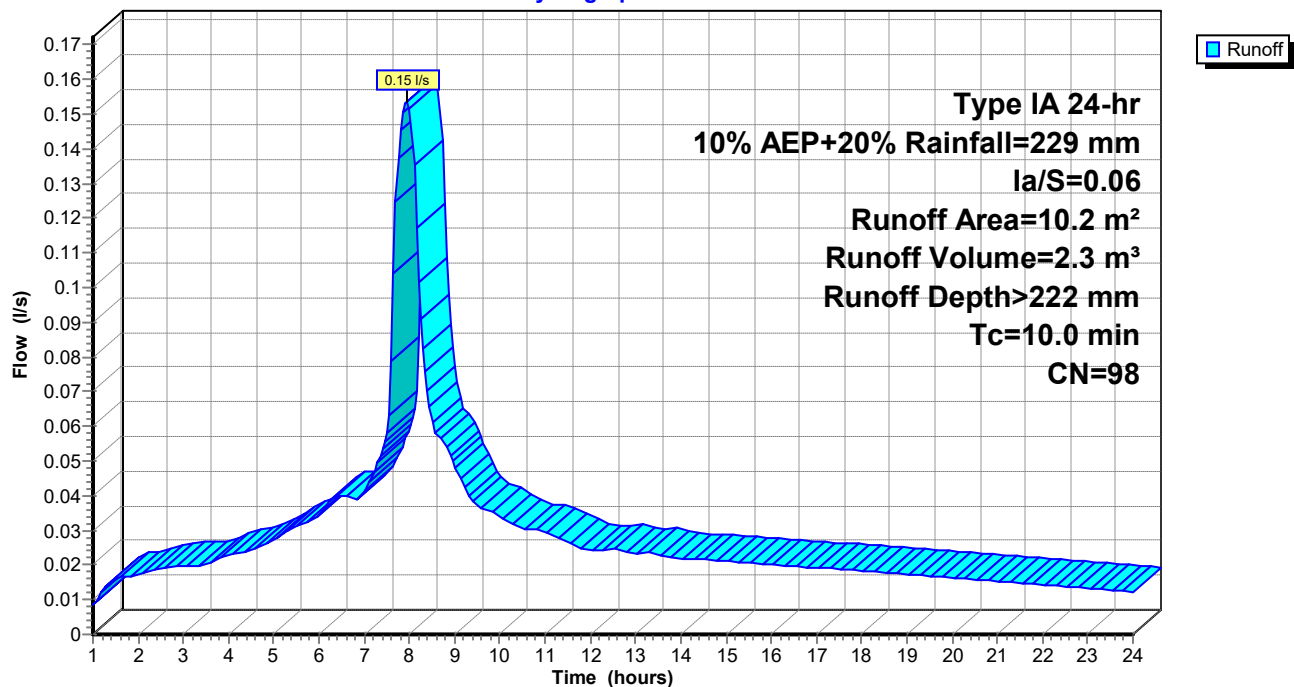
Summary for Subcatchment 16S: Proposed Rainwater TankRunoff = 0.15 l/s @ 7.94 hrs, Volume= 2.3 m³, Depth> 222 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, Ia/S=0.06

Area (m ²)	CN	Description
10.2	98	Paved roads w/curbs & sewers, HSG C
10.2		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 16S: Proposed Rainwater Tank

Hydrograph



129385Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

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Summary for Subcatchment 18S: Existing Dwelling & Proposed ExtensionRunoff = 6.62 l/s @ 7.94 hrs, Volume= 97.4 m³, Depth> 222 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

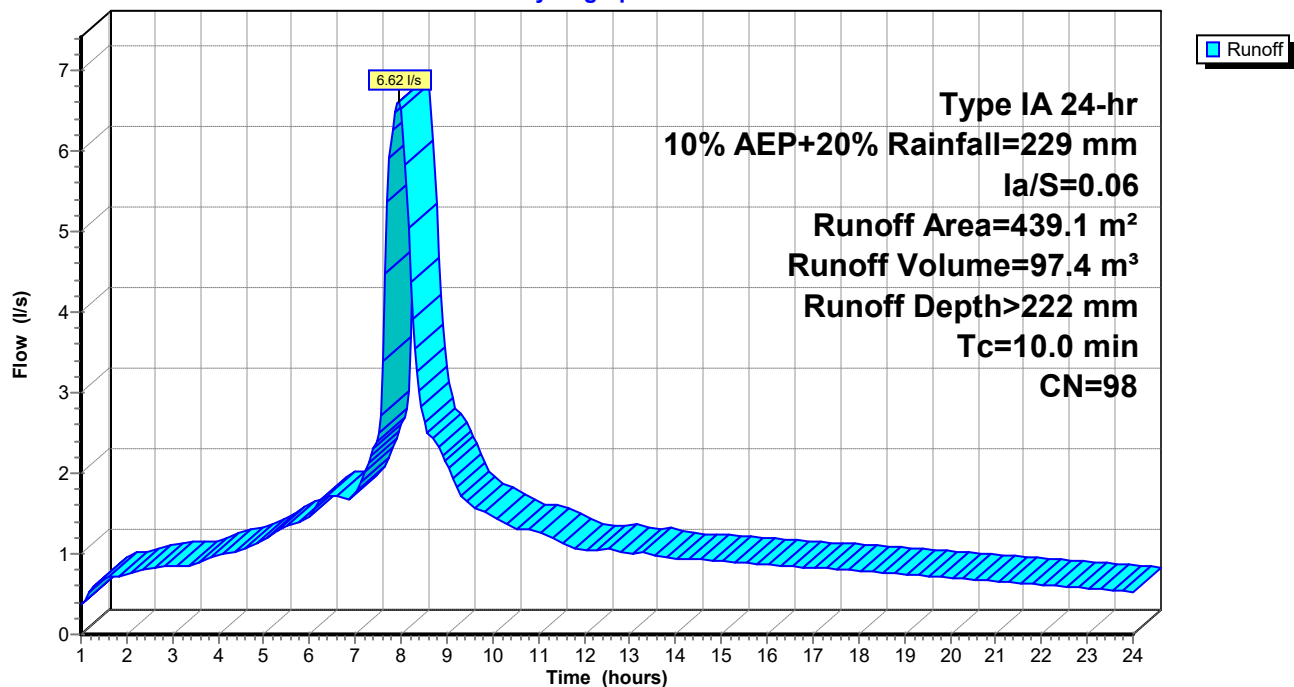
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
439.1	98	Roofs, HSG C
439.1		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 18S: Existing Dwelling & Proposed Extension

Hydrograph



129385

Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

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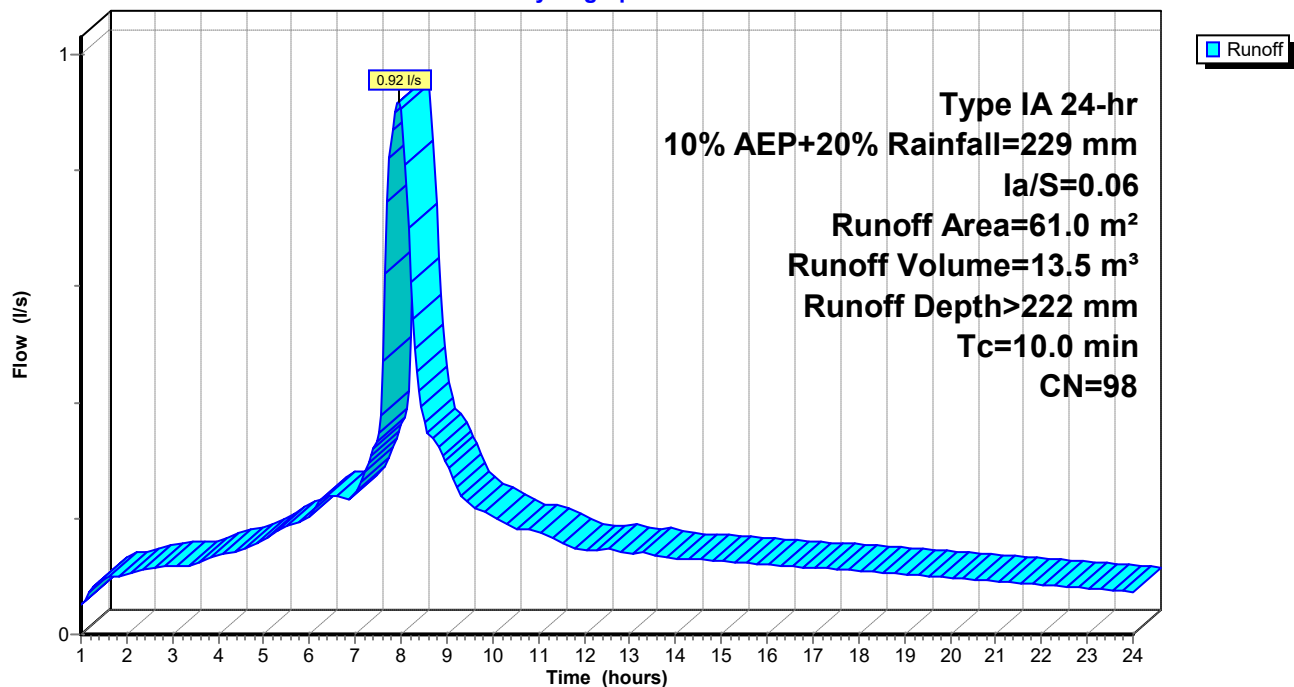
Summary for Subcatchment 24S: Existing Office / Future SleepoutRunoff = 0.92 l/s @ 7.94 hrs, Volume= 13.5 m³, Depth> 222 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
61.0	98	Roofs, HSG C
61.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 24S: Existing Office / Future Sleepout

Hydrograph



129385

Type IA 24-hr 10% AEP+20% Rainfall=229 mm, Ia/S=0.06

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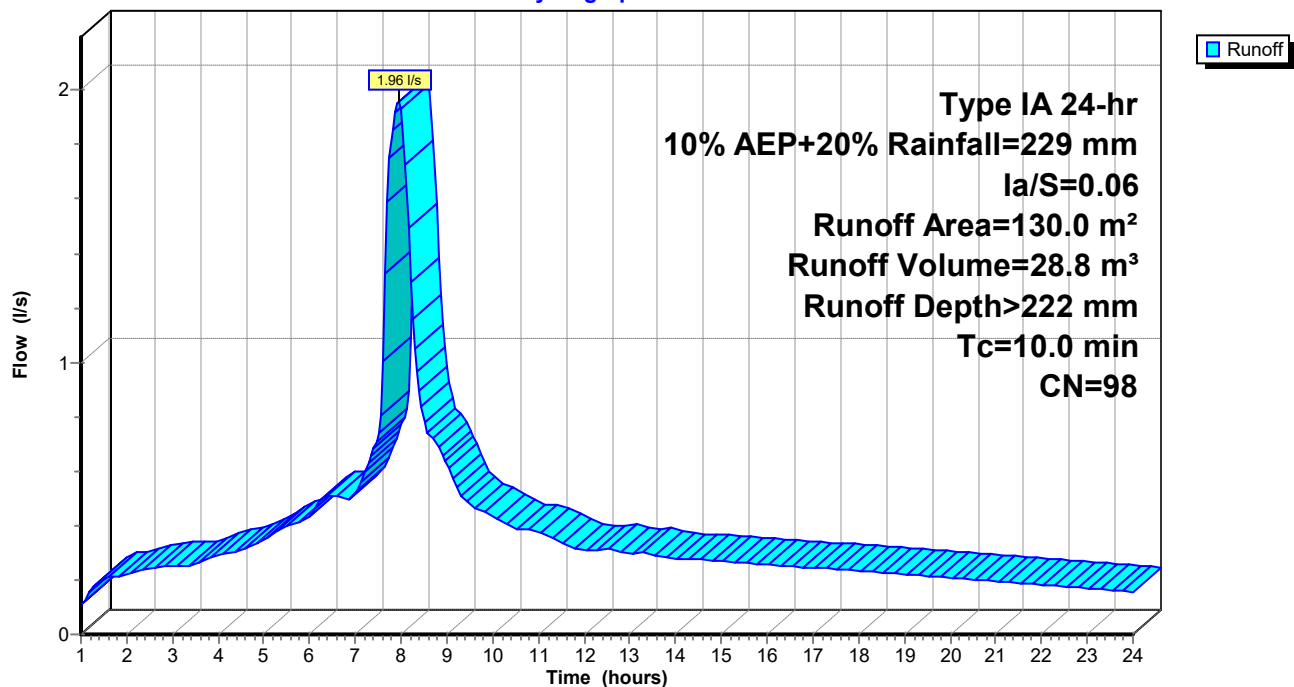
Summary for Subcatchment 25S: Future Minor DwellingRunoff = 1.96 l/s @ 7.94 hrs, Volume= 28.8 m³, Depth> 222 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, Ia/S=0.06

Area (m ²)	CN	Description
130.0	98	Roofs, HSG C
130.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 25S: Future Minor Dwelling

Hydrograph



129385

Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

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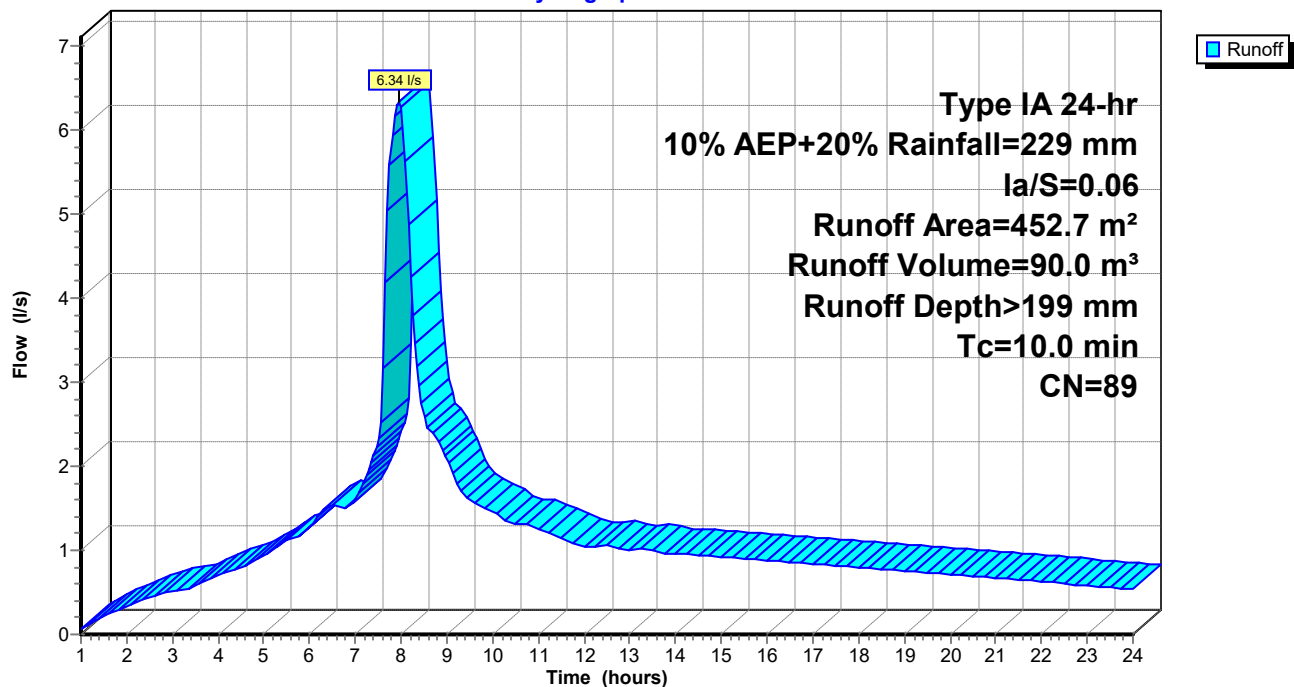
Summary for Subcatchment 26S: Existing Metal DrivewayRunoff = 6.34 l/s @ 7.95 hrs, Volume= 90.0 m³, Depth> 199 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
452.7	89	Gravel roads, HSG C
452.7		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 26S: Existing Metal Driveway

Hydrograph



129385Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

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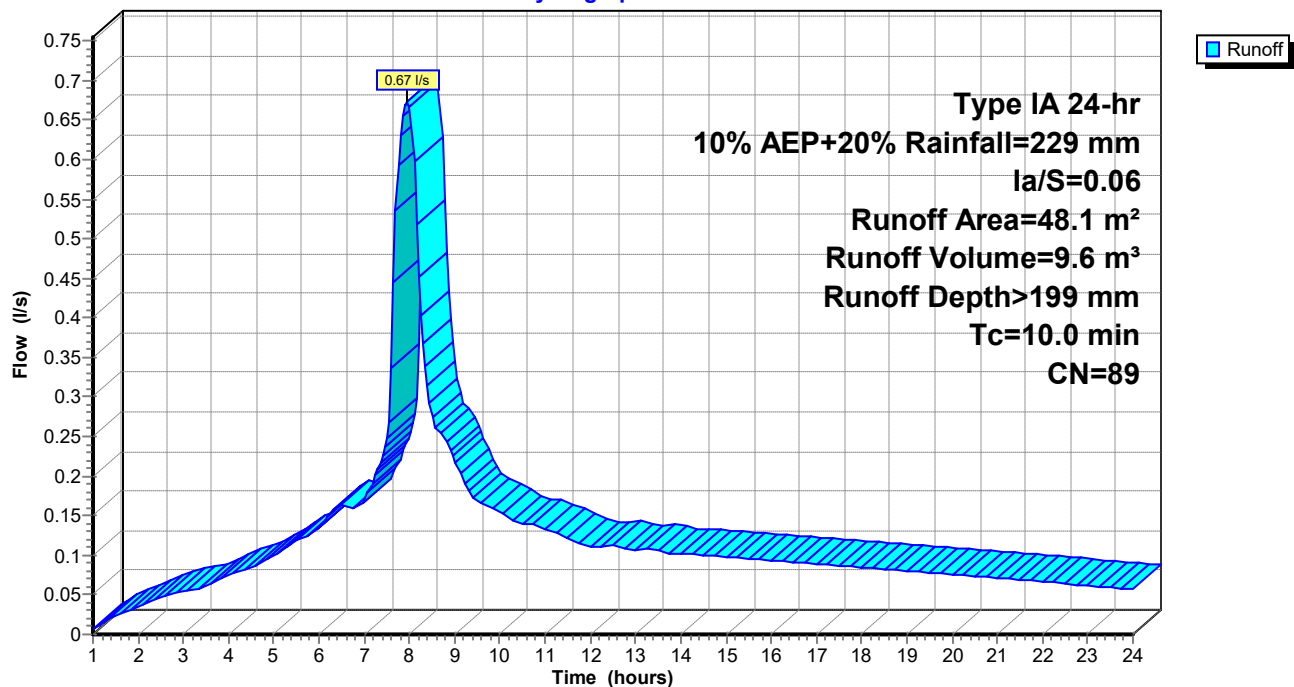
Summary for Subcatchment 27S: Proposed Metal DrivewayRunoff = 0.67 l/s @ 7.95 hrs, Volume= 9.6 m³, Depth> 199 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
48.1	89	Gravel roads, HSG C
48.1		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 27S: Proposed Metal Driveway

Hydrograph



129385

Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

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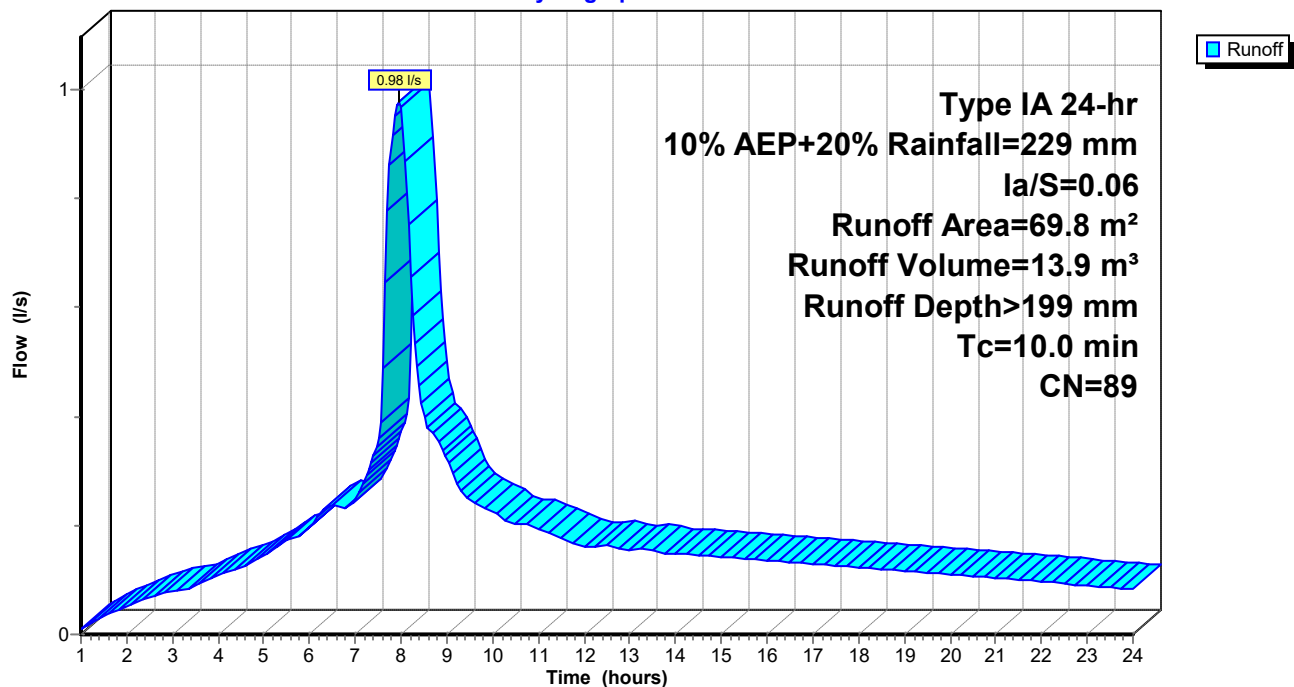
Summary for Subcatchment 28S: Future Metal DrivewayRunoff = 0.98 l/s @ 7.95 hrs, Volume= 13.9 m³, Depth> 199 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
69.8	89	Gravel roads, HSG C
69.8		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 28S: Future Metal Driveway

Hydrograph



129385

Type IA 24-hr 10% AEP+20% Rainfall=229 mm, Ia/S=0.06

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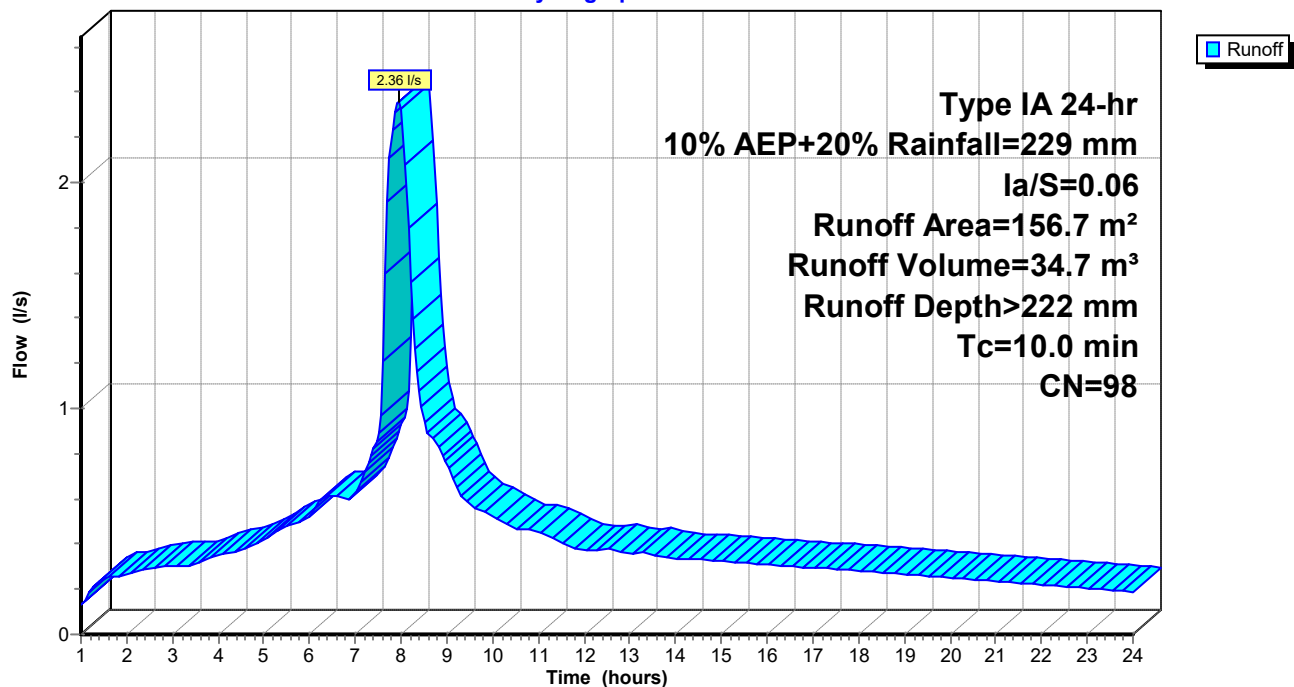
Summary for Subcatchment 29S: Proposed Concrete DrivewayRunoff = 2.36 l/s @ 7.94 hrs, Volume= 34.7 m³, Depth> 222 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, Ia/S=0.06

Area (m ²)	CN	Description
156.7	98	Paved roads w/curbs & sewers, HSG C
156.7		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 29S: Proposed Concrete Driveway

Hydrograph



129385

Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

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Summary for Subcatchment 30S: Future PoolRunoff = 1.51 l/s @ 7.94 hrs, Volume= 22.2 m³, Depth> 222 mm

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

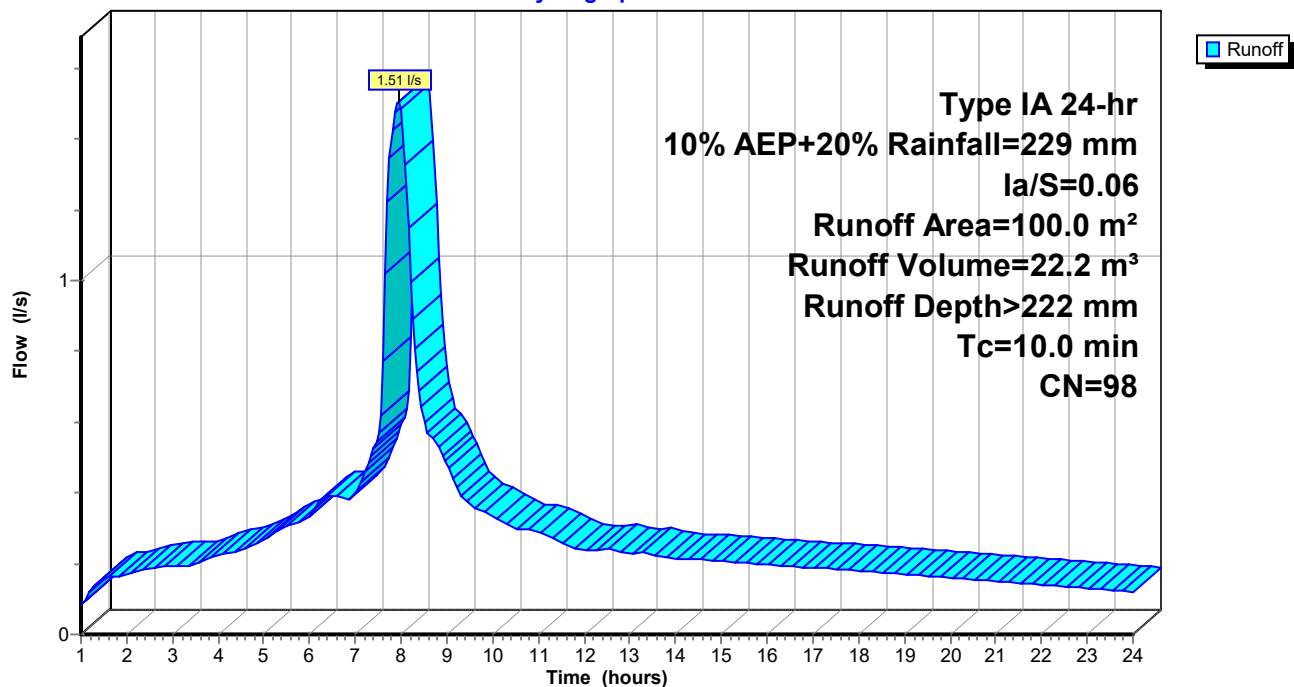
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
100.0	98	Paved roads w/curbs & sewers, HSG C
100.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 30S: Future Pool

