



Office Use Only Application Number:

APPLICATION FOR RESOURCE CONSENT OR FAST-TRACK RESOURCE CONSENT

(Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA))

(If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of Form 9)

Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges – both available on the Council’s web page.

1. Pre-Lodgement Meeting

Have you met with a Council Resource Consent representative to discuss this application prior to lodgement? Yes / No

2. Type of Consent being applied for (more than one circle can be ticked):

- Land Use Fast Track Land Use* Subdivision Discharge
- Extension of time (s.125) Change of conditions (s.127) Change of Consent Notice (s.221(3))
- Consent under National Environmental Standard (e.g. Assessing and Managing Contaminants in Soil)
- Other (please specify) _____

***The fast track for simple land use consents is restricted to consents with a controlled activity status and requires you provide an electronic address for service.**

3. Would you like to opt out of the Fast Track Process? Yes / No

4. Applicant Details:

Name/s: _____

Electronic Address for Service (E-mail): _____

Phone Numbers: _____ Home: _____

Postal Address: _____
(or alternative method of service under section 352 of the Act)

Post Code: 0230

5. Address for Correspondence: Name and address for service and correspondence (if using an Agent write their details here).

Name/s: Martin O'Brien

Electronic Address for Service (E-mail): martin@obrienconsulting.co.nz

Phone Numbers: Work: 027 4075208 Home: _____

Postal Address: _____
(or alternative method of service under section 352 of the Act)

153B Kerikeri Inlet Road, Kerikeri

Post Code: 0230

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

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

Name/s: John & Shirley Procter

Property Address/
Location: 19 Riverbank Drive, Kerikeri

7. Application Site Details:

Location and/or Property Street Address of the proposed activity:

Site Address/
Location: 19 Riverbank Drive, Kerikeri

Legal Description: Lot 20 DP 375532 Val Number: _____

Certificate of Title: 303961
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.**

8. Description of the Proposal:

Please enter a brief description of the proposal here. Attach a detailed description of the proposed activity and drawings (to a recognized scale, e.g. 1:100) to illustrate your proposal. Please refer to Chapter 4 of the District Plan, and Guidance Notes, for further details of information requirements.

Application for Building Coverage as a Discretionary Activity due to Building Coverage being a total of 16.7% (503.6m²) of the total lot area.

Application for Stormwater Management as a Discretionary activity due to impermeable surfaces being a total of 30% (907.9m²) of the total lot area.

If this is an application for an Extension of Time (s.125); Change of Consent Conditions (s.127) or 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) or extension being sought, with reasons for requesting them.

9. Would you like to request Public Notification

Yes/No

10. Other Consent required/being applied for under different legislation (more than one circle can be ticked):

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

11. 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 (further information in regard to this NES is available on the Council's planning web pages):

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? (If the activity is any of the activities listed below, then you need to tick the 'yes' circle). yes no don't know

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

12. 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.

Please attach your AEE to this application.

13. 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 all names in full)

Email:

Postal Address:

Post Code: 0230

Phone Numbers:

Home:

Fax:

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 print)

Signature: _____ (signature of bill payer – mandatory) Date: 05/ 03/2024

14. 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.

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

Name: _____ (please print)

Signature: _____ (signature)

Date: 05/03/2024

(A signature is made by electronic means)

Checklist (please tick if information is provided)

- Payment (cheques payable to Far North District Council)
- A current Certificate of Title (Search Copy not more than 6 months old)
- 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.

Only one copy of an application is required, but please note for copying and scanning purposes, documentation should be:

UNBOUND

SINGLE SIDED

NO LARGER THAN A3 in SIZE

ASSESSMENT OF ENVIRONMENTAL EFFECTS

Building Coverage & Stormwater Management

John & Shirely Procter
19 Riverbank Drive
Kerikeri
Lot 20 DP 375532

Written by: Nicola O'Brien
Reviewed by: Martin O'Brien

Rev: A
Date: 7th March 2024
Job No: 4134

Ph: (09) 407 5208 | Mob: 027 407 5208
E-mail: martin@obrienconsulting.co.nz
E-mail: nicola@obrienconsulting.co.nz

Form 9

Application for Resource Consent under Sections 127 Resource Management Act 1991

To Far North District Council

1. *John & Shirley Procter, from 19 Riverbank Drive, Kerikeri, Lot 20 DP 375532, apply for Resource Consent due to the following rule breaches in a Rural Living Zone:*

- Application for Building Coverage as a Discretionary Activity is due to building coverage being a total of 16.7% (503.6m²) of the total lot area. Resulting in 201.6m² over the 10% (302m²) permitted allowance outlined in the Far North District Plan, Section 8.7.5.1.13. Building coverage will increase due to proposed additions to the existing dwelling.

The activity is Discretionary because it does not comply with Permitted Activities rule 8.7.5.1.13, building coverage is not listed in Controlled Activities (8.7.5.2) and total building coverage exceeds the 15% allowed for a Restricted Discretionary activity as per rule 8.7.5.3.4.

- Application for Stormwater Management as a Discretionary activity is due to impermeable surfaces being a total of 30% (907.9m²) of the total lot area.

The total proposed impermeable area 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). Stormwater Management is not listed as a Restricted Discretionary Activity. Discretionary Activity rule 8.7.5.4 (c) states a Discretionary activity "does not comply with one or more of the other standards for permitted controlled or restricted discretionary activities in this zone as set out under Rules 8.7.5.1, 8.7.5.2 and 8.7.5.3. Therefore, the activity is Discretionary.

The applicant opts out of the fast-track consent process as the breach is a Restricted Discretionary and Discretionary activity.

2. *The activity to which the application relates (the proposed activity) is as follows:*

The existing dwelling at 19 Riverbank Drive, Kerikeri is to be extended, along with a proposed verandah area. The driveway is to be increased and a proposed concrete patio constructed. The existing shed is to be relocated. The proposal increases building coverage and requires stormwater management. Architectural Plans, Appendix I provides details of the development.

This report addresses relevant criteria in the existing and proposed Far North District Plan and Resource Management Act (1991).

3. *The location of the proposed activity:*

19 Riverbank Drive, Kerikeri is located off Access Road and is accessed via a shared right of way. The property is zoned Rural Living in the Far North District Plan. Refer to the Site Location Plan, Appendix I, Sheet A01a, showing the location of Lot 20 DP 375532 and the surrounding area.

4. The owner listed is the only owner/occupier of the site to which this application relates.
5. There are no other activities that are part of the proposal to which this application relates.
6. No additional resource consents are required for the proposal to which this application relates.
7. Attached is an assessment of the proposed activity's effect on the environment that:
 - a. Includes the information required by clause 6 of Schedule 4 of the Resource Management Act 1991; and
 - b. Addresses the matters specified in clause 7 of Schedule 4 of the Resource Management Act 1991; and
 - c. includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.
8. Attached is an assessment of the proposed activity against the matters set out in Part 2 of the Resource Management Act 1991.
9. Attached is an assessment of the proposed activity against any relevant provisions of a document referred to in section 104(1)(b) of the Resource Management Act 1991, including the information required by clause 2(2) of Schedule 4 of that Act.
- 10-13 Not applicable.
14. Attached is further information required to be included in this application by the District Plan, the Regional Plan, the Resource Management Act 1991, or any regulations made under that Act.

1.0 Introduction

Lot 20 DP 375532 is an existing, established residential property with a dwelling, shed and 2 water tanks. Additions to the dwelling are proposed which will increase the floor area of the building and building coverage. The existing shed is to be relocated near the western boundary so that a concrete driveway can be created to the south of the dwelling. The existing driveway is to be removed and a new larger driveway constructed. A concrete patio is proposed. The increased roof area and hardstand coverage mean stormwater mitigation is required.

1.1 Scope

O'Brien Design Consulting were engaged by John Procter to prepare an Assessment of Environmental Effects Report to accompany an application to for Resource Consent addressing the requirements of Section 88.2 and Schedule 4 of the Resource Management Act 1991. The application is to be submitted to the Far North District Council. This application has been prepared in accordance with Form 9 and Schedule 4, Sections 2, 6 and 7 of the Resource Management Act.

Relevant District Plan rules and proposed District Plan rules have been assessed along with objectives and policies, for each plan. District Plan Criterion for building coverage are addressed in this report. A Stormwater Mitigation Report by Wilton Joubert Engineers addresses criterion for stormwater management and is attached as Appendix II. This report focuses on mitigation for building coverage.

1.2 Description of Activities

An existing dwelling and shed are located on the property. The dwelling is to be extended and the shed relocated. The driveway is to be increased and a concrete patio constructed.

Building Coverage:

Existing relocated shed:	26.0m ²
Existing dwelling with proposed extensions:	<u>477.6m²</u>
Total proposed:	503.6m ²

Refer to attached Site Plans for details of the extension and general property layout (Appendix I).

Application for Building Coverage as a Discretionary activity is due to building coverage being a total of 16.7% (503.6m²) of the total lot area. Resulting in 201.6m² over the 10% (302m²) permitted allowance outlined in the Far North District Plan, Section 8.7.5.1.13.

The activity is Discretionary because it does not comply with Permitted Activities rule 8.7.5.1.13, building coverage is not listed in Controlled Activities (8.7.5.2) and total building coverage exceeds the 15% allowed for a Restricted Discretionary activity as per rule 8.7.5.3.4.

Stormwater Management:

Existing relocated shed:	26.0m ²
Proposed concrete patio:	22.9m ²
Proposed & existing concrete driveway:	314.0m ²
Proposed dwelling & extension:	<u>545.0m²</u>
Total:	907.9m ²

Application for Stormwater Management as a Discretionary activity is due to impermeable surfaces being a total of 30% (907.9m²) of the total lot area.

The total proposed impermeable area 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). Stormwater Management is not listed as a Restricted Discretionary Activity. Discretionary Activity rule 8.7.5.4 (c) states a Discretionary activity "does not comply with one or more of the other standards for permitted controlled or restricted discretionary activities in this zone as set out under Rules 8.7.5.1, 8.7.5.2 and 8.7.5.3. Therefore, the activity is Discretionary.

A Stormwater Mitigation Report has been written by Wilton Joubert Consulting Engineers, 23rd February 2024. Refer to Appendix II. The low impact design principles utilised will mitigate runoff from impermeable areas exceeding permitted threshold to that of predevelopment levels (10% and 1% AEP storm events with climate change). With mitigation stormwater effects are considered to have less than minor impact on the receiving environment.

2.0 Site Description

Lot 20 DP 375532 is a 3,020m², irregular shaped, slight to moderately sloping, established residential property located at 19 Riverbank Drive, Kerikeri. Access to the property is gained via a shared concrete right of way which runs along the southern property boundary. The concrete driveway enters the property at the southeast corner.

An existing dwelling, shed and concrete driveway are located to the south of the property on flat to slightly sloping topography. The buildings are serviced by 2 water tanks and onsite wastewater consisting of an aeration treatment system with dripper line. The property has well maintained gardens, mature trees, and lawn areas. The property boundaries are planted with a mixture of exotic shrubs and trees.

The topography over Lot 20 is primarily flat to slightly sloping in a north-westerly direction. The northwestern part of the property becomes moderate as it slopes down towards the northwest boundary. A well-maintained grassed strip then Puketotara Stream are located to the northwest of the property. Residential properties are located to the west, south and east. Refer to the Site Location Plan, A01a showing Lot 20 and the surrounding area.

A site visit occurred on 4th March 2024 including a walk over of the property and property boundaries. Existing plantings have screened or at least partially screened the dwelling from view from the right of way and adjacent sites. This means potential visual effects of increased building coverage are less than minor.

Photograph 1 shows existing mixed exotic tree species along the southern property boundary. Species include Magnolia, Camelia, and Liquid Amber. Currently the trees are approximately 4m in height and provide complete privacy from view when standing along the right of way (except for the driveway entrance). This means adjacent properties to the south (Lot 17 DP 375532, Lot 18 DP 375532, and Lot 19 DP 375532) cannot currently see the dwelling or proposed development unless standing on or near the driveway entrance. Mixed exotic species continue along the southwest boundary.

Established trees and shrubs ranging in height from approximately 2-7m run along the northwest boundary between the dwelling and reserve along Puketotara Stream. The trees include a mix of exotic and native species such as Pittosporums, Manuka, Liquid Amber, Silk Tree, Banksia species. The vegetation creates privacy or at a minimum partially obscures the dwelling and proposed development from view. Refer to Photograph 2 showing plantings along the northwest boundary.

The eastern boundary is planted with tall, well established citrus trees providing privacy or at least partial screening from neighbouring Lot 21 DP 375532 to the east. Visibility occurs along part of the eastern boundary near the driveway. However, a reasonable level of privacy still occurs. Juvenile Ake Ake, a native small tree near the driveway, will provide additional privacy as it grows in width and height (approximate mature height of 5m x 3m width).

Numerous established gardens and semi mature trees within the lawn area also provide privacy screening the development. Photograph 4 shows an example of trees and established gardens to the north of the property. Many of the tree species on the property and along the boundaries are not yet fully mature and will therefore provide further screening over time.

Proposed building coverage with the additions will be 477.6m². There are numerous properties in the area with a building coverage greater than 400m² for example Lot 3 DP 375532, 5 Riverstone Lane has a building coverage of ~570m², Lot 12 DP 357360, 10 Access Heights has a building coverage of approximately 441m² while Lot 13 DP 357360, 12 Access Heights has a coverage of ~416m². This shows the development of a single residential unit with a larger than usual building coverage is in keeping with the local area.



Photograph 1: Showing existing exotic vegetation obscuring visibility of the development along the right of way.



Photograph 2: Showing exotic trees along the northwest boundary obscuring or partially obscuring the development from the grass reserve.



Photograph 3: Showing part of the eastern boundary planted with citrus ranging in height providing a reasonable level of privacy for adjacent Lot 21.



Photograph 4: Showing an example of established trees and gardens on Lot 20.

3.0 Far North District Plan Review

3.1 Operative Far North District Plan

Application for Building Coverage as a Discretionary activity is due to building coverage being a total of 16.7% (503.6m²) of the total lot area. Resulting in 201.6m² over the 10% (302m²) permitted allowance outlined in the Far North District Plan, Section 8.7.5.1.13. Building coverage will increase due to proposed additions to the existing dwelling.

Application for Stormwater Management as a Discretionary activity is due to impermeable surfaces being a total of 30% (907.9m²) of the total lot area.

3.2 Operative Far North District Plan Other Rule Assessment:

The following District Plan rules all comply:

8.6.5.1.1 Residential intensity: Complies.

8.6.5.1.2 Sunlight: Complies.

8.6.5.1.4 Setback from Boundaries: 3m minimum, Complies.

8.6.5.1.8 Building Height: Permitted 9m proposed 6m: Complies.

12.3.6.1: Earthworks: 69.2m³ cut/fill well under the 300m³. Complies.

3.3 Operative Far North District Plan Objectives & Policies

3.3.1 Rural Living Zone, Section 8.7, Operative Far North District Plan

The following has been taken from the Operative Far North District Plan, Section 8.7, p. 1 and 2.

Objectives

8.7.3.1 To achieve a style of development on the urban periphery where the effects of the different types of development are compatible.

Applicable for building coverage. Although building coverage has increased, land use remains as a single residential dwelling compatible with surrounding land use and development.

8.7.3.2 To provide for low density residential development on the urban periphery, where more intense development would result in adverse effects on the rural and natural environment.

The development is in keeping with low density development and is not considered intense development that would result in adverse effects on the rural and natural environment. A single dwelling is proposed. Low impact design principles are to be used to reduce run off volumes and to protect receiving environments from the adverse effects of stormwater discharges.

8.7.3.3 To protect the special amenity values of the frontage to Kerikeri Road between SH10 and the urban edge of Kerikeri.

Not applicable.

Policies

8.7.4.1 That a transition between residential and rural zones is achieved where the effects of activities in the different areas are managed to ensure compatibility.

Transition achieved at subdivision stage. The development is in keeping with surrounding properties.

8.7.4.2 That the Rural Living Zone be applied to areas where existing subdivision patterns have led to a semi-urban character but where more intensive subdivision would result in adverse effects on the rural and natural environment.

Not applicable. Subdivision has created a semi urban character.

8.7.4.3 That residential activities have sufficient land associated with each household unit to provide for outdoor space, and where a reticulated sewerage system is not provided, sufficient land for onsite effluent disposal.

Applicable. The 3,020m² property has sufficient land to provide outdoor space and onsite infrastructure. An aeration treatment system with dripper lines currently services the dwelling. As additional bedrooms are proposed a new field is to be installed. The Onsite Wastewater Report (TP58), job number 4134 provides details of the design. There is sufficient land available for the wastewater field and a 50% reserve. Potable water is collected in 2 water tanks. 3 tanks total are proposed. Stormwater will be managed onsite with detention and a 9m long rock filled soakage trench. Refer to Sheet A01b, Appendix I.

8.7.4.4 That no limits be placed on the types of housing and forms of accommodation in the Rural Living Zone, in recognition of the diverse needs of the community.

Not applicable. The style of housing is in keeping with modern, Kerikeri dwellings.

8.7.4.5 That non-residential activities can be established within the Rural Living Zone subject to compatibility with the existing character of the environment.

Not applicable the development is residential.

8.7.4.6 That home-based employment opportunities be allowed in the Rural Living Zone.

Not applicable.

8.7.4.7 That provision be made for ensuring that sites, and the buildings and activities which may locate on those sites, have adequate access to sunlight and daylight.

Not applicable. The dwelling, shed and addition comply with the sunlight rule.

8.7.4.8 That the scale and intensity of activities other than a single residential unit be commensurate with that which could be expected of a single residential unit.

Not applicable. A single residential dwelling is proposed. Building coverage exceeds permitted but is compatible with existing development in the area.

8.7.4.9 That activities with effects on amenity values greater than a single residential unit could be expected to have, be controlled so as to avoid, remedy or mitigate those adverse effects on adjacent activities.

Not applicable. The development is a single residential unit in keeping with modern, large dwellings in the Kerikeri area. The completed development is not expected to affect amenity values on adjacent sites as existing plantings on the property and along boundaries fully screen or at a minimum partially obscure the development from view.

8.7.4.10 That provision be made to ensure a reasonable level of privacy for inhabitants of buildings on adjoining sites.

Applicable. A reasonable level of privacy for inhabitants of buildings on adjoining sites has been achieved due to existing trees and shrubs on the property and along property boundaries.

8.7.4.11 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.

Not applicable as not on a site with frontage to Kerikeri Road.

8.7.4.12 That the Council maintains discretion over new connections to a sewerage system to ensure treatment plant discharge quality standards are not compromised.

Not applicable. A secondary treatment system with buried dripper lines services the dwelling.

Summary

Following development, a single dwelling with ample area for outdoor activities and onsite infrastructure including wastewater disposal and stormwater management will be created. Existing vegetation screens or at a minimum provides a reasonable level of privacy for buildings on adjoining sites. Visual effects on neighbouring sites are expected to be less than minor. Section 5 addresses Assessment Criteria Section, 8.7.5.3.4 of the Far North District Plan for building coverage.