Hydrograph



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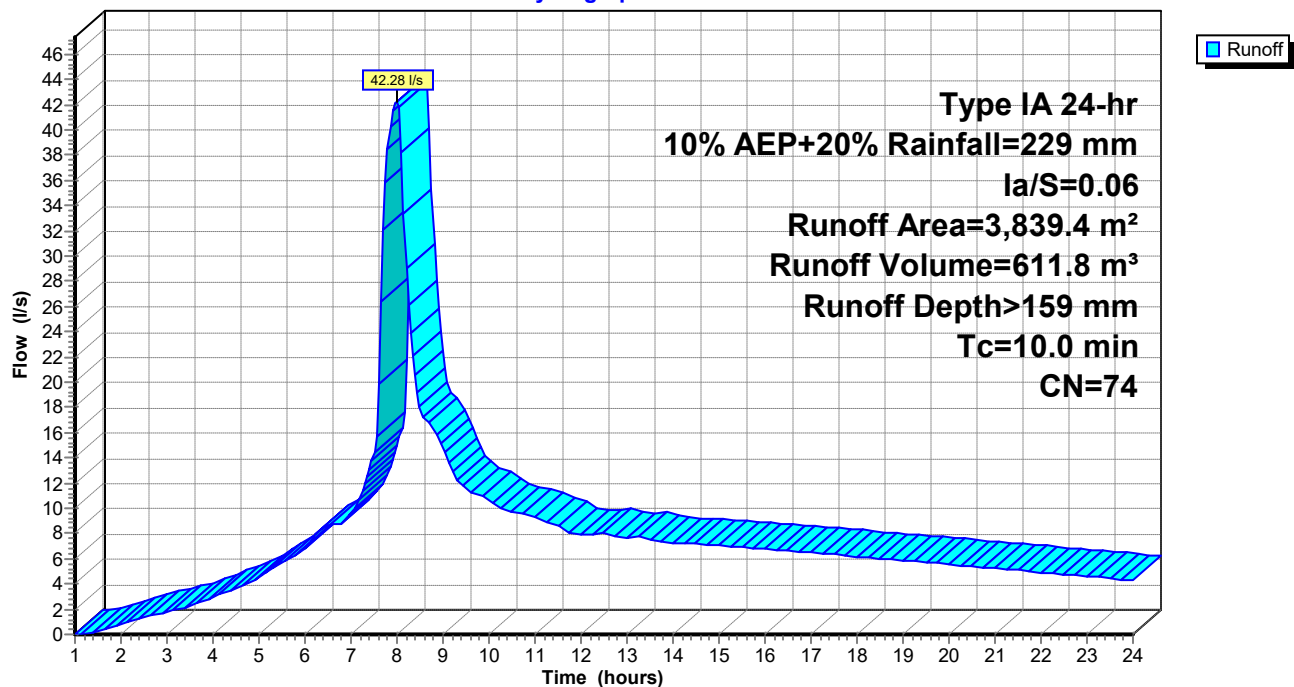
Summary for Subcatchment 31S: Remaining PastureRunoff = 42.28 l/s @ 7.98 hrs, Volume= 611.8 m³, Depth> 159 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

Area (m ²)	CN	Description
3,839.4	74	>75% Grass cover, Good, HSG C
3,839.4		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 31S: Remaining Pasture

Hydrograph



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Type IA 24-hr 10% AEP+20% Rainfall=229 mm, Ia/S=0.06

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Summary for Pond 21P: 3 x 25,000L Rainwater Tanks

Inflow Area = 439.1 m², 100.00% Impervious, Inflow Depth > 222 mm for 10% AEP+20% event
 Inflow = 6.62 l/s @ 7.94 hrs, Volume= 97.4 m³
 Outflow = 4.23 l/s @ 8.22 hrs, Volume= 96.4 m³, Atten= 36%, Lag= 16.8 min
 Primary = 4.23 l/s @ 8.22 hrs, Volume= 96.4 m³

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 0.263 m @ 8.22 hrs Surf.Area= 30.5 m² Storage= 8.0 m³

Plug-Flow detention time= 24.9 min calculated for 96.4 m³ (99% of inflow)
 Center-of-Mass det. time= 16.8 min (665.8 - 649.0)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	79.4 m ³	3.60 mD x 2.60 mH Vertical Cone/Cylinder x 3

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	65 mm Vert. Orifice/Grate C= 0.600
#2	Primary	0.270 m	65 mm Vert. Orifice/Grate C= 0.600

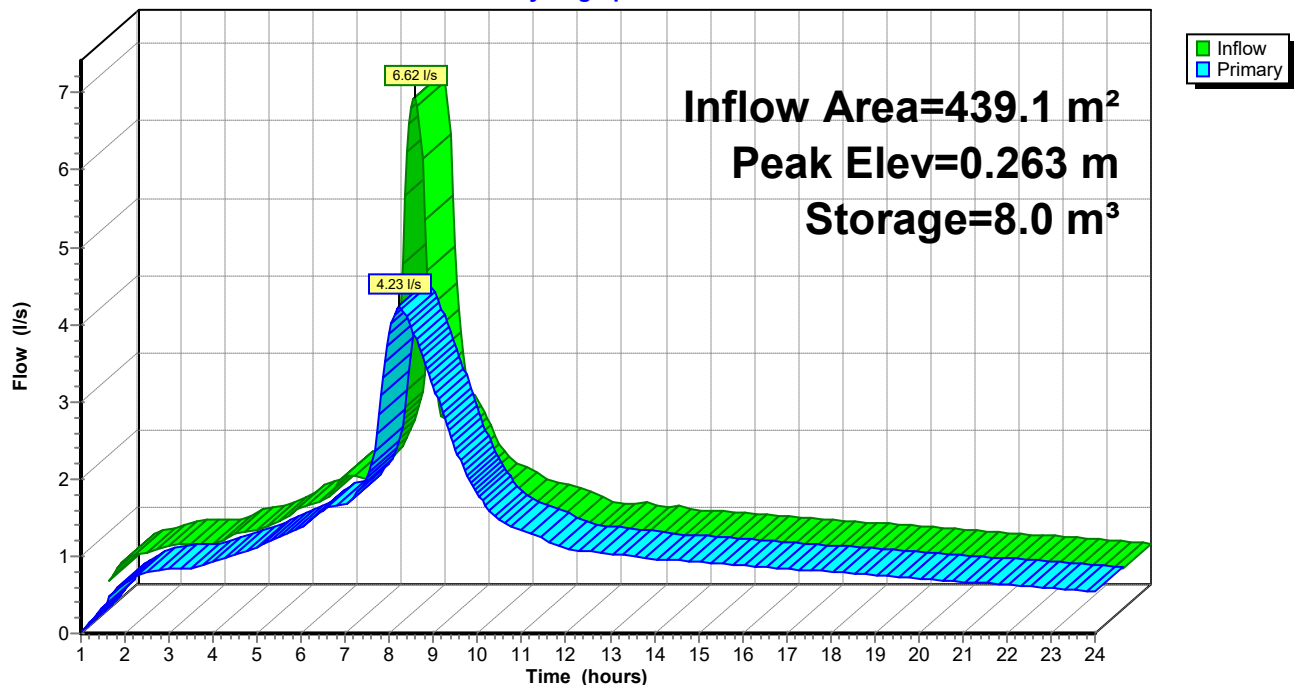
Primary OutFlow Max=4.23 l/s @ 8.22 hrs HW=0.263 m (Free Discharge)

1=Orifice/Grate (Orifice Controls 4.23 l/s @ 1.28 m/s)

2=Orifice/Grate (Controls 0.00 l/s)

Pond 21P: 3 x 25,000L Rainwater Tanks

Hydrograph



129385

Type IA 24-hr 10% AEP+20% Rainfall=229 mm, $Ia/S=0.06$

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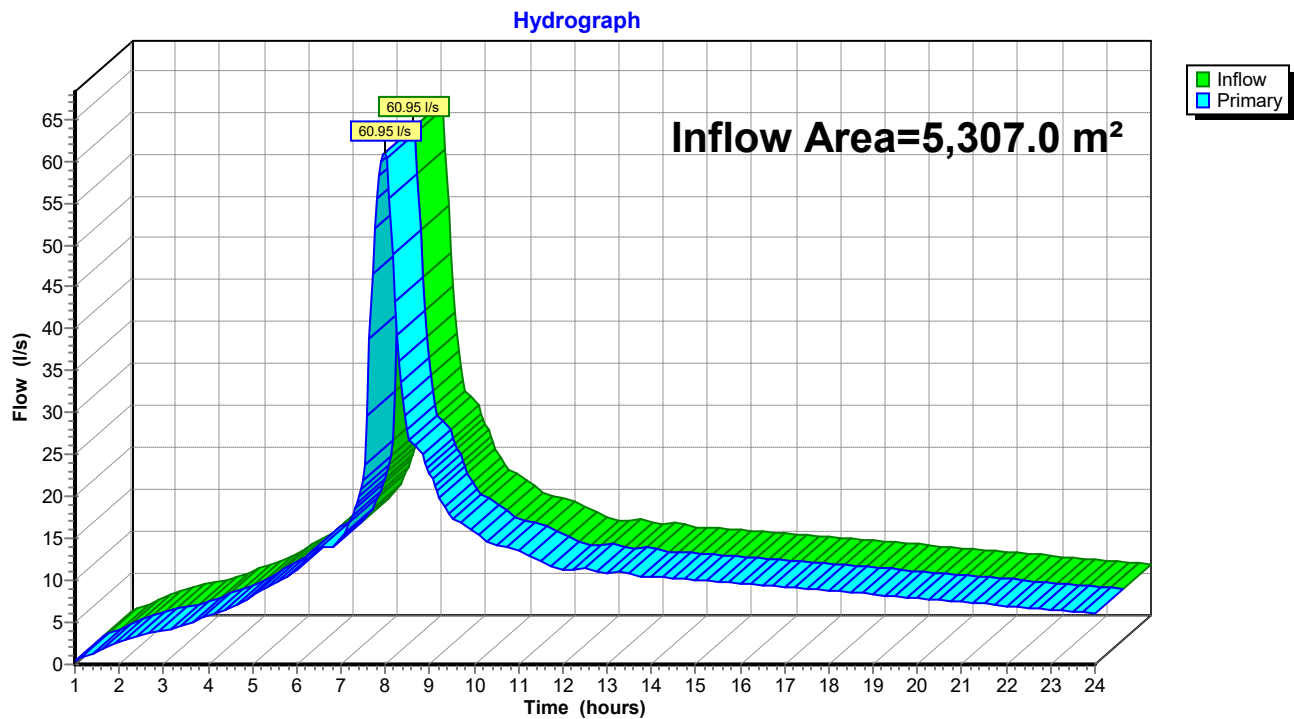
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Summary for Link 22L: Post-Development Peak Flows

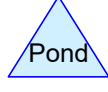
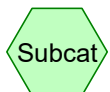
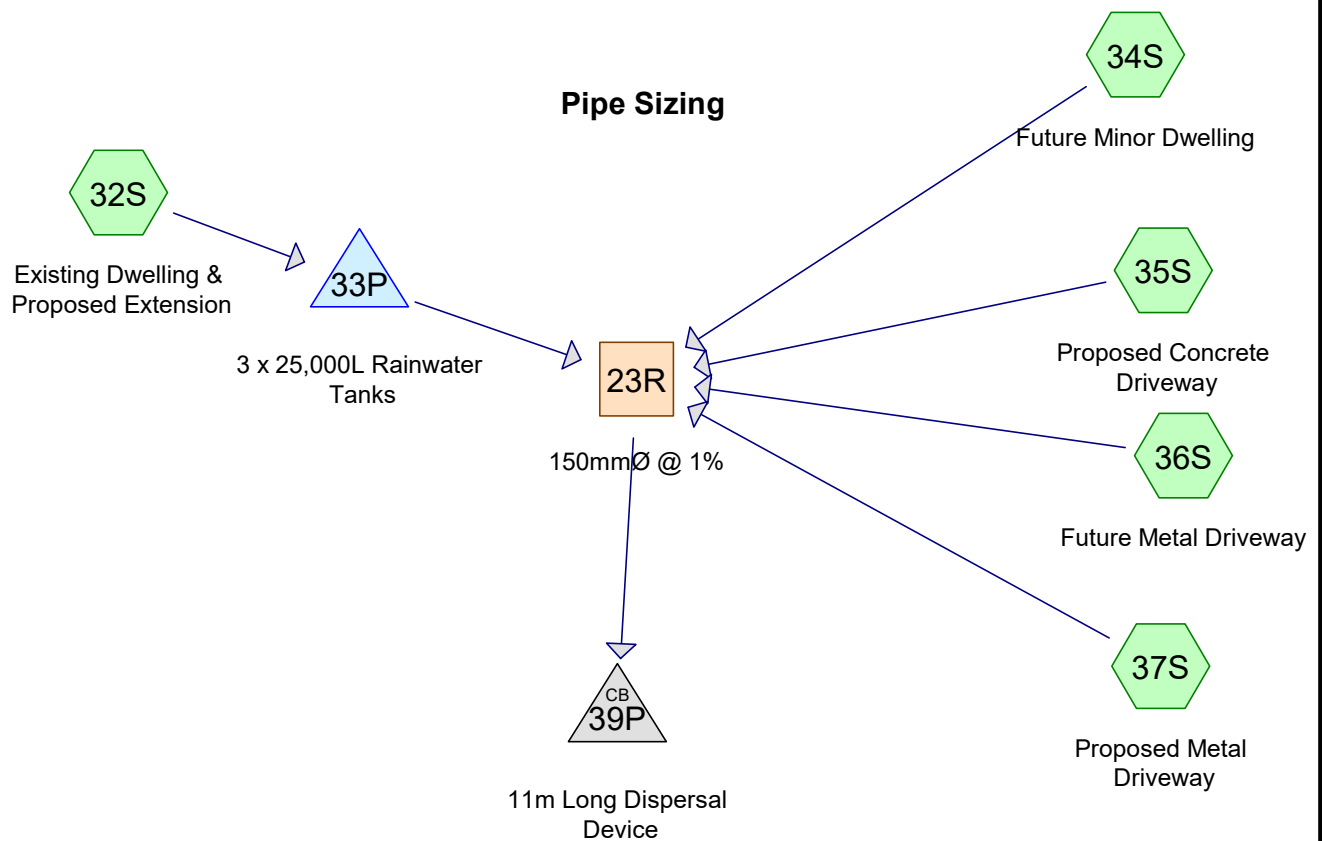
Inflow Area = 5,307.0 m², 16.90% Impervious, Inflow Depth > 174 mm for 10% AEP+20% event
Inflow = 60.95 l/s @ 7.98 hrs, Volume= 923.2 m³
Primary = 60.95 l/s @ 7.98 hrs, Volume= 923.2 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Link 22L: Post-Development Peak Flows



Pipe Sizing



Routing Diagram for 129385 - Pipe Sizing

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129385 - Pipe Sizing

Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 32S: Existing Dwelling Runoff Area=439.1 m² 100.00% Impervious Runoff Depth>341 mm
Tc=10.0 min CN=98 Runoff=10.14 l/s 149.7 m³

Subcatchment 34S: Future Minor Runoff Area=130.0 m² 100.00% Impervious Runoff Depth>341 mm
Tc=10.0 min CN=98 Runoff=3.00 l/s 44.3 m³

Subcatchment 35S: Proposed Runoff Area=156.7 m² 100.00% Impervious Runoff Depth>341 mm
Tc=10.0 min CN=98 Runoff=3.62 l/s 53.4 m³

Subcatchment 36S: Future Metal Driveway Runoff Area=69.8 m² 0.00% Impervious Runoff Depth>318 mm
Tc=10.0 min CN=89 Runoff=1.55 l/s 22.2 m³

Subcatchment 37S: Proposed Metal Runoff Area=48.1 m² 0.00% Impervious Runoff Depth>318 mm
Tc=10.0 min CN=89 Runoff=1.07 l/s 15.3 m³

Reach 23R: 150mmØ @ 1% Avg. Flow Depth=0.11 m Max Vel=1.15 m/s Inflow=16.47 l/s 283.8 m³
150 mm Round Pipe n=0.011 L=10.00 m S=0.0100 m/m Capacity=18.00 l/s Outflow=16.47 l/s 283.7 m³

Pond 33P: 3 x 25,000L Rainwater Tanks Peak Elev=0.389 m Storage=11.9 m³ Inflow=10.14 l/s 149.7 m³
Outflow=7.85 l/s 148.5 m³

Pond 39P: 11m Long Dispersal Device Peak Elev=0.113 m Inflow=16.47 l/s 283.7 m³
Outflow=16.47 l/s 283.7 m³

129385 - Pipe Sizing

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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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Summary for Subcatchment 32S: Existing Dwelling & Proposed Extension

Runoff = 10.14 l/s @ 7.94 hrs, Volume= 149.7 m³, Depth> 341 mm

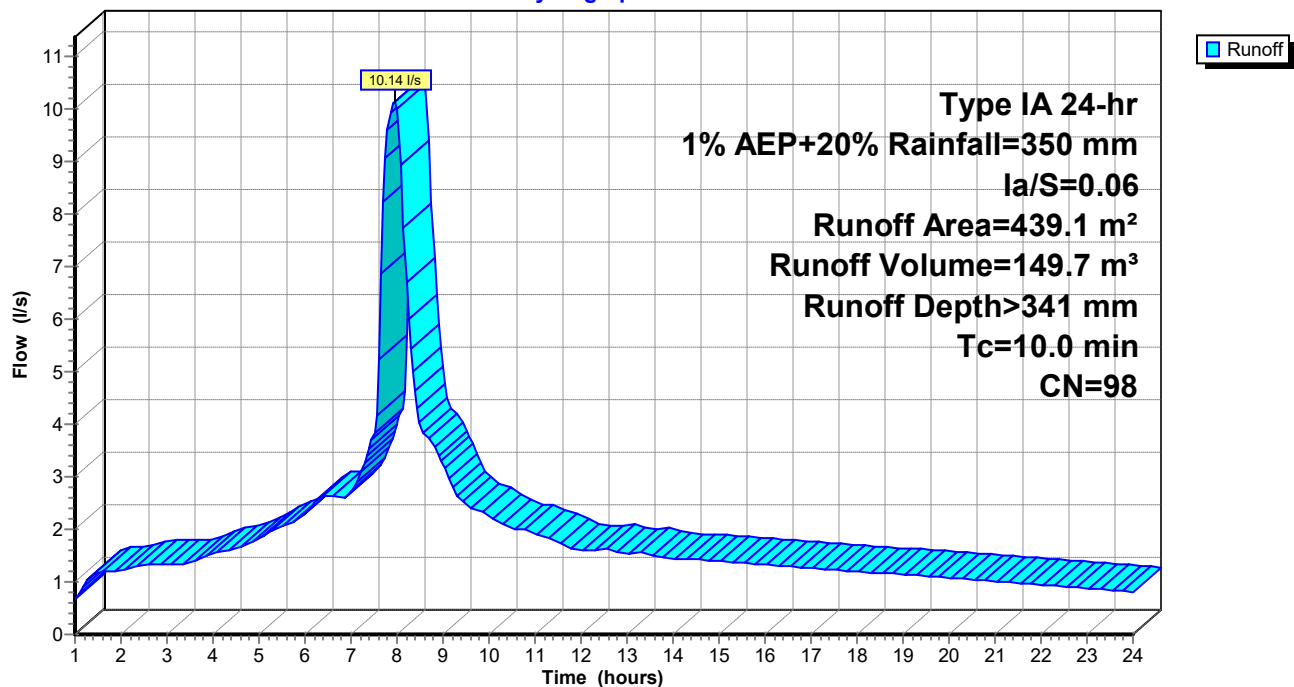
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
439.1	98	Roofs, HSG C
439.1		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 32S: Existing Dwelling & Proposed Extension

Hydrograph



129385 - Pipe Sizing

Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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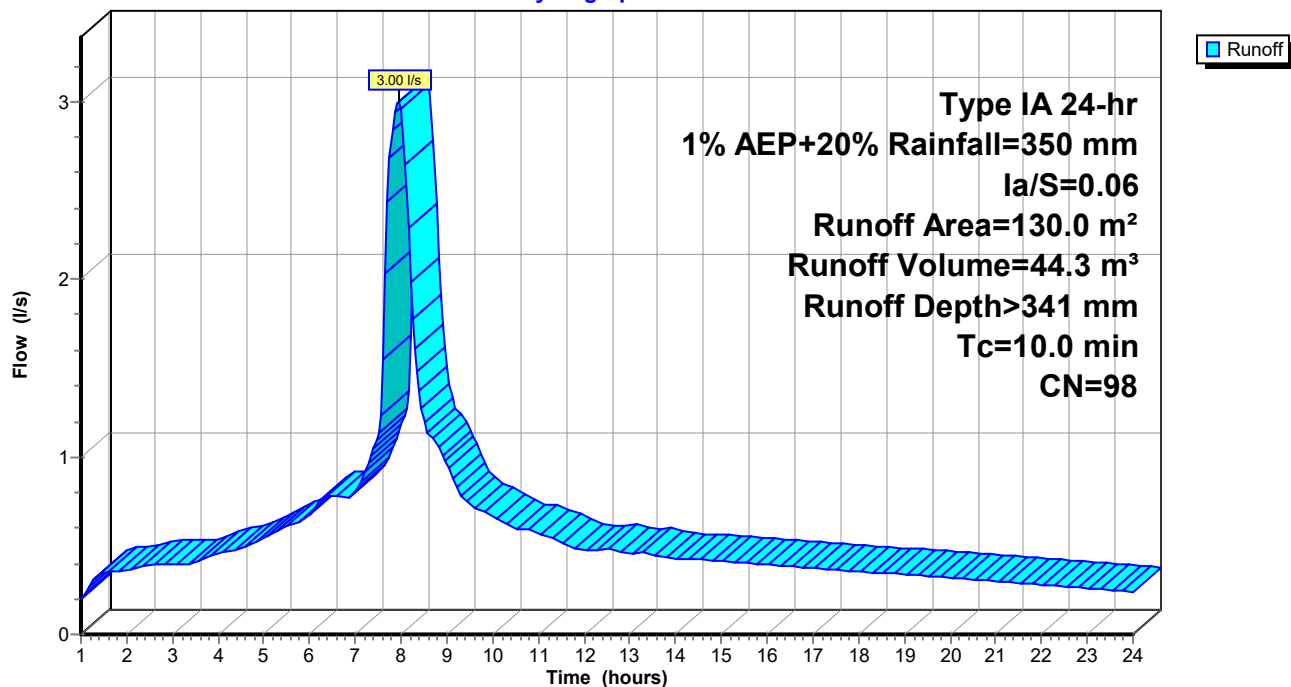
Summary for Subcatchment 34S: Future Minor DwellingRunoff = 3.00 l/s @ 7.94 hrs, Volume= 44.3 m³, Depth> 341 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
130.0	98	Roofs, HSG C
130.0		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 34S: Future Minor Dwelling

Hydrograph



129385 - Pipe Sizing

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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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Summary for Subcatchment 35S: Proposed Concrete Driveway

Runoff = 3.62 l/s @ 7.94 hrs, Volume= 53.4 m³, Depth> 341 mm

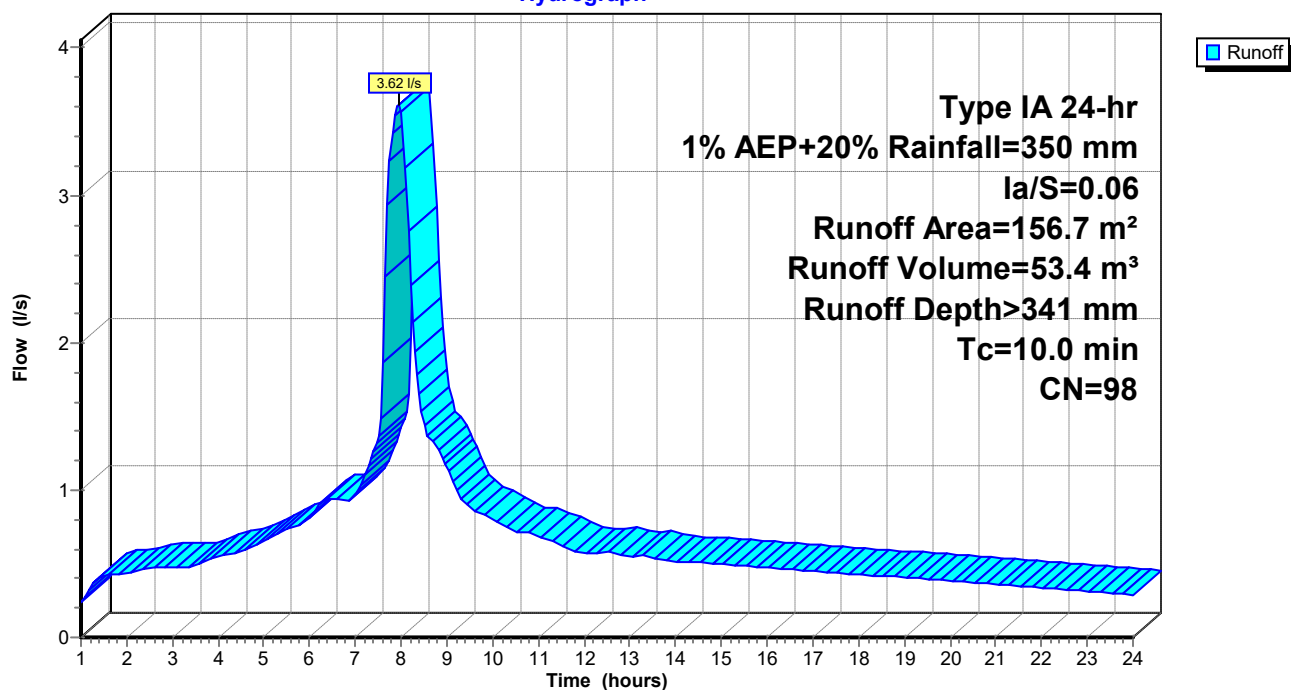
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m²)	CN	Description
156.7	98	Paved roads w/curbs & sewers, HSG C
156.7		100.00% Impervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry,

Subcatchment 35S: Proposed Concrete Driveway

Hydrograph



129385 - Pipe Sizing

Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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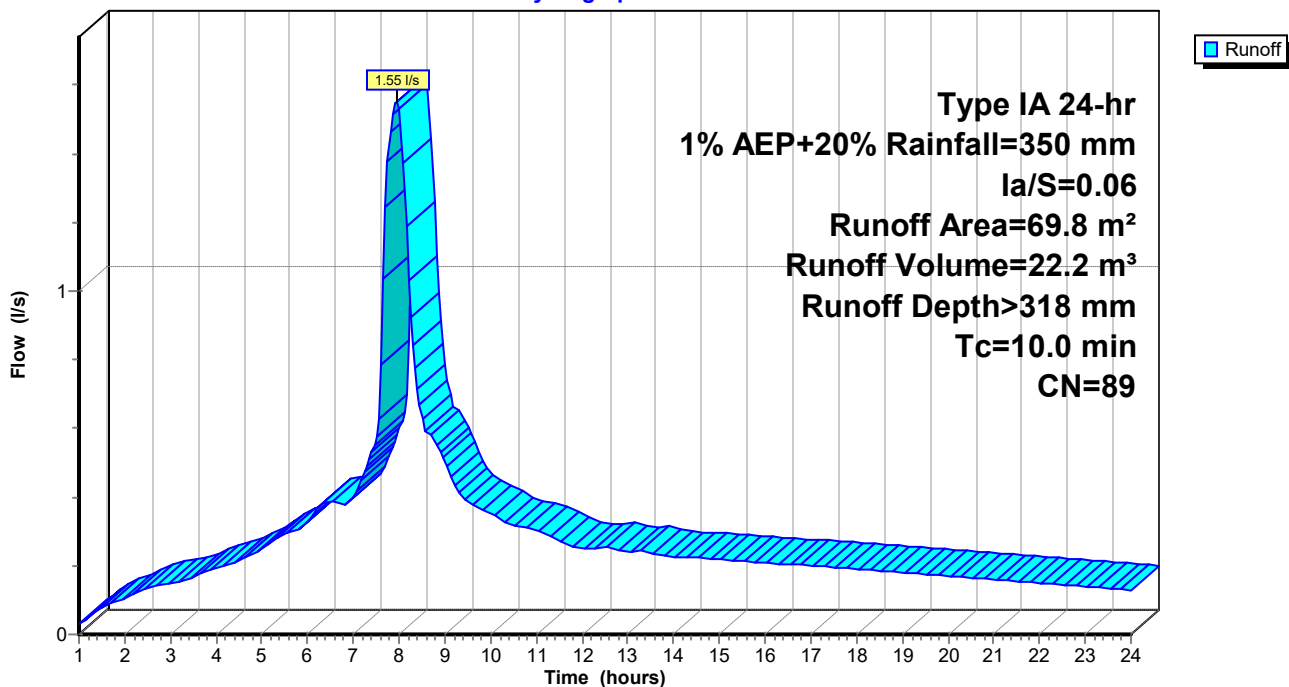
Summary for Subcatchment 36S: Future Metal DrivewayRunoff = 1.55 l/s @ 7.95 hrs, Volume= 22.2 m³, Depth> 318 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
69.8	89	Gravel roads, HSG C
69.8		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 36S: Future Metal Driveway

Hydrograph



129385 - Pipe Sizing

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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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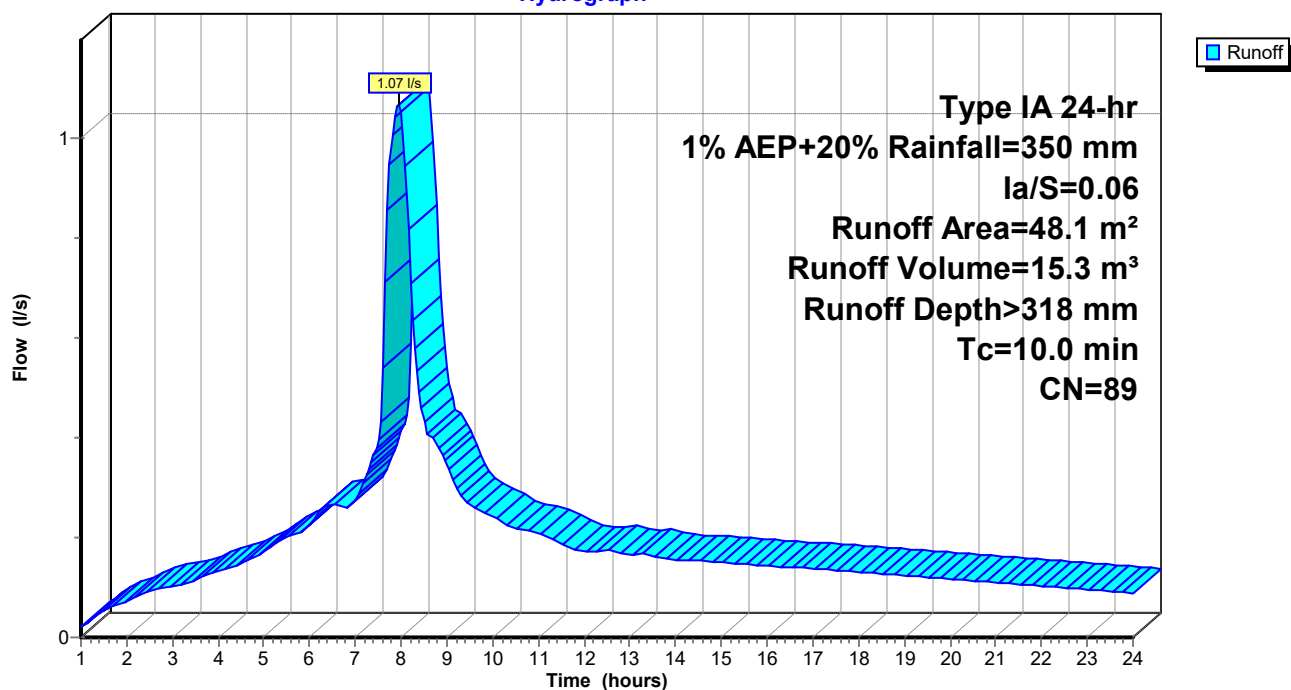
Summary for Subcatchment 37S: Proposed Metal DrivewayRunoff = 1.07 l/s @ 7.95 hrs, Volume= 15.3 m³, Depth> 318 mmRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Area (m ²)	CN	Description
48.1	89	Gravel roads, HSG C
48.1		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m ³ /s)	Description
10.0					Direct Entry,

Subcatchment 37S: Proposed Metal Driveway

Hydrograph



129385 - Pipe Sizing

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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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Summary for Reach 23R: 150mmØ @ 1%

Inflow Area = 843.7 m², 86.03% Impervious, Inflow Depth > 336 mm for 1% AEP+20% event
Inflow = 16.47 l/s @ 8.03 hrs, Volume= 283.8 m³
Outflow = 16.47 l/s @ 8.04 hrs, Volume= 283.7 m³, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.15 m/s, Min. Travel Time= 0.1 min

Avg. Velocity= 0.76 m/s, Avg. Travel Time= 0.2 min

Peak Storage= 0.1 m³ @ 8.04 hrs

Average Depth at Peak Storage= 0.11 m

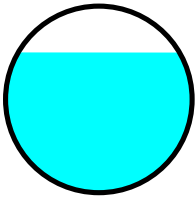
Bank-Full Depth= 0.15 m Flow Area= 0.02 m², Capacity= 18.00 l/s

150 mm Round Pipe

n= 0.011 PVC, smooth interior

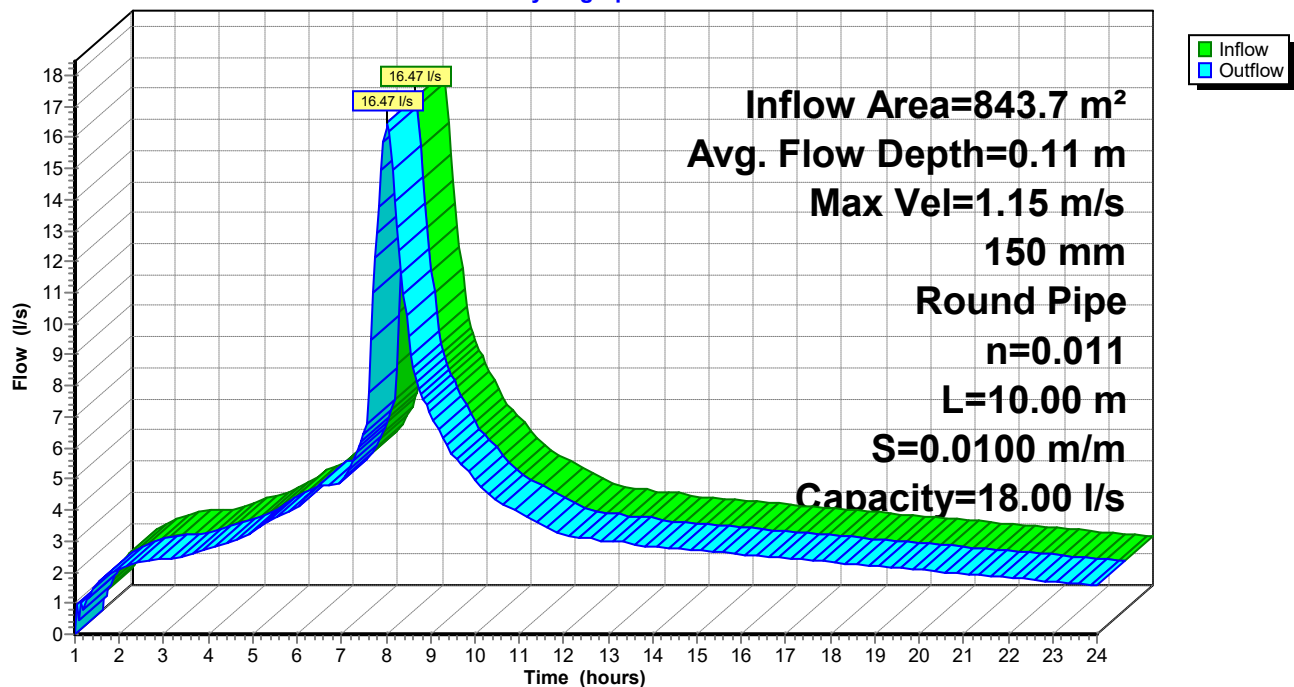
Length= 10.00 m Slope= 0.0100 m/m

Inlet Invert= 0.000 m, Outlet Invert= -0.100 m



Reach 23R: 150mmØ @ 1%

Hydrograph



129385 - Pipe Sizing

Prepared by Wilton Joubert Limited

HydroCAD® 10.00-26 s/n 10413 © 2020 HydroCAD Software Solutions LLC

Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

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Summary for Pond 33P: 3 x 25,000L Rainwater Tanks

Inflow Area = 439.1 m², 100.00% Impervious, Inflow Depth > 341 mm for 1% AEP+20% event
Inflow = 10.14 l/s @ 7.94 hrs, Volume= 149.7 m³
Outflow = 7.85 l/s @ 8.15 hrs, Volume= 148.5 m³, Atten= 23%, Lag= 12.6 min
Primary = 7.85 l/s @ 8.15 hrs, Volume= 148.5 m³

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 0.389 m @ 8.15 hrs Surf.Area= 30.5 m² Storage= 11.9 m³

Plug-Flow detention time= 24.2 min calculated for 148.1 m³ (99% of inflow)

Center-of-Mass det. time= 17.2 min (663.5 - 646.3)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	79.4 m ³	3.60 mD x 2.60 mH Vertical Cone/Cylinder x 3

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	65 mm Vert. Orifice/Grate C= 0.600
#2	Primary	0.270 m	65 mm Vert. Orifice/Grate C= 0.600

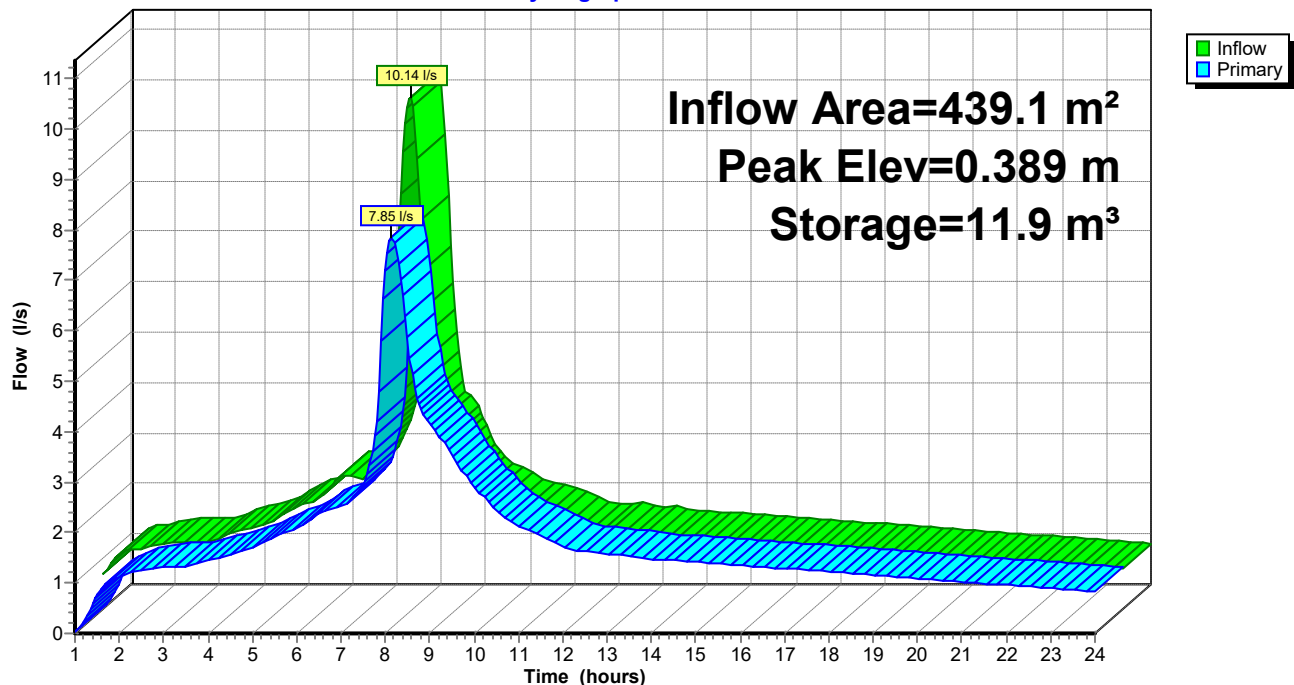
Primary OutFlow Max=7.85 l/s @ 8.15 hrs HW=0.388 m (Free Discharge)

1=Orifice/Grate (Orifice Controls 5.26 l/s @ 1.59 m/s)

2=Orifice/Grate (Orifice Controls 2.59 l/s @ 0.78 m/s)

Pond 33P: 3 x 25,000L Rainwater Tanks

Hydrograph



129385 - Pipe Sizing

Prepared by Wilton Joubert Limited

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Type IA 24-hr 1% AEP+20% Rainfall=350 mm, Ia/S=0.06

Printed 18/08/2025

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Summary for Pond 39P: 11m Long Dispersal Device

Inflow Area = 843.7 m², 86.03% Impervious, Inflow Depth > 336 mm for 1% AEP+20% event
Inflow = 16.47 l/s @ 8.04 hrs, Volume= 283.7 m³
Outflow = 16.47 l/s @ 8.04 hrs, Volume= 283.7 m³, Atten= 0%, Lag= 0.0 min
Primary = 16.47 l/s @ 8.04 hrs, Volume= 283.7 m³

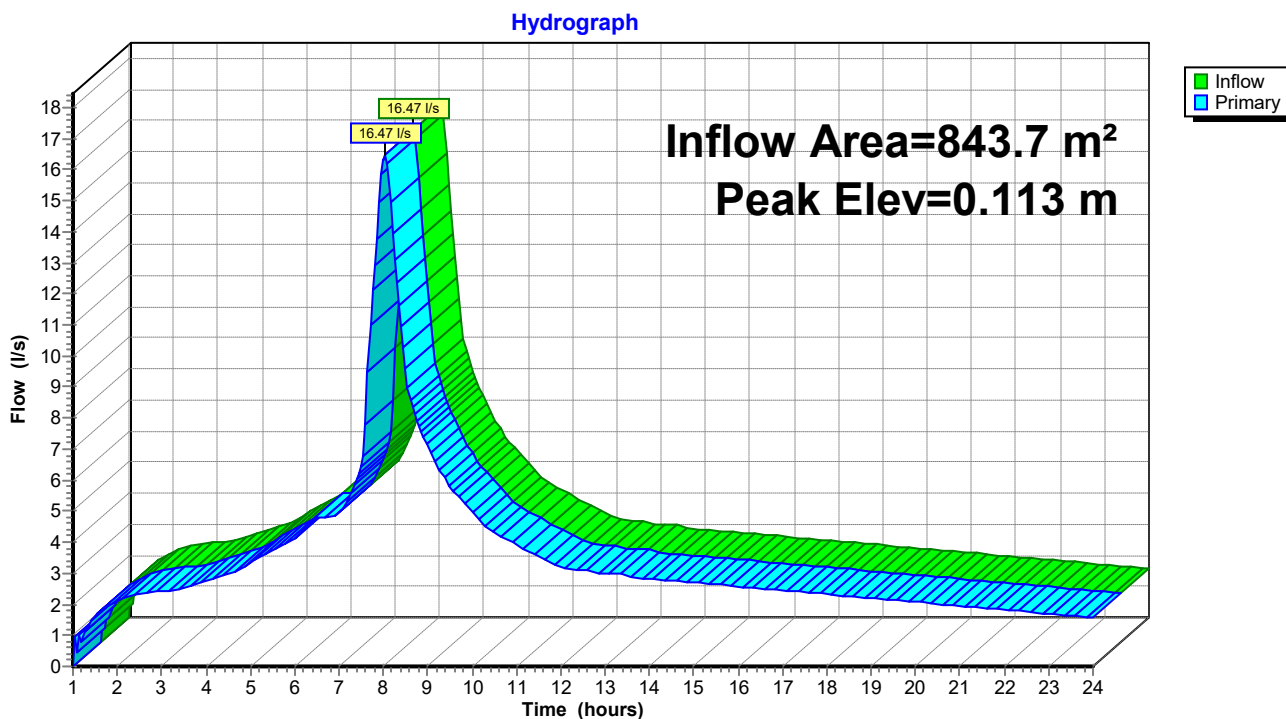
Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 0.113 m @ 8.04 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	15 mm Vert. Orifice/Grate X 108.00 C= 0.600

Primary OutFlow Max=16.41 l/s @ 8.04 hrs HW=0.112 m (Free Discharge)
↑1=Orifice/Grate (Orifice Controls 16.41 l/s @ 0.86 m/s)

Pond 39P: 11m Long Dispersal Device



SITE SUITABILITY REPORT

11 Ironbark Road, Waipapa 0295



T&A STRUCTURES LTD.

26 July, 2025

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1. PROJECT

1.1 Project Details

Client's Name	:	Regan & Rebekah Polglaze
Site Address	:	11 Ironbark Road, Waipapa 0295
Lot Number	:	9
DP number	:	145038

1.2 Brief

T&A Structures Ltd were engaged by the Client to undertake a Site Suitability Report with the purpose of checking the suitability of the site for the proposed new developments. The site assessment was carried out on 14 July 2025.

This report addresses the suitability of the site for the proposed dwelling. As part of the assessment, the report undertakes to:

- Describe the soils at the site;
- Quantify sub-soil conditions to allow selection of foundation types;
- Note any pertinent features of the land;
- Make recommendations regarding further investigations if necessary.

It was understood that the Client proposes to do some alterations to the existing house and then extend it southwards. The extension will include 3 bedrooms, 3-bay garage and a workshop occupying about 235 square metres in area. The extension will be a single-level lightweight structure on concrete foundation.

This report also covers the following future developments:

- Pool with fence, to be constructed at the northern part of the property, at the western side of the existing deck.
- Minor dwelling, to be built near the entrance of the property.

2. SITE DESCRIPTION

The property occupies a land area of about 5,307 square metres. Existing structures in the property includes a house at the northern part of the property which will be altered, a shed at front of the house which will be removed, a dwelling at the eastern part of the property which will be relocated and an office building at the western side of the existing driveway.

As mentioned above, the existing dwelling is located at the northern part of the property, near to the northern boundary. The proposed house extension will be towards the south. The ground in this area is predominantly flat as this area is currently occupied by an existing shed.

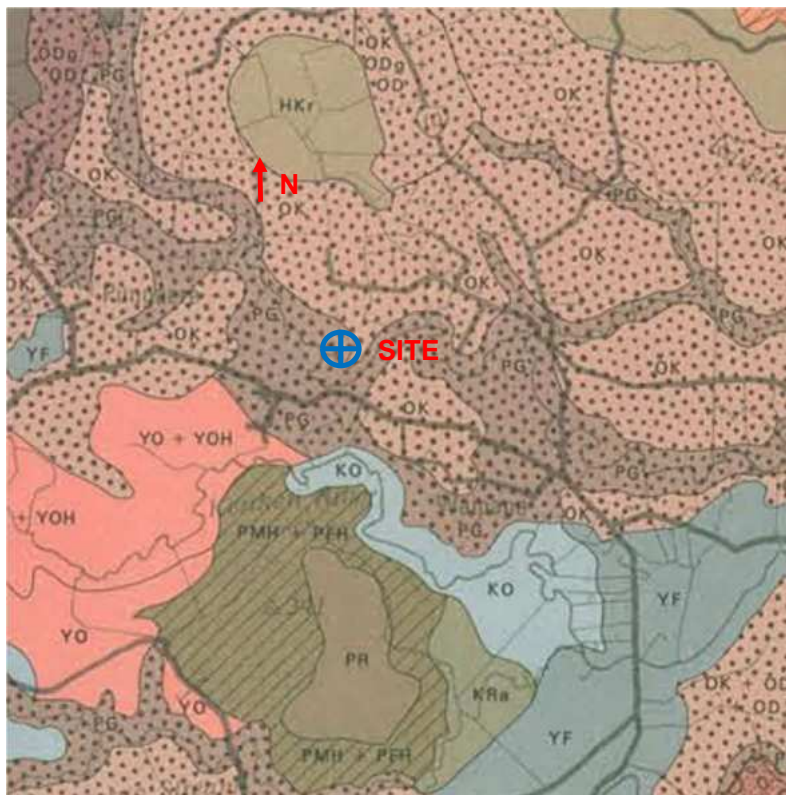
The proposed pool will be constructed at the western side of the existing deck, about 2.4 metres from the northern boundary which is defined by an existing pole retaining wall. The ground in this area is gently sloping down towards the north by an average slope of about 8.5 degrees and is covered by a well-maintained grass.

The proposed minor dwelling is to be constructed at the western part of the property. The ground in this area is sloping down gently towards the west by an average slope of about 10 to 12 degrees. This area is currently covered with bush.

3. GEOTECHNICAL INVESTIGATIONS

3.1 Geology

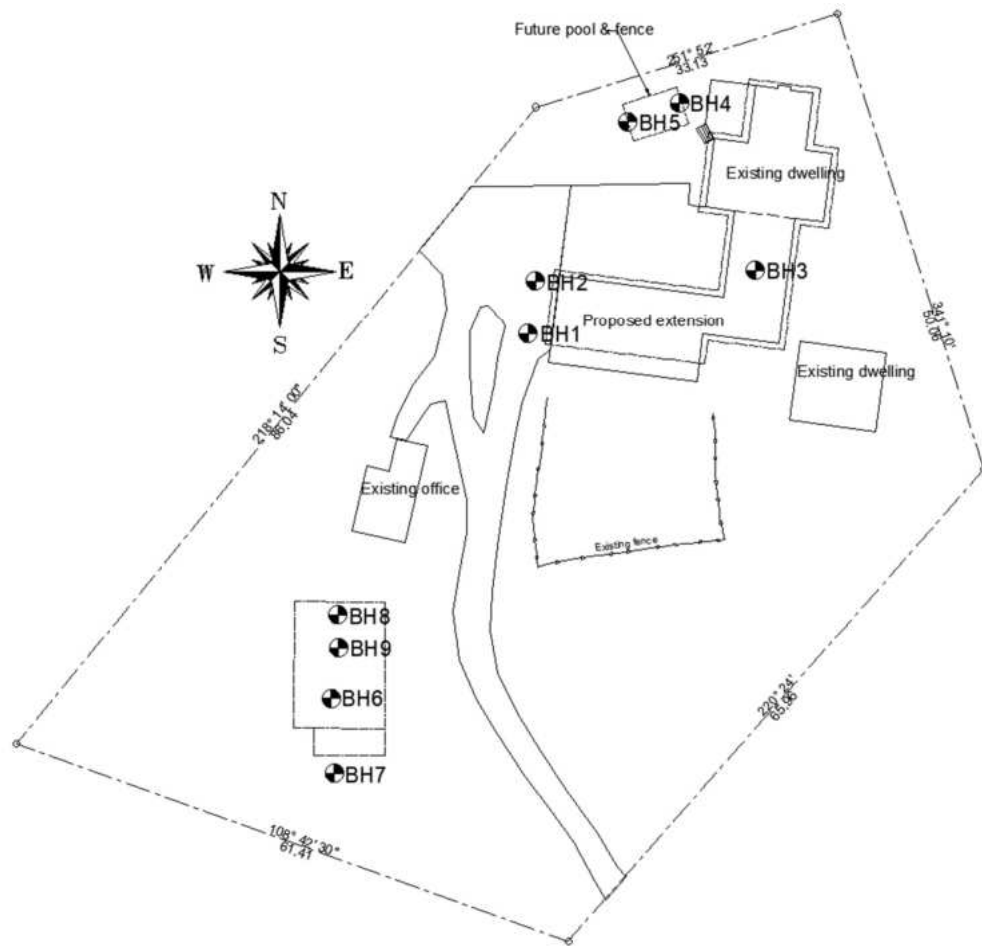
The land is described in the New Zealand Land Inventory NZMS 290 series as Pungaere gravelly friable clay (PG), belonging to the Soils of the Rolling and Hilly Land and categorised as well to moderately well drained soils. This has been found to be consistent with the results of the site investigation.



3.2 Subsurface Investigations

The investigations undertaken included a walkover inspection, one augered borehole and eight Scala Penetrometer tests. The location plan of the test holes is attached below.

The borehole logs are attached as Appendix 1 to this report. The depths of strata on the Engineer's log are measured from ground levels at each exploratory hole.



3.4 Subsurface Findings

The subsoil materials were found to have the following bearing capacities 600 to 1000mm below existing ground level:

	BEARING CAPACITY (kPa)	DESCRIPTION
Allowable bearing capacity	100	the reading the inspector obtained with any specialised equipment
Ultimate bearing capacity	300	value = 3 times the allowable bearing capacity
Ultimate dependable bearing capacity	150	value = 1.5 times the allowable bearing capacity

From the results of our preliminary investigations, we were able to establish that in the area of the proposed developments, the subsurface soils comprised of about 600 to 1000mm thick, soft gravelly clay soil underlain with stiff to hard gravelly clay. 100mm to 200mm topsoil was encountered at the proposed pool and minor dwelling locations. Ground water was not encountered in any of the test holes. It should be noted however, that ground water table will vary according to season.

The subsurface conditions are detailed on the borehole logs in Appendix 1. The observations noted in the investigations have been extrapolated between the various test locations to infer probable site conditions. It is noted that these inferences in no way guarantee the validity of these findings due to the inherent variability of natural soil deposits. The actual ground conditions discovered during excavation may vary from what is reported herein.

4. MATERIAL PROPERTIES

Soil shear strengths (measured with shear vane, BH9) are well over 190 kpa.

The eight Scala Penetrometer tests (BH1 to BH8) carried out within the proposed developments generally reached 100 kpa (3.3 blows per 100mm) allowable soil bearing capacity at 1000mm bgl at the proposed house extension and 600mm bgl at the proposed pool and minor dwelling and consistently have higher readings as the scala was driven down.

5. STORMWATER AND SEWERAGE

The FNDC 3 Waters Map indicated that both the council's stormwater and wastewater reticulated systems are not available in this site for the stormwater mitigation and wastewater proper disposal. It is recommended that a suitably qualified professional be engaged to sort out the proper disposal and mitigation of the wastewater and stormwater, respectively, generated by this development.

Any site-specific stormwater management design and/or wastewater disposal system design, if required, is outside the scope of this report.

6. NATURAL HAZARD

The NRC Natural Hazards Map indicated that as of writing this report, there were no any natural hazard affecting the property which could affect the proposed development.



7. ASSESSMENT

7.1 Expansiveness

Based on the results of our field investigation, along with our knowledge and experience with these kinds of soils, we classify the investigated site as moderately expansive in terms of AS2870:2011. Expansive soils are prone to shrinkage and swelling effects resulting from moisture changes from within the soil.

We note that no laboratory testing of the material to confirm the soil expansivity was undertaken.

7.2 Site Stability

The site did not appear to be subject to creep or instability. There appear to be no recent ground movement on the site. It is also anticipated that the proposed development will not affect or worsen the current stability of the site.

7.3 Earthworks and Retaining Structures

As mentioned earlier, the ground in the site where the proposed dwelling and other proposed developments are to be built is sloping. A level building platform, if required, will need a cut and/or fill operation. Cuts and fills in excess of 0.5m high and within 3.0 metres from any of the building footprints, if needed should either be battered back at no greater than 1v:2h or retained by a suitably designed retaining wall. Any retaining wall retaining at least a metre of soil should be specifically designed according to the following parameters:

- Unit weight of soil: 18 kN/m³
- Angle of internal friction: 28°
- Undrained soil shear strength: 80 kpa

7.4 Liquefaction Potential

Liquefaction occurs when the structure of a loose, saturated sand breaks down due to some rapidly applied loading such as earthquake shaking. As mentioned above, the soil in the site is cohesive clay. Ground water was not encountered in any of the boreholes. In addition, the site is in Northland where earthquake occurrence is considered unlikely. Hence, it is considered that liquefaction is unlikely to occur on this site.

A detailed liquefaction assessment for this site is outside the scope of this study.

7.5 Foundation System

The soils on this site are considered to be moderately expansive and soft. The soils appeared to have not complied with the definition of “good ground” as noted in NZS3604:2011. It is however, considered that the site is suitable for the proposed development. The following are the recommended foundation options:

- For the proposed house extension, a specifically designed ribraft concrete slab foundation is recommended. The top 300mm of soil, including topsoil if any should be taken out and be replaced with compacted hardfill, preferably Gap 65 or 40, placed and compacted at every 150mm fill layer. Any pockets of soft and organic soil including rocks and remnants of the existing foundation, should be over-excavated. The foundation should be designed for a maximum allowable soil bearing pressure of 75Kpa. The edge footing should be embedded at least 600mm into the ground. It is expected that this depth is enough to mitigate the possible effect of seasonal ground movements due to soil expansion or contraction.
- For the proposed future minor dwelling, a pile foundation designed according to the requirements of NZS3604:2011 is recommended provided that the piles are embedded into the ground at least 900mm. At these depths, it is expected that the soil has at least 300kpa ultimate soil bearing capacity. It is also expected that these depths are enough to mitigate the possible effect of seasonal ground movements due to soil expansion or contraction. Any rocks encountered during drilling of the pile foundation should be over-excavated. Any enlarged holes due to removed rocks should be fully filled with concrete.
- The proposed pool is located about 2.4 metres south of the existing retaining wall. The retaining wall ranges from 1200mm to 1500mm high within the vicinity of the proposed pool. The pool foundation should be specifically design. The top 300mm of soil, including topsoil if any should be taken out and be replaced with compacted hardfill, preferably Gap 65 or 40, placed and compacted at every 150mm fill layer. Any pockets of soft and organic soil including rocks and remnants of the existing foundation, should be over-excavated. The foundation should be designed for a maximum allowable soil bearing pressure of 75Kpa. It should be designed in such a way that it will not cause extra surcharge to the existing retaining wall.