Stormwater will be managed so that flow rates are that of predeveloped. The low impact design principles utilised will mitigate runoff from impermeable areas exceeding permitted threshold to that of predevelopment levels (10% and 1% AEP). Mitigation includes the use of 3 concrete water tanks for stormwater attenuation and a 9m soakage trench. With mitigation stormwater effects are considered to be less than minor on the receiving environment. The Stormwater Mitigation Report by Wilton Joubert, Appendix II provides further details of stormwater management.

The proposed development is in keeping with the objectives and policies in the Operative Far North District Plan for a Rural Living zone.

3.3.2 Proposed Far North District Plan Objectives & Policies

In the proposed District Plan the property will become Rural Residential. The Rural Residential zone has been applied to areas that were formerly zoned Rural Living and are contiguous with an urban area.

Objectives

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

Applicable. The proposed development is considered a residential activity which complies with the character and amenity of the zone, surrounding properties and neighborhood.

RRZ-02 The predominant character and amenity of the Rural Residential Zone is maintained and enhanced, which includes:

a. Peri-urban scale residential activities.

Applicable. The property is peri-urban scale residential. The development is in keeping with neighboring properties and the local area.

b. Small scale farming activities with limited buildings and structures.

Not applicable as no farming activities proposed.

c. Smaller lot sizes than anticipated in the Rural Production or Rural Lifestyles zones:

Applicable. Lot size of 3,020m² in keeping with residential activity.

d. A diverse range of rural residential environments reflecting the character and amenity of the adjacent urban area.

Applicable. In keeping with the character and amenity of adjacent sites and the local area.

RRZ-03 The Rural Residential zone helps meet the demand for growth around urban centers while ensuring the ability of the land to be rezoned for urban development in the future is not compromised.

Not applicable to this application.

RRZ-04 Land use and subdivision in the Rural Residential zone:

a. Maintains rural residential character and amenity values.

Applicable. The residential land use maintains the existing character and amenity values of the surrounding area.

b. Supports a range of rural residential and small-scale farming activities.

Not applicable as residential use with no farming activities.

c. Is managed to control any reverse sensitivity issues that may occur within the zone or at the zone interface.

Not applicable as primarily residential land use to the south of Puketotara Stream.

Policies

Enable activities that will not compromise the role, function and predominant character and amenity of the Rural Residential Zone, while ensuring their design, scale and intensity is appropriate, including:

- a. *rural residential activities;***

Applicable. The design, scale and intensity are appropriate for the neighbourhood and surrounding area. The development does not compromise the role, function, or character of the Rural Residential Zone. The dwelling is modern and stylish enhancing the amenity and financial value of the neighbourhood.

- b. *small-scale farming activities;*** Not applicable.

- c. *home business activities;*** Not applicable.

- d. *visitor accommodation;*** Not applicable.

- e. *small-scale education facilities;*** Not applicable.

RRZ-P2

Avoid activities that are incompatible with the role, function and predominant character and amenity of the Rural Residential Zone including:

- a. *activities that are contrary to the density anticipated for the Rural Residential Zone;***

Not applicable. A single dwelling is proposed.

- b. *primary production activities, such as intensive indoor primary production or rural industry, that generate adverse amenity effects that are incompatible with rural residential activities;***

Not applicable as primary production activities not proposed.

- c. *commercial or industrial activities that are more appropriately located in an urban zone or a Settlement Zone.***

Not applicable as commercial or industrial activities are not proposed.

RRZ-P3

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

Not applicable. Reverse sensitivity effects from sensitive and other non-productive activities on primary production activities not anticipated as the lot is located in a residential area.

RRZ-P4

Require all subdivision in the Rural Residential zone to provide the following reticulated services to the boundary:

- a. *telecommunications:***

- i. *fibre where it is available;***
- ii. *copper where fibre is not available;***
- iii. *copper where the area is identified for future fibre deployment.***

- b. *local electricity distribution network.***

Not applicable.

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

a. consistency with the scale and character of the rural residential environment;

Applicable. Although building coverage exceeds permitted the scale and character of the development is consistent with the local area. Proposed building coverage with the additions will be 477.6m². There are numerous properties in the area with a building coverage greater than 400m² for example Lot 3 DP 375532, 5 Riverstone Lane has a building coverage of ~570m², Lot 12 DP 357360, 10 Access Heights has a building coverage of approximately 441m². This shows the development of a single residential unit with a larger than usual building coverage is in keeping with the local area.

b. location, scale and design of buildings or structures;

Applicable. Extension to the primary dwelling along with increased driveway area and concrete patio. Brick veneer with render and Linear weatherboard is proposed for the extension, the same type and colour as the existing.

c. at zone interfaces:

- i. any setbacks, fencing, screening or landscaping required to address potential conflicts;**
- ii. the extent to which adverse effects on adjoining or surrounding sites are mitigated and internalised within the site as far as practicable;**

An esplanade strip then Puketotara Stream are located to the northwest of Lot 20. Farmland zoned Rural Production is located on the other side of the stream. Established vegetation runs along the property boundary between the lot and esplanade strip. The vegetation provides full to partial screening of the development depending on where a person is standing along the strip. The vegetation is not yet mature so further privacy will occur over time. The development will not be visible on farmland to the northwest. Conflicts are not anticipated. Stormwater management to that of predeveloped ensures adverse effects do not occur along the strip or river.

d. the capacity of the site to cater for on-site infrastructure associated with the proposed activity;

Applicable. The 3,020m² property caters for onsite infrastructure including 3 x water tanks to be used for potable water and stormwater management as well as a 9m soakage trench. Onsite wastewater consists of an aeration treatment system with dripper line. A new field with a 50%reserve area is to be installed.

e. the adequacy of roading infrastructure to service the proposed activity;

Not applicable. A single dwelling only proposed.

f. managing natural hazards;

Northland Regional Council Hazard Maps show the northwest boundary of Lot 20 may be affected by flooding from Puketotara Stream in 10-year, 50 year and 100-year flood events. The proposed development is located to the south of the property outside of potential flooding. The proposed wastewater disposal field will be outside of potential flooding.

Rainfall intensity as a result of climate change is considered for stormwater calculations.

g. any adverse effects on historic heritage and cultural values, natural features and landscapes or indigenous biodiversity;

Not applicable. Not identified as having historic heritage and cultural values, natural features, landscapes, or indigenous biodiversity.

h. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.

Not applicable to this application.

Rules

RRZ-R2 Impermeable Surface Coverage

Application for Stormwater Management as a Discretionary activity is due to impermeable surfaces being a total of 30% (907.9m²) of the total lot area. The activity is Discretionary.

A Stormwater Mitigation Report written by Wilton Joubert Consulting Engineers attached as Appendix II outlines mitigation measures and includes a District Plan Assessment in Section 8, p. 8 and 9. With mitigation stormwater effects are considered to have less than minor impact on the receiving environment. As stormwater is managed onsite it will not affect flooding along the northwest boundary.

RRZ-S5 Building Structure or Coverage

Application for Building Coverage as a Discretionary activity is due to building coverage being a total of 16.7% (503.6m²) of the total lot area. Resulting in 201.6m² over the 10% (302m²) permitted allowance outlined in the Far North District Plan, Section 8.7.5.1.13. The verandah is included in the calculations for building coverage.

Where the standard is not met, matters of discretion are restricted to:

- a. the character and amenity of the surrounding area;***
- b. any landscaping, planting and screening to mitigate any adverse effects;***
- c. the extent to which private open space can be provided for future uses;***
- d. the extent to which the siting, setback and design mitigate visual dominance on adjacent sites and surrounding environment; and***
- e. natural hazard mitigation and site constraints.***

a-e above are addressed in Section 5 of this report. The assessment criteria of the current plan are similar to the above an exception being the inclusion of e. natural hazard mitigation and site constraints in the proposed plan. An increase in building coverage will not affect potential flooding from Puketotara Stream. Potential flooding is considered a site constraint. Increased rainfall intensity as a result of climate change is considered for stormwater calculations.

4.0 Proposed Far North District Plan Rules with Immediate Legal Effect

The proposal is also subject to the Proposed District Plan process. Within the Proposed District Plan, the site is zoned Rural Production with a Coastal Environment overlay. 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
<i>Hazardous Substances</i>	<i>The following rules have immediate legal effect: Rule HS-R2 has immediate legal effect but only for a new significant hazardous facility. HS-R5 relates to a hazardous facility within a scheduled site and area of significance to Maori. HS-R6 relates to a hazardous facility within an SNA. HS-R9 relates to a hazardous facility within a scheduled heritage resource.</i>	Not applicable. The site does not contain any hazardous substances to which these rules would apply.
<i>Heritage Area Overlays</i>	<i>All rules have immediate legal effect (HAR1 to HAR14) All standards have immediate legal effect (HA-S1 to HA-S3)</i>	Not applicable. The site is not located within a Heritage Area Overlay.
<i>Historic Heritage</i>	<i>All rules have immediate legal effect (HHR1 to HHR10) Schedule 2 has immediate legal effect</i>	Not applicable. The site is not located within a Heritage Area Overlay.
<i>Notable Trees</i>	<i>All rules have immediate legal effect (NTR1 to NTR9) All standards have legal effect (NT-S1 to NT-S2) Schedule 1 has immediate legal effect</i>	Not applicable. The site does not contain any notable trees.
<i>Sites and Areas of Significance to Maori</i>	<i>All rules have immediate legal effect (SASM-R1 to SASM-R7) Schedule 3 has immediate legal effect</i>	Not applicable. The site does not contain any sites or areas of significance to Maori.
<i>Ecosystems and Indigenous Biodiversity</i>	<i>All rules have immediate legal effect (IB-R1 to IB-R5)</i>	Not applicable. The proposal does not include any indigenous vegetation pruning trimming, clearance, or associated land disturbance. No plantation forestry activities are proposed. Therefore, the proposal is not in breach of rules IB-R1 to IB-R5.
<i>Subdivision</i>	<i>The following rules have immediate legal effect: SUB-R6, SUB-R13, SUB-R14, SUB-R15, SUB-R17</i>	Not applicable. The proposal is not a subdivision
<i>Activities on the Surface of Water</i>	<i>All rules have immediate legal effect (ASWR1 to ASWR4)</i>	Not applicable. The proposal does not involve activities on the surface of water.
<i>Earthworks</i>	<i>The following rules have immediate legal effect: EW-R12, EW-R13 The following standards have immediate legal effect: EW-S3, EW-S5</i>	Earthworks addressed in Section 5.2
<i>Signs</i>	<i>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</i>	Not applicable. No signs are proposed as part of this application.
<i>Orongo Bay Zone</i>	<i>Rule OBZ-R14 has partial immediate legal effect because RD-1(5) relates to water</i>	Not applicable. The site is not located in the Orongo Bay Zone.

The assessment above indicates that the proposal is determined to be a Permitted Activity in regard to the Proposed District Plan. Therefore, no further assessment of these rules will be undertaken.

5.0 Assessment of Environmental Effects

5.1 Building Coverage – *Far North District Plan Assessment Criteria Section 8.7.5.3.4*

Application for Building Coverage as a Discretionary activity is due to building coverage being a total of 16.7% (503.6m²) of the total lot area. Resulting in 201.6m² over the 10% (302m²) permitted allowance outlined in the Far North District Plan, Section 8.7.5.1.13.

In considering whether or not to grant consent or impose conditions, the Council shall also have regard to the following assessment matters:

In assessing an application under this provision, the Council will restrict the exercise of its discretion to:

(a) *The ability to provide adequate landscaping for all activities associated with the site;*

As discussed in Section 2 of the report and shown in Photographs 1-4 the property has been extensively planted. Planting includes gardens, shrubs, and trees on the property along with extensively planted boundaries. The trees and shrubs are not yet mature therefore further screening will occur with time. The existing boundary planting ensures that adjoining sites have privacy and screening. The development will be obscured to partially obscured from neighbouring properties and the right of way.

(b) *The extent to which building(s) are consistent with the character and scale of the existing buildings in the surrounding environment;*

The proposed extension is in keeping with the character and scale of existing buildings in the neighbourhood. Proposed building coverage with the additions will be 477.6m². There are numerous properties in the area with a building coverage greater than 400m² for example Lot 3 DP 375532, 5 Riverstone Lane has a building coverage of ~570m², Lot 12 DP 357360, 10 Access Heights has a building coverage of approximately 441m². A single dwelling with a shed is in keeping with the residential character of the neighbourhood.

(c) *The scale and bulk of the building in relation to the site;*

The scale and bulk of the proposed dwelling and existing shed on the 3,020m² property is typical of modern development in Kerikeri. The property will have ample available area for required infrastructure and outdoor recreational activities.

(d) *The extent to which private open space can be provided for future uses;*

Existing lawn areas provide private open space on the 3,020m² residential property.

(e) *The extent to which the cumulative visual effects of all the buildings impact on landscapes, adjacent sites and the surrounding environment;*

The proposed development is to occur to the south of the property where the dwelling is located. The existing shed is to be moved to the west of the dwelling so that the concrete driveway can be extended. A single dwelling and shed only will be located on the property. No other buildings are proposed.

Visual effects on adjacent sites and from the right of way are expected to be less than minor due to extensive planting on Lot 20 which fully obscures or at a minimum partially obscures the development from view.

(f) *The extent to which the siting, setback and design of building(s) avoid visual dominance on landscapes, adjacent sites and the surrounding environment;*

The existing dwelling and driveway are located to the south of the property. This means the location has been pre-determined. As the southern boundary is extensively planted the development can not be seen from the right of way or southern properties unless standing in the driveway entrance. From the driveway entrance only part of the dwelling is visible.

Existing plantings along the eastern boundary obscure or partially obscure the development from neighbouring Lot 21 DP 375532 to the east. The vegetation is not yet mature. Species such as Ake Ake will grow to a mature height of ~5m by ~3m wide. This will provide further screening of the driveway from Lot 21.

The building is clad in rendered brick veneer and Linea Weatherboard with metal tile roof in keeping with local dwellings.

(g) *The extent to which landscaping and other visual mitigation measures may reduce adverse effects;*

Refer to (a) above. Following completion of the project the dwelling and property will be aesthetically pleasing and increase or maintain the property value of the neighbourhood.

Policy 8.7.4.10 states “*That provision be made to ensure a reasonable level of privacy for inhabitants of buildings on adjoining sites*”. The existing planting on and along the property boundaries provide at least a reasonable level of privacy from adjacent sites. At some locations a high level of privacy to full privacy is provided by existing vegetation.

(h) *The extent to which non-compliance affects the privacy, outlook, and enjoyment of private open spaces on adjacent sites.*

Non-compliance is not expected to affect the privacy, outlook, and enjoyment of private open spaces on adjacent sites.

5.2 *Stormwater Management – Far North District Plan Assessment Criteria Section 8.7.5.2.2*

The assessment criteria for stormwater management are addressed in Section 8, p. 8 and 9 of the Stormwater Mitigation Report by Wilton Joubert, 23rd February 2024 attached as Appendix II.

6.0 Notification Assessment, Section 95, RMA 1991

6.1 Section 95A-G, RMA 1991

Section 95A-G, Public Notification and Limited Notification of Applications, of the Resource Management Act (1991) were reviewed against the breach discussed.

95A Public Notification of Consent Applications

- (1) A consent authority must follow the steps set out in this section, in the order given, to determine whether to publicly notify an application for a resource consent.

Step 1: Mandatory public notification in certain circumstances

- (2) Determine whether the application meets any of the criteria set out in subsection (3) and,—
(a) if the answer is yes, publicly notify the application; and
(b) if the answer is no, go to step 2.
- (3) The criteria for step 1 are as follows:
(a) the applicant has requested that the application be publicly notified;
(b) public notification is required under section 95C;
(c) the application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.

The applicant has not requested public notification nor is it required under section 95C. The application is not made jointly with an application to exchange recreation reserve land. Step 1 does not apply.

Step 2: If not required by step 1, 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]

Step 2 does not apply to the activity.

Step 3: If not precluded by Step 2, 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.

The application does not require public notification. The activity will have a less than minor effect on the environment.

Step 4; Public notification in special circumstances

- (9) Determine whether special circumstances exist in relation to the application that warrant the application being publicly notified and,—
(a) if the answer is yes, publicly notify the application; and

(b) if the answer is no, do not publicly notify the application, but determine whether to give limited notification of the application under section 95B.

No special circumstances exist in this application which justify public notification.
From the assessment above it is considered that the application does not require public notification.

95B Limited notification of consent applications

(1) A consent authority must follow the steps set out in this section, in the order given, to determine whether to give limited notification of an application for a resource consent, if the application is not publicly notified under section 95A.

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

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

There are no protected customary rights groups or affected customary marine title groups.

*(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.*

Not applicable to this application.

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

Step 2: if not required by step 1, 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.*

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).*

Step 3: if not precluded by step 2, 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.

The activity is not a boundary activity. Section 6.2 provides information determining that neighbours and the public are unlikely to be affected by the activity.

Step 4: further notification in special circumstances

*(10) Determine 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), and,—
(a) if the answer is yes, notify those persons; and
(b) if the answer is no, do not notify anyone else.*

No special circumstances exist in relation to the application that warrant notification of other persons.

95C-E – Are not applicable as the activity has been assessed as being less than minor effect to neighbouring properties.

95F and G are not applicable as there are no affected customary rights groups involved or is it a customary marine title group.

It is considered that the application does not require public notification.

6.2 Neighboring Properties

Policy 8.7.4.10 of the operative plan states *“That provision be made to ensure a reasonable level of privacy for inhabitants of buildings on adjoining sites”*. The existing trees and shrubs on Lot 20 and along the boundaries provide at least a reasonable level of privacy for inhabitants of buildings on adjoining sites.

The southwest and southern boundary planting currently fully screens Lot 20 from the right of way and neighbouring Lot 19 DP 375532 and Lot 18 DP 375532 to the southwest and south. The planting along the boundaries provides privacy to southern properties at a distance. The driveway in the southeast corner of Lot 20 is the only area where visibility of the dwelling occurs from a southerly direction.

Existing trees and shrubs line the northwest property boundary. The vegetation obscures or partially obscures the dwelling from the grass verge. The vegetation is not yet mature therefore further screening will occur. Puketotara Stream then farmland, Pt Lot 2 DP 63499 are located further to the northwest. The development will not be visible from Pt Lot 2 SP 63499.

Existing plantings including citrus and exotic trees and shrubs line the eastern property boundary providing a reasonable to good level of privacy from adjacent Lot 21 DP 375532 to the east. Juvenile species such as Ake Ake will provide further screening once mature.

A single dwelling with relocated shed is proposed in keeping with the local neighbourhood.

Once implemented and maintained stormwater mitigation outlined in the report by Wilton Joubert will ensure that neighbouring properties are not affected by stormwater runoff from Lot 20. Lot 20 slopes to the northwest towards the esplanade strip and Puketotara Stream. The grass strip and stream will not be impacted by stormwater as it will be managed onsite.

7.0 Resource Management Act Section 104 Assessment

7.1 Section 104 Assessment

(1) *When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2 and section 77M, have regard to:*

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

Section 104(1)(a) requires assessment of any actual and potential effects on the environment as a result of the proposed activity. Section 4, 5 and 6.2 discusses actual and potential effects. The conclusion reached is that the adverse effects of granting consent to the proposal are less than minor, and therefore acceptable in the receiving environment.

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

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'. It is considered 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. Mitigation measures are proposed and have been discussed.

(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.*

The Regional Plan has been reviewed and there are no documents that are relevant to the proposal.

Any earthworks will proceed under the guidance of an ADP and will be 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.

8.2 Part 2 of the Resource Management Act

(1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*

(2) *In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while:*

(a) *sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*

(b) *safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*

(c) *avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

The application will have less than minor effect on the items in Part 2 of the Resource Management Act.

8.0 Schedule 4

Information required in assessment of environmental effects.

(1) An assessment of the activity's effects on the environment must include the following information:

(a) if it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:

Refer to Section 4, 5 and 6.2 which discuss the activity, potential effects, and mitigation methods. The activity will not result in any significant adverse effects on the environment.

(b) an assessment of the actual or potential effect on the environment of the activity:

Section 4, 5 and 6.2 discuss potential effects. The potential effects with mitigation are expected to be less than minor.

(c) if the activity includes the use of hazardous installations, an assessment of any risks to the environment that are likely to arise from such use:

There are no hazardous installations proposed.

(d) if the activity includes the discharge of any contaminant, a description of—

(i) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and

(ii) any possible alternative methods of discharge, including discharge into any other receiving environment:

No contaminants are proposed.

(e) a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect:

Mitigation measures are discussed in this report. Refer to Section 5 for mitigation measures and recommendations.

(f) identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted:

Refer to Section 6.1, Notification Assessment, Section 95, RMA 1991 and Section 6.2 Neighbouring Properties. Consultation and response not applicable.

(g) if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:

No monitoring is required for this activity.

(h) if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).

The activity will not have a more than minor effect on protected customary rights groups.

(2) A requirement to include information in the assessment of environmental effects is subject to the provisions of any policy statement or plan.

Refer to Section 4 and 5 for the assessment against the operative and proposed Far North District Plan and the Far North District Plan Assessment Criterion.

(3) To avoid doubt, subclause (1)(f) obliges an applicant to report as to the persons identified as being affected by the proposal, but does not—

(a) oblige the applicant to consult any person; or

(b) create any ground for expecting that the applicant will consult any person.

Refer to Section 6.0 Notification Assessment, Section 95, RMA 1991.

Matters that must be addressed by assessment of environmental effects.

- (1) An assessment of the activity's effects on the environment must address the following matters:
- (a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:
 - (b) any physical effect on the locality, including any landscape and visual effects:
 - (c) any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:
 - (d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations:
 - (e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants:
 - (f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or hazardous installations.
- (2) The requirement to address a matter in the assessment of environmental effects is subject to the provisions of any policy statement or plan.

Refer to Section 4.0 - 7.0 which address the items required as per Schedule 4, Section 7.

9.0 Conclusion

At the completion of the project a single dwelling with a building coverage of 477.6m² and a shed will be located to the south of the property. The project includes the creation of a verandah, concrete patio, and concrete driveway. The development will be modern, stylish, well maintained and visually pleasing. Although building coverage exceeds permitted there are numerous dwellings located in the area of a similar size. The development is in keeping with that of the local area and compatible with existing and proposed zoning. There is ample available area on the property for required infrastructure such as onsite wastewater, water tanks, and stormwater management along with lawn and garden areas for recreational residential use. The existing plantings on and along the boundaries provide a reasonable to excellent level of privacy and screening of the development from adjacent sites. Potential visual effects of building coverage are considered to be less than minor.

Stormwater will be managed so that flow rates are that of predeveloped. The low impact design principles utilised will mitigate runoff from impermeable areas exceeding permitted threshold to that of predevelopment levels. Mitigation includes the use of 3 concrete water tanks for stormwater attenuation and a 9m soakage trench. With mitigation implemented and maintained stormwater effects are expected to be less than minor on the receiving environment.

Proposed Dwelling

John & Shirley Procter
19 Riverbank Drive
Kerikeri
Lot 20 DP 375532

Sheet Index		
Sheet No.	Sheet Title	Rev
A01a	Site Location Plan	D
A01b	Site Plan	D
A02	Existing Floor Plan	D
A03	Existing Elevations	D
A04a	Proposed Floor Plan	D
A04b	Proposed Floor Plan with Dimensions	D
A05	Proposed Elevations	D
A07	Foundation Plan	D
A10	Bracing Plan	D
Revisions		
-	-	-

Concept Drawings

Date: 5 March 2024

Job Number: 4134

Drawn by:





Far North Maps



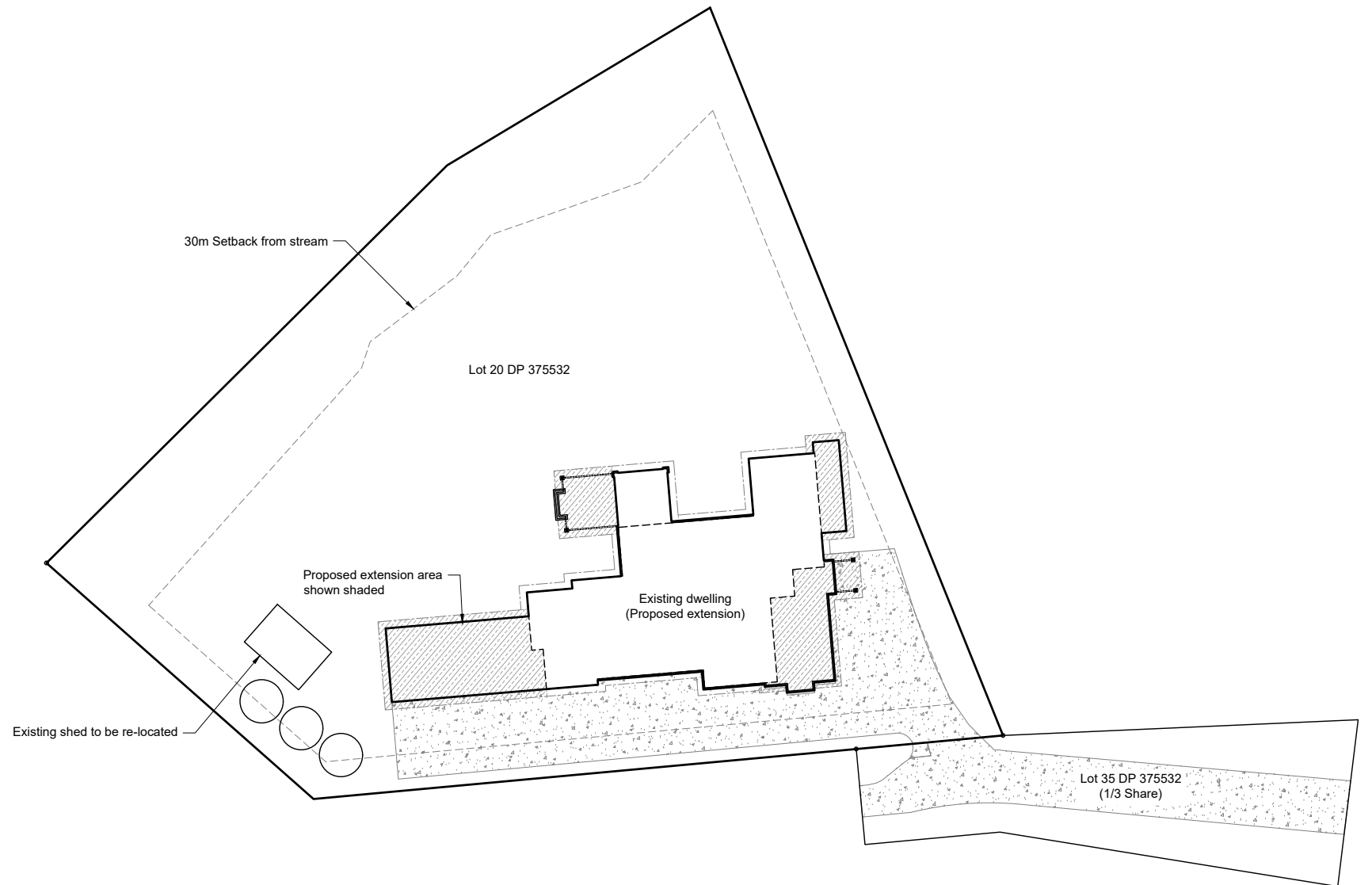
	Building Outlines (LINZ)
	Street Addresses (LINZ)
	Parcels (LINZ)



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.

Projection NZTM2000, Datum NZGD2000. Scale:1:1,000

Created: 25/01/2024



Site Notes

Client
John & Shirley Procter
19 Riverbank Drive
Kerikeri
Lot 20 DP 375532

Sheet Title
Site Location Plan

Drawn Matei Paveluc 5 March 2024

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 No 4134

Scale (A3 Original) 1: 500

Rev D

Sheet A01a

Lot 20 DP 375532
 Lot area: 3,020m²
 Corrosion zone: C
 Wind zone: High
 Rural Living Zone
 District plan compliance:

Residential intensity: Complies
 Sunlight rule: Complies

Stormwater Management

(Impermeable surfaces):
 Existing re-located shed: 26.0m²
 Proposed concrete patio: 22.9m²
 Proposed concrete driveway: 314.0m²
 Proposed dwelling & extension: 545.0m²
 Total proposed: 907.9m²

Total permitted = 12.5% of gross site area = 377.5m²
 Total proposed = 907.9m² = 30.0% Does not comply
 RC Consent required refer to Stormwater Report

Setbacks to boundaries: 3m min. Complies

Building height:
 Permitted: 9m max
 Proposed: 6.0m approx. Complies

Building Coverage:

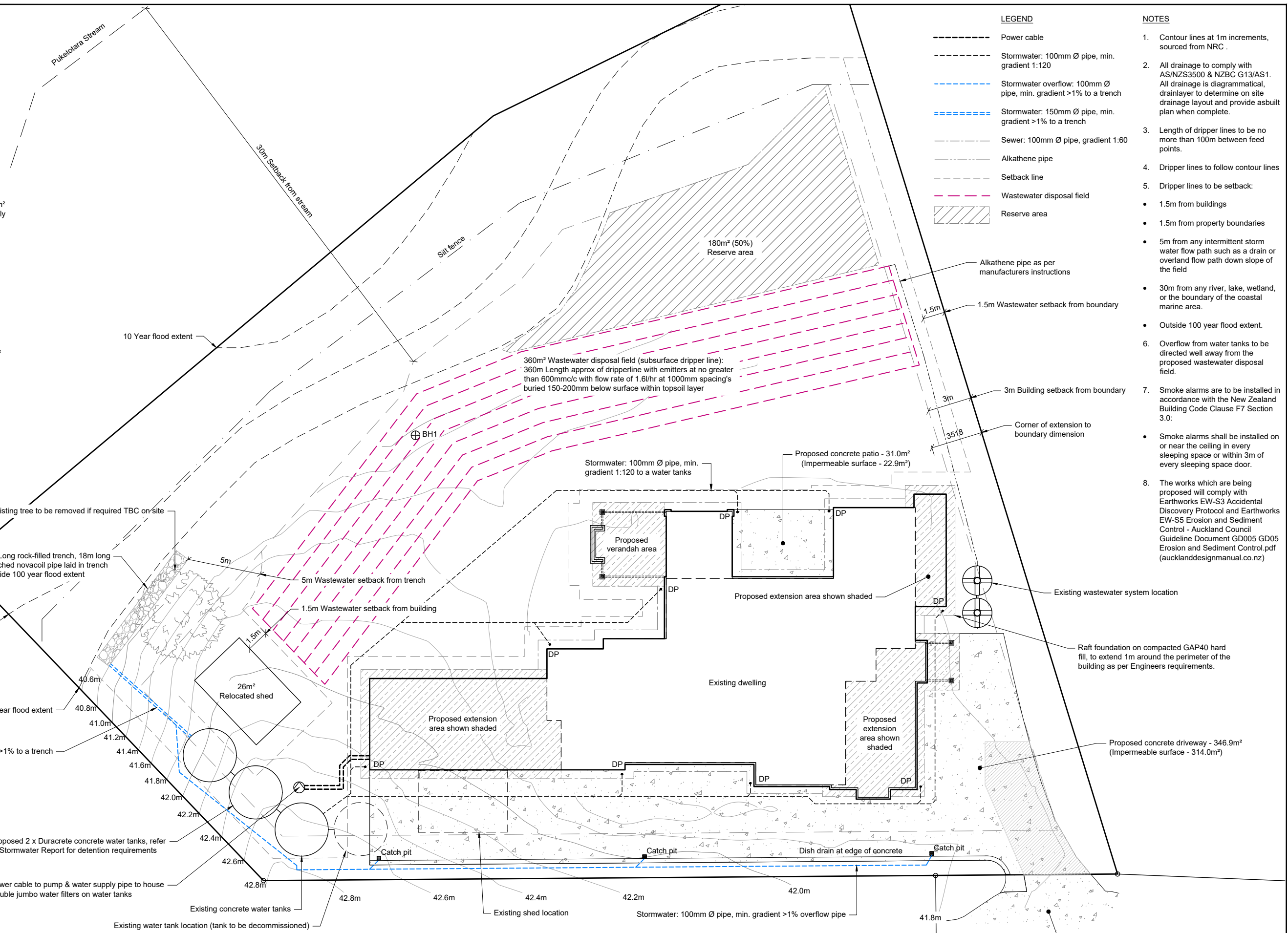
Existing re-located shed: 26.0m²
 Proposed dwelling & extension: 477.6m²
 Total proposed: 503.6m²

Total permitted = 10% of gross site area = 302.0m²
 Total proposed = 503.6 = 16.7% Does not comply
 RC Consent required

Earthworks

Cut: 34.6m³
 Fill: 34.6m³
 Cut/Fill: 69.2m³

Total permitted = 300m³ Complies



LEGEND

- Power cable
- Stormwater: 100mm Ø pipe, min. gradient 1:120
- Stormwater overflow: 100mm Ø pipe, min. gradient >1% to a trench
- Stormwater: 150mm Ø pipe, min. gradient >1% to a trench
- Sewer: 100mm Ø pipe, gradient 1:60
- Alkathene pipe
- Setback line
- Wastewater disposal field
- Reserve area

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, lake, wetland, or the boundary of the coastal marine area.
 - Outside 100 year flood extent.
6. Overflow from water tanks to be directed well away from the proposed wastewater disposal field.
7. 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.
8. 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)



Site Notes

Client
 John & Shirley Procter
 19 Riverbank Drive
 Kerikeri
 Lot 20 DP 375532

Sheet Title
 Site Plan

Drawn Matei Paveluc
 5 March 2024

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Project No 4134

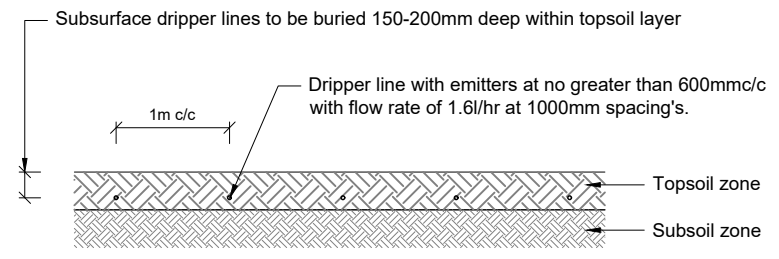
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Rev D