8. OTHER RECOMMENDATIONS

- In case of shallow foundation, the exposed subsoils should be examined, and any potential soft spots are to be over-excavated. Replacement fill shall be GAP 65 or GAP 40 placed in layers not exceeding 150mm thick and compacted with a suitable compactor. Any fill exceeding 600mm thick should be tested for compaction.
- All stormwater collected from roofed and paved surfaces together with discharges from retaining walls and other subsoil drains shall be controlled and piped away from the proposed building footprint. Ensure that no uncontrolled runoff or concentrated discharges are directed onto open ground, into soakage pits or into subsoil drainage systems.
- Fill materials beneath any on-ground slab shall be GAP 65 or GAP 40 placed and compacted in layers not exceeding 150mm thick. Any fill exceeding 600mm thick should be tested for compaction.
- In case of shallow foundation, an engineer should inspect the earthworks, building platform and foundation prior to the concrete being poured to ensure that the actual soil parameters are as mentioned in this report or better. Producer Statements PS4 – Construction Review should be required for each of these stages.

9. LIMITATIONS






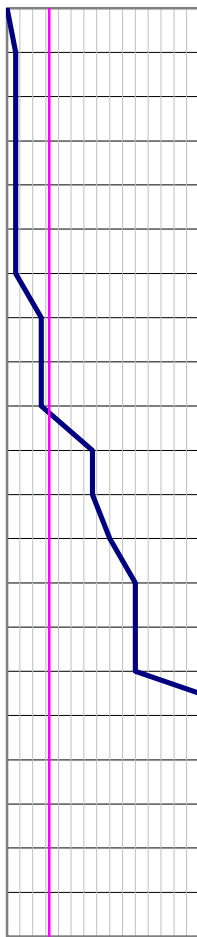
- Our responsibility for this report is limited to the Client named in this report. We disclaim all responsibility and will accept no liability to any other person unless that party has obtained the written consent of T&A Structures Ltd. T&A Structures Ltd reserves the right to qualify or amend any opinion expressed in this report in dealing with any other party. It is not to be relied upon for any other purpose without reference to T&A Structures Ltd.
- Recommendations and opinions in this report are based on data obtained from the investigations and site observations as detailed in this report. The nature and continuity of subsoil conditions at locations other than the investigation bores and tests are inferred and it should be appreciated that actual conditions could vary from the assumed model.
- It is essential that this office be contacted if there is any variation in subsoil conditions from those described in this report as it may affect the design parameters recommended.
- This report was carried for the purpose of checking the ground with respect to the proposed development. This should not be taken as a full geotechnical report.
- Our professional services were performed using a degree of care and skill normally exercised, under similar circumstances, by reputable consultants practicing in this field at the time.



Teo Pilapil
Chartered Professional Engineer
Structural Engineer, CMEngNZ CPEng

T&A STRUCTURES LTD.

10. APPENDIX 1: BORE LOGS

BORE HOLE LOG BH1 (extension)						Job No.		059-FND-25SD	
Address		11 Ironbark Road, Waipapa 0295							
Client		Regan & Rebekah Polglaze							
Borehole Location			Refer to site plan						
Surface elevation							Datum	Ground level	
Surface Condition			Grassed						
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Fill</div> <div style="text-align: center;"> Topsoil</div> <div style="text-align: center;"> Sand</div> <div style="text-align: center;"> Clay</div> <div style="text-align: center;"> Silt</div> </div>									
Depth mm	G.W.L	Geologic Unit	Graphic Log	Field Description	Undrained Shear Strength (kPa) Corrected (Per NZGS guideline)				Scala Penetrometer (blows/ 100 mm)
					50	100	150	200	3 6 9 12
_____					0				

300									





600									

900									






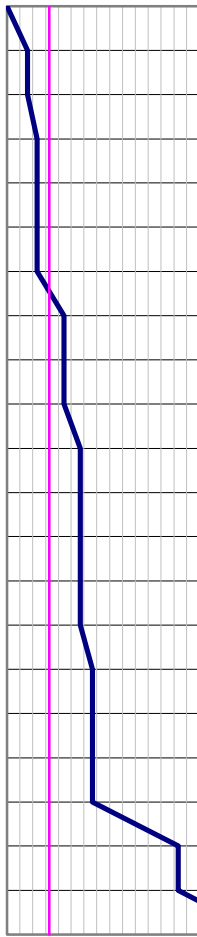





1200									







1500									






1800									


2100									
Drill Method		Scala penetrometer							
Date Drilled		14 Jul 2025							
Drilled by		Teo							
Shear Vane No									
<p>NOTE : The subsurface data described above has been determined at this specific borehole location</p> <p>Such data will not identify any variations away from this location</p>									
 <p>T&A STRUCTURES LTD CHARTERED PROFESSIONAL ENGINEERS</p> <p>www.tastructures.co.nz info.tastructures@gmail.com</p>					Tests In situ shear vane reading  Remoulded shear vane reading  Scala Penetrometer ● 100 kPa reference line 				

BORE HOLE LOG BH2 (extension)						
Address		Job No.				
		059-FND-25SD				
Client		Regan & Rebekah Polglaze				
Borehole Location		Refer to site plan				
Surface elevation		Datum	Ground level			
Surface Condition		Grassed				
<div style="display: flex; justify-content: space-around;"><div> Fill</div><div> Topsoil</div><div> Sand</div><div> Clay</div><div> Silt</div></div>						
Depth mm	G.W.L	Geologic Unit	Graphic Log	Field Description	Un drained Shear Strength (kPa) Corrected (Per NZGS guideline) <div>50 100 150 200</div>	Scala Penetrometer (blows / 100 mm) <div>3 6 9 12</div>
_____					0	
_____					O	
_____					O	
300					O	
_____					O	
_____					O	
_____					O	
600					O	
_____					O	
_____					O	
_____					O	
900					O	
_____					O	
_____					O	
1200					O	
_____					O	
1500					O	
_____	O					
_____	O					
1800	O					
_____	O					
_____	O					
2100	O					
Drill Method		Scala penetrometer				
Date Drilled	14 Jul 2025		NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location			
Drilled by	Teo					
Shear Vane No						
<div>T&A STRUCTURES LTD CHARTERED PROFESSIONAL ENGINEERS www.tastructures.co.nz info.tastructures@gmail.com</div>					<div>Tests<div>In situ shear vane reading</div><div>Remoulded shear vane reading</div><div>Scala Penetrometer</div><div>100 kPa reference line</div></div>	

BORE HOLE LOG BH3 (extension)						Job No.		059-FND-25SD	
Address		11 Ironbark Road, Waipapa 0295							
Client		Regan & Rebekah Polglaze							
Borehole Location			Refer to site plan						
Surface elevation						Datum		Ground level	
Surface Condition			Grassed						
 Fill  Topsoil  Sand  Clay  Silt									
Depth mm	G.W.L	Geologic Unit	Graphic Log	Field Description	Undrained Shear Strength (kPa) Corrected (Per NZGS guideline) 50 100 150 200				Scala Penetrometer (blows/ 100 mm) 3 6 9 12
_____					0				
_____					0				
_____					0				
_____					0				
300					0				
_____					0				
_____					0				
_____					0				
_____					0				
600					0				
_____					0				
_____					0				
_____	0								
900	0								
_____	0								
_____	0								
_____	0								
1200	0								
_____	0								
_____	0								
_____	0								
1500	0								
_____	0								
_____	0								
_____	0								
1800	0								
_____	0								
_____	0								
_____	0								
2100	0								
Drill Method		Scala penetrometer							
Date Drilled		14 Jul 2025		NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location					
Drilled by		Teo							
Shear Vane No									
 T&A STRUCTURES LTD CHARTERED PROFESSIONAL ENGINEERS www.tastructures.co.nz info.tastructures@gmail.com					Tests In situ shear vane reading  Remoulded shear vane reading  Scala Penetrometer  100 kPa reference line 				

BORE HOLE LOG BH4 (pool)						Job No.		059-FND-25SD	
Address		11 Ironbark Road, Waipapa 0295							
Client		Regan & Rebekah Polglaze							
Borehole Location			Refer to site plan						
Surface elevation							Datum	Ground level	
Surface Condition			Grassed						
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Fill</div> <div style="text-align: center;"> Topsoil</div> <div style="text-align: center;"> Sand</div> <div style="text-align: center;"> Clay</div> <div style="text-align: center;"> Silt</div> </div>									
Depth mm	G.W.L	Geologic Unit	Graphic Log	Field Description	Undrained Shear Strength (kPa) Corrected (Per NZGS guideline)				Scala Penetrometer (blows/ 100 mm)
					50	100	150	200	3 6 9 12
300									
600									
900									
1200									
1500									
1800									
2100									
Drill Method		Scala penetrometer							
Date Drilled		14 Jul 2025		NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location					
Drilled by		Teo							
Shear Vane No									
 <p>T&A STRUCTURES LTD CHARTERED PROFESSIONAL ENGINEERS</p> <p>www.tastructures.co.nz info.tastructures@gmail.com</p>					Tests In situ shear vane reading Remoulded shear vane reading Scala Penetrometer ● 100 kPa reference line —				

BORE HOLE LOG BH5 (pool)						Job No.			
Address						059-FND-25SD			
Client									
Borehole Location						Refer to site plan			
Surface elevation						Datum	Ground level		
Surface Condition						Grassed			
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Fill</div> <div style="text-align: center;"> Topsoil</div> <div style="text-align: center;"> Sand</div> <div style="text-align: center;"> Clay</div> <div style="text-align: center;"> Silt</div> </div>									
Depth mm	G.W.L	Geologic Unit	Graphic Log	Field Description	Undrained Shear Strength (kPa) Corrected (Per NZGS guideline)				Scala Penetrometer (blows/ 100 mm)
					50	100	150	200	3 6 9 12
300									
600									
900									
1200									
1500									
1800									
2100									
Drill Method		Scala penetrometer							
Date Drilled		14 Jul 2025			NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location				
Drilled by		Teo							
Shear Vane No									






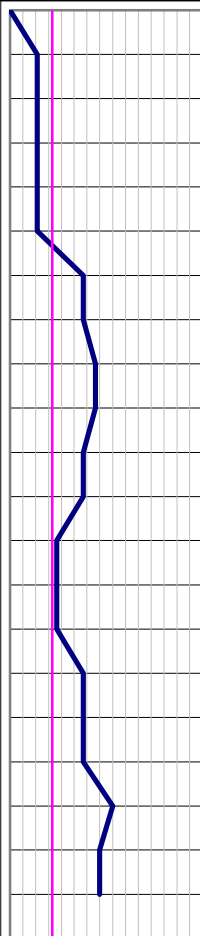

















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


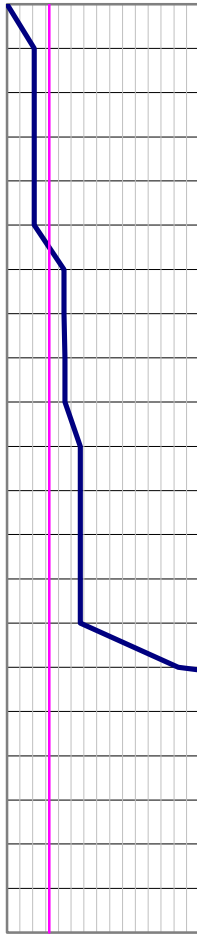





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






















Tests

- In situ shear vane reading
- Remoulded shear vane reading
- Scala Penetrometer
- 100 kPa reference line

BORE HOLE LOG BH6 (minor dwelling)						Job No.		059-FND-25SD	
Address		11 Ironbark Road, Waipapa 0295							
Client		Regan & Rebekah Polglaze							
Borehole Location			Refer to site plan						
Surface elevation							Datum	Ground level	
Surface Condition			Grassed						
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Fill</div> <div style="text-align: center;"> Topsoil</div> <div style="text-align: center;"> Sand</div> <div style="text-align: center;"> Clay</div> <div style="text-align: center;"> Silt</div> </div>									
Depth mm	G.W.L	Geologic Unit	Graphic Log	Field Description	Undrained Shear Strength (kPa) Corrected (Per NZGS guideline)				Scala Penetrometer (blows/ 100 mm)
					50	100	150	200	3 6 9 12
_____					0				
_____					0				
300					0				
_____					0				
_____					0				
600					0				
_____					0				
_____					0				
900					0				
_____					0				
_____					0				
1200					0				
_____					0				
_____					0				
1500					0				
_____					0				
_____					0				
1800					0				
_____					0				
_____					0				
2100					0				
Drill Method		Scala penetrometer							
Date Drilled		14 Jul 2025			NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location				
Drilled by		Teo							
Shear Vane No									
 T&A STRUCTURES LTD CHARTERED PROFESSIONAL ENGINEERS www.tastructures.co.nz info.tastructures@gmail.com					Tests In situ shear vane reading  Remoulded shear vane reading  Scala Penetrometer  100 kPa reference line 				

BORE HOLE LOG BH7 (minor dwelling)						Job No.		059-FND-25SD	
Address		11 Ironbark Road, Waipapa 0295							
Client		Regan & Rebekah Polglaze							
Borehole Location			Refer to site plan						
Surface elevation							Datum	Ground level	
Surface Condition			Grassed						
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Fill</div> <div style="text-align: center;"> Topsoil</div> <div style="text-align: center;"> Sand</div> <div style="text-align: center;"> Clay</div> <div style="text-align: center;"> Silt</div> </div>									
Depth mm	G.W.L	Geologic Unit	Graphic Log	Field Description	Undrained Shear Strength (kPa) Corrected (Per NZGS guideline)				Scala Penetrometer (blows/ 100 mm)
					50	100	150	200	3 6 9 12
300									
600									
900									
1200									
1500									
1800									
2100									
Drill Method		Scala penetrometer							
Date Drilled		14 Jul 2025			NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location				
Drilled by		Teo							
Shear Vane No									
 <p>T&A STRUCTURES LTD CHARTERED PROFESSIONAL ENGINEERS</p> <p>www.tastructures.co.nz info.tastructures@gmail.com</p>					Tests In situ shear vane reading  Remoulded shear vane reading  Scala Penetrometer  100 kPa reference line 				

BORE HOLE LOG BH8 (minor dwelling)						Job No.		059-FND-25SD	
Address		11 Ironbark Road, Waipapa 0295							
Client		Regan & Rebekah Polglaze							
Borehole Location			Refer to site plan						
Surface elevation							Datum	Ground level	
Surface Condition			Grassed						
 Fill  Topsoil  Sand  Clay  Silt									
Depth mm	G.W.L	Geologic Unit	Graphic Log	Field Description	Undrained Shear Strength (kPa) Corrected (Per NZGS guideline) 50 100 150 200				Scala Penetrometer (blows/ 100 mm) 3 6 9 12
_____					0				
_____					0				
_____					0				
300					0				
_____					0				
_____					0				
_____					0				
_____					0				
600					0				
_____					0				
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900	0								
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1200	0								
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1500	0								
_____	0								
_____	0								
_____	0								
1800	0								
_____	0								
_____	0								
_____	0								
2100	0								
Drill Method		Scala penetrometer							
Date Drilled		14 Jul 2025		NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location					
Drilled by		Teo							
Shear Vane No									
 T&A STRUCTURES LTD CHARTERED PROFESSIONAL ENGINEERS www.tastructures.co.nz info.tastructures@gmail.com					Tests In situ shear vane reading  Remoulded shear vane reading  Scala Penetrometer  100 kPa reference line 				

BORE HOLE LOG BH9 (minor dwelling)					Job No. 059-FND-25SD	
Address		11 Ironbark Road, Waipapa 0295				
Client		Regan & Rebekah Polglaze				
Borehole Location		Refer to site plan				
Surface elevation				Datum		Ground level
Surface Condition		Grassed				
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  Fill </div> <div style="text-align: center;">  Topsoil </div> <div style="text-align: center;">  Sand </div> <div style="text-align: center;">  Clay </div> <div style="text-align: center;">  Silt </div> </div>						
Depth mm	G.W.L	Geologic Unit	Graphic Log	Field Description	Undrained Shear Strength (kPa) Corrected (Per NZGS guideline) 50 100 150 200	Scala Penetrometer (blows/ 100 mm) 3 6 9 12
				topsoil, brown clay	0	
				stiff brown clay, with gravel	0	
300					193	
					193	
600					193	
					193	
900					193	
				becomes very stiff	193	
1200				UTP		
						
1500						
						
1800						
						
2100						
Drill Method		50mm hand auger				
Date Drilled		14 Jul 2025				
Drilled by		Teo				
Shear Vane No						
<p>NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location</p>						
 T&A STRUCTURES LTD CHARTERED PROFESSIONAL ENGINEERS www.tastructures.co.nz info.tastructures@gmail.com					Tests In situ shear vane reading  Remoulded shear vane reading  Scala Penetrometer  100 kPa reference line 	



**FAR NORTH OPERATIVE DISTRICT PLAN
DECISION ON RESOURCE CONSENT APPLICATION (Section 127)**

Resource Consent Number: 1980137-RMAVAR/A



Pursuant to section 127 of the Resource Management Act 1991 (the Act), the Far North District Council hereby grants resource consent to:

Brett Lawrence and Debra Glew

The activity to which this decision relates:

To change condition 4 of RC 1980137, being a consent to construct a family flat.

Subject Site Details

Address: 11 Ironbark Road, Waipapa 0295
Legal Description: Lot 9 DP 145038
Certificate of Title reference: NA86A/271

The following changes are made to the consent conditions:

- Condition 4 is removed to allow for the family flat to be used as a minor residential unit, in accordance with Rule 8.6.5.2.3 in the Rural Production zone.

For the purpose of clarity the complete amended conditions of consent are as follows:

1. That the development proceeds in accordance with the plans and information provided with the application.
2. The building is to be finished and maintained in recessive colours compatible with the surrounding environment.
3. Prior to the issue of a building consent, supply a landscaping plan which details the existing and proposed screening vegetation to ensure the visual effects of the family flat are minor, as viewed from the public road and reserve area. This landscaping vegetation is to be maintained for the duration of this consent.
4. ~~That the family flat be used as the residence of a socially depended relative of the household living in the dwelling on the site, and that the family flat shall not be sold, leased or otherwise disposed of except in conjunction with the dwelling.~~

Advice Notes

1. 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.

Reasons for the Decision

1. The Council has determined (by way of an earlier report and resolution) that the adverse environmental effects associated with the proposed changes are no more than minor and that there are no affected persons or affected order holders.
2. The proposed changes being sought are considered to be consistent with the Objectives and Policies in the Operative Far North District Plan.
3. In summary it is considered that the proposed changes are consistent with the sustainable management purpose of the RMA.

Approval

This resource consent has been prepared by Emily Robinson, Consents Planner and is granted under delegated authority (pursuant to section 34A of the Resource Management Act 1991) from the Far North District Council by:

PP 
Pat Killalea, Principal Planner

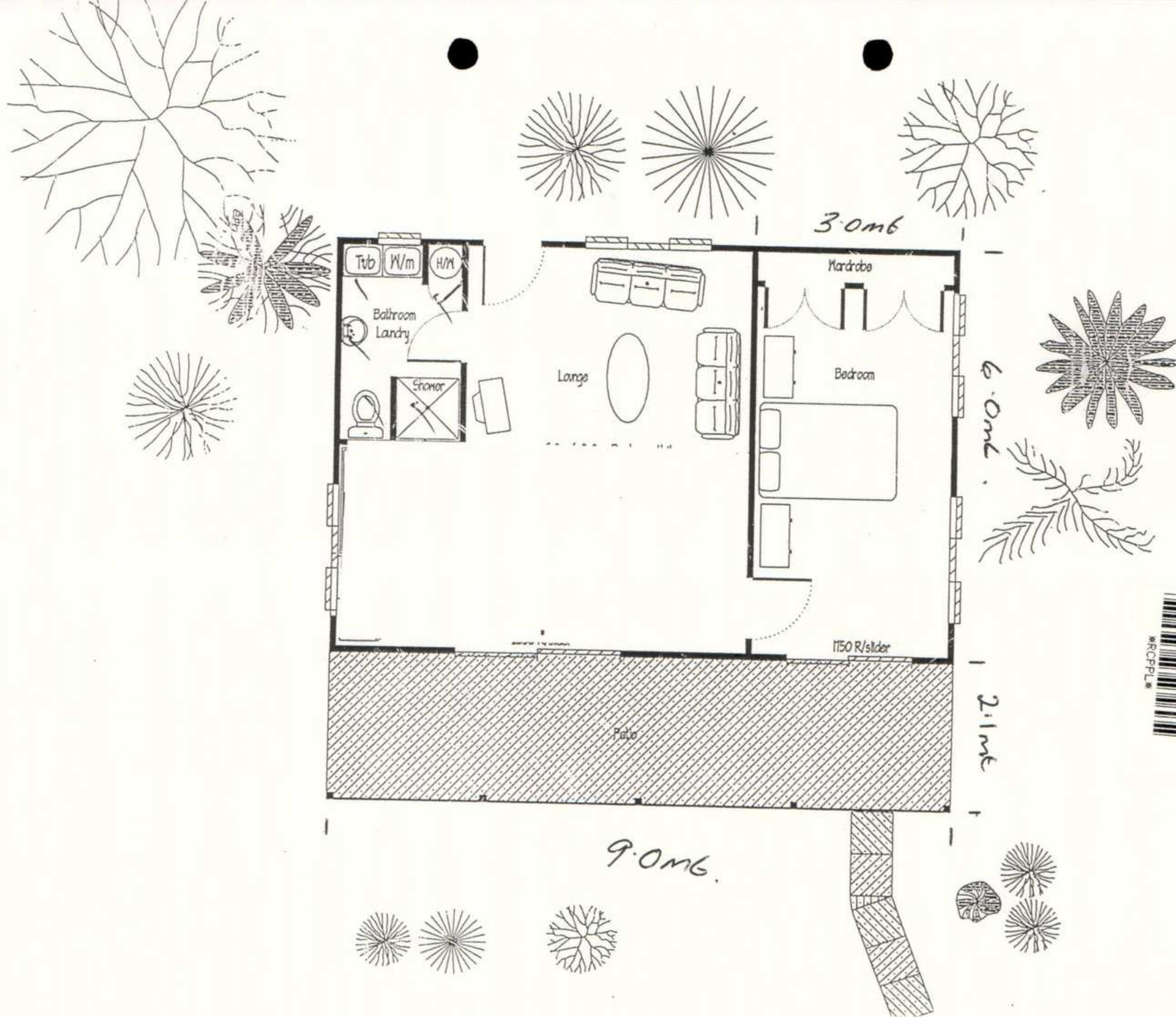
26th October 2017
Date

Right of Objection

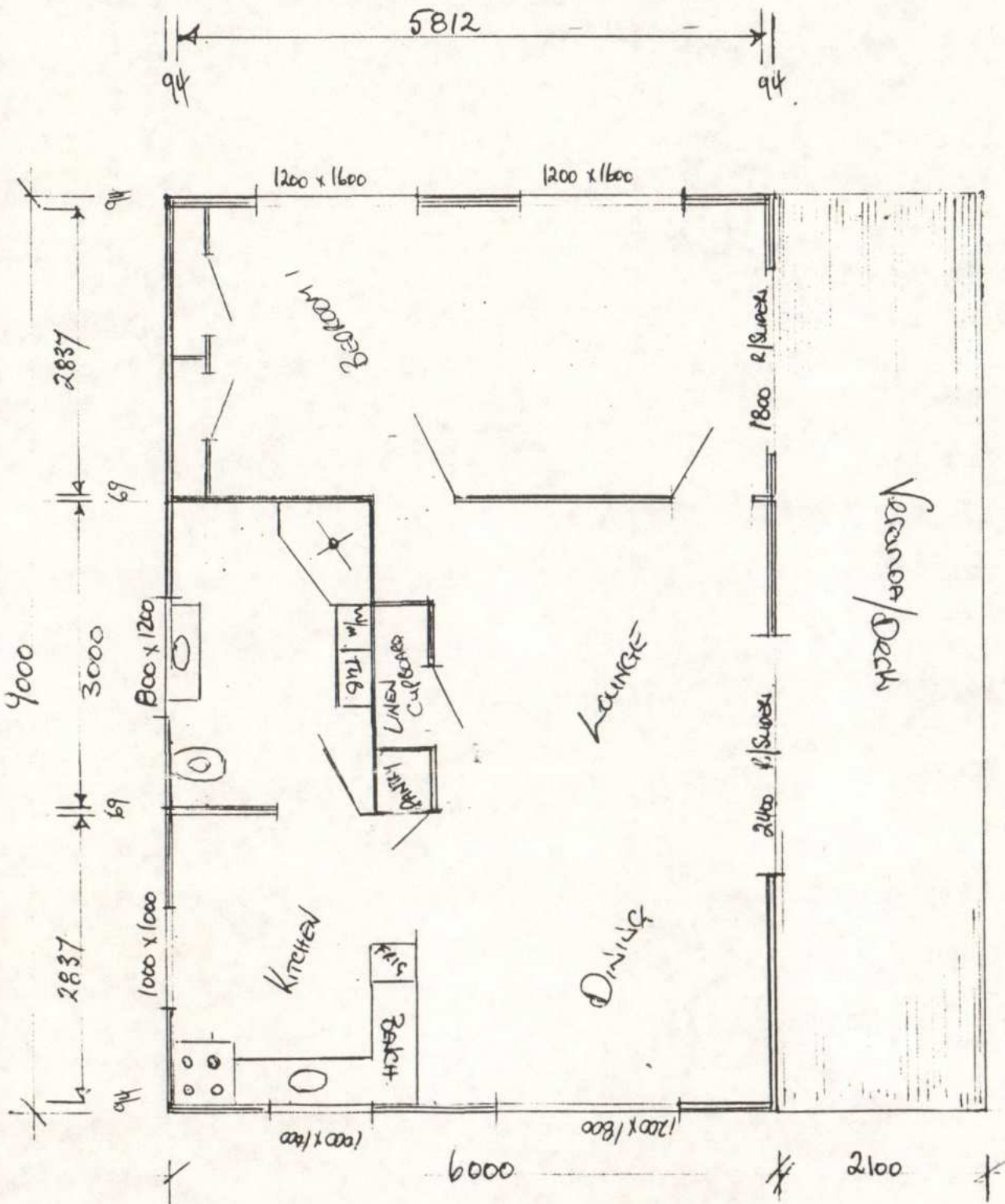
If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 357A of the Resource Management Act 1991) to object to the decision. The objection must be in writing, stating reasons for the objection and must be received by Council within 15 working days of the receipt of this decision.

Lapsing Of Consent

You should note that the granting of this consent for a change or cancellation of conditions does not affect the lapsing date of the underlying consent for the proposed activity.