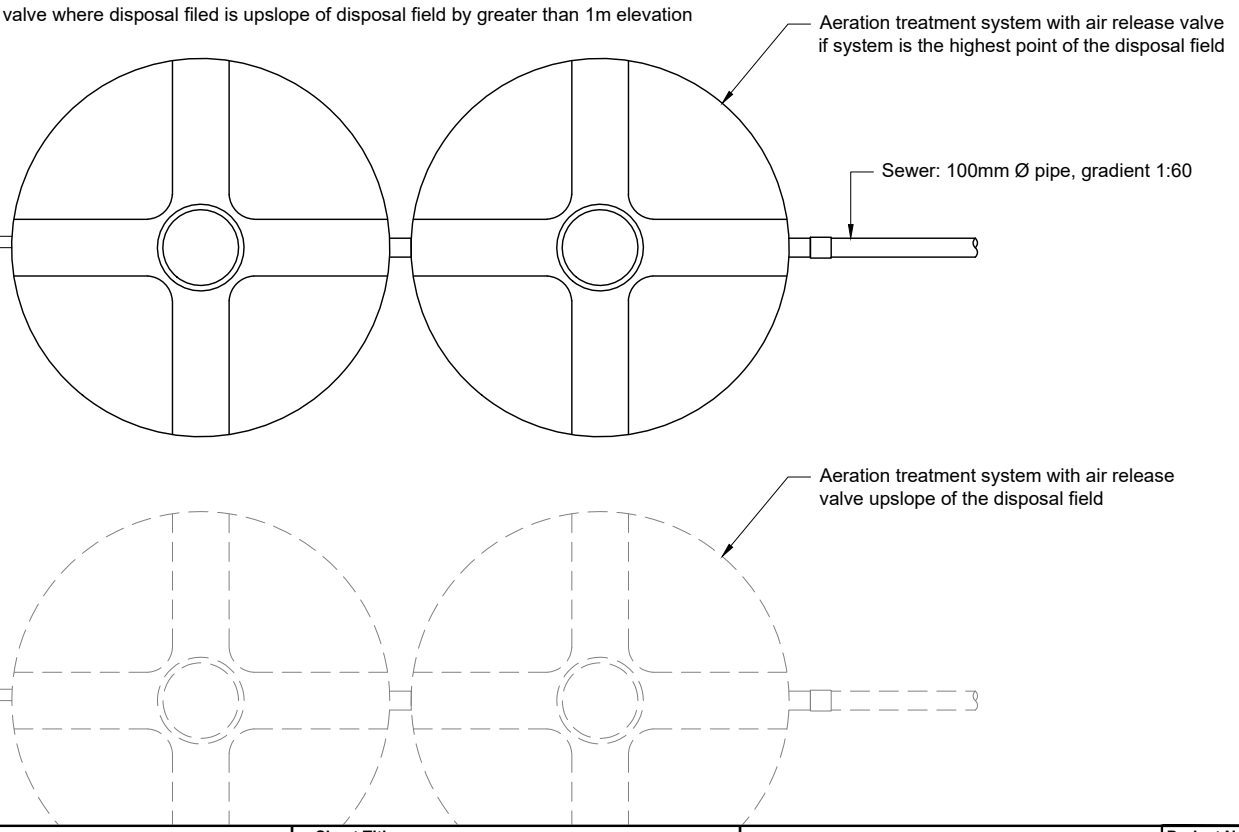
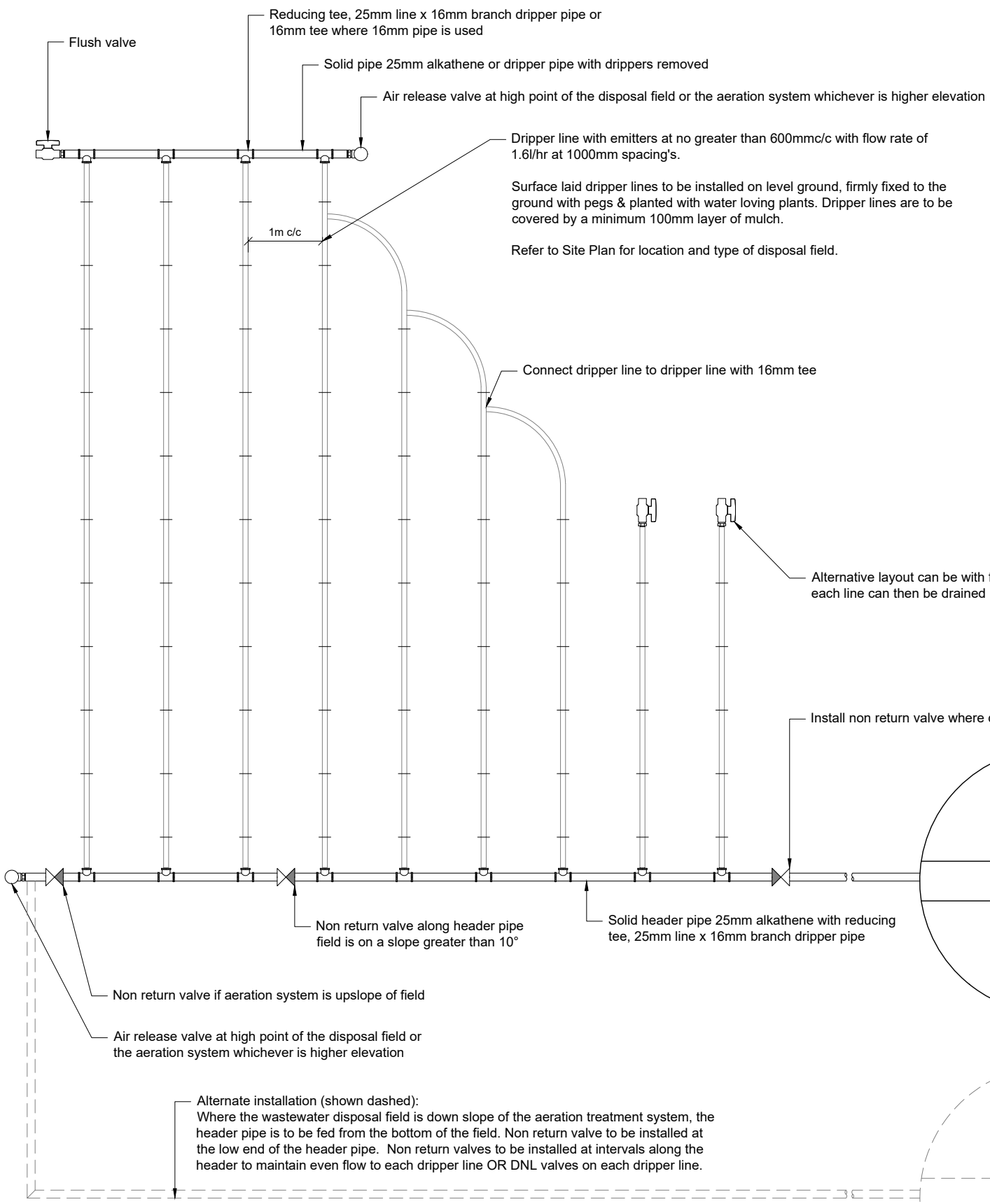
Sheet A01b

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. Dripper lines to follow contour lines.
4. Dripper 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)



W02 Typical Subsurface Dripper Line Detail
SCALE = 1:20



W01 Typical Wastewater Disposal Field Plan
SCALE = 1:20

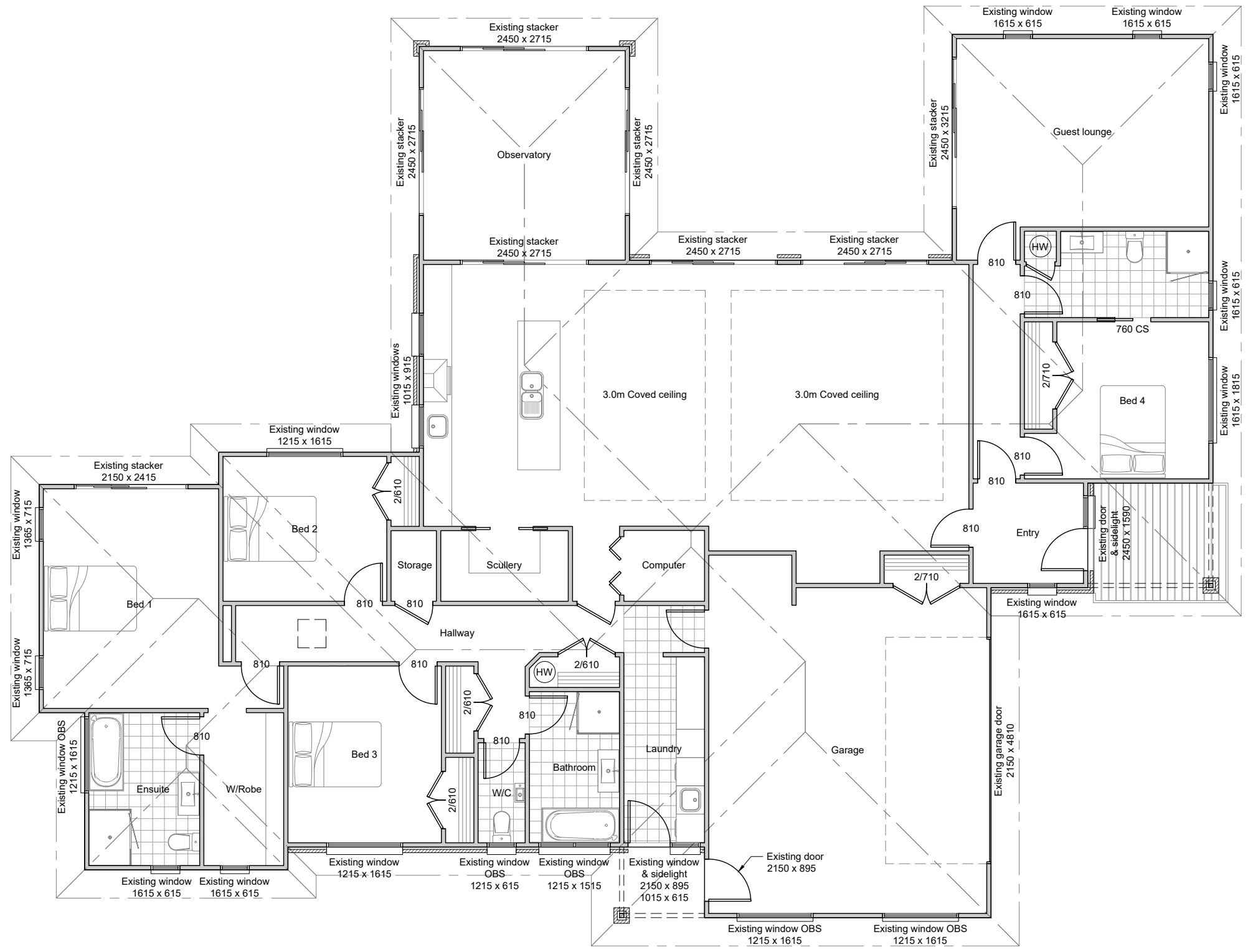


EXISTING BUILDING AREA:


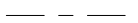

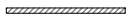
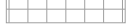

Floor Area: 298.6m²
Roof Area: 367.1m²

FIXINGS:

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



LEGEND

-  Smoke detector
-  Existing roof line
-  Existing timber framing walls
-  Existing plastered brick veneer
-  Existing tiled flooring
-  Existing hot water cylinder



Site Notes


Client
John & Shirley Procter
19 Riverbank Drive
Kerikeri
Lot 20 DP 375532

Sheet Title
Existing Floor Plan

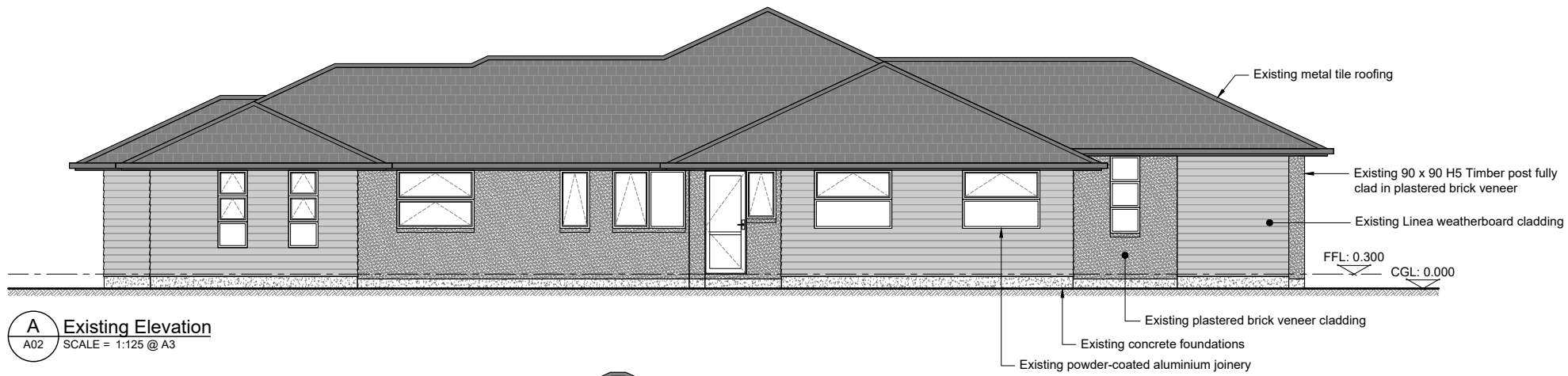
Drawn Matei Paveluc
5 March 2024

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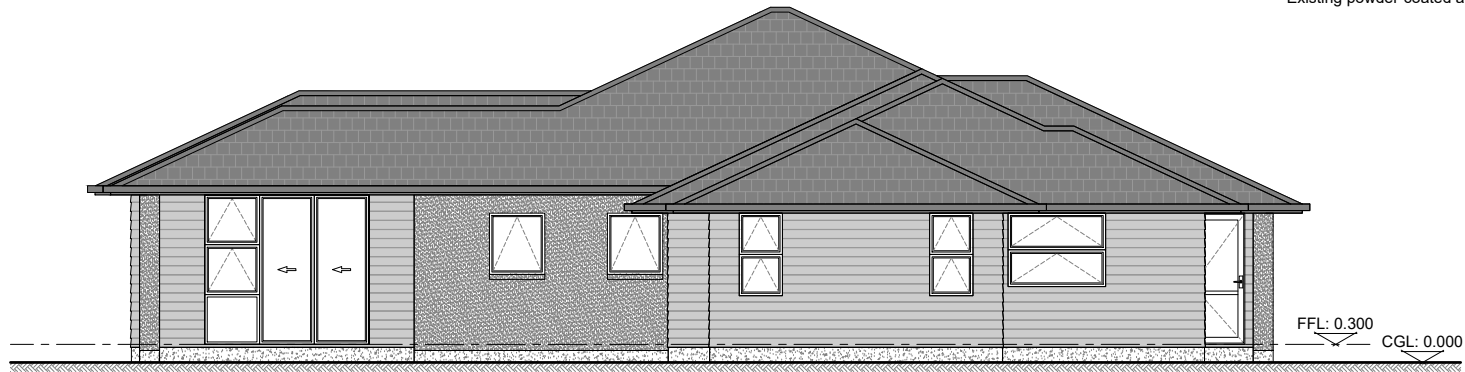
Project No 4134
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Rev D
Sheet A02



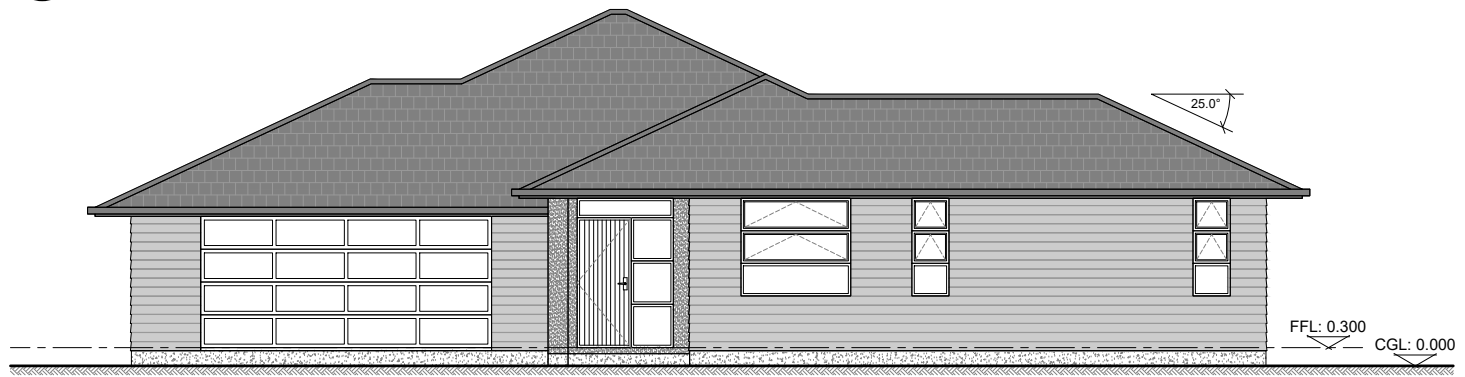
A Existing Elevation
A02 SCALE = 1:125 @ A3



B Existing Elevation
A02 SCALE = 1:125 @ A3



C Existing Elevation
A02 SCALE = 1:125 @ A3



D Existing Elevation
A02 SCALE = 1:125 @ A3

NOTE:

1. All heights shown are existing ground heights.
2. All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
3. All windows and doors double glazed other than the garage joinery.
4. 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

Site Notes

Client

John & Shirley Procter
19 Riverbank Drive
Kerikeri
Lot 20 DP 375532

Sheet Title

Existing Elevation

Drawn Matei Paveluc 5 March 2024

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Project No

4134

Scale (A3 Original) 1: 125





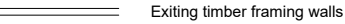
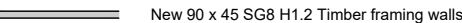
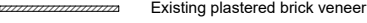
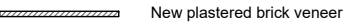

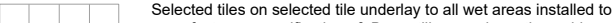

Rev

D

Sheet

A03

LEGEND

-  Smoke Detector
-  Roof Line
-  Existing timber framing walls
-  New 90 x 45 SG8 H1.2 Timber framing walls
-  Existing plastered brick veneer
-  New plastered brick veneer
-  Timber flooring installed to manufacturers specifications TBC
-  Selected tiles on selected tile underlay to all wet areas installed to manufacturers specifications & Branz tiling good practice guide
-  Existing hot water cylinder

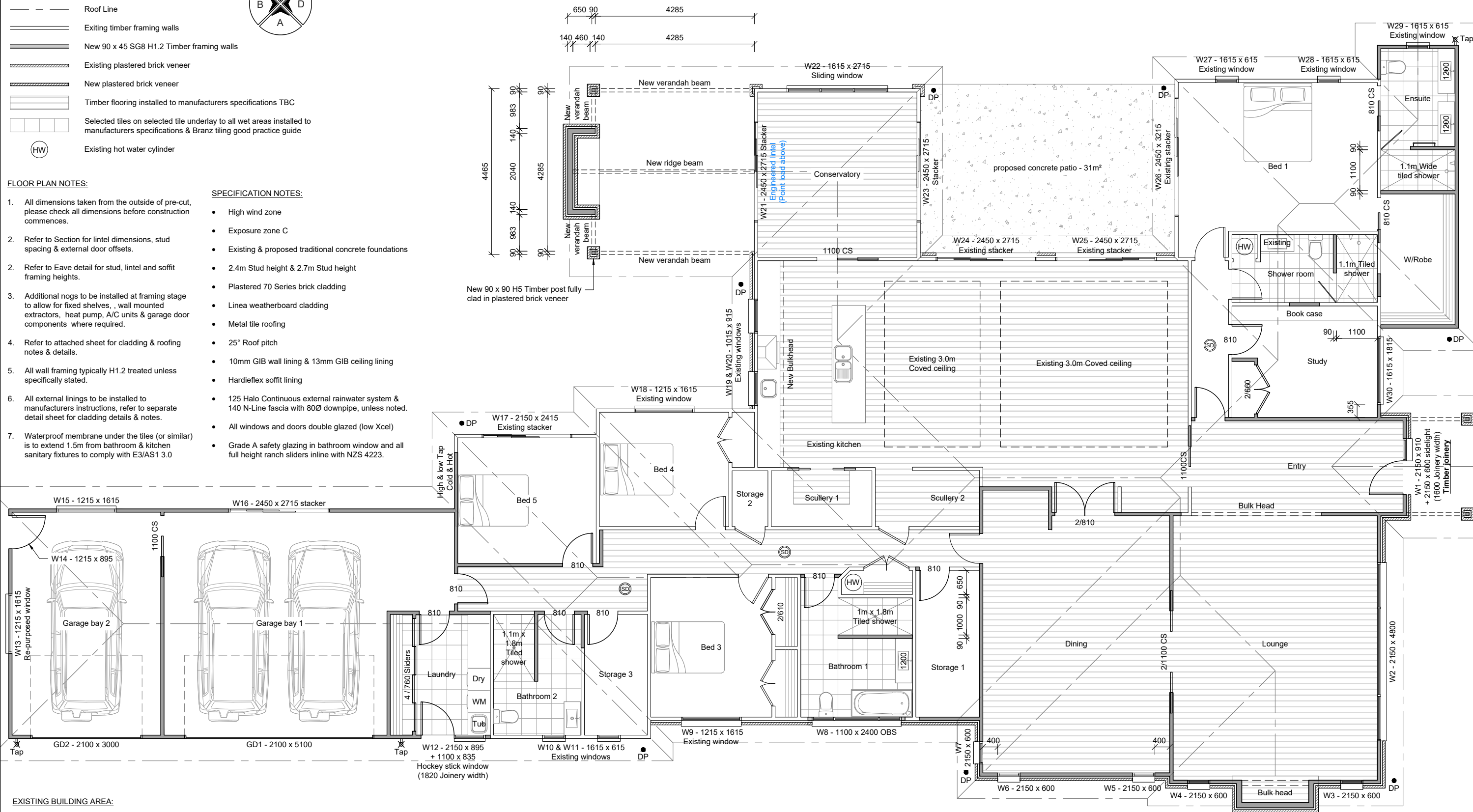


FLOOR PLAN NOTES:

1. All dimensions taken from the outside of pre-cut, please check all dimensions before construction commences.
2. Refer to Section for lintel dimensions, stud spacing & external door offsets.
2. Refer to Eave detail for stud, lintel and soffit framing heights.
3. 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.
4. Refer to attached sheet for cladding & roofing notes & details.
5. All wall framing typically H1.2 treated unless specifically stated.
6. All external linings to be installed to manufacturers instructions, refer to separate detail sheet for cladding details & notes.
7. Waterproof membrane under the tiles (or similar) is to extend 1.5m from bathroom & kitchen sanitary fixtures to comply with E3/AS1 3.0

SPECIFICATION NOTES:

- High wind zone
- Exposure zone C
- Existing & proposed traditional concrete foundations
- 2.4m Stud height & 2.7m Stud height
- Plastered 70 Series brick cladding
- Linea weatherboard cladding
- Metal tile roofing
- 25° Roof pitch
- 10mm GIB wall lining & 13mm GIB ceiling lining
- Hardiflex soffit lining
- 125 Halo Continuous external rainwater system & 140 N-Line 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.



EXISTING BUILDING AREA:

Floor Area (Frame line): 298.6m²
Roof Area: 367.1m²

PROPOSED BUILDING AREA:

Floor Area (Frame line): 435.2m²
Floor Area (Brick line): 440.9m²
Roof Area: 545.0m²

FIXINGS:

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



Site Notes

Client
John & Shirley Procter
19 Riverbank Drive
Kerikeri
Lot 20 DP 375532

Sheet Title
Proposed Floor Plan

Drawn Matei Paveluc **Date** 5 March 2024

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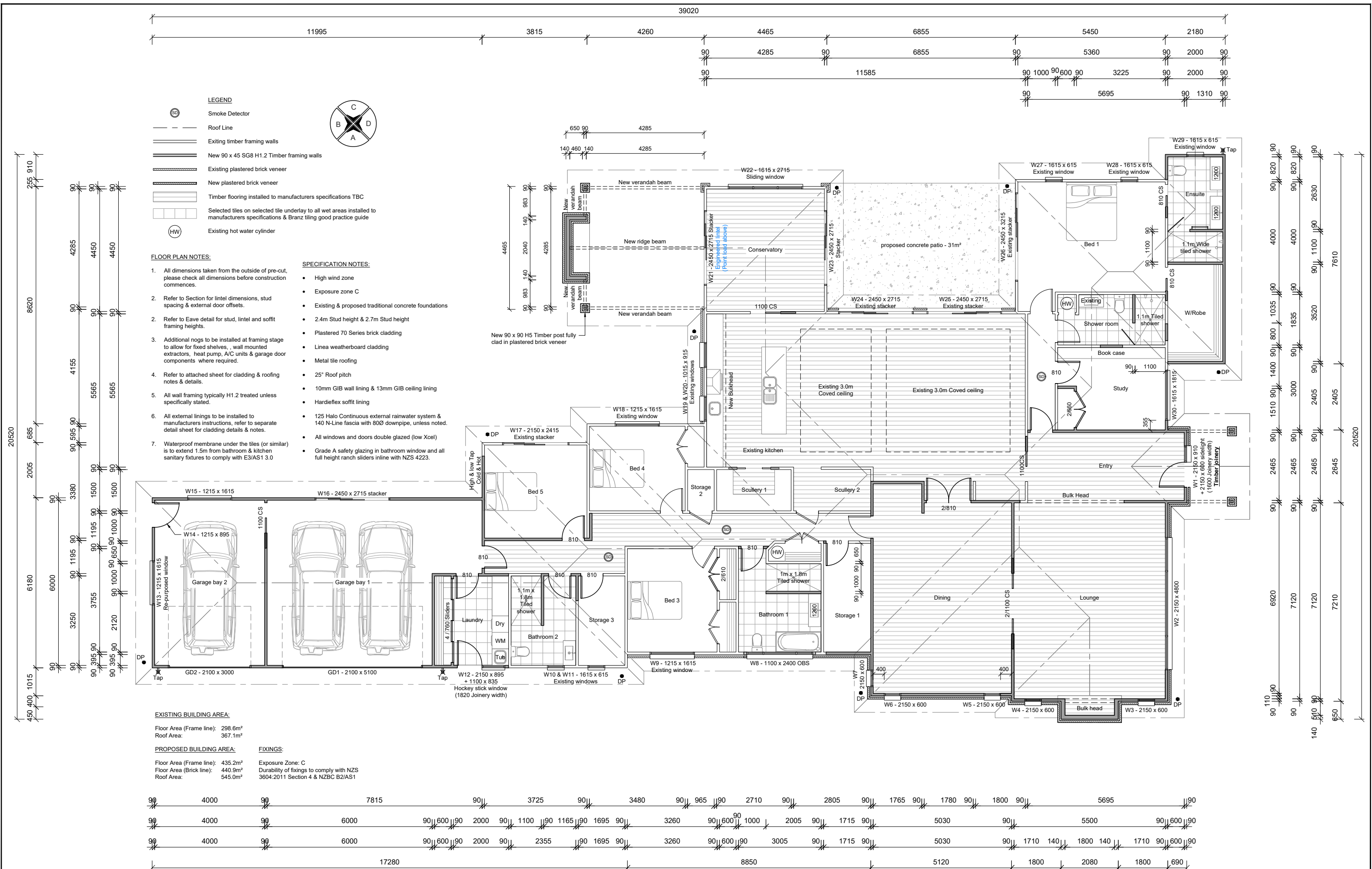
Project No 4134

Scale (A3 Original) 1: 100



Rev D

Sheet A04a



Site Notes

Client
 John & Shirley Procter
 19 Riverbank Drive
 Kerikeri
 Lot 20 DP 375532

Sheet Title
 Proposed Floor Plan with
 Dimensions

Drawn Matei Paveluc
 5 March 2024

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Project No 4134

Scale (A3 Original) 1:125

1:25 0.63 0 1.25 2.5 m

Rev D

Sheet A04b

SITE 19 Riverbank Drive, Kerikeri
LEGAL DESCRIPTION Lot 20 DP 375532
PROJECT Proposed Residential Dwelling Extension
CLIENT John & Shirley Procter
REFERENCE NO. 131935
DOCUMENT Stormwater Mitigation Report
STATUS/REVISION No. B
DATE OF ISSUE 6th March 2024

Report Prepared For	Email
John & Shirley Procter	[REDACTED]

Authored by	G. Brant <i>(BE(Hons) Civil)</i>	Civil Engineer	Gustavo@wjl.co.nz	[REDACTED]
Reviewed by	P. McSweeney <i>(BE(Hons) Civil)</i>	Civil Engineer	Patrick@wjl.co.nz	[REDACTED]
Approved by	B. Steenkamp <i>(CPEng, BEng Civil, CMEngNZ, BSc (Geology))</i>	Senior Civil Engineer	BenS@wjl.co.nz	[REDACTED]

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 20 DP 375532	
Site Area:	3,020m ²	
Development Type:	Proposed Residential Extension	
Development Proposals Supplied:	Plan Set supplied by O'Brien Design Consulting (Ref No: 4134 Rev C, dated: 15.02.2024)	
Associated Documents:	WJL Geotechnical Report Ref. 131871	
District Plan Zone:	Rural Living	
Permitted Activity Coverage:	<u>12.5% or 3,000m²</u>	
	Post-Development Impermeable Areas	
Impermeable Coverage:	Total Roof Area	571m ²
	Total Hardstand (uncovered)	336.9m ²
	Total impermeable area = 907.9m ² or 30% of the site area	
Activity Status:	<u>Discretionary Activity</u>	
	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.	
Roof Attenuation:	<p>Existing / Proposed Tanks – 3 x 25,000 litre Duracrete Rainwater Tanks</p> <p>Dimensions – 3730mm Ø x 2900mm high</p> <p>10% AEP Control Orifice – 51mmØ orifice; <u>located >820mm below the Overflow Outlet</u></p> <p>1% AEP Control Orifice – 30mmØ orifice; <u>located 510mm above the 10% AEP Control Orifice</u></p> <p>Overflow – 150mmØ at the top of the tank</p>	
Driveway Attenuation:	<p>It is recommended to shape the proposed concrete driveway to direct runoff to catchpits, which are required to drain directly to the lot's dispersal device.</p> <p>Smaller hardstand areas are to be shaped to shed runoff to an equal or greater sized area of lower-lying lawn / planted areas as passive mitigation.</p>	
Point of Discharge:	9m long trench, with punched novacoil snaked in trench to provide 18m long underground spreader pipe.	

2. SCOPE OF WORK

Wilton Joubert Ltd. (WJL) was engaged by the client, **John & Shirley Procter**, to produce an on-site stormwater mitigation assessment at the above site.

At the time of report writing, we have been supplied the following documents:

- Plan Set supplied by O'Brien Design Consulting including site plan, floor plan and elevations (Ref No: 4134 Rev D, dated: 05.03.2024)

Should any changes be made to the provided plans with stormwater management implications, WJL must be contacted for review.

3. SITE DESCRIPTION

The subject 3,020m² irregular shaped property is located off the northern side of a shared right-of-way (ROW), accessed 40m west of the northern cul-de-sac end of Riverbank Drive, within the suburb of Kerikeri. The site entrance is at the south-eastern boundary corner via a paved driveway.

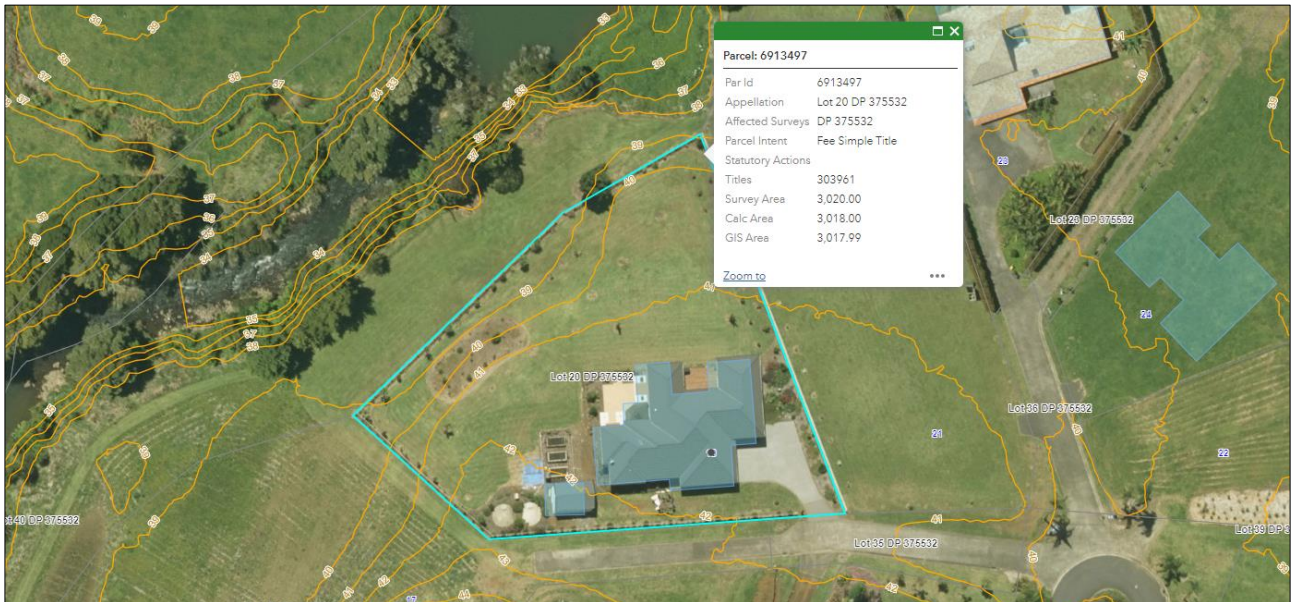


Figure 1: Screenshot Aerial View of the Subject Site from the Far North District Council (FNDC) on-line GIS Property and Land Map. Subject Property is Highlighted in Cyan. 1.0m Contours are Overlaid

Topographically speaking, most of the property comprises of a broad, gently sloping crest that falls towards the northwest at gradients averaging less than 5°. The north-western boundary area is covered by a moderate graded slope, averaging 14° (1V:4H), that falls some 2.0m down to a council reserve. The reserve covers the area of land downslope of the northern boundary and is flat natured across an average width of 15m, before steeply falling approximately 4.0m down to the Puketotara Stream.

Built development on site comprises of an existing residential dwelling that occupies the south-eastern corner of the property and a shed to the southwest of the dwelling. As part of the development works, it is our understanding that the existing shed is to be removed from its current building site location.

Vegetation comprises mainly grass, with maintained gardens present along the western, northern, and eastern sides of the existing dwelling, and trees and bush planted along much of the perimeter of the property.

The FNDC on-line GIS 3Water Services Map indicates that the property is not serviced by public stormwater, wastewater or potable water reticulation.

5. ASSESSMENT CRITERIA

Impermeable Areas

The calculations for the stormwater system for the development are based on a gross site area of 3,020m² and the below areas *extracted from the supplied plans and FNDC GIS Maps*:

	Pre-Development	Post-Development	Total Change
Total Roof Area	420 m²	571 m²	151 m ²
Existing Dwelling	~394 m ²	545 m ²	
Existing Shed	26 m ²	26 m ²	
Total Hardstand (uncovered)	116 m²	336.9 m²	220.9 m ²
Concrete Driveway	~116 m ²	314 m ²	
Concrete Patio	0 m ²	22.9 m ²	
Pervious	2,484 m²	2,112.1 m²	-371.9 m ²

The total amount of impermeable area on site, post-development, equates to 907.9m² or 30% of the site area. 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 Living. The following rules apply under the FNDC District Plan:

8.7.5.1.5 – **Permitted Activities – Stormwater Management** - The maximum proportion or amount of the gross site area covered by buildings and other impermeable surfaces shall be 12.5% or 3,000m², whichever is the lesser.

8.7.5.2.2 – **Controlled Activities – Stormwater Management** - The maximum proportion or amount of the gross site area covered by buildings and other Impermeable Surfaces shall be 20% or 3300m², whichever is the lesser.

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 **530.4m²**. 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.

Provided that the recommendations within this report are adhered to, the effects of stormwater runoff resulting from the unattenuated proposed / existing impermeable surfaces (377.5m² 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.

Stormwater Modelling Method

The attenuation calculations have been computed using HydroCAD modelling software. The model has been configured utilising the Rational Method (NZ Building Code E1). The rainfall intensity values for the 10% and 1% AEP storm events adjusted for climate change are as follows:

Rainfall Intensity Values (RCP6.0 2081-2100)								
Time	10m	20m	30m	1h	2h	6h	12h	24h
10% AEP	122	87.8	72.6	52.3	36.9	20.1	13.1	8.19
1% AEP	181	131	109	78.8	55.9	30.7	20.1	12.6

The NIWA RCP6.0 rainfall data scenario for 2081-2100 has been used to account for climate change.

6. STORMWATER MITIGATION ASSESSMENT

To meet the requirements outlined in Section 5, the following must be provided:

Potable Water Supply

It is recommended that an existing 25,000L Duracrete tank and two new 25,000L Duracrete tanks are used to provide the existing dwelling with a potable water supply. A proprietary guttering system is required to collect roof runoff from the existing dwelling extensions and shed. A first flush diverter and/or leaf filters may be installed in-line between the gutters and the tank inlet. The tank inlet level should be at least 600mm below the gutter inlet and 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 dwelling and shed. 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 100mm \varnothing balancing pipes at the top and 2 x 100mm \varnothing balancing pipes near the base of each tank to connect all potable water tanks to each other. 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 threshold. One of the tanks is to be fitted with a 150mm \varnothing overflow outlet with flow attenuation outlets as specified below.

Potable Tanks Detention Volume

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

Existing / Proposed Tank	3 x 25,000 litre Duracrete Rainwater Tanks
Tank dimensions	3730mm \varnothing x 2900mm high
Outlet orifice (10% AEP control)	51mm diameter orifice ; located <u>>820mm below the overflow outlet</u> - 514mm water elevation

- 16.8m³ Storage

Outlet orifice (1% AEP control)

30mm diameter orifice; located 510mm above the 10% AEP control orifice

- 817mm water elevation
- 26.8m³ Storage

Overflow Outlet

150mm diameter; located at the top of the tank

Refer to the appended calculation set, Site Plan (131935-C200) and Tank Detail (131935-C201) for clarification. Discharge from the potable water / detention tanks must be transported via sealed pipes to the dispersal device specified below.

The tank 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.

Stormwater Mitigation – Hardstand

It is recommended to shape the proposed concrete driveway to direct runoff to catchpits, which are required to drain directly to the dispersal device specified below via sealed pipes. Refer to the appended Site Plan (131935-C200).

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.

Smaller hardstand areas are to be shaped to shed runoff to an equal or greater sized area of lower-lying lawn / planted areas for passive mitigation. Runoff passed through lawn / planted areas will be naturally filtered of entrained pollutants via filtration and evapotranspiration.

Dispersal Device

It is recommended that discharge from the potable water / detention tanks and catchpits be directed via sealed pipes to an underground spreader pipe in a rock-filled dispersal trench, as shown in the appended Site Plan (131935-C200) and Dispersal Device Detail (131935-C202). The trench is recommended to be 9m long, with punched novacoil snaked inside the trench to provide a total 18m long underground spreader pipe. The dispersal device must be installed parallel to the property's topography and up-slope of any mapped flood areas.

7. STORMWATER RUNOFF SUMMARY

Refer to the appended HydroCAD Calculation output.

Pre-Development Scenario – 10% AEP & 1% AEP Storm Events + CCF

Surface	Area	Runoff C	10% AEP Peak Flow Rate	1% AEP Flow Peak Rate
Greenfields Impermeable Roof Area Exceeding Permitted Activity Threshold	530.4 m ²	0.59	3.87ℓ/s	5.87ℓ/s

Post-Development Scenario – 10% AEP & 1% AEP Storm Events + CCF

Surface	Area	Runoff C	10% AEP Peak Flow Rate	1% AEP Flow Peak Rate
Post-Development Roof Area Exceeding Permitted Activity Threshold via Detention Tanks	530.4 m ²	0.96	3.82ℓ/s	5.85ℓ/s

Given the design parameters, stormwater neutrality has been achieved for the 10% AEP and 1% AEP storm events across the proposed impermeable surfaces over the permitted activity threshold.