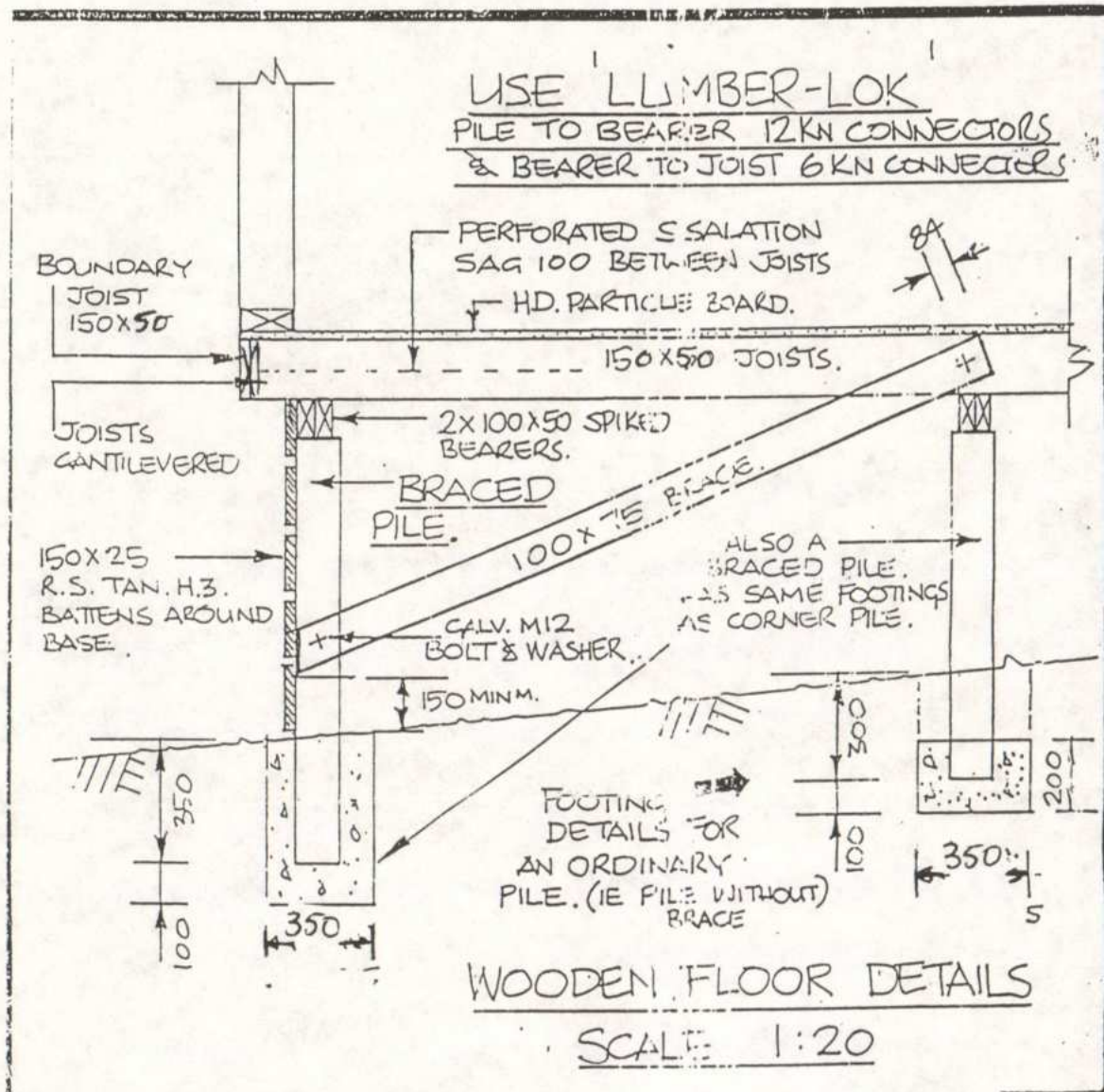


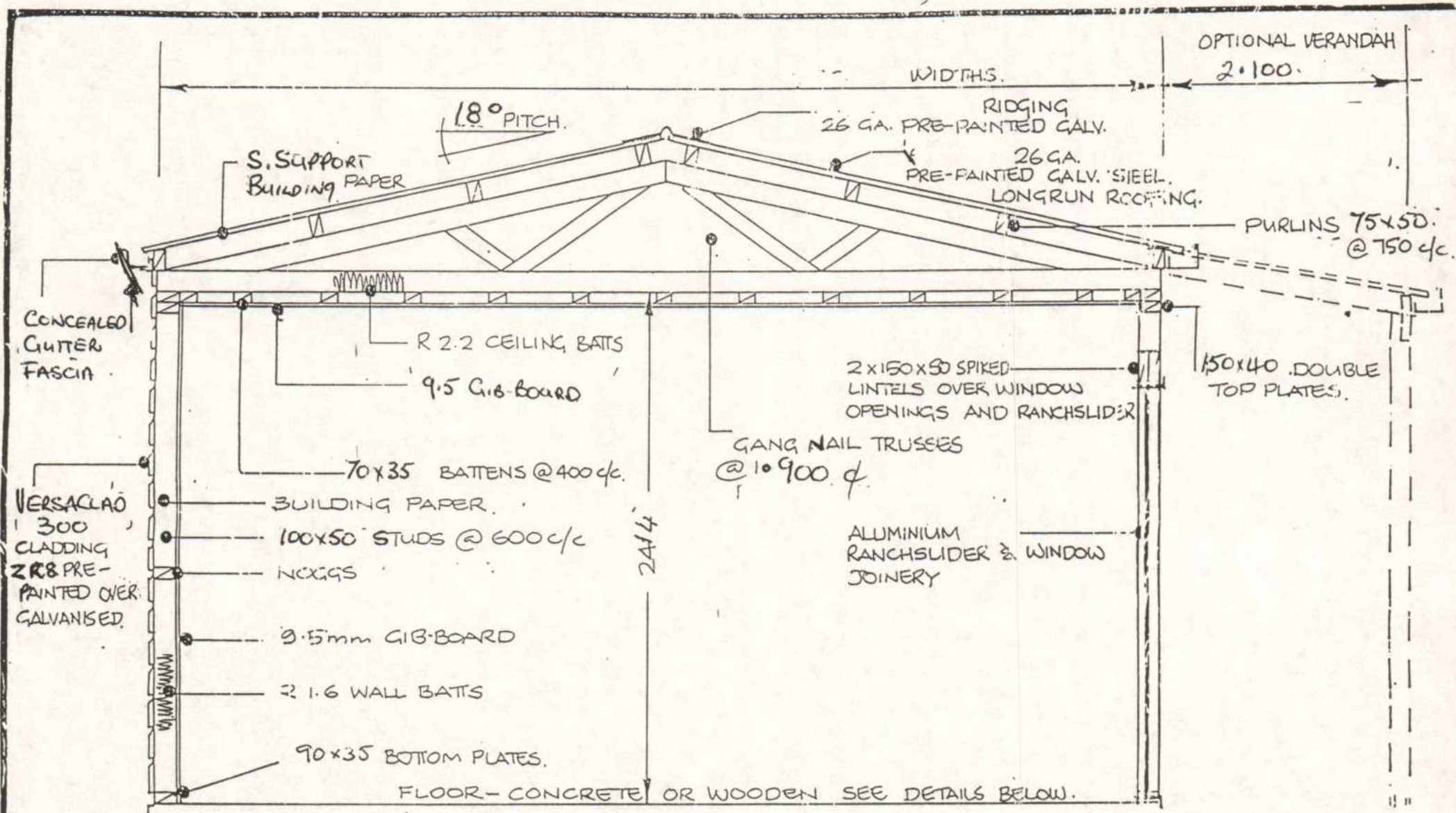
AMENDED FLOOR PLAN FOR L.D. & B.W. WOODROFFE

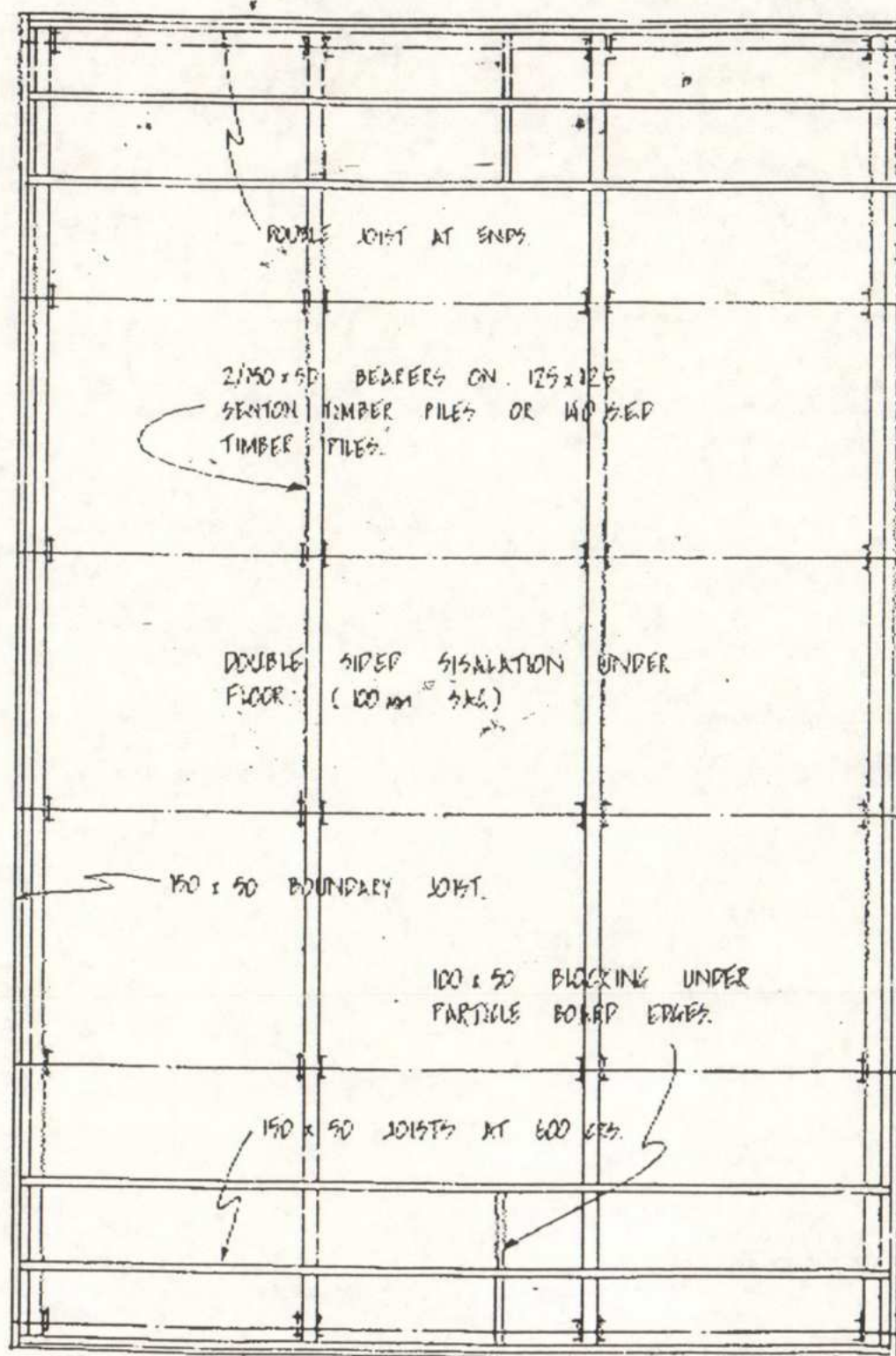
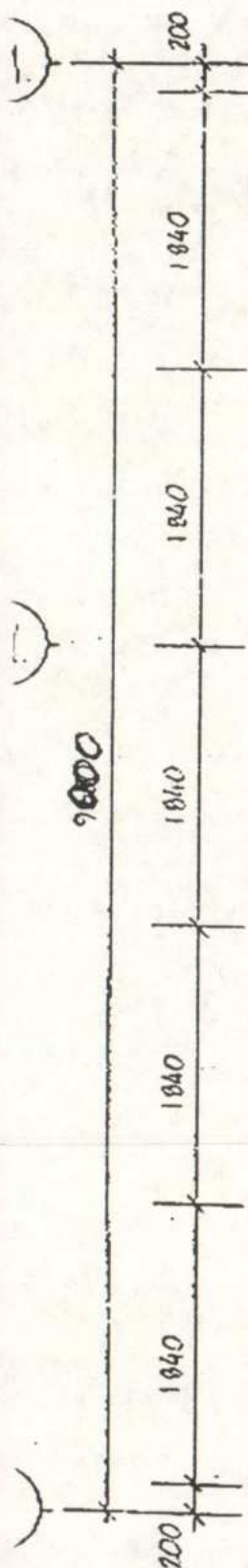
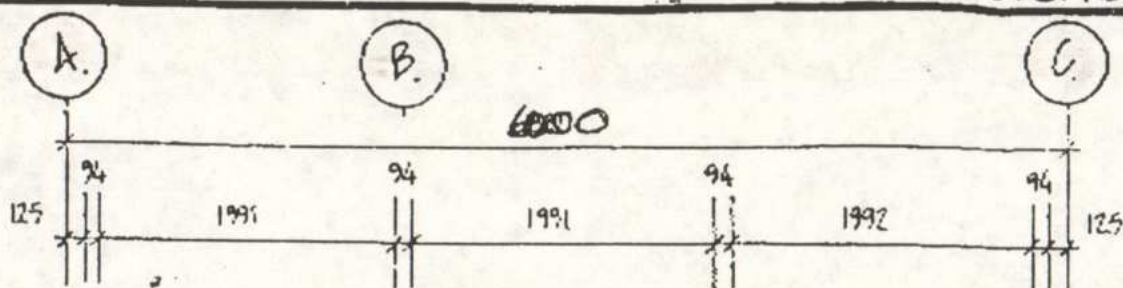


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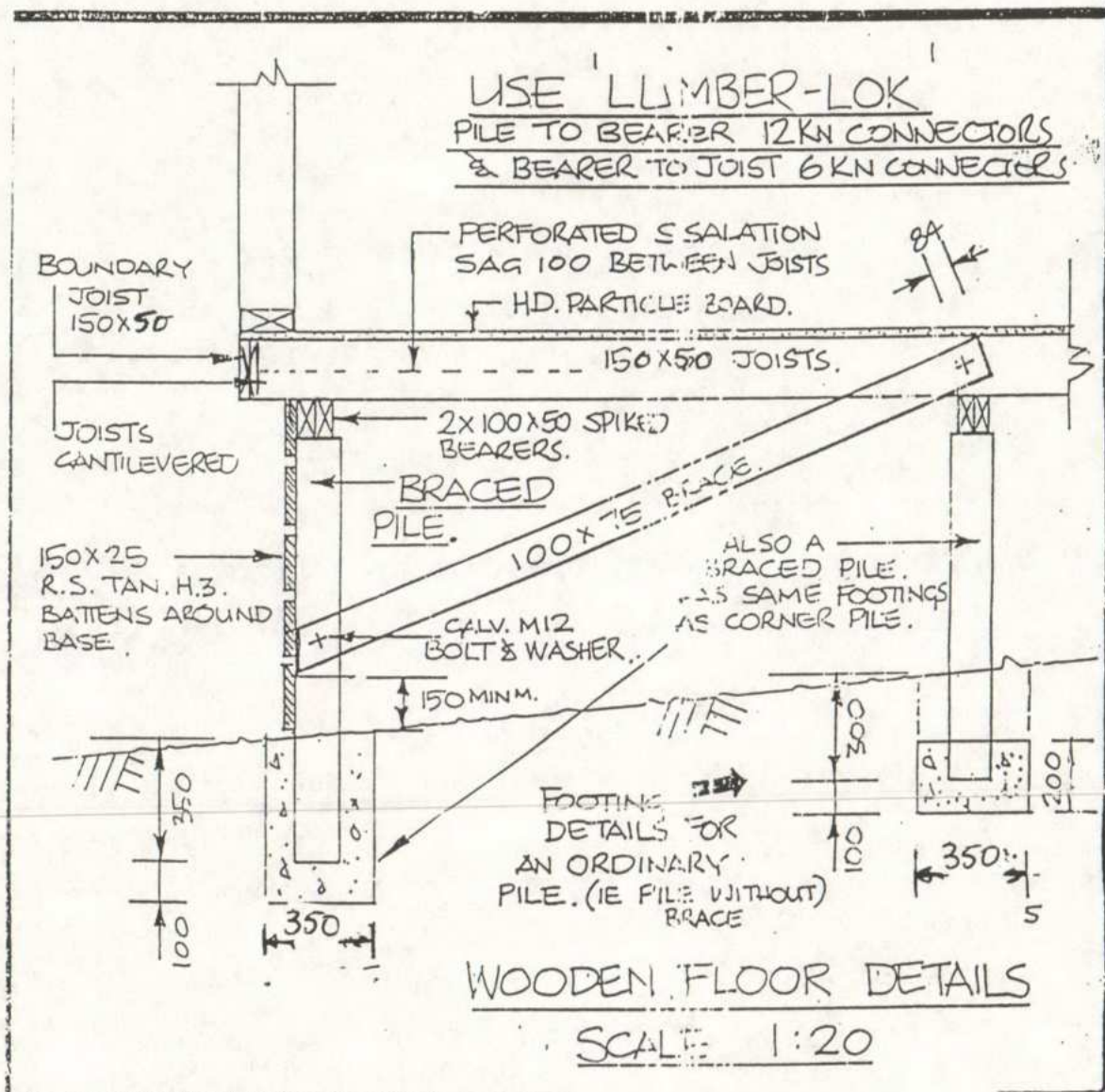
WOODEN FLOOR.



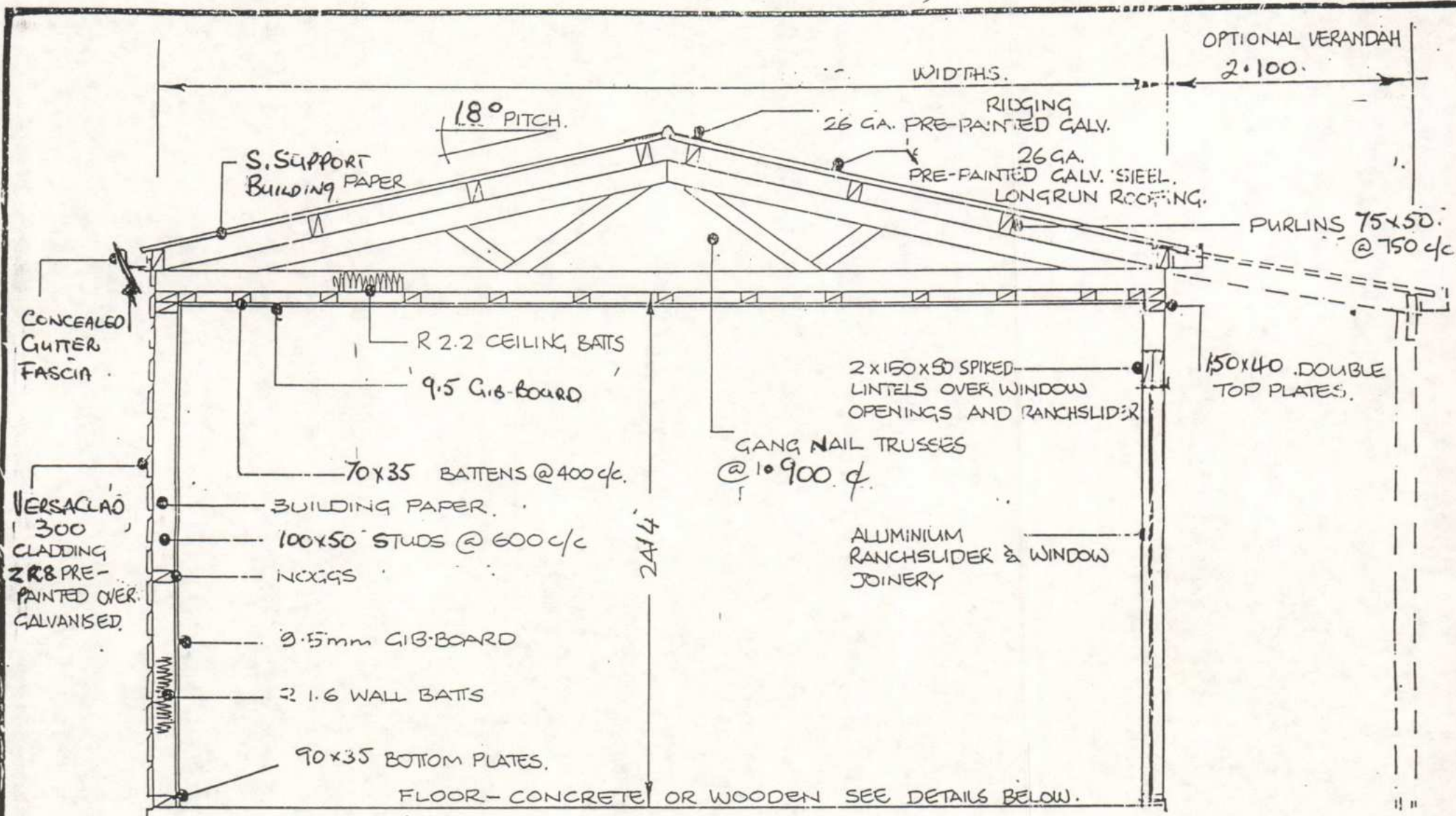


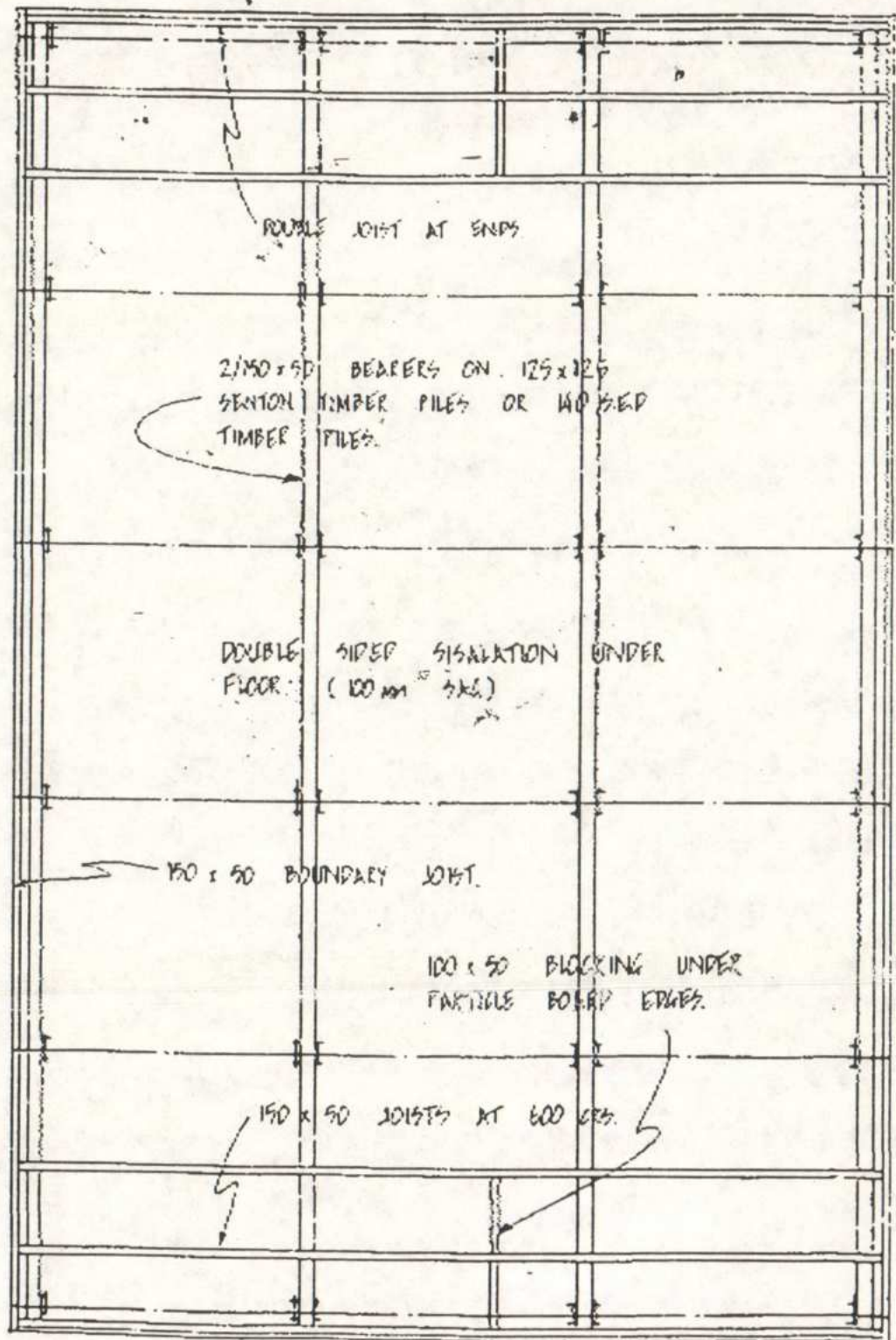
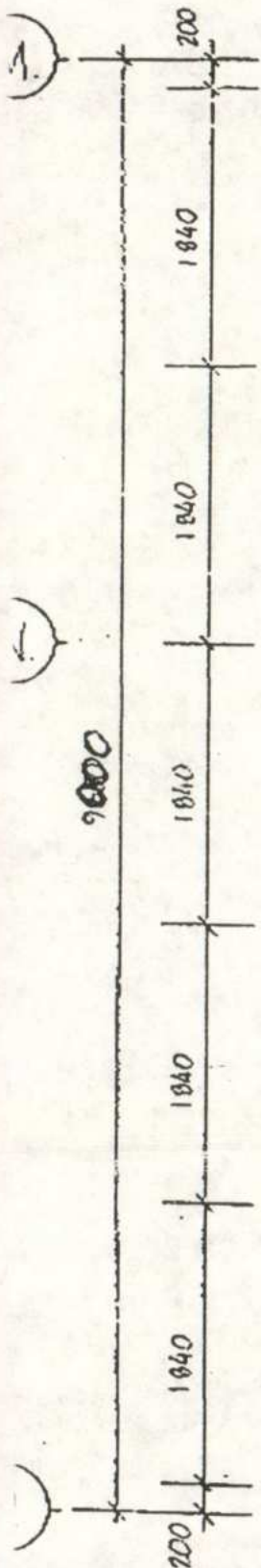


WOODEN FLOOR

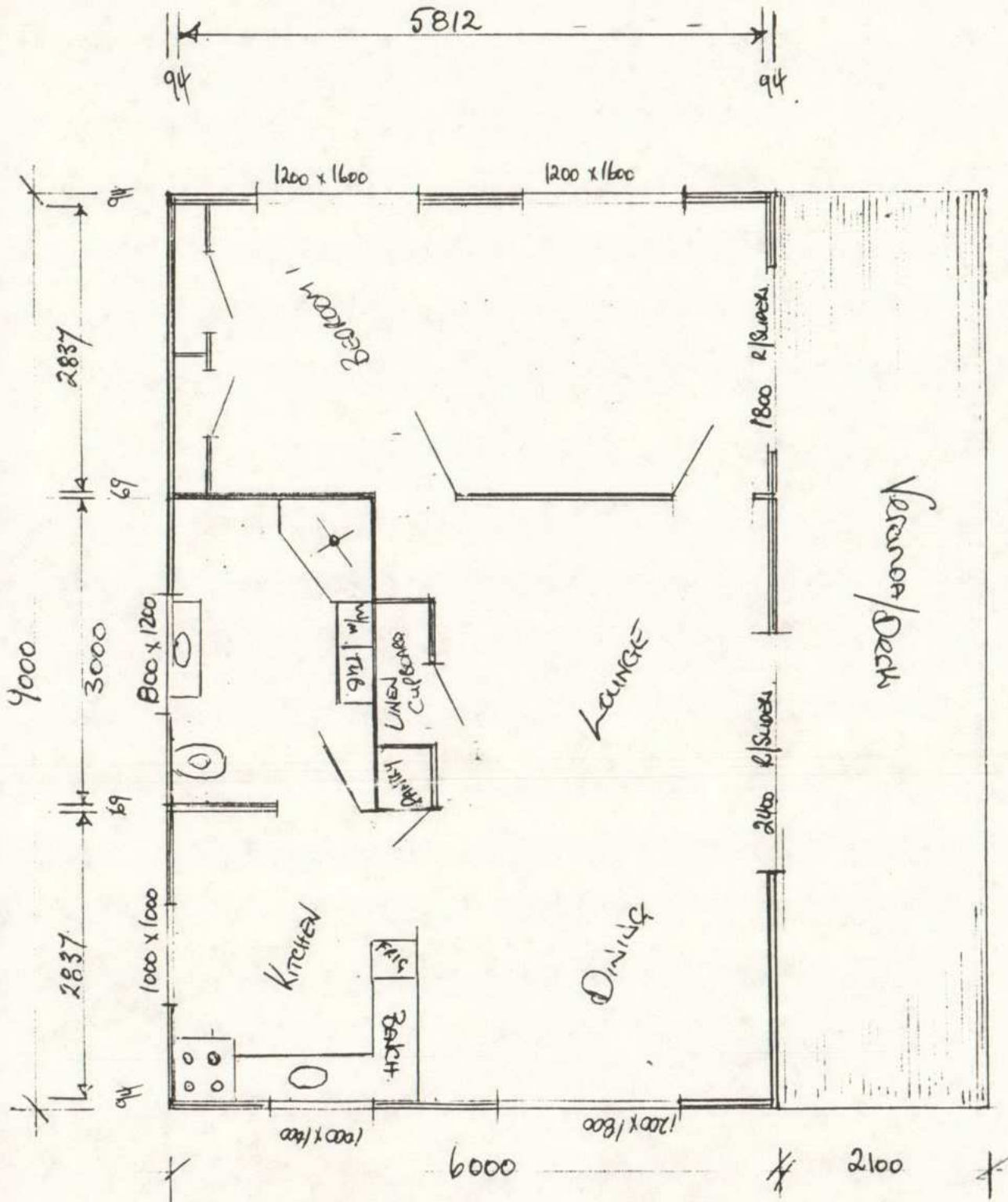


WOODROFFE



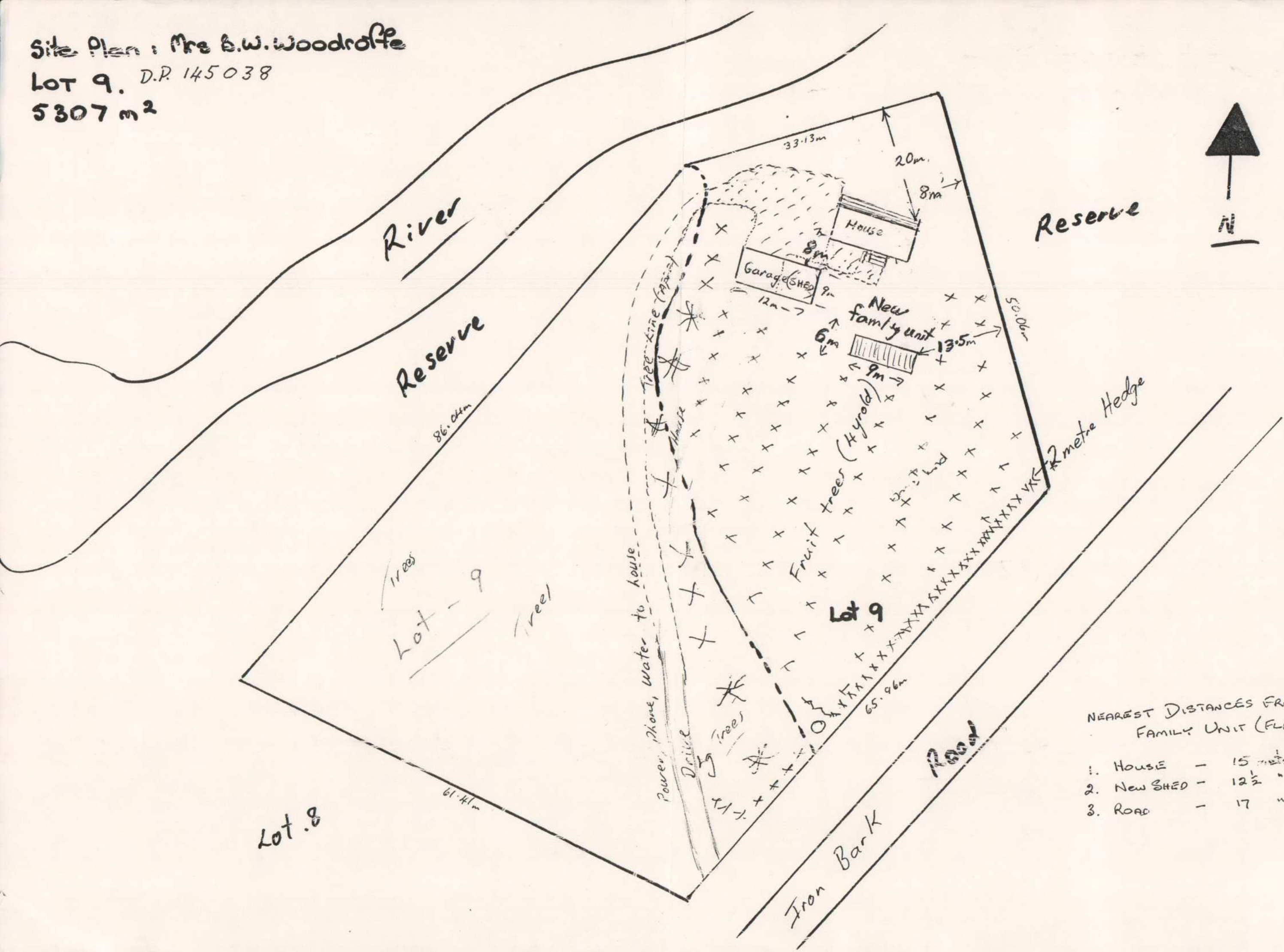


AMENDED FLOOR PLAN FOR L.O. & B.W. WOODROFFE



Scale. 1 : 50.