8. DISTRICT PLAN ASSESSMENT

As the proposed development is not compliant with Permitted Activity Rule 8.7.5.1.5, nor Controlled Activity Rule 8.7.5.2.2, 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 FNDCDP 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 8.7.5.1.5 have been attenuated back to pre-development flow rates for the 10% AEP and 1% AEP storm events, 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 will increase by 371.9m ² .
(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 proposed roof areas is to be collected and directed to the dispersal device via sealed pipes.

	<p>Ponding is not anticipated to occur provided the recommendations within this report are adhered to, mitigating interference with natural water absorption.</p> <p>The specified outfall location will direct flows to downslope areas, following the natural drainage patterns of the site with flows dispersed for erosion prevention.</p>
(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 proposed impermeable roof areas and proposed driveway are to be collected and directed to stormwater management devices via sealed pipes, mitigating the potential for contamination of surrounding soils and hard 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;	<p>Runoff resulting from the proposed roof areas and hardstand area is to be collected and directed to a dispersal device via sealed pipes, mitigating the potential for runoff to pass over / saturate surrounding soils.</p> <p>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).</p>
(h) the extent to which paved, Impermeable Surfaces are necessary for the proposed activity;	The proposed driveway necessary to provide the dwelling with access and is not considered excessive.
(i) the extent to which land scaping and vegetation may reduce adverse effects of runoff;	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;	Runoff resulting from the impermeable areas in exceedance of Permitted Activity Rule 8.7.5.1.5 will be 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;	NIWA RCP6.0 rainfall data scenario for 2081-2100 has been used for the post-development flow scenario.
(m) the extent to which stormwater detention ponds and other engineering solutions are used to mitigate any adverse effects.	Runoff resulting from the impermeable areas in exceedance of Permitted Activity Rule 8.7.5.1.5 will be attenuated back to pre-development flow rates for the 10% AEP and 1% AEP storm event, adjusted for climate change.

9. 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 (131935-C200, 131935-C201 & 131935-C202).

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

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.

10. 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.



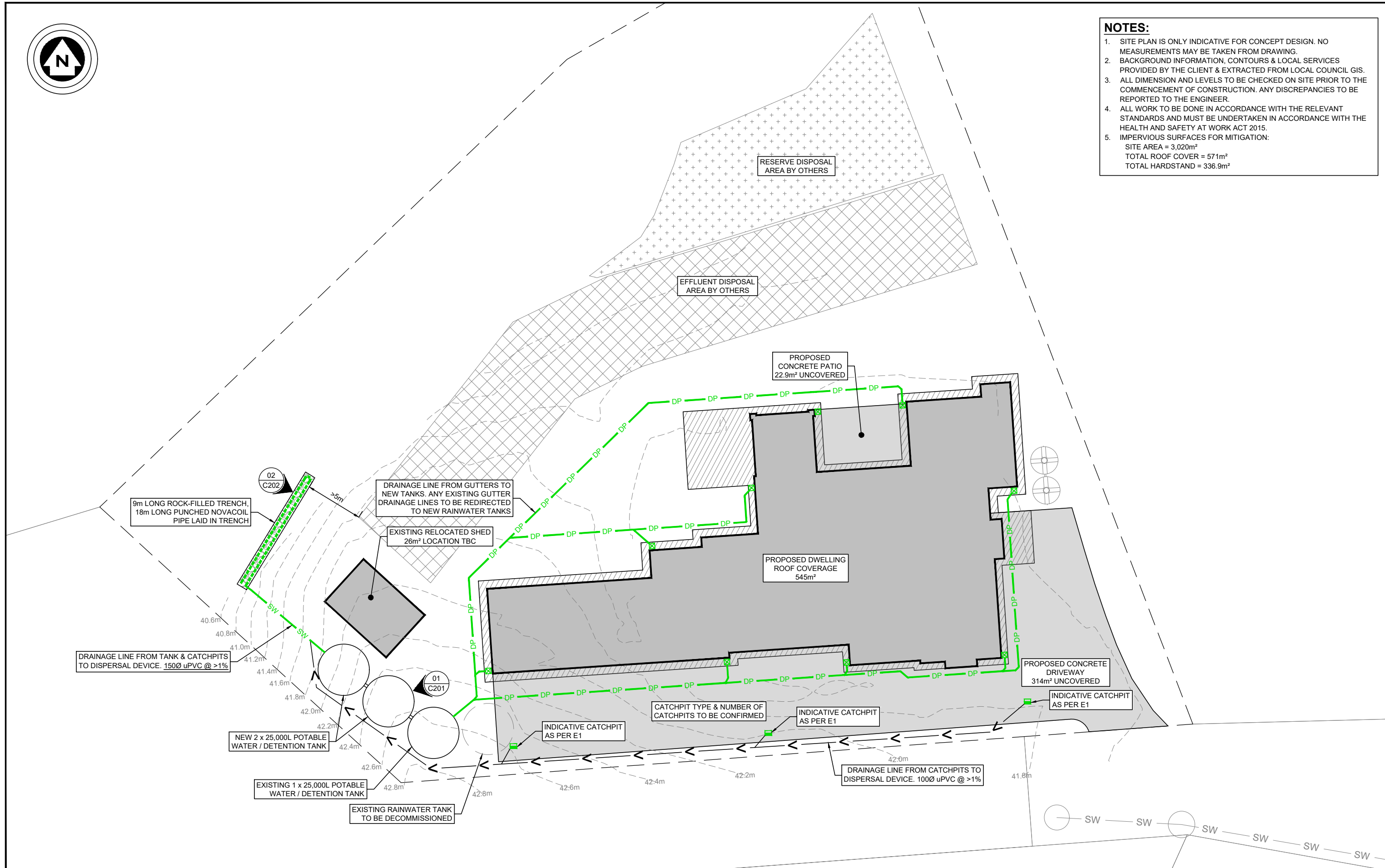
Gustavo Brant
Civil Engineer
BE(Hons)

REPORT ATTACHMENTS

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



- NOTES:**
- SITE PLAN IS ONLY INDICATIVE FOR CONCEPT DESIGN. NO MEASUREMENTS MAY BE TAKEN FROM DRAWING.
 - BACKGROUND INFORMATION, CONTOURS & LOCAL SERVICES PROVIDED BY THE CLIENT & EXTRACTED FROM LOCAL COUNCIL GIS.
 - ALL DIMENSION AND LEVELS TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER.
 - ALL WORK TO BE DONE IN ACCORDANCE WITH THE RELEVANT STANDARDS AND MUST BE UNDERTAKEN IN ACCORDANCE WITH THE HEALTH AND SAFETY AT WORK ACT 2015.
 - IMPERVIOUS SURFACES FOR MITIGATION:
 SITE AREA = 3,020m²
 TOTAL ROOF COVER = 571m²
 TOTAL HARDSTAND = 336.9m²



WILTON JOUBERT
 Consulting Engineers

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

ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
A	FEB '24	GMB	STORMWATER MITIGATION REPORT
B	MAR '24	GMB	STORMWATER MITIGATION REPORT REV B

DESIGNED BY:
GMB

DRAWN BY:
GMB

CHECKED BY:
BGS

SURVEYED BY:
N/A

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

BUILDING CONSENT
 DESIGN / DRAWING SUBJECT TO ENGINEERS APPROVAL

DRAWING TITLE:
SITE PLAN

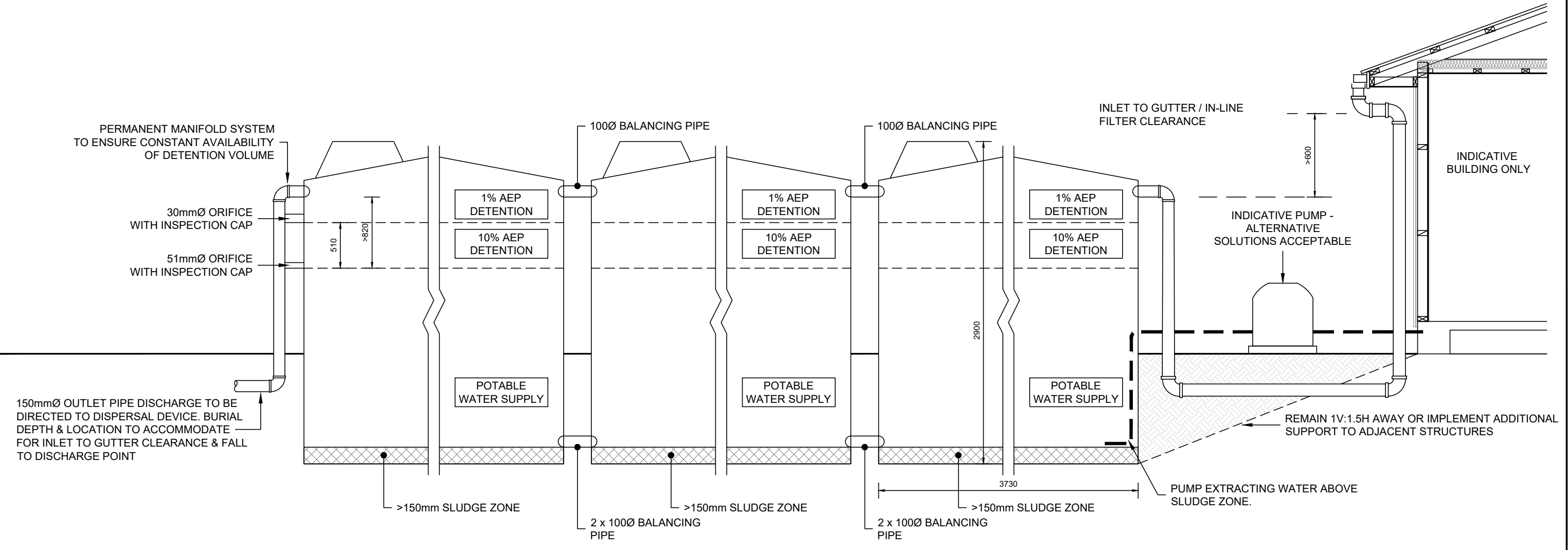
PROJECT DESCRIPTION:
STORMWATER MITIGATION REPORT

PROJECT TITLE:
**LOT 20 DP 375532
 19 RIVERBANK DRIVE
 KERIKERI
 NORTHLAND**

ORIGINAL DRAWING SIZE: A3	OFFICE: OREWA
DRAWING SCALE: 1:250	CO-ORDINATE SYSTEM: NOT COORDINATED
DRAWING NUMBER: 131935-C200	ISSUE: B
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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. MINIMUM SLUDGE ZONE OF 150mm TO BE KEPT.
6. ASSUMED USE OF 3 x 25,000L DURACRETE TANKS OR SIMILARLY APPROVED.



01 **TANK DETAIL**
C200 N.T.S

WILTON JOUBERT
Consulting Engineers

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ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
A	FEB '24	GMB	STORMWATER MITIGATION REPORT
B	MAR '24	GMB	STORMWATER MITIGATION REPORT REV B

DESIGNED BY:
GMB

DRAWN BY:
GMB

CHECKED BY:
BGS

SURVEYED BY:
N/A

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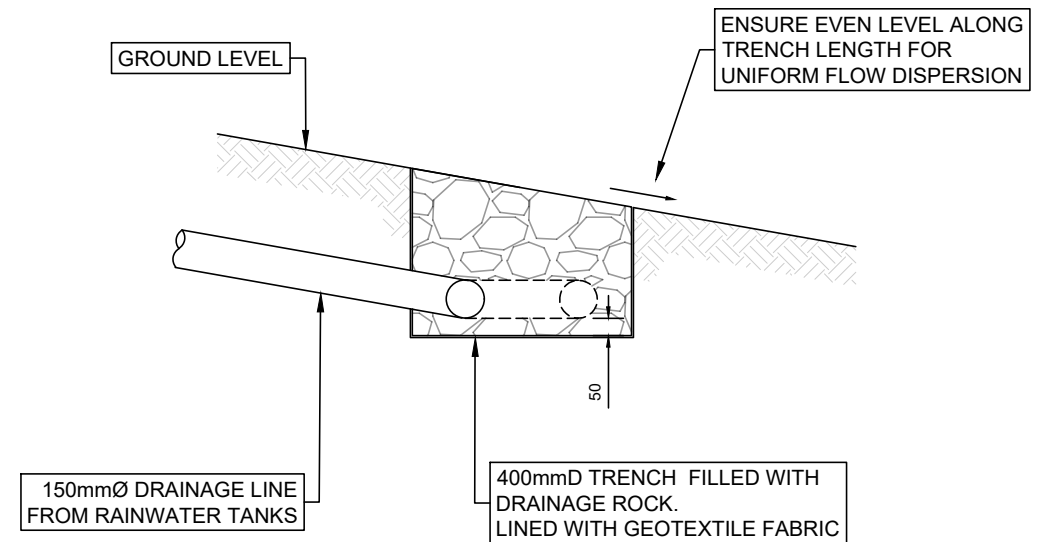
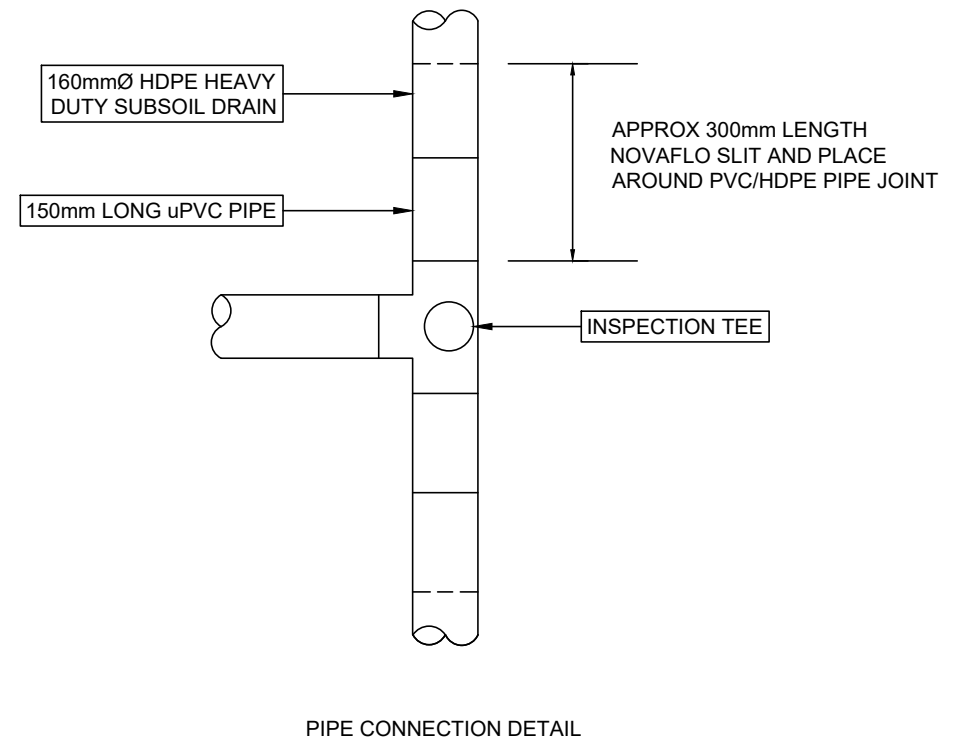
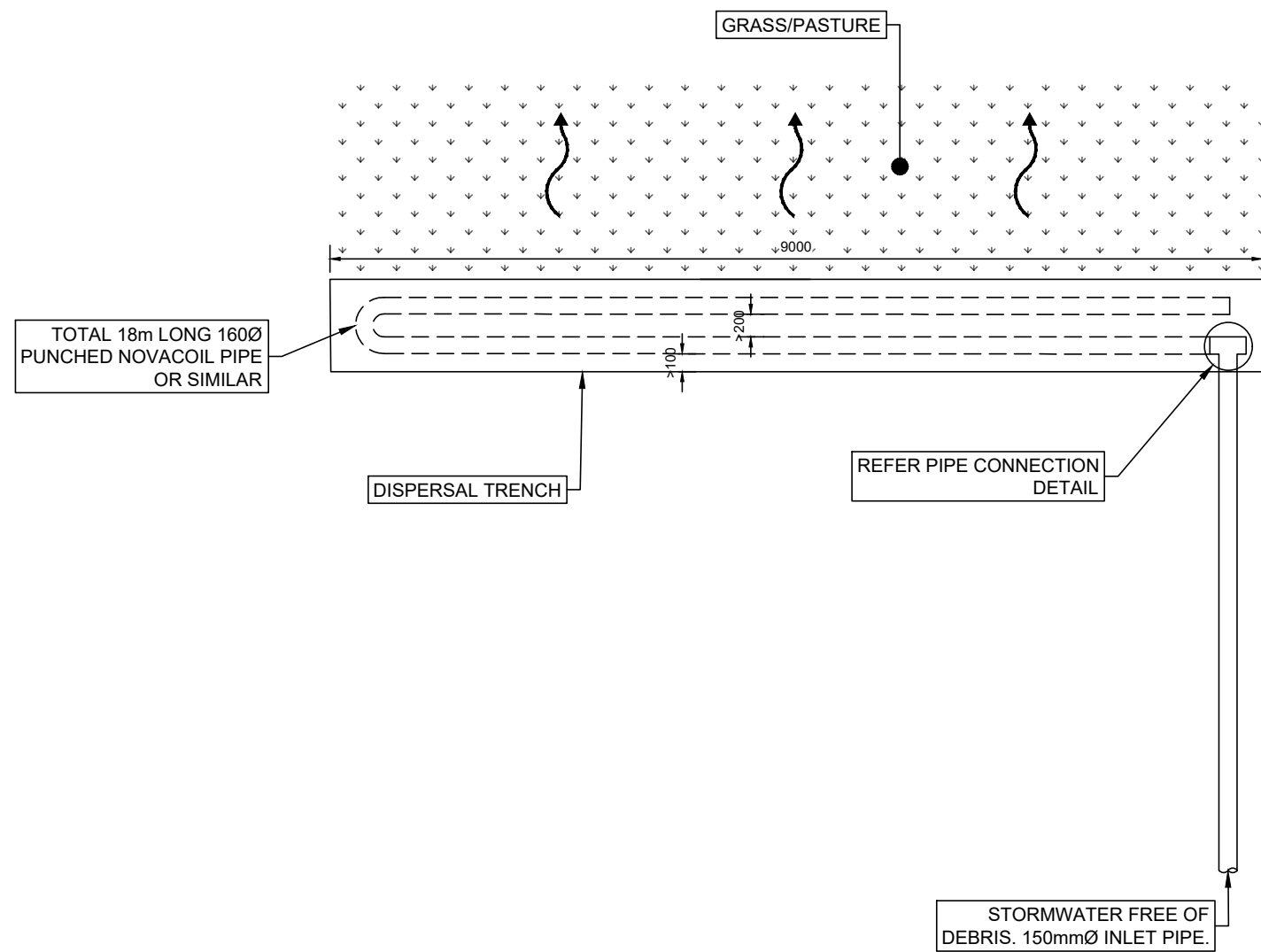
BUILDING CONSENT
DESIGN / DRAWING SUBJECT TO ENGINEERS APPROVAL

DRAWING TITLE:
TANK DETAIL

PROJECT DESCRIPTION:
STORMWATER MITIGATION REPORT

PROJECT TITLE:
**LOT 20 DP 375532
19 RIVERBANK DRIVE
KERIKERI
NORTHLAND**

ORIGINAL DRAWING SIZE: A3	OFFICE: OREWA
DRAWING SCALE: N.T.S	CO-ORDINATE SYSTEM: NOT COORDINATED
DRAWING NUMBER: 131935-C201	ISSUE: B
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02 **DISPERSAL DEVICE DETAIL**
C200 N.T.S

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Consulting Engineers

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Christchurch: 021 824 063 Wanaka: 03 443 6209
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ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
A	FEB '24	GMB	STORMWATER MITIGATION REPORT
B	MAR '24	GMB	STORMWATER MITIGATION REPORT REV B

DESIGNED BY:	GMB
DRAWN BY:	GMB
CHECKED BY:	BGS
SURVEYED BY:	N/A

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

BUILDING CONSENT
DESIGN / DRAWING SUBJECT TO ENGINEERS APPROVAL

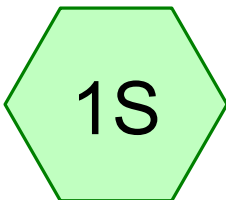
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DISPERSAL DEVICE DETAIL

PROJECT DESCRIPTION:
STORMWATER MITIGATION REPORT

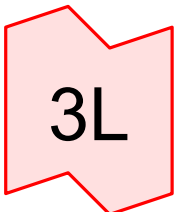
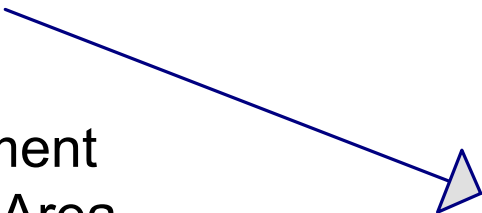
PROJECT TITLE:
**LOT 20 DP 375532
19 RIVERBANK DRIVE
KERIKERI
NORTHLAND**

ORIGINAL DRAWING SIZE: A3	OFFICE: OREWA
DRAWING SCALE: N.T.S	CO-ORDINATE SYSTEM: NOT COORDINATED
DRAWING NUMBER: 131935-C202	ISSUE: B
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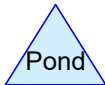
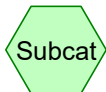
Pre-Development Scenario



Pre-Development
Impermeable Area
Exceeding 12.5%



Pre-Development



131935

7 The Lakes Drive 10-Year + CCF Duration=80 min, Inten=44.5 mm/hr

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Page 2

Time span=0.00-3.00 hrs, dt=0.01 hrs, 301 points

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre-Development

Runoff Area=530.4 m² 0.00% Impervious Runoff Depth=35 mm
Tc=10.0 min C=0.59 Runoff=3.87 L/s 18.6 m³

Link 3L: Pre-Development

Inflow=3.87 L/s 18.6 m³
Primary=3.87 L/s 18.6 m³

Summary for Subcatchment 1S: Pre-Development Impermeable Area Exceeding 12.5%

Runoff = 3.87 L/s @ 0.17 hrs, Volume= 18.6 m³, Depth= 35 mm

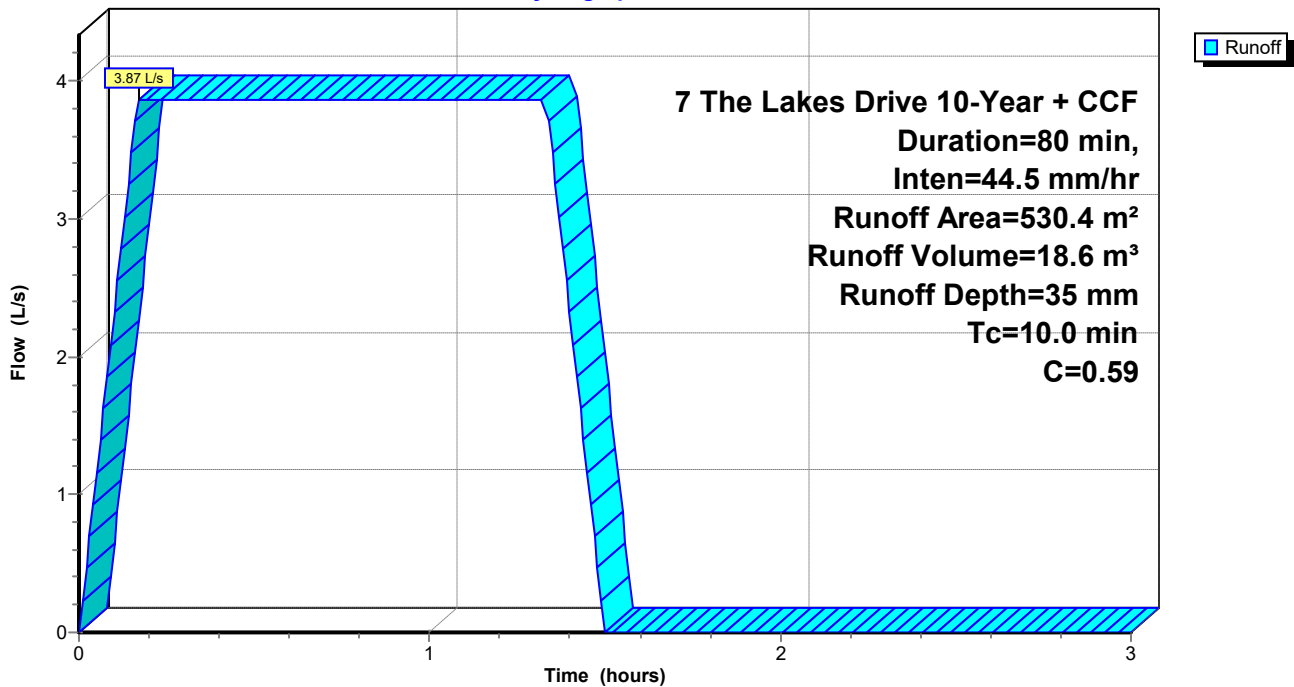
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 7 The Lakes Drive 10-Year + CCF Duration=80 min, Inten=44.5 mm/hr

Area (m ²)	C	Description
530.4	0.59	Grass, short
530.4		100.00% Pervious Area

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

Subcatchment 1S: Pre-Development Impermeable Area Exceeding 12.5%

Hydrograph



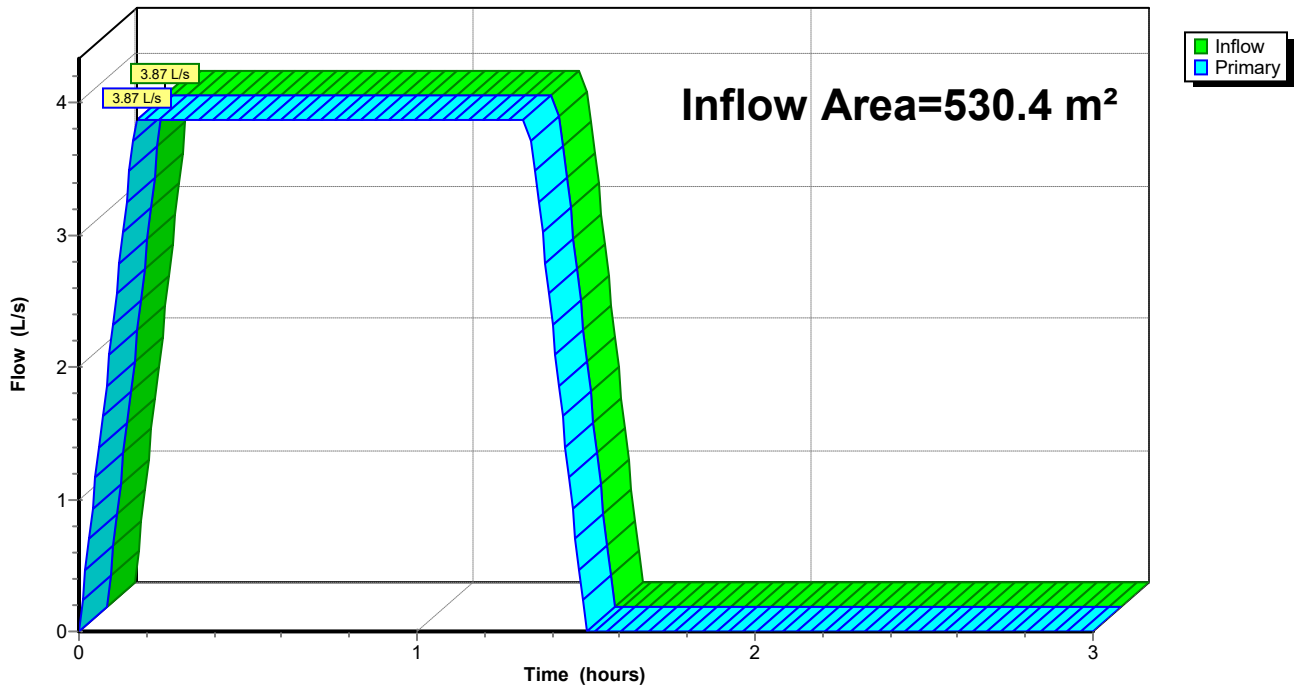
Summary for Link 3L: Pre-Development

Inflow Area = 530.4 m², 0.00% Impervious, Inflow Depth = 35 mm for 10-Year + CCF event
Inflow = 3.87 L/s @ 0.17 hrs, Volume= 18.6 m³
Primary = 3.87 L/s @ 0.17 hrs, Volume= 18.6 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Link 3L: Pre-Development

Hydrograph



131935

7 The Lakes Drive 100-Year + CCF Duration=80 min, Inten=67.6 mm/hr

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Page 5

Time span=0.00-3.00 hrs, dt=0.01 hrs, 301 points

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre-Development

Runoff Area=530.4 m² 0.00% Impervious Runoff Depth=53 mm
Tc=10.0 min C=0.59 Runoff=5.87 L/s 28.2 m³

Link 3L: Pre-Development

Inflow=5.87 L/s 28.2 m³
Primary=5.87 L/s 28.2 m³

Summary for Subcatchment 1S: Pre-Development Impermeable Area Exceeding 12.5%

Runoff = 5.87 L/s @ 0.17 hrs, Volume= 28.2 m³, Depth= 53 mm

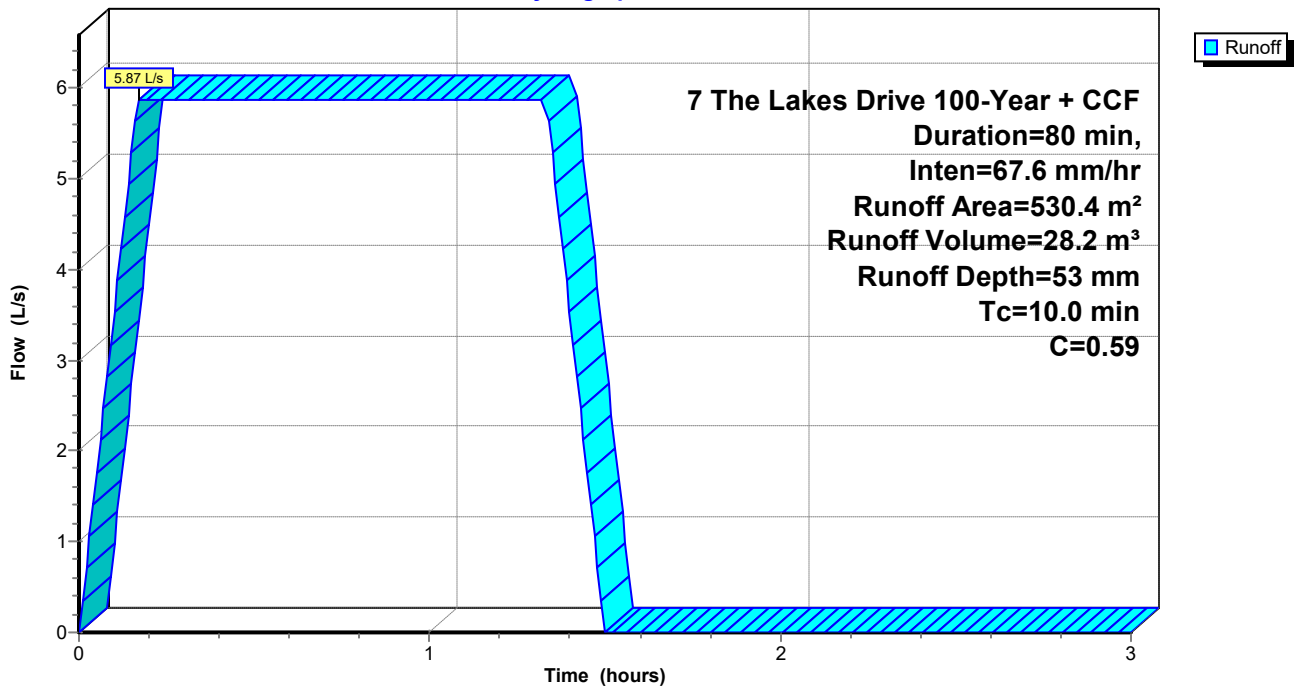
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 7 The Lakes Drive 100-Year + CCF Duration=80 min, Inten=67.6 mm/hr

Area (m ²)	C	Description
530.4	0.59	Grass, short
530.4		100.00% Pervious Area

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

Subcatchment 1S: Pre-Development Impermeable Area Exceeding 12.5%

Hydrograph



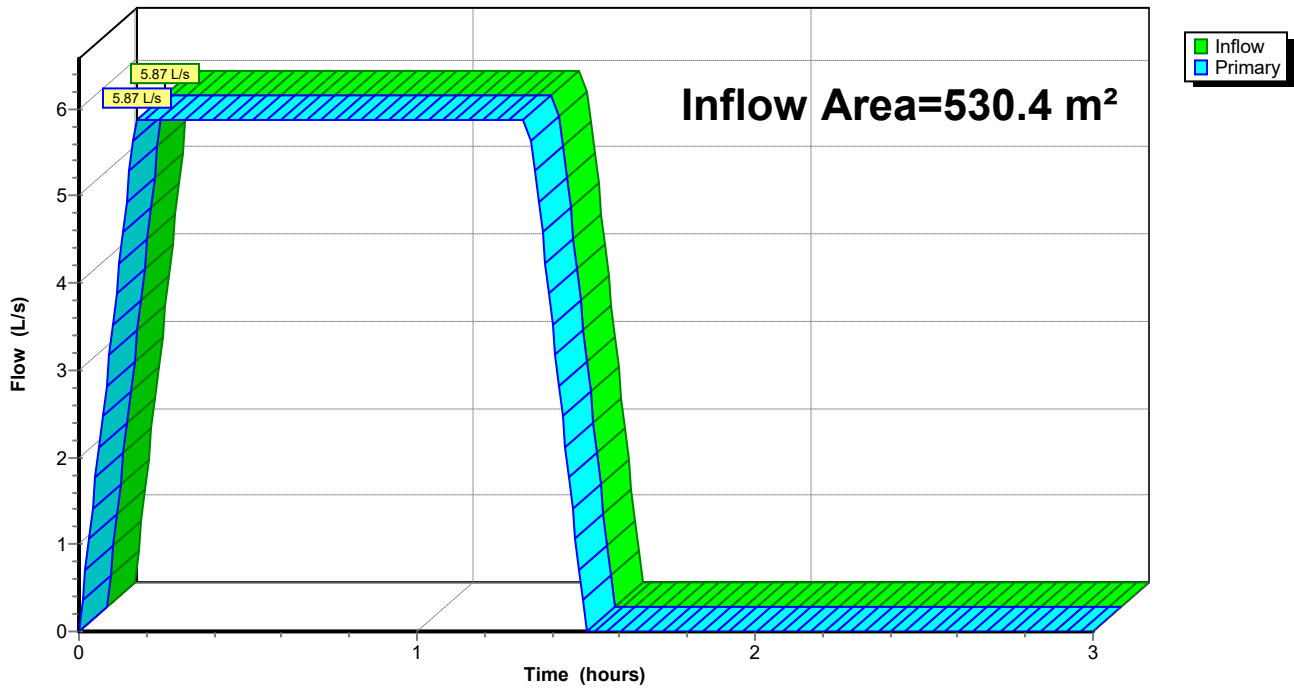
Summary for Link 3L: Pre-Development

Inflow Area = 530.4 m², 0.00% Impervious, Inflow Depth = 53 mm for 100-Year + CCF event
Inflow = 5.87 L/s @ 0.17 hrs, Volume= 28.2 m³
Primary = 5.87 L/s @ 0.17 hrs, Volume= 28.2 m³, Atten= 0%, Lag= 0.0 min

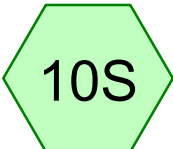
Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Link 3L: Pre-Development

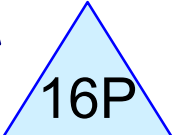
Hydrograph



Post-Development Scenario



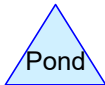
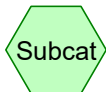
Post-Development
Impermeable Roof Area
Exceeding 12.5%



2 x 25,500L Duracrete
Rainwater Tank



Post-development



131935

7 The Lakes Drive 10-Year + CCF Duration=80 min, Inten=44.5 mm/hr

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Page 2

Time span=0.00-3.00 hrs, dt=0.01 hrs, 301 points

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 10S: Post-Development Runoff Area=530.4 m² 100.00% Impervious Runoff Depth=57 mm
Tc=10.0 min C=0.96 Runoff=6.30 L/s 30.2 m³

Pond 16P: 2 x 25,500L Duracrete Rainwater Peak Elev=0.514 m Storage=16.8 m³ Inflow=6.30 L/s 30.2 m³
Outflow=3.82 L/s 27.6 m³

Link 16L: Post-development Inflow=3.82 L/s 27.6 m³
Primary=3.82 L/s 27.6 m³

Summary for Subcatchment 10S: Post-Development Impermeable Roof Area Exceeding 12.5%