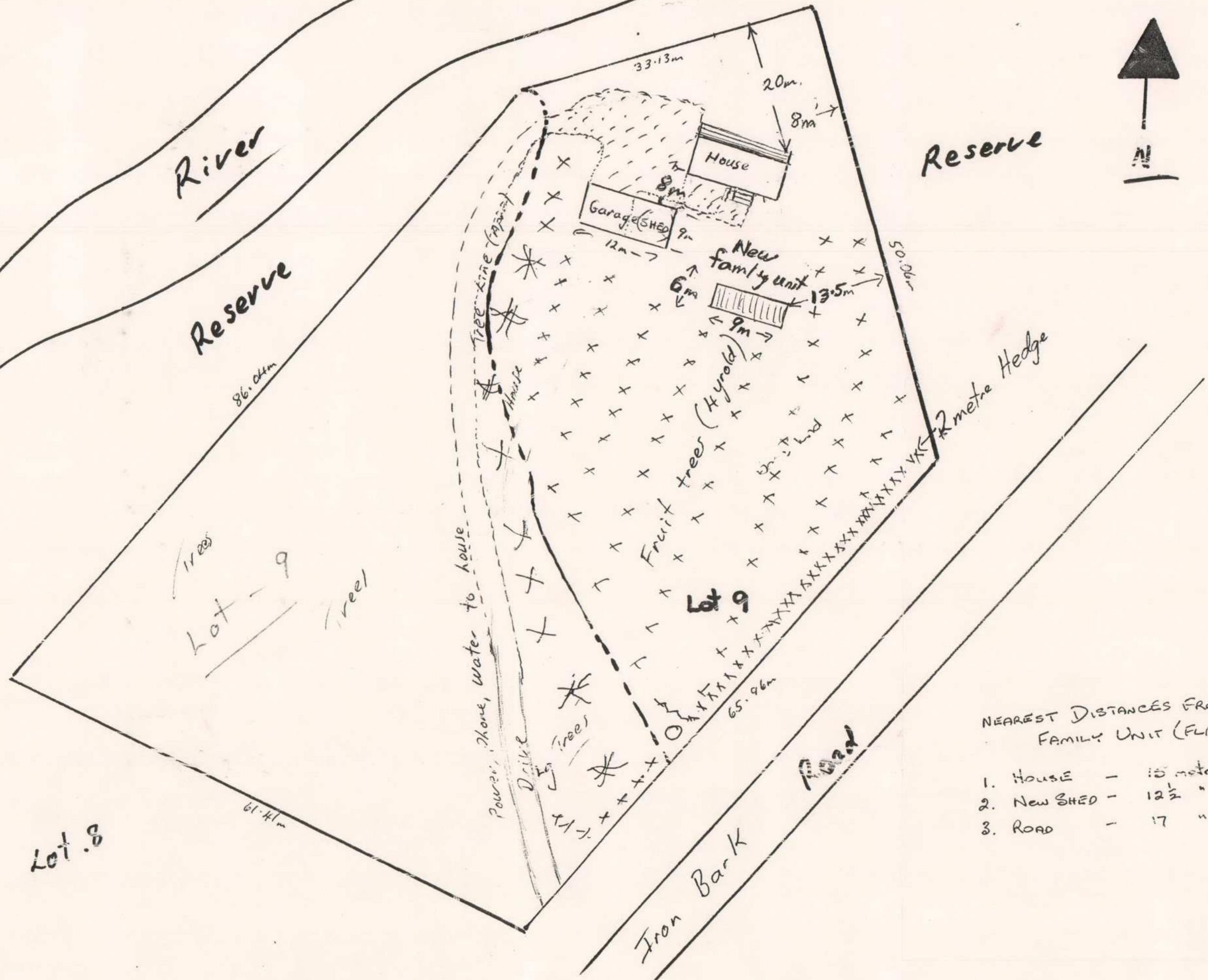
Site Plan: Mrs B.W. Woodroffe
 Lot 9. D.R. 145038
 5307 m²



NEAREST DISTANCES FROM FAMILY UNIT (FLAT)

1. HOUSE	-	15 metres
2. New SHED	-	12 1/2 "
3. ROAD	-	17 "

Site Plan: Mrs B.W. Woodroffe
 Lot 9. D.P. 145038
 5307 m²



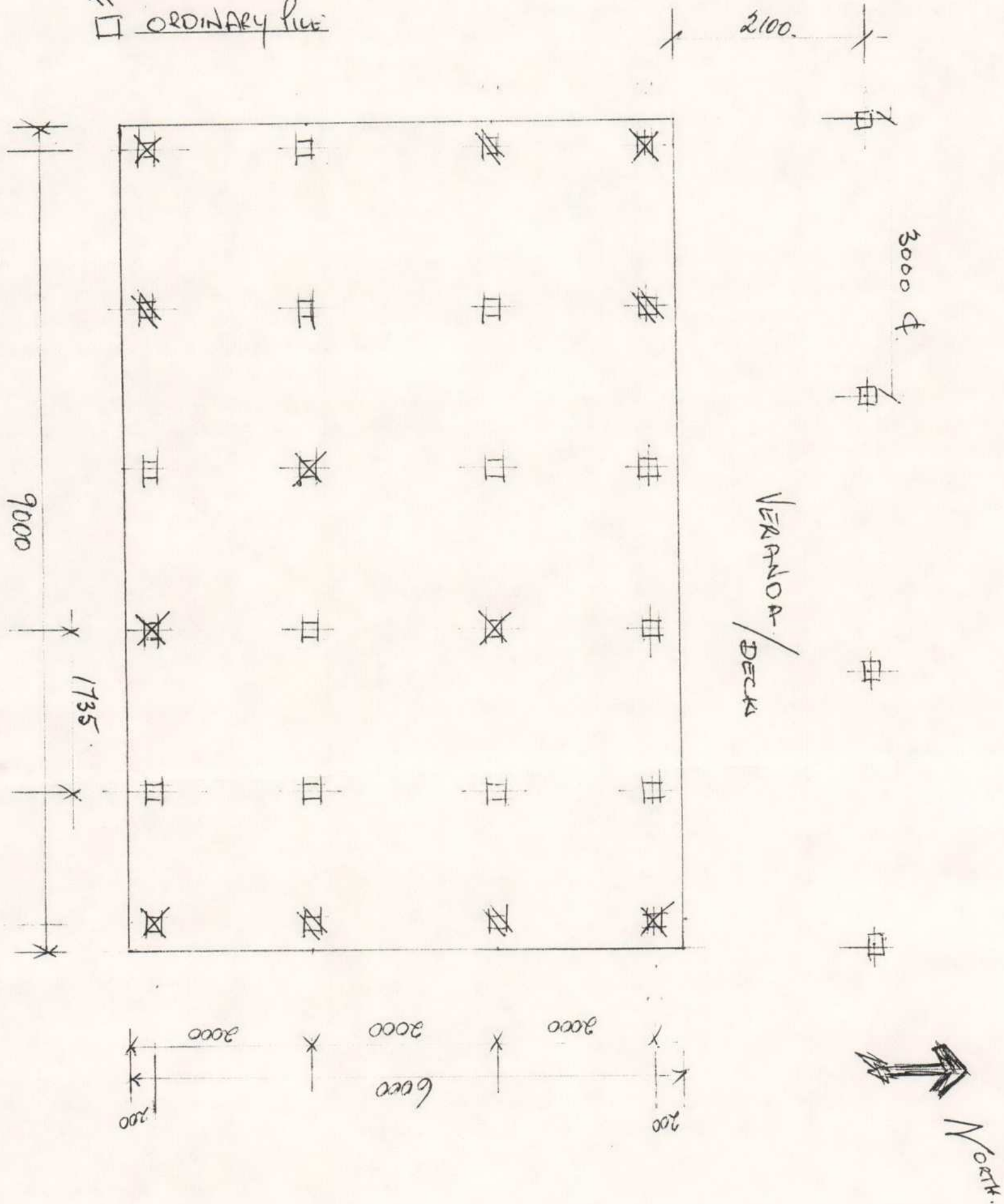
NEAREST DISTANCES FROM
 FAMILY UNIT (FLAT)

1. HOUSE - 15 metres
2. New SHED - 12 1/2 "
3. ROAD - 17 "

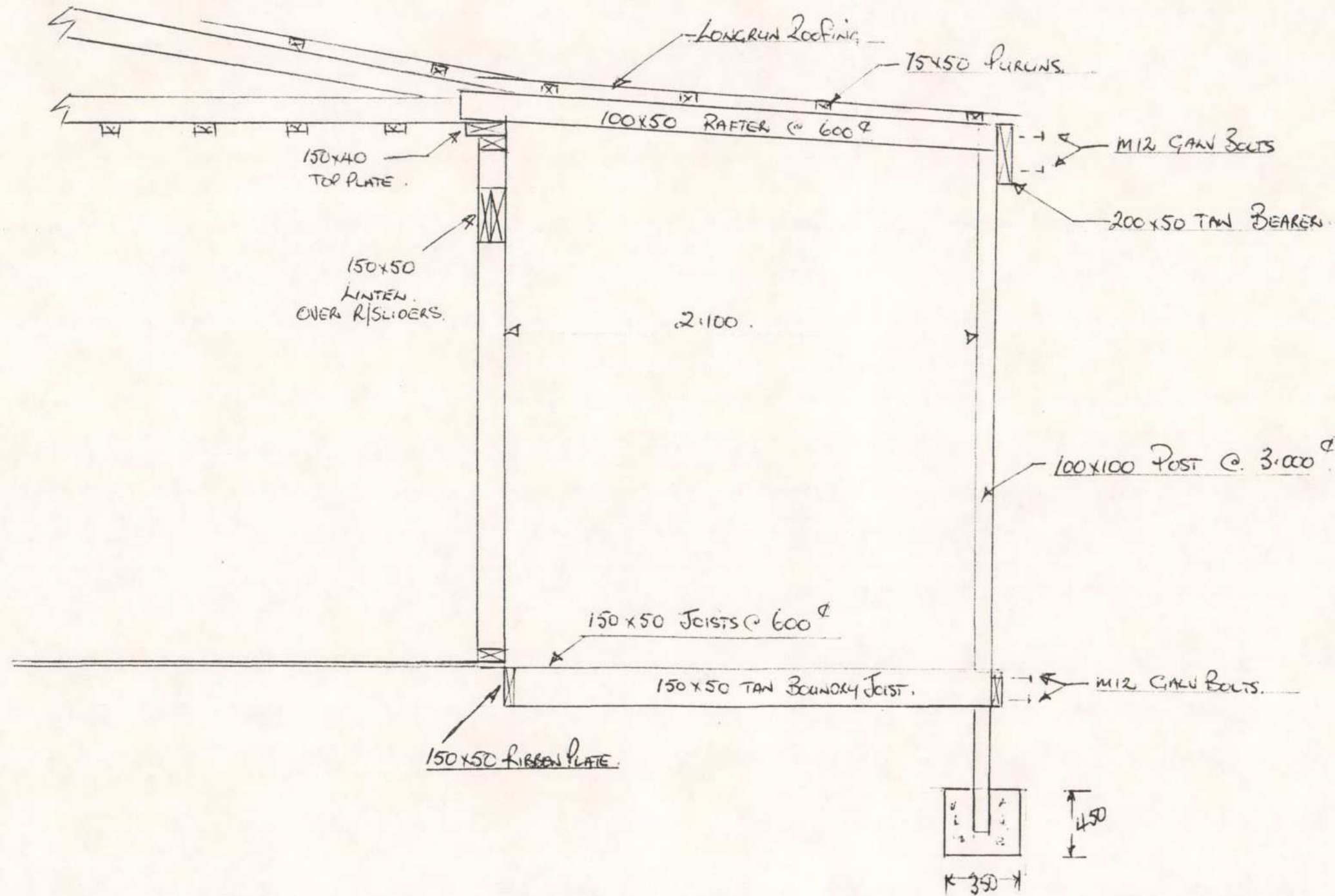
WOODROFFE

FOUNDATION DETAIL.

- ☒ ANCHOR PILE.
- ☒ BRACE PILE.
- ORDINARY PILE.



VERANDA DETAIL.

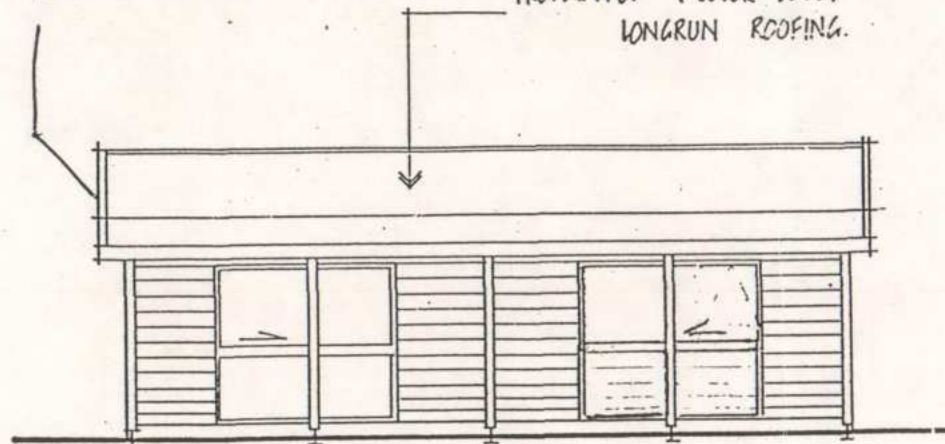


MOORAFEE

WOODROFFE

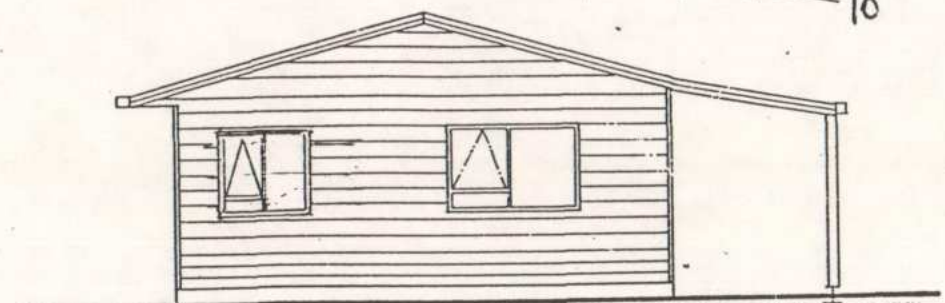
TAYLOR FASCIA / BARGE

PREPAINTED (COLOR-LOTE)
LONGRUN ROOFING.



ELEVATION A

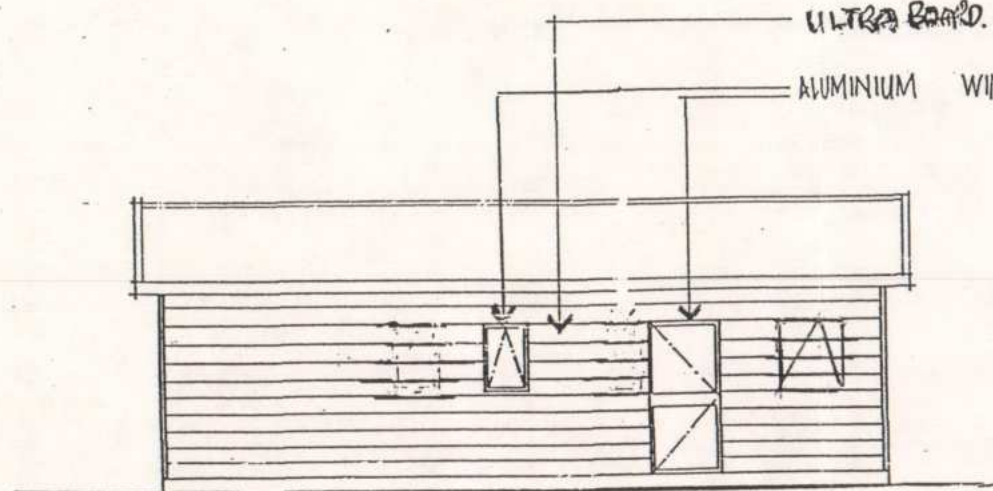
18°
10°



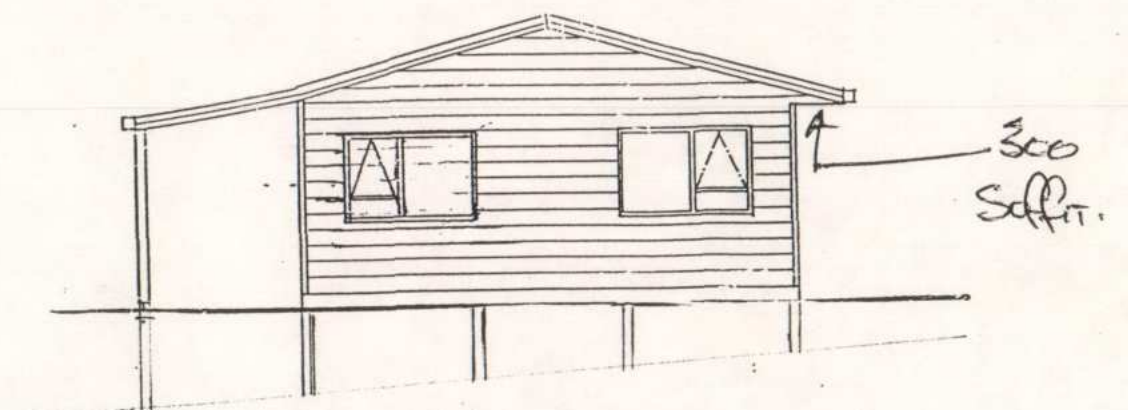
ELEVATION B

ULTRA BOARD WEATHERBOARDS

ALUMINIUM WINDOW AND DOOR JOINERY

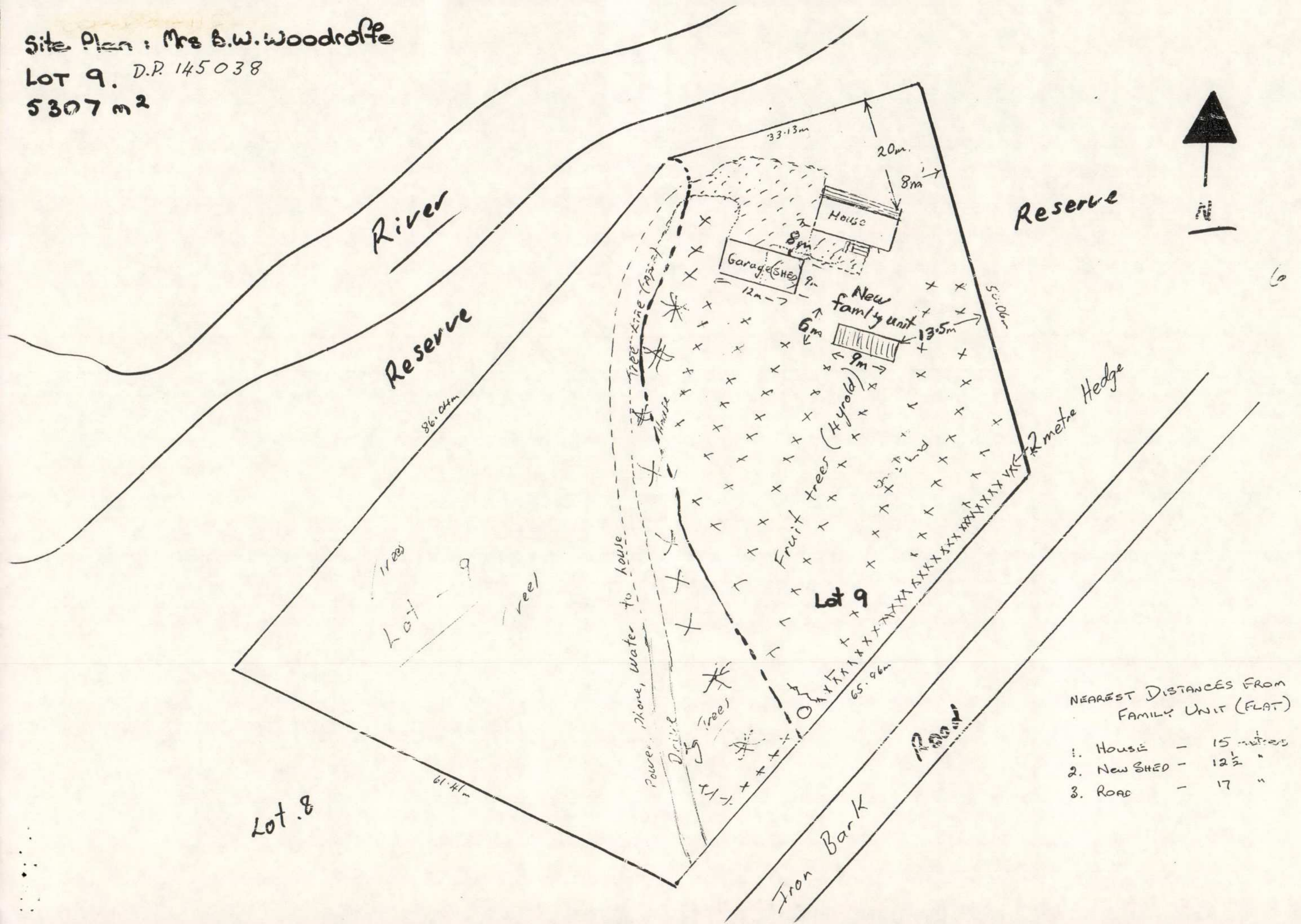


ELEVATION C



ELEVATION D

Site Plan: Mrs B.W. Woodroffe
 Lot 9. D.P. 145038
 5307 m²



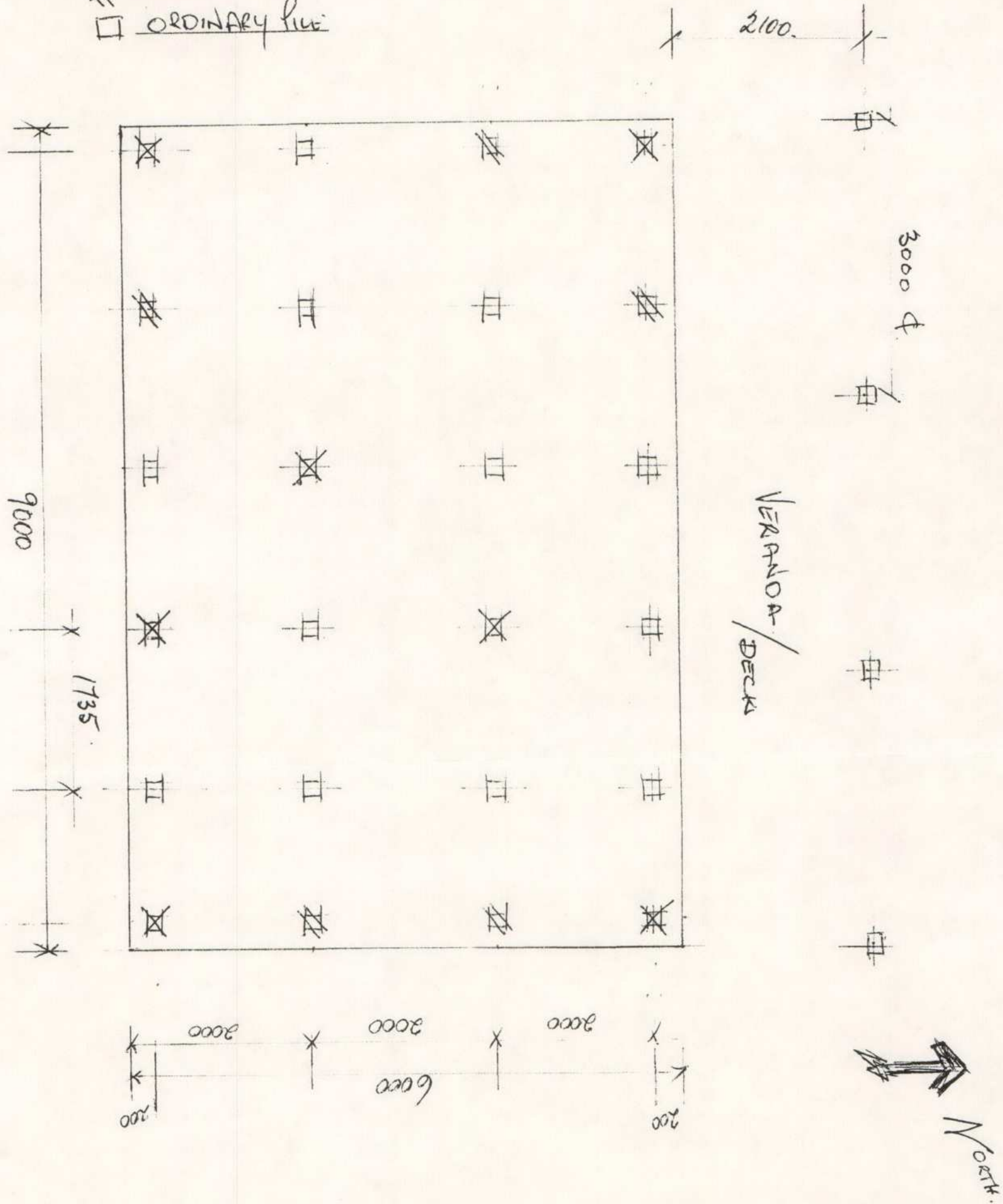
NEAREST DISTANCES FROM
 FAMILY UNIT (FLAT)

1. House - 15 metres
2. New SHED - 12 1/2 "
3. ROAD - 17 "

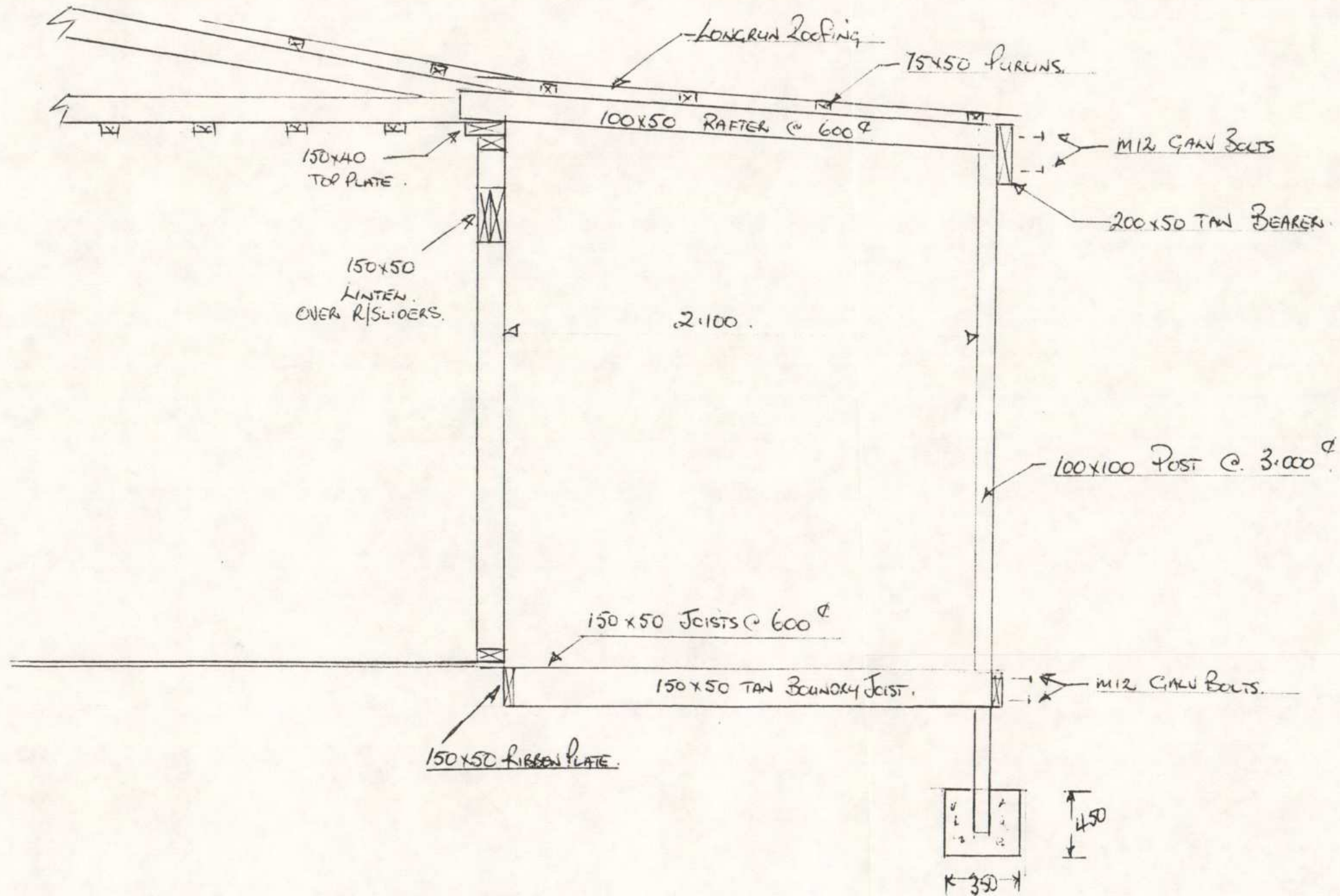
WOODROFFE

FOUNDATION DETAIL.

- ☒ ANCHOR PILE.
- ☒ BRACE PILE.
- ORDINARY PILE.



VERANDA DETAIL.

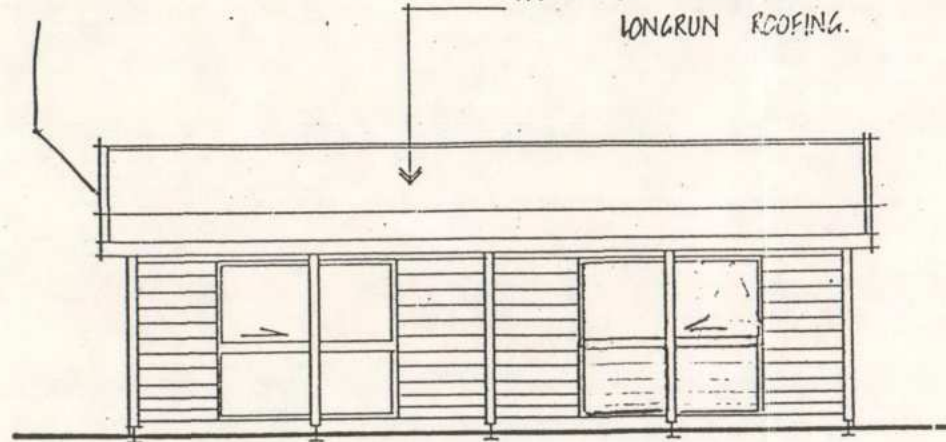


WOODEN

WOODROFFE

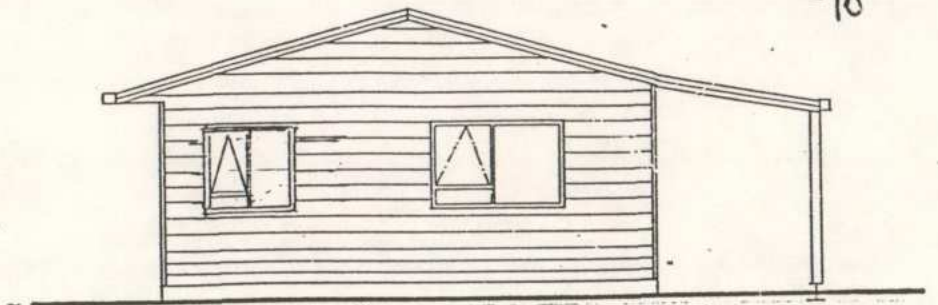
TAYLOR FASCIA/BARGE

PREPAINTED (COLOR-LOTE)
LONGRUN ROOFING.



ELEVATION A

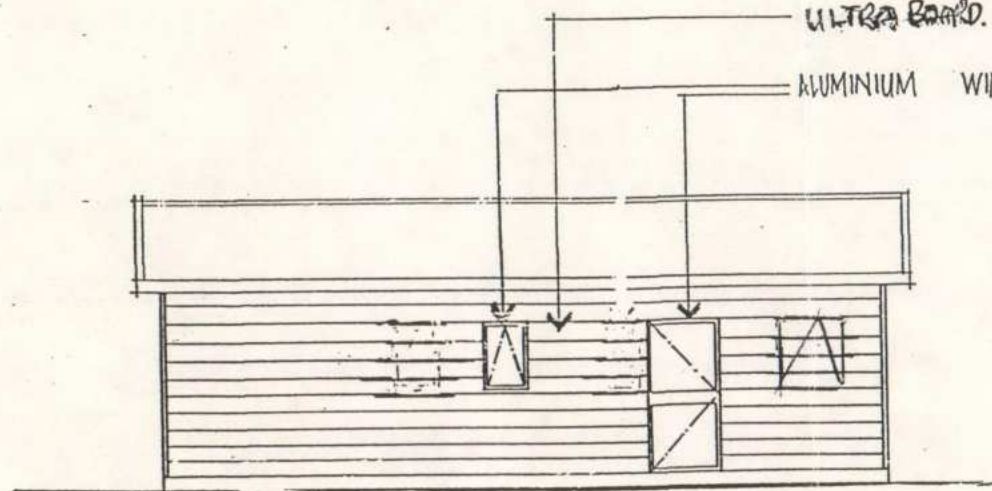
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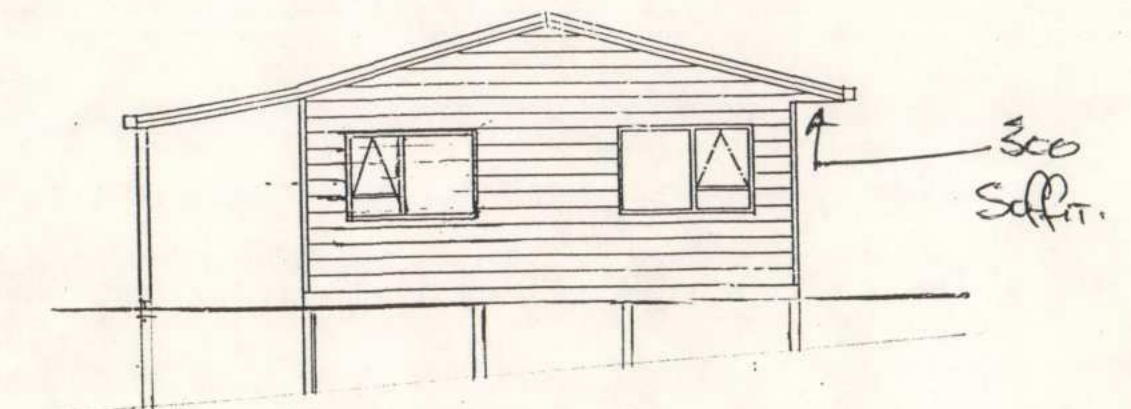
ELEVATION B

ULTRA BOARD WEATHERBOARDS

ALUMINIUM WINDOW AND DOOR JOINERY

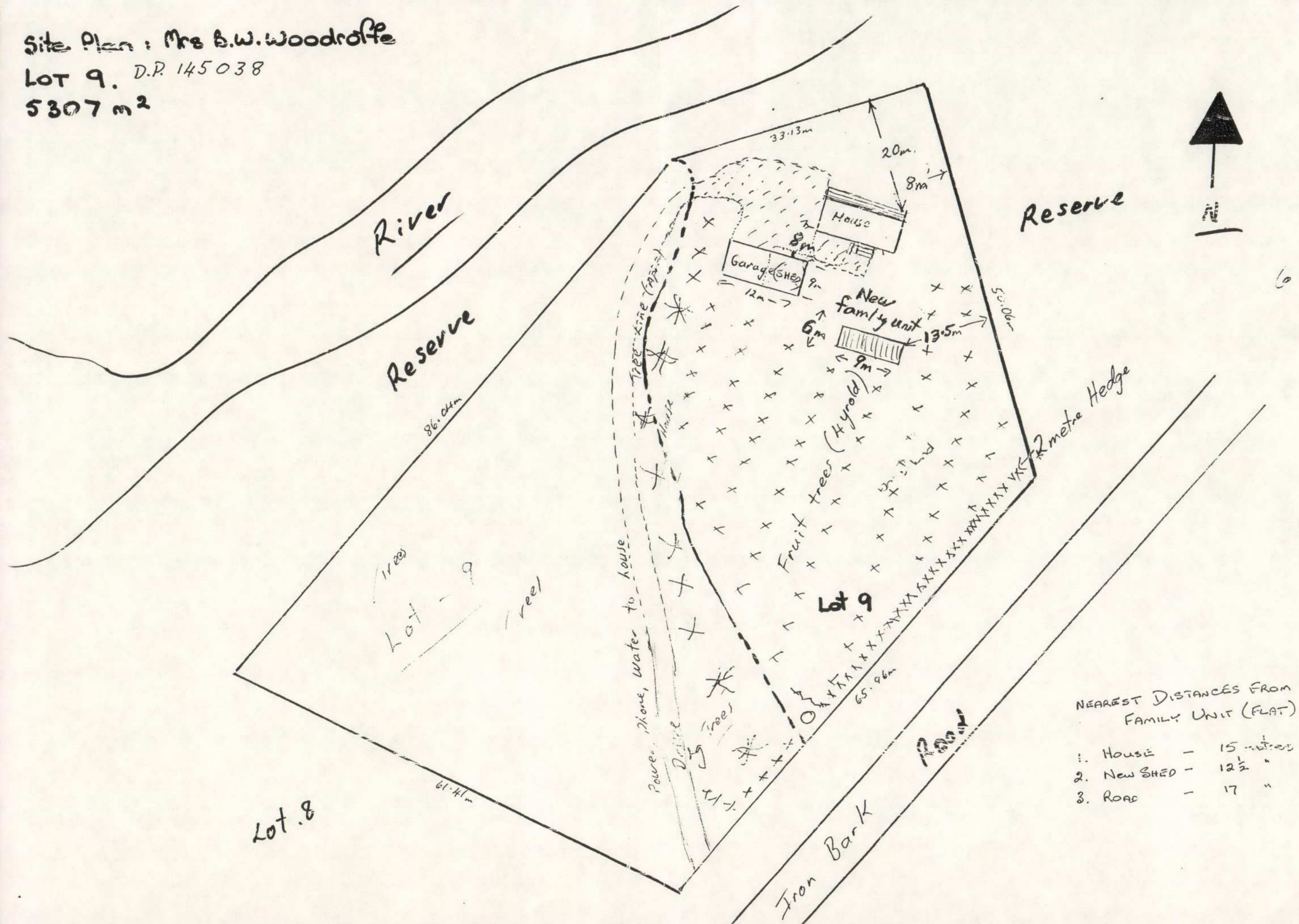


ELEVATION C



ELEVATION D

Site Plan: Mrs B.W. Woodroffe
 Lot 9. D.P. 145038
 5307 m²



NEAREST DISTANCES FROM
FAMILY UNIT (FLAT)

1. House	-	15 metres
2. New SHED	-	12 1/2 "
3. ROAD	-	17 "

DECISION ON LAND USE CONSENT APPLICATION UNDER THE RESOURCE MANAGEMENT ACT 1991

Decision

Pursuant to section 34(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: Regan Lance Polglaze
Council Reference: 2240317-RMALUC
Property Address: 11 Ironbark Road, Waipapa 0295
Legal Description: LOT 9 DP 145038

The activities to which this decision relates are listed below:

The proposal is to extend the main dwelling for an additional living area to the north, decking along the west of the proposed additional living area, an extension to the south of the main dwelling and a retrospective consent for the existing office. The proposal also includes the construction of a future swimming pool and swimming pool fence which will be constructed at a later date. The activity breaches the Stormwater Management, Setback from Boundaries and Setback from Lakes, Rivers and CMA Rules in the Rural Production Zone as a Discretionary Activity.

Conditions

Pursuant to sections 108 of the Act, this consent is granted subject to the following conditions:

1. The activity shall be carried out in accordance with the approved plans prepared by O'Brien Design Consulting Ltd, referenced Polglaze 11 Ironbark Road Kerikeri Lot 9 DP 145038, dated 24th April 2024, and attached to this consent with the Council's "Approved Stamp" affixed to them.
2. Prior to commencement of works on site, a landscape plan prepared by a suitably qualified person is provided for approval by the Parks and Recreation Planner to mitigate visual and amenity effects in views from surrounding public places. This plan is to include:
 - a) Location of planting, including accurate location of existing planting proposed to be retained as mitigation;
 - b) Details of the minimum height that all planting and particularly hedges will be maintained at;

- c) Tall hedge planting (2m minimum) along the road frontage of the site, within the site boundary, excluding the access and along at least a third of the eastern boundary to assist in mitigating views from the road.
 - d) Low, (minimum 1m height) hedge planting or similar within the northern side of the site between existing and proposed development and the reserve.
 - e) Planting below the spreader bar to mitigate any stormwater effects on the adjoining reserve;
 - f) A basic planting methodology statement to include planting works and maintenance for a minimum period of 2 years and continued maintenance operations in perpetuity.
3. Planting within the Site shall occur within the planting season (April-September) following approval of the plan, and all plants, species and methods for planting shall be in accordance with the Approved Landscape Plan.
 4. Prior to the establishment of mitigation planting along boundaries, any retaining walls and ancillary and supporting structures shall be entirely located within the site and shall be clear of the boundary of the reserve (Lot 11 DP 145038). Where any structures or materials are removed from the reserve, the area is to be reinstated to the satisfaction of the relevant Council asset manager.
 5. Prior to construction of the swimming pool, the consent holder must provide, for the approval of the Council's Resource Consents Monitoring Officers details of the swimming pool ie whether it is above ground or in-ground. If the pool is below ground, plans prepared by a suitably qualified professional is required to confirm that the earthworks is within permitted threshold. If an Earthworks rule breach is noted, the consent holder must apply for relevant resource consents at the consent holder's expense and to the satisfaction of the Council.
 6. Prior to construction of the swimming pool, the consent holder must provide, for the approval of the Council's Resource Consents Monitoring Officers details for a separate system designed by a suitably qualified professional to prevent contamination by pool runoff to the reserve and mitigation planting, how pool water will be managed while being emptied, and how pool overflows will be managed to avoid effects on the reserve and mitigation planting.
- Note: Please submit plan for review to RCmonitoring@fndc.govt.nz with the relevant application number and address.
7. Within 6 months following the approval of this resource consent, the accessway located towards the northeastern boundary of the site is to be legally established or must be reinstated to grassed berm and the 2m hedge planting within the site boundaries road frontage is planted and maintained. This must be undertaken at the consent holder's expense and to the satisfaction of the Council.
 8. Prior to the issue of a Code Compliance Certificate for the proposed extension and associated impermeable surface areas, stormwater runoff from the proposed extension and associated impermeable surface areas are to be restricted to those of pre-development levels for the 1% and 10% AEP storm events plus an allowance for climate change generally in accordance with the recommendations of the Wilton Joubert Ltd Stormwater Report ref. 129385 dated 26th Feb 2024 submitted with the application.

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.*

Archaeological Sites

3. *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

4. *Council is not responsible for the removal of illegal structures within the reserve.*

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. In particular the matters listed in 8.6.5.1.3 Stormwater Management, 8.6.5.1.4 Setback from Boundaries , and 12.7.6.1.1 Setback from lakes, rivers and the CMA are of particular relevance.
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 proposed development is conventional in terms of its layout, form and scale, and will fit comfortably within the established setting.

- b. Appropriate infrastructure and servicing connections can be provided to facilitate the proposed development.
 - c. The proposal requires minimal earthworks to establish the proposal.
 - d. The proposal will also result in positive effects, it is seen as an efficient use of the land on the site, as it enables the provision of good outdoor living space.
- 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. National Policy Statement for Highly Productive Land
 - b. Northland Regional Policy Statement 2016,
 - c. Operative Far North District Plan 2009,
 - d. Proposed Far North District Plan 2022

National Policy Statement for Highly Productive Land

The site is 5307m² and site contains two residential dwellings, a garage and an office space. While gardening activities can be carried out on site, this is only of a scale which will support residential activities.

The area of mapped highly productive land covers a large area but cannot easily be integrated with a boundary adjustment or amalgamation with a neighbouring site such that it could be operate as a productive unit. The site is located within an area that has other rural residential sized allotments and is topographically separated from any larger land parcels by the river, public reserves and Ironbark Road. Even if the existing built development was removed on site, any future productive potential for land based primary production activities on site would not be feasible.

Due to the size of the existing allotment and the existing built development on site, the site cannot be economically viable for production within the next 30 years, it is evident that existing development on the site has constrained development potential, along with the size of the land and its location.

Northland Regional Policy Statement 2016

The activity is not located within any areas identified as having High Natural Character; the site is not known to be located within an area of Outstanding Landscape or within the Coastal Environment.

The proposal is considered to create no more than minor effects on the character of the locality. The proposal is considered to have negligible effects on the life supporting capacity of air, water, soil and ecosystems. As such, it is considered the proposal is compatible with the intent of the RPS.

Operative Far North District Plan

The activity is consistent with the relevant objectives, policies and assessment criteria of the Operative District Plan because

- The activity is consistent with the relevant objectives, policies and assessment criteria of the Operative District Plan because the activity is consistent with the relevant objectives, policies and assessment criteria of the Operative District Plan because the objectives and policies under Chapter 8 of the Operative District Plan aims to manage natural and physical resources sustainably and enable wide variety of activities is enabled, consistent with safeguarding the life supporting capacity of air, water, soil and ecosystems.
- The proposal promotes sustainable management by implementing effective stormwater mitigation methods to avoid potential adverse effects on the river or surrounding properties. Furthermore, any earthworks will be carried out in accordance with GD05.
- The proposal is consistent with the existing activities on the subject site and surrounding properties such that it is not considered to create any potential conflicts with existing land use activities.
- The proposal is not considered to compromise the amenity values of the rural environment. The surrounding environment includes smaller lifestyle sections with low density residential development associated with small scale rural activities.
- The proposal will not compromise the productivity of the site, as the site can still accommodate small productive activities such as gardening.
- The proposal is not considered to create any conflicting land use or reverse sensitivity effects as the development is consistent with the existing activities in the surrounding environment.

Proposed Far North District Plan

The activity is consistent with the relevant objectives, policies and assessment criteria of the Proposed District Plan because for this resource consent application the relevant provisions of both an operative and any proposed plan must be considered. Weighting is relevant if different outcomes arise from assessments of objectives and policies under both the operative and proposed plans.

- The proposal will not affect the availability of land for primary production activities, as the site is rural residential in nature. The site is 5307m² with existing development, the proposal is not considered to alter the availability of land for primary production activities as this was already compromised at the time of subdivision.
- The rural character and amenity will not be affected as the proposed development is consistent with other built development in the area.

As the outcomes sought are the same under the operative and the proposed plan frameworks, no weighting is necessary.

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 Swetha Maharaj, Intermediate 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.



Name: Pat Killalea

Date: 15th June 2024

Title: Independent commissioner

Proposed Extension

Regan & Rebekah Polgaze
11 Ironbark Road
Waipapa
Lot 9 DP 145038

Construction Plans
Date: 18 December 2023
Job Number: 7989
Drawn by:



Engineer Sheet Index		
Sheet No.	Sheet Title	Rev
A07	Foundation Plan Mark Up	-
A04	Proposed Floor Plan Mark Up	-
SD1	Connections Detail	-

APPROVED PLAN

Planner: SMaharaj
RC: 2240317-RMALUC
Date: 14/06/2024

Designer Sheet Index		
Sheet No.	Sheet Title	Rev
A01a	Site Location Plan	S
A01b	Site Plan	S
A02	Existing Floor Plan	S
A03	Existing Elevations	S
A04	Proposed Floor Plan	S
A05	Proposed Elevations	S
A06	Drainage Plan	S
A07	Foundation Plan	S
A08	Joist Layout Plan	S
A09	Roof Plan	S
A10	Framing & Lintel Plan	S
A11	Bracing Plan	S
A12	Section A	S
A13	Section B	S
A14	Foundation Details	S
A15	Foundation Details	S
A16	Subfloor Details	S
A17	Deck Step Details	S
A18	Face Fix Balustrade Details	S
A19	Threshold Details	S
A20	Hold Down Details	S
A21	24KN Uplift Truss Connection	S
A22	Cladding Details	S
A23	Roof Details	S
A24	Roof Details	S
A25	Drainage Details	S
Revisions		
A01b	Site Plan Information Revsied	N
A18	Page removed	N
A17, A24	Additional notes added	N
A05A & A05b	Ground heights now shown on elevations	O
A01a A01b, A04, A05a A05c	Part of deck removed and site plan updated	P & Q
A01a, A01b	Future office shape update	R & S



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BUILDING COMPLIANCE



Far North Maps



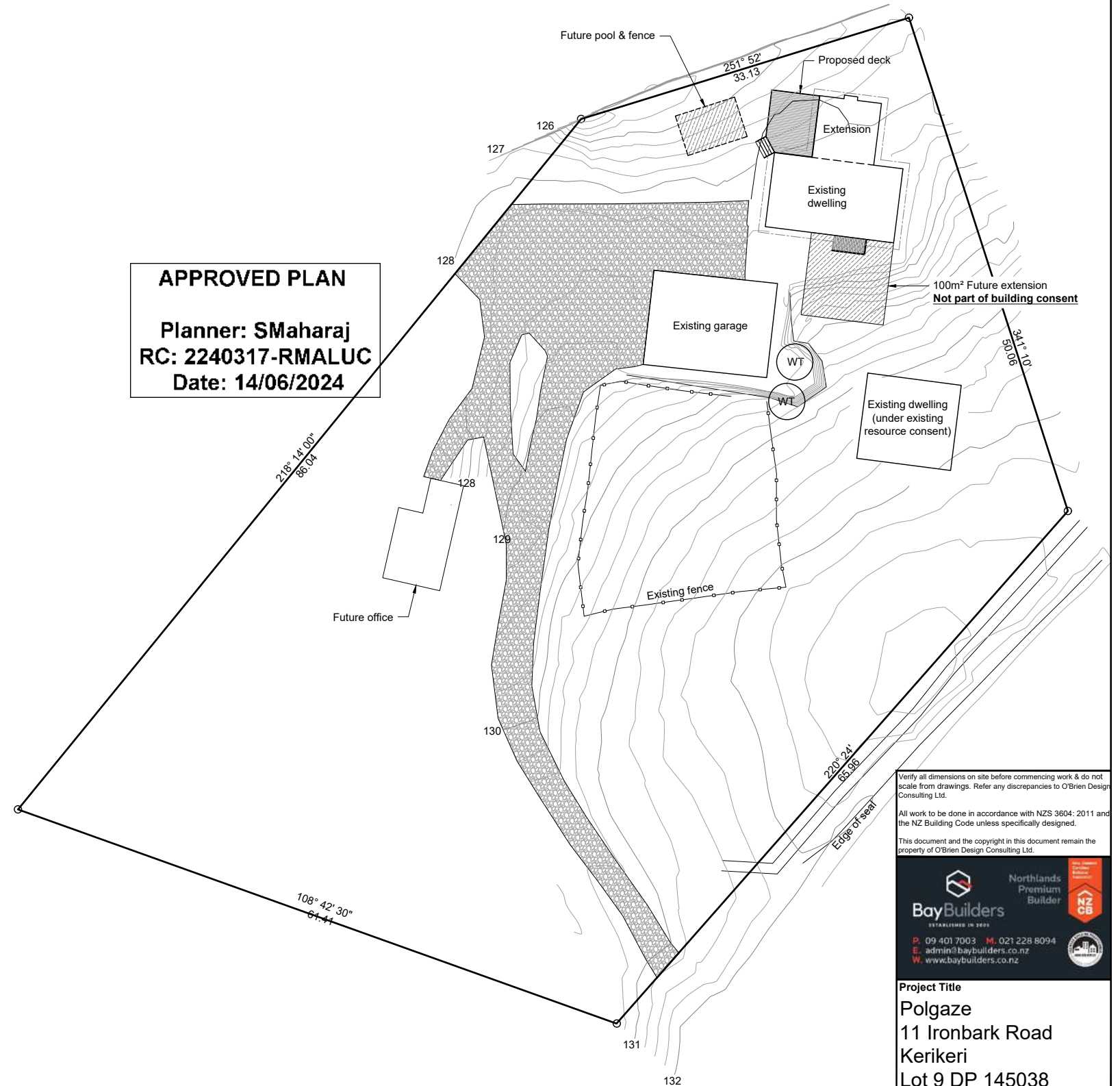
Projection NZTM2000, Datum NZGD2000, Scale: 1:1,000

DISCLAIMER:
While the Far North District Council strives to keep the data in this service current, it may not be the most recent or most accurate data available. No reliance on the information contained on this map by any person is permitted. FNDC will not be liable for any omissions or errors of information contained on this map. FNDC recommends that persons seek specific advice on individual properties from FNDC and other specialist organisations, which may hold more up-to-date or accurate information.

Created: 1/05/2023

APPROVED PLAN

Planner: SMaharaj
RC: 2240317-RMALUC
Date: 14/06/2024



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Project Title
Polgaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

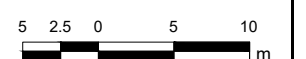
Sheet Title
Site Location Plan

Drawn 6 June 2024

Project No 7989

Rev R **Sheet** A01a

Scale (A3 Original) 1: 500





Lot 9 DP 145038
Lot area: 5,307m²
Cladding weight: Light
Corrosion zone: C
Wind zone: High
Rural Production Zone
District plan compliance:

Residential intensity: Complies

Sunlight rule: Complies

Stormwater Management

(Impermeable surfaces):
Existing metal driveway 1: 592.4m²
Future office (& verandah): 61.0m²
Existing second dwelling: 118.0m²
Existing garage: 125.0m²
Existing dwelling & proposed extension: 161.2m²
Future extension: 100.0m²
Future pool: 100.0m²
Total proposed: 1,257.6m²

Note: Future extension is not proposed & not part of consent, impermeable surface of future extension to be included in stormwater report & resource consent.

Total permitted = 15% of gross site area = 769.0m²
Total proposed = 1,257.6m² = 23.7% Does not comply, **RC required**
Stormwater mitigation by Wilton Joubert report dated 5th October 2023 submitted with BC information.

Setbacks to boundaries: 10m min. Does not comply, **RC required**

Building height:
Permitted: 12m max
Proposed: 4.5m approx.