Runoff = 6.30 L/s @ 0.17 hrs, Volume= 30.2 m³, Depth= 57 mm

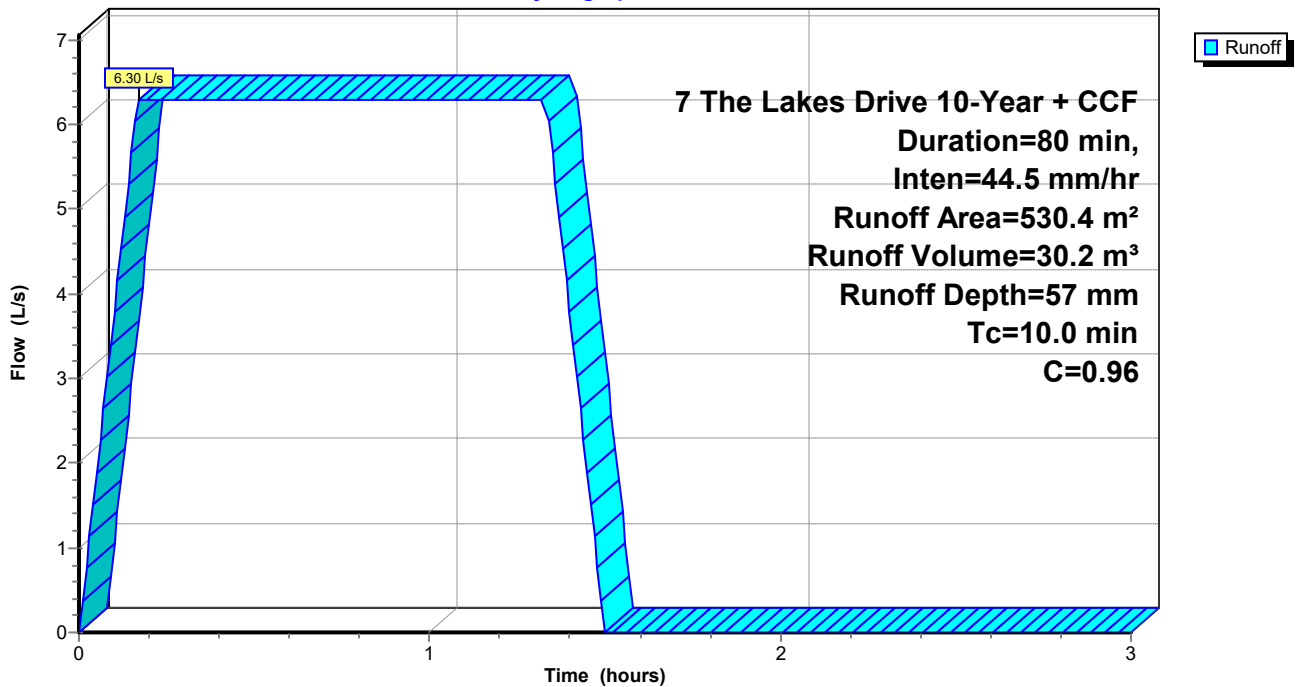
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
7 The Lakes Drive 10-Year + CCF Duration=80 min, Inten=44.5 mm/hr

Area (m ²)	C	Description
530.4	0.96	Roof
530.4		100.00% Impervious Area

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

Subcatchment 10S: Post-Development Impermeable Roof Area Exceeding 12.5%

Hydrograph



Summary for Pond 16P: 2 x 25,500L Duracrete Rainwater Tank

Inflow Area = 530.4 m², 100.00% Impervious, Inflow Depth = 57 mm for 10-Year + CCF event
 Inflow = 6.30 L/s @ 0.17 hrs, Volume= 30.2 m³
 Outflow = 3.82 L/s @ 1.40 hrs, Volume= 27.6 m³, Atten= 39%, Lag= 73.7 min
 Primary = 3.82 L/s @ 1.40 hrs, Volume= 27.6 m³

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.514 m @ 1.40 hrs Surf.Area= 32.8 m² Storage= 16.8 m³

Plug-Flow detention time= 49.2 min calculated for 27.5 m³ (91% of inflow)
 Center-of-Mass det. time= 45.8 min (90.8 - 45.0)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	78.7 m ³	3.73 mD x 2.40 mH Vertical Cone/Cylinder x 3

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	51 mm Vert. Orifice/Grate C= 0.600
#2	Primary	0.510 m	30 mm Vert. Orifice/Grate C= 0.600

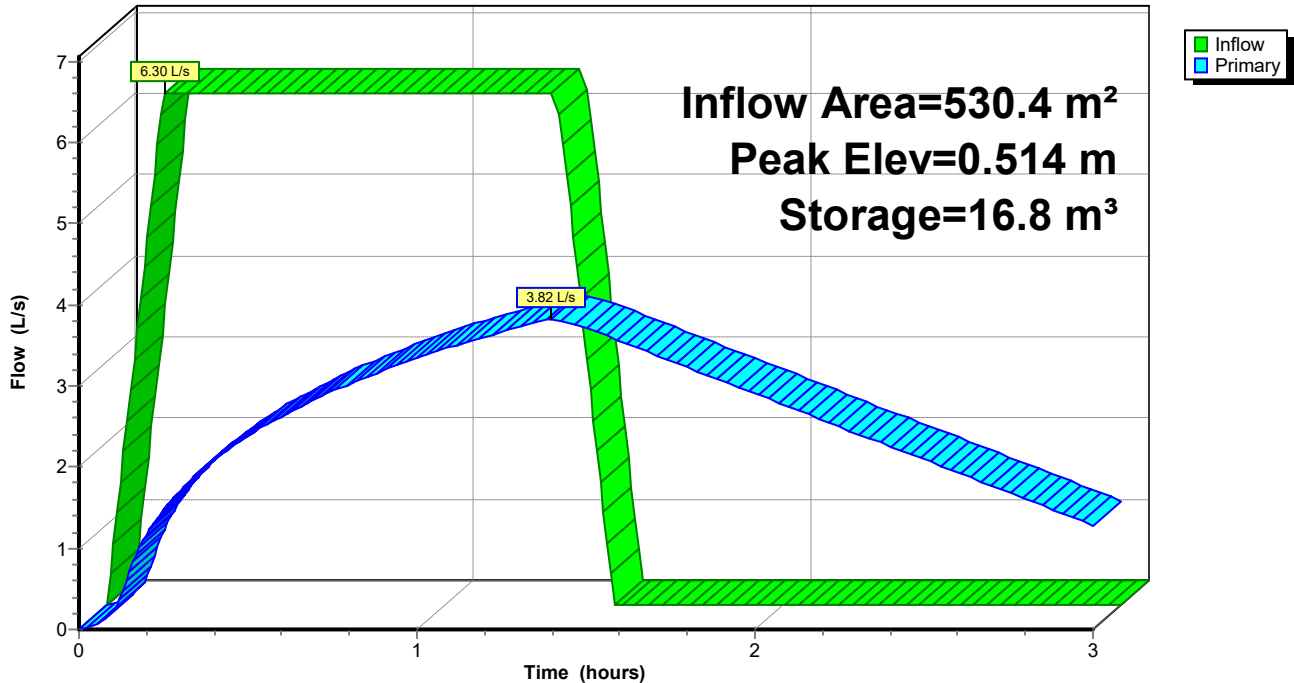
Primary OutFlow Max=3.80 L/s @ 1.40 hrs HW=0.514 m (Free Discharge)

1=Orifice/Grate (Orifice Controls 3.79 L/s @ 1.86 m/s)

2=Orifice/Grate (Orifice Controls 0.01 L/s @ 0.11 m/s)

Pond 16P: 2 x 25,500L Duracrete Rainwater Tank

Hydrograph



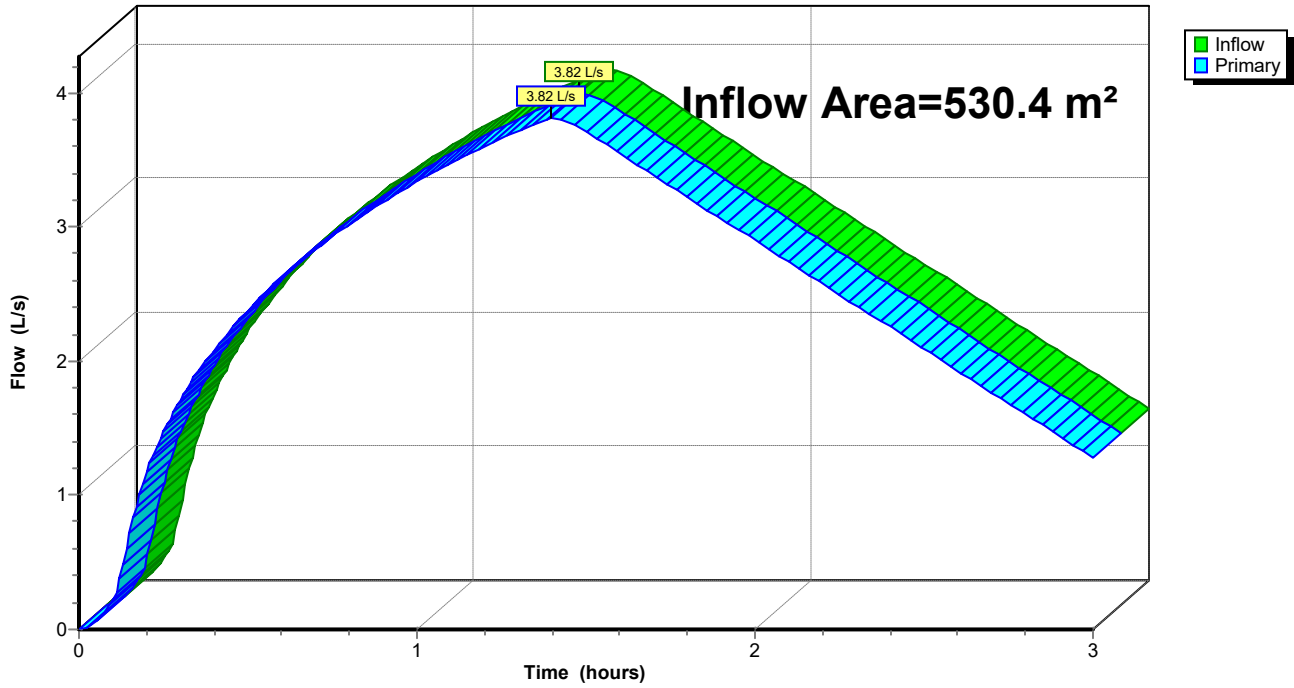
Summary for Link 16L: Post-development

Inflow Area = 530.4 m², 100.00% Impervious, Inflow Depth > 52 mm for 10-Year + CCF event
Inflow = 3.82 L/s @ 1.40 hrs, Volume= 27.6 m³
Primary = 3.82 L/s @ 1.40 hrs, Volume= 27.6 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Link 16L: Post-development

Hydrograph



131935

7 The Lakes Drive 100-Year + CCF Duration=80 min, Inten=67.6 mm/hr

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Page 6

Time span=0.00-3.00 hrs, dt=0.01 hrs, 301 points

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 10S: Post-Development Runoff Area=530.4 m² 100.00% Impervious Runoff Depth=86 mm
Tc=10.0 min C=0.96 Runoff=9.56 L/s 45.9 m³

Pond 16P: 2 x 25,500L Duracrete Rainwater Peak Elev=0.817 m Storage=26.8 m³ Inflow=9.56 L/s 45.9 m³
Outflow=5.85 L/s 39.7 m³

Link 16L: Post-development

Inflow=5.85 L/s 39.7 m³
Primary=5.85 L/s 39.7 m³

Summary for Subcatchment 10S: Post-Development Impermeable Roof Area Exceeding 12.5%

Runoff = 9.56 L/s @ 0.17 hrs, Volume= 45.9 m³, Depth= 86 mm

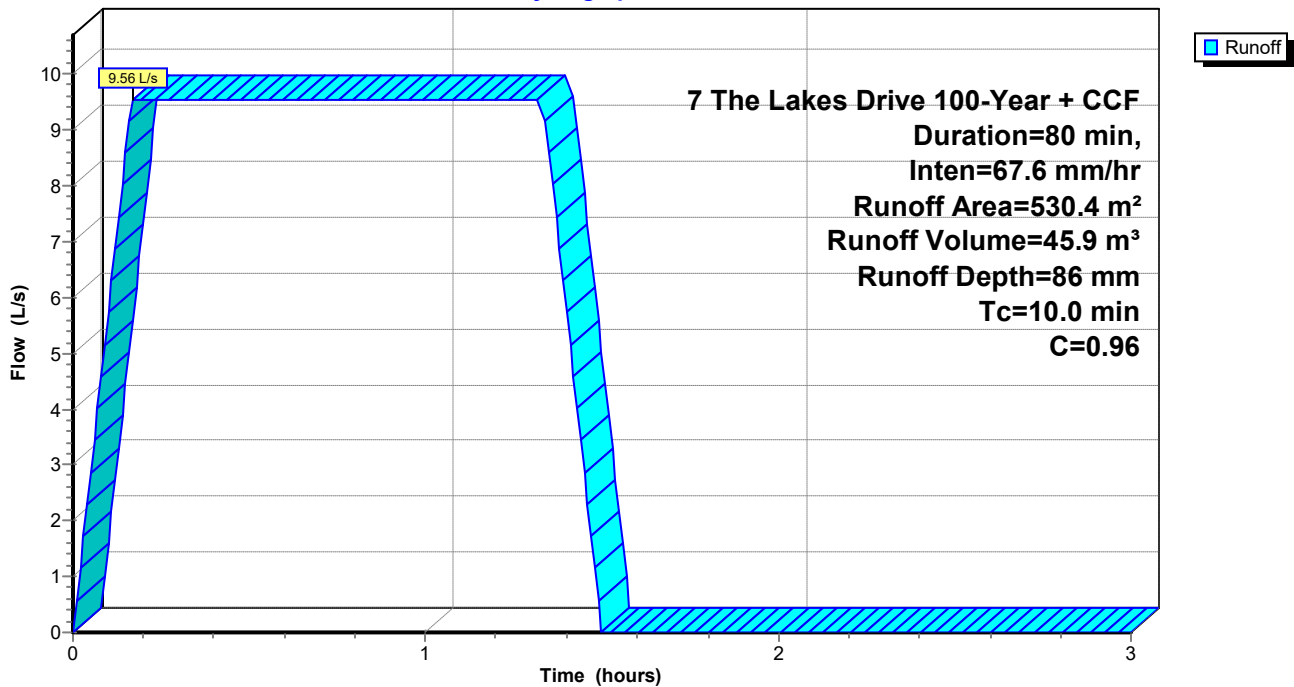
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
7 The Lakes Drive 100-Year + CCF Duration=80 min, Inten=67.6 mm/hr

Area (m ²)	C	Description
530.4	0.96	Roof
530.4		100.00% Impervious Area

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

Subcatchment 10S: Post-Development Impermeable Roof Area Exceeding 12.5%

Hydrograph



Summary for Pond 16P: 2 x 25,500L Duracrete Rainwater Tank

Inflow Area = 530.4 m², 100.00% Impervious, Inflow Depth = 86 mm for 100-Year + CCF event
 Inflow = 9.56 L/s @ 0.17 hrs, Volume= 45.9 m³
 Outflow = 5.85 L/s @ 1.40 hrs, Volume= 39.7 m³, Atten= 39%, Lag= 73.7 min
 Primary = 5.85 L/s @ 1.40 hrs, Volume= 39.7 m³

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.817 m @ 1.40 hrs Surf.Area= 32.8 m² Storage= 26.8 m³

Plug-Flow detention time= 52.3 min calculated for 39.7 m³ (87% of inflow)
 Center-of-Mass det. time= 46.9 min (91.9 - 45.0)

Volume	Invert	Avail.Storage	Storage Description
#1	0.000 m	78.7 m ³	3.73 mD x 2.40 mH Vertical Cone/Cylinder x 3

Device	Routing	Invert	Outlet Devices
#1	Primary	0.000 m	51 mm Vert. Orifice/Grate C= 0.600
#2	Primary	0.510 m	30 mm Vert. Orifice/Grate C= 0.600

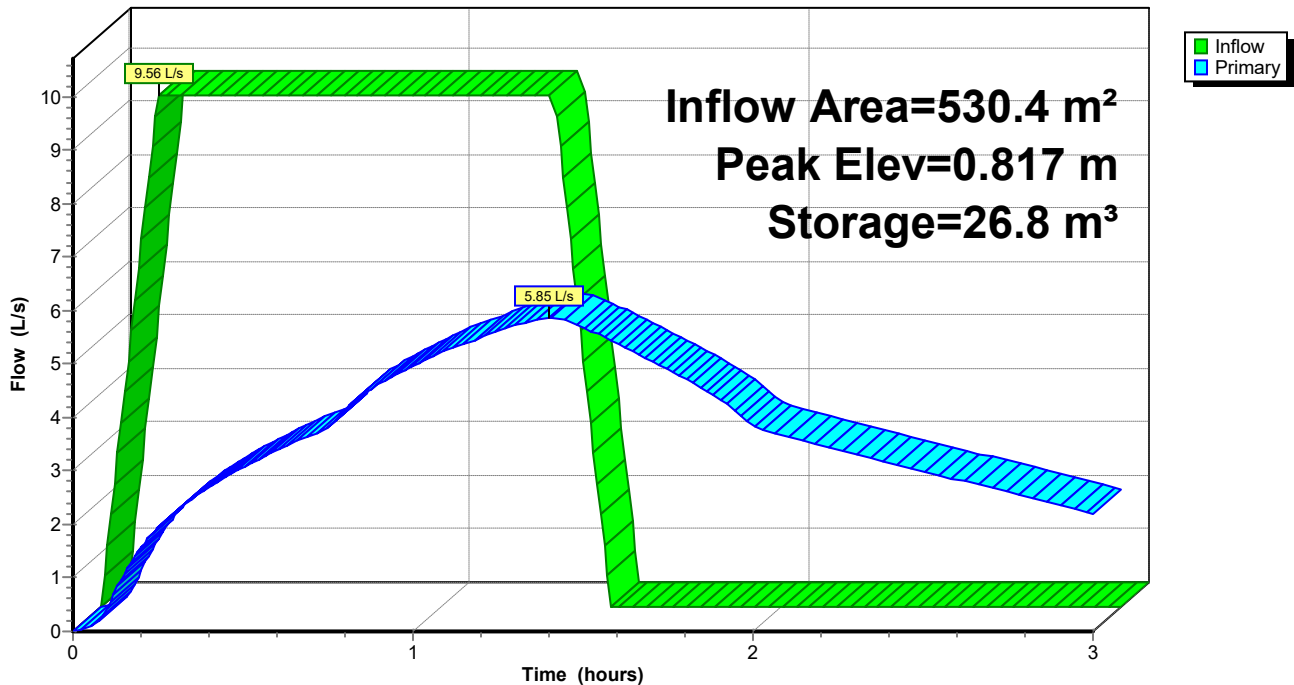
Primary OutFlow Max=5.85 L/s @ 1.40 hrs HW=0.817 m (Free Discharge)

1=Orifice/Grate (Orifice Controls 4.83 L/s @ 2.36 m/s)

2=Orifice/Grate (Orifice Controls 1.02 L/s @ 1.44 m/s)

Pond 16P: 2 x 25,500L Duracrete Rainwater Tank

Hydrograph