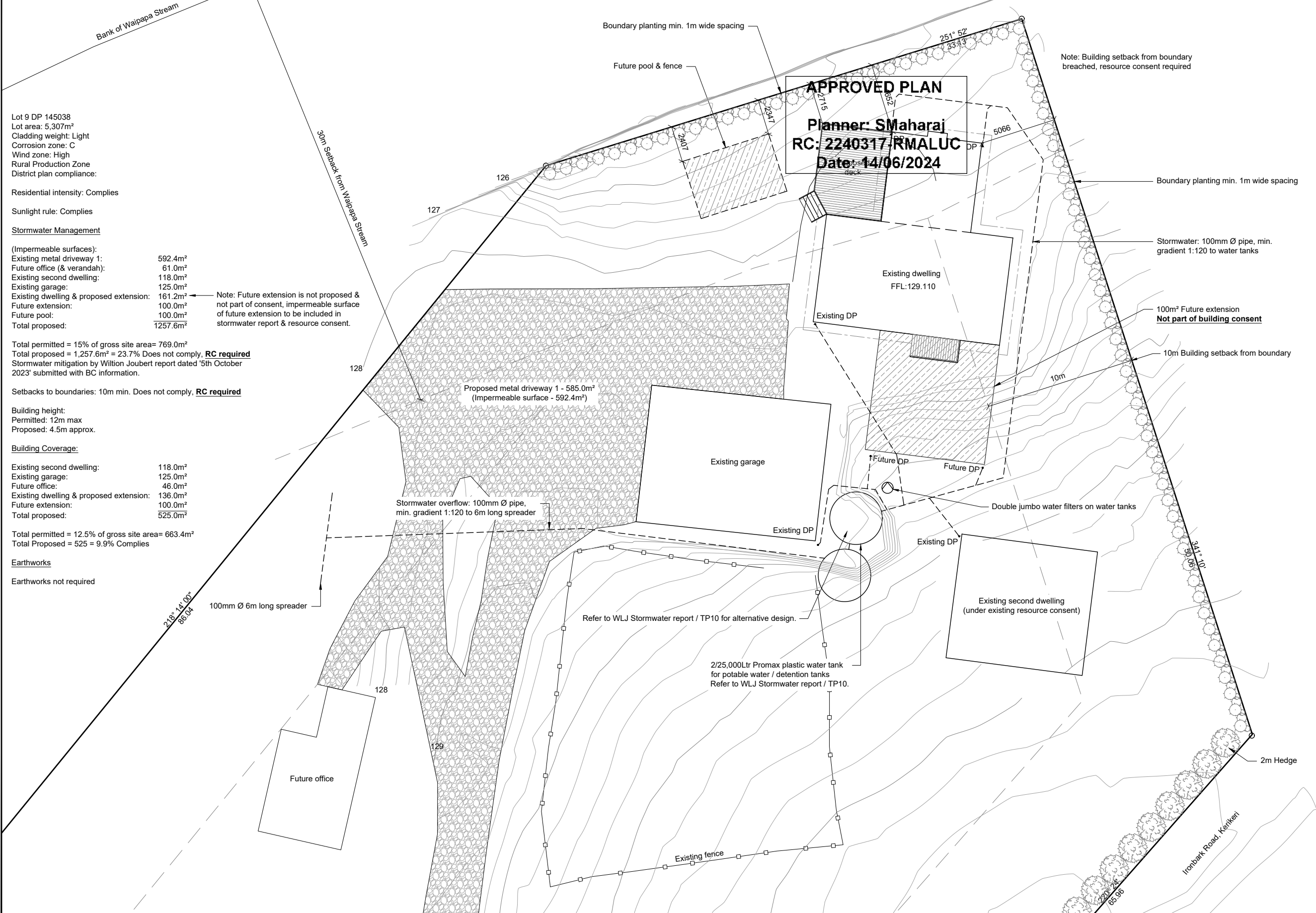
Building Coverage:

Existing second dwelling: 118.0m²
Existing garage: 125.0m²
Future office: 46.0m²
Existing dwelling & proposed extension: 136.0m²
Future extension: 100.0m²
Total proposed: 525.0m²

Total permitted = 12.5% of gross site area = 663.4m²
Total Proposed = 525 = 9.9% Complies

Earthworks

Earthworks not required



NOTES

- All heights shown are existing ground heights.
- Contour lines at 1m increments, sourced from NRC.
- All drainage to comply with AS/NZS3500 & NZBC G13/AS1. All drainage is diagrammatical, drainlayer to determine on site drainage layout and provide asbuilt plan when complete.
- Smoke alarms are to be installed in accordance with the New Zealand Building Code Clause F7 Section 3.0:
 - Smoke alarms shall be installed on or near the ceiling in every sleeping space or within 3m of every sleeping space door.
- The works which are being proposed will comply with Earthworks EW-S3 Accidental Discovery Protocol and Earthworks EW-S5 Erosion and Sediment Control - Auckland Council Guideline Document GD005 GD05 Erosion and Sediment Control.pdf (aucklanddesignmanual.co.nz)

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Project Title
Polgaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Site Plan

Drawn 6 June 2024

Project No 7989

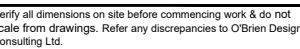
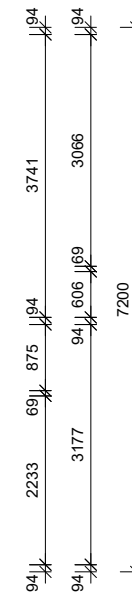
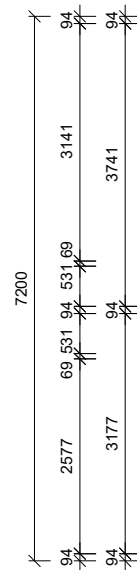
Rev	Sheet
R	A01b

Scale (A3 Original) 1: 250
2.5 1.25 0 2.5 5 m



FIXINGS:

Planner: SMaharaj
RC: 2240317-RMALUC
Date: 14/06/2024



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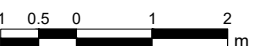
Sheet Title

Drawn 6 June 2024

Project No	7989
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Rev	Sheet
R	A02

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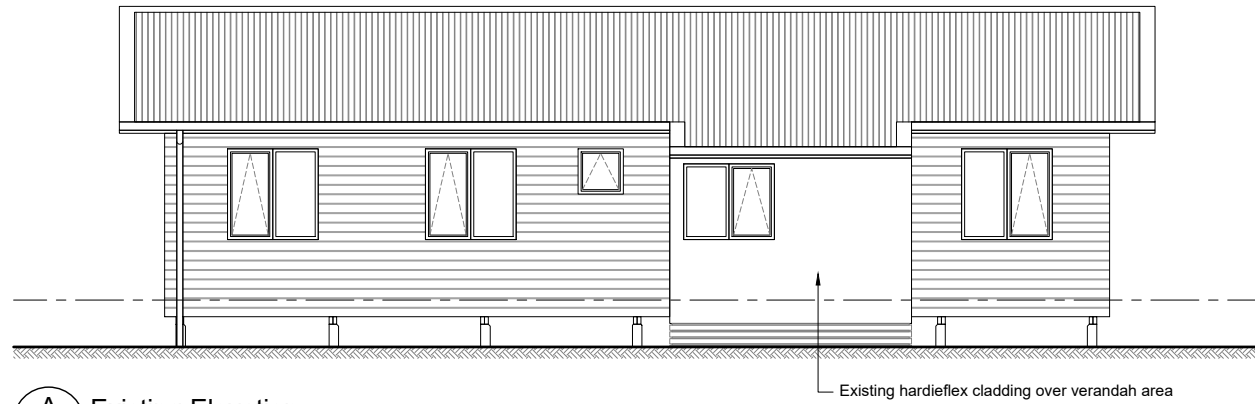


— — — Roof Line

==== Existing Timber framing walls

FIXINGS:

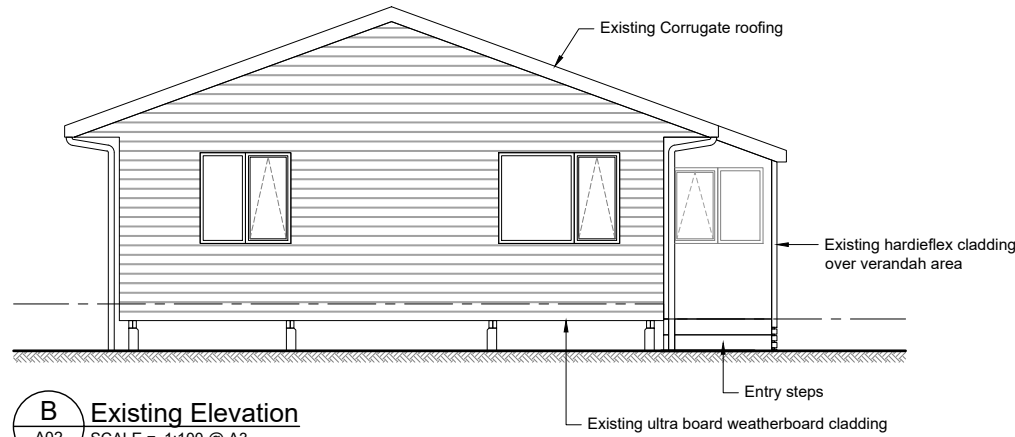
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Durability of fixings to comply with NZS
3604:2011 Section 4 & NZBC B2/AS1



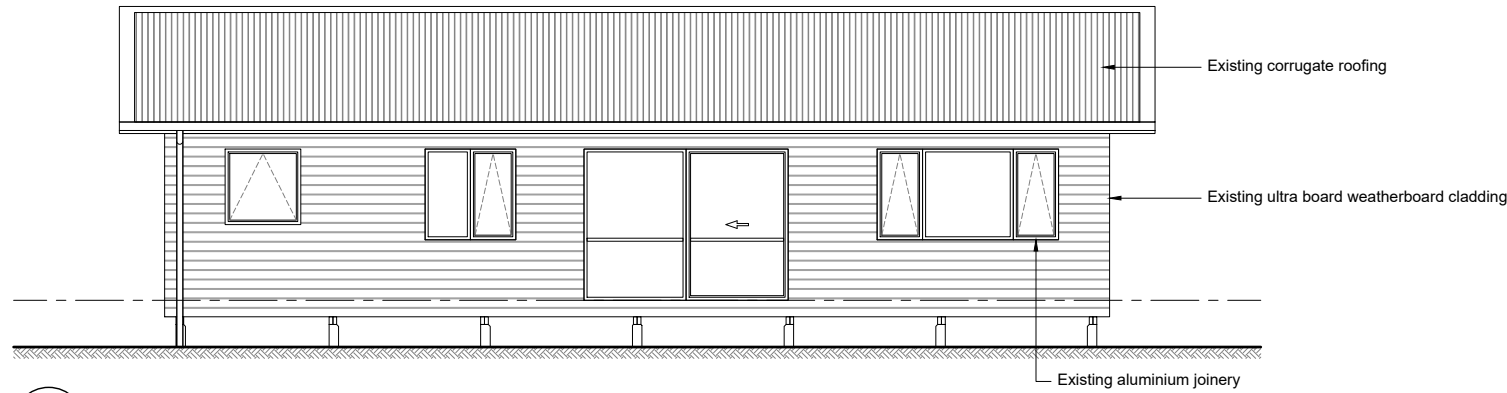
A Existing Elevation
A02 SCALE = 1:100 @ A3

APPROVED PLAN

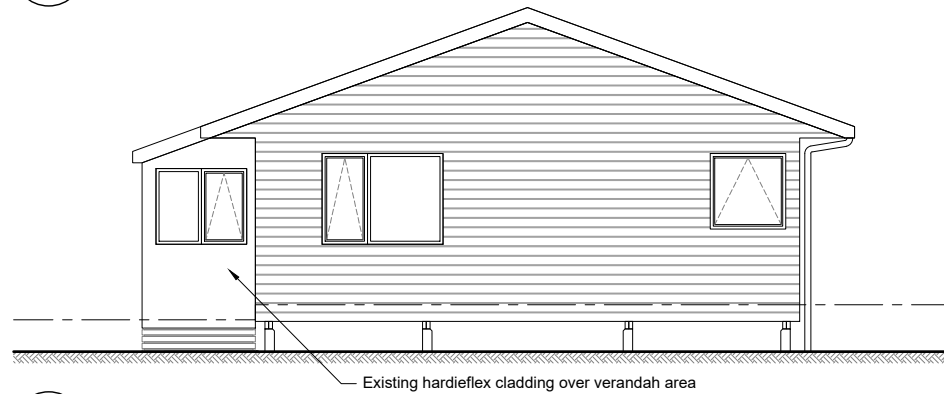
Planner: SMaharaj
RC: 2240317-RMALUC
Date: 14/06/2024



B Existing Elevation
A02 SCALE = 1:100 @ A3



C Existing Elevation
A02 SCALE = 1:100 @ A3



D Existing Elevation
A02 SCALE = 1:100 @ A3

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Project Title
Polgaze
11 Ironbark Road
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Lot 9 DP 145038

Sheet Title
Existing Elevations

Drawn 6 June 2024






Project No 7989

Rev	Sheet
R	A03

Scale (A3 Original) 1: 100

1 0.5 0 1 2 m



- | <u>LEGEND</u> | |
|--|---|
|  | Smoke Detector |
|  | Roof Line |
|  | New 90 x 45 SG8 H1.2 Timber framing walls |
|  | Existing Timber framing walls |
|  | Existing vinyl floor |
| Selected tiles on selected tile underlay to all wet areas installed to manufacturers specifications & Branz tiling good practice guide | |



Planner: SMaharaj
RC: 2240317-RMALUC
Date: 14/06/2024

NOTE:

- BUILDING AREA:

Existing
Floor Area: 90.0m²
Roof Area: 117.9m²

Proposed
Floor Area: 126.8m²
Roof Area: 161.2m²

FIXINGS

Exposure Zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

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Project Title
Polgaze
11 Ironbark Road
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Lot 9 DP 145038

Sheet Title

Proposed Floor Plan

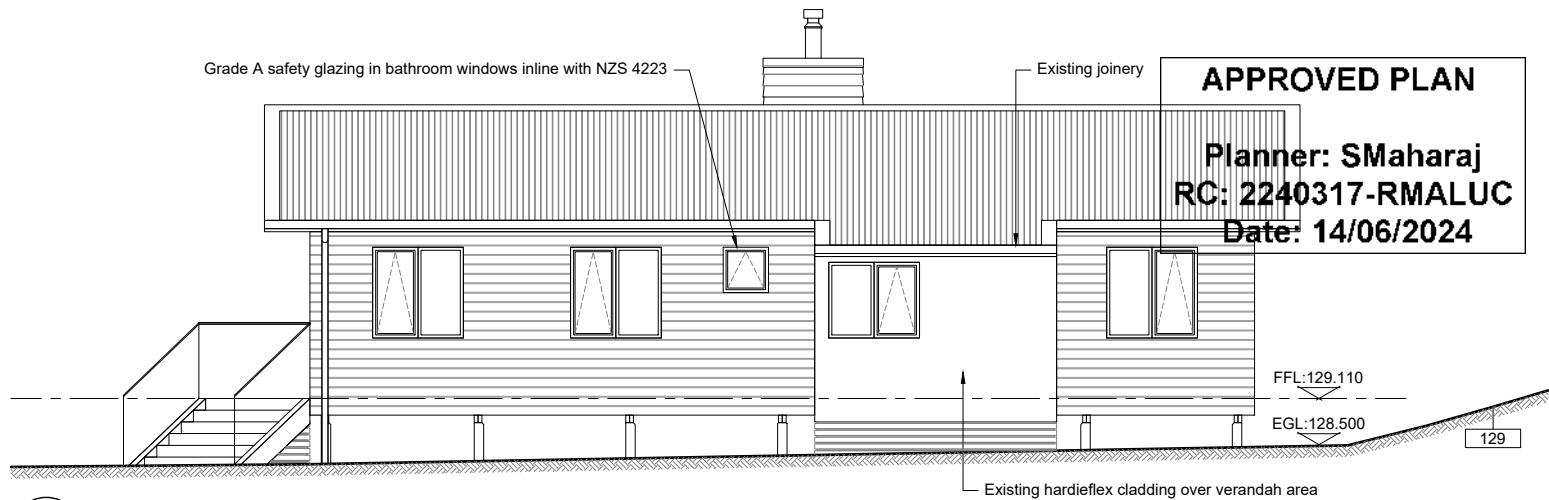
Drawn 6 June 2024

Project No 7989

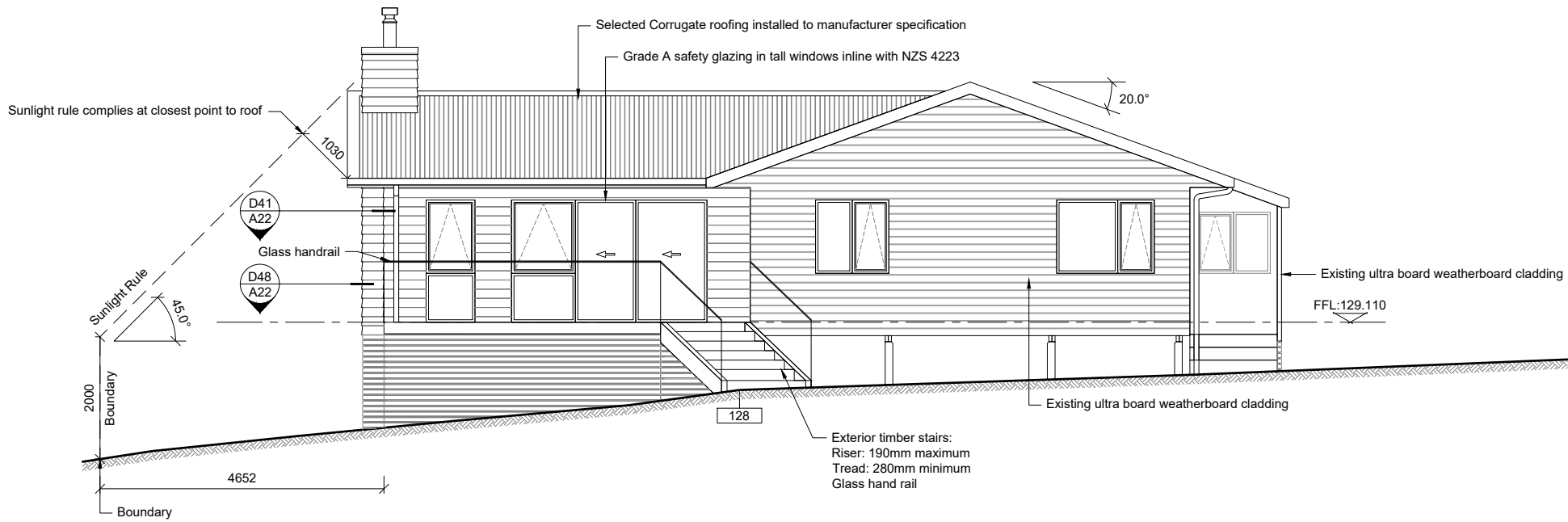
Rev	Sheet
R	A04

Scale (A3 Original) 1 : 100





A Elevation
A04 SCALE = 1:100 @ A3



B Elevation
A04 SCALE = 1:100 @ A3

SPECIFICATIONS					
Cladding Type	Existing Ultra Board & Linea Weatherboard				
Stud Height	2400				
Roofing Type	Corrugate				
Roof Pitch	20°				
Joinery	Aluminum				
Wind Zone	High				
Earth Quake Zone	1				
RISK MATRIX					
Risk Factor	L	M	H	VH	Score
A. Wind Zone	0	0	1	2	1
B. Number of Storeys	0	1	2	4	0
C. Roof / Wall Intersection	0	1	3	5	5
D. Eave Width	0	1	2	5	1
E. Envelope Complexity	0	1	3	6	1
F. Deck Design	0	2	4	6	0
	Total				8

- NOTE:
- All heights shown are existing ground heights.
 - All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
 - All windows and doors double glazed other than the garage joinery.
 - Grade A safety glazing in bathrooms & tall windows and sliders inline with NZS 4223.

FIXINGS:

Exposure Zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

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Project Title
Polgaze
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Lot 9 DP 145038

Sheet Title
Proposed Elevations

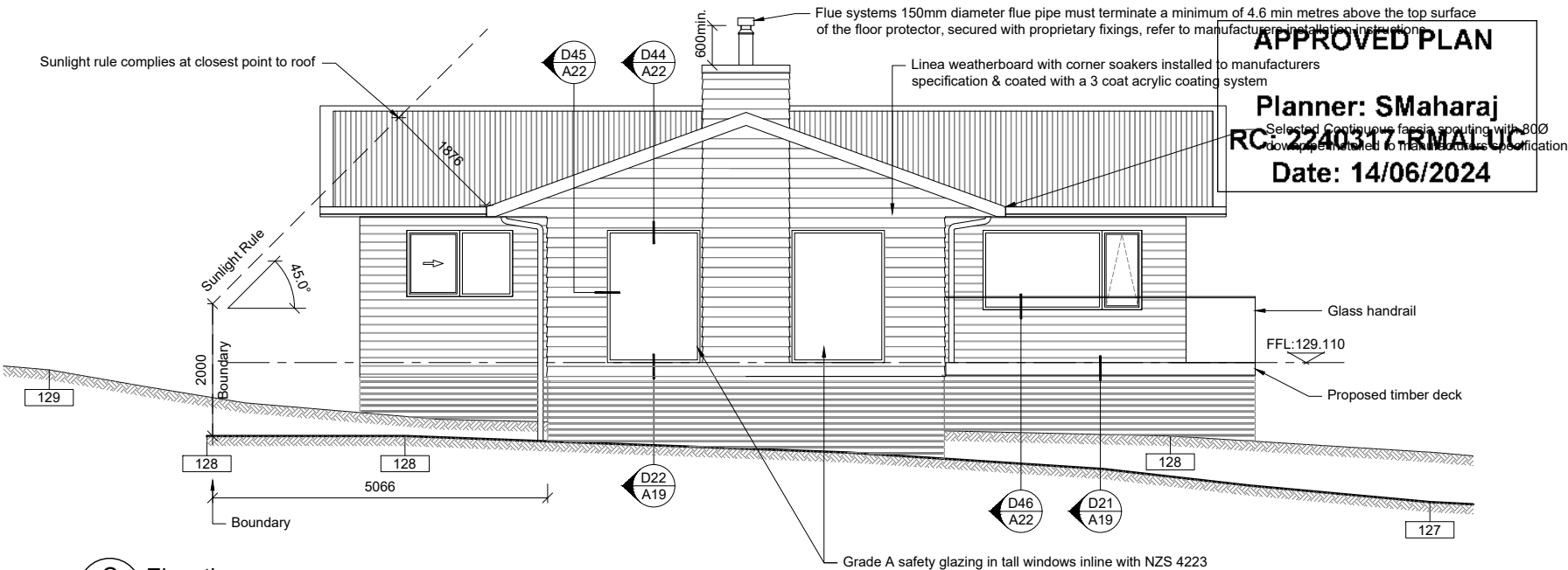
Drawn 6 June 2024

Project No 7989

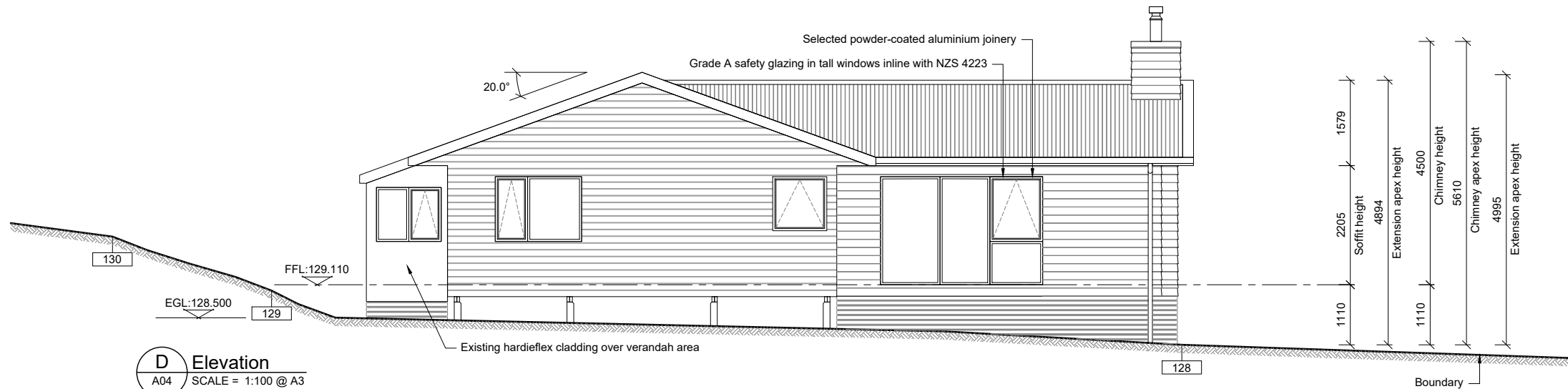
Rev	Sheet
R	A05a

Scale (A3 Original) 1: 100





C Elevation
A04 SCALE = 1:100 @ A3



D Elevation
A04 SCALE = 1:100 @ A3

SPECIFICATIONS					
Cladding Type	Existing Ultra Board & Linea Weatherboard				
Stud Height	2400				
Roofing Type	Corrugate				
Roof Pitch	20°				
Joinery	Aluminum				
Wind Zone	High				
Earth Quake Zone	1				
RISK MATRIX					
Risk Factor	L	M	H	VH	Score
A. Wind Zone	0	0	1	2	1
B. Number of Storeys	0	1	2	4	0
C. Roof / Wall Intersection	0	1	3	5	5
D. Eave Width	0	1	2	5	1
E. Envelope Complexity	0	1	3	6	1
F. Deck Design	0	2	4	6	0
Total					8

- NOTE:
- All heights shown are existing ground heights.
 - All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
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FIXINGS:

Exposure Zone: C
Durability of fixings to comply with NZS 3604:2011 Section 4 & NZBC B2/AS1

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Project Title
Polgaze
11 Ironbark Road
Kerikeri
Lot 9 DP 145038

Sheet Title
Proposed Elevations

Drawn 6 June 2024

Project No 7989

Rev	Sheet
R	A05b

Scale (A3 Original) 1: 100

1 0.5 0 1 2 m

17 June 2025

Rebekah Leigh Polglaze and Regan Lance Polglaze
11 Ironbark Road
RD 2
Kerikeri 0295

Dear Sir / Madam,

Building consent number: EBC-2024-416/0/A
Property ID: 3312268
Address: 11 Ironbark Road, Waipapa 0295
Description: Extension to existing dwelling and replacement of onsite waste water system

Requirement for Resource Consent

PIM Assessment of your application has highlighted the need for Resource Consent that must be granted prior to any building works or earthworks commencing.

NB: As of 27th July 2022, some rules and standards in the Far North District Council Proposed District Plan took legal effect and compliance with these rules applies to your building consent. Please visit our website to see these rules
[Far North Proposed District Plan \(isoplan.co.nz\)](https://isoplan.co.nz)

The site is zoned **Rural Production** under the Operative District Plan and Resource Consent is required for breach of the following:

Rule:	Breach of Condition of Resource Consent 2240317-RMALUC approved 14/06/2024.
Reason:	Building Consent plan are not in accordance with the stamped 'approved' plans in 2240317-RMALUC therefore a variation to Resource Consent is required.

Rule:	12.3.6.1.1 EXCAVATION AND/OR FILLING, EXCLUDING MINING AND QUARRYING, IN THE RURAL PRODUCTION ZONE OR KAURI CLIFFS ZONE
Reason:	Earthworks cut exceeds 1.5m in height and documentation from an experienced Geotechnical Chartered Professional Engineer for the cut and batter has not been provided.

Please note there may be other rule breaches found during the Resource Consent process. It is your responsibility to ensure the Resource Consent approved plans match the Consented approved plans.

The application form can be downloaded from www.fndc.govt.nz and submitted to Council's (Planning Department) with the appropriate documentation and instalment fee.

If you have any queries, please contact the Duty Planner on Duty.Planner@fndc.govt.nz or 0800 920 029.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'L Mare'.

Lysigna Mare

PIM Officer

Delivery and Operations

Emailed to: martin@obrienconsulting.co.nz

FORM 4
Certificate attached to
PROJECT INFORMATION MEMORANDUM

Section 37, Building Act 2004

Building Consent Number: EBC-2024-416/0/A

**RESTRICTIONS ON COMMENCING BUILDING WORK UNDER
RESOURCE MANAGEMENT ACT 1991**

The building work referred to in the attached Project Information Memorandum is also required to have the following **Resource Consent(s)** under the Resource Management Act 1991:

• **Variation to Resource Consent 2240317-RMALUC – REQUIRED**

As the above Resource Consent(s) will affect the building work to which the Project Information Memorandum relates, until this has been granted no building work may proceed.

Failure to comply with the requirements of this notice may result in legal action being taken against you under the Resource Management Act 1991.

Signature:



Trent Blakeman
Manager - Building Services –
Delivery and Operations
Far North District Council (Building Consent Authority)
17 June 2025

Position:

On behalf of:

Date: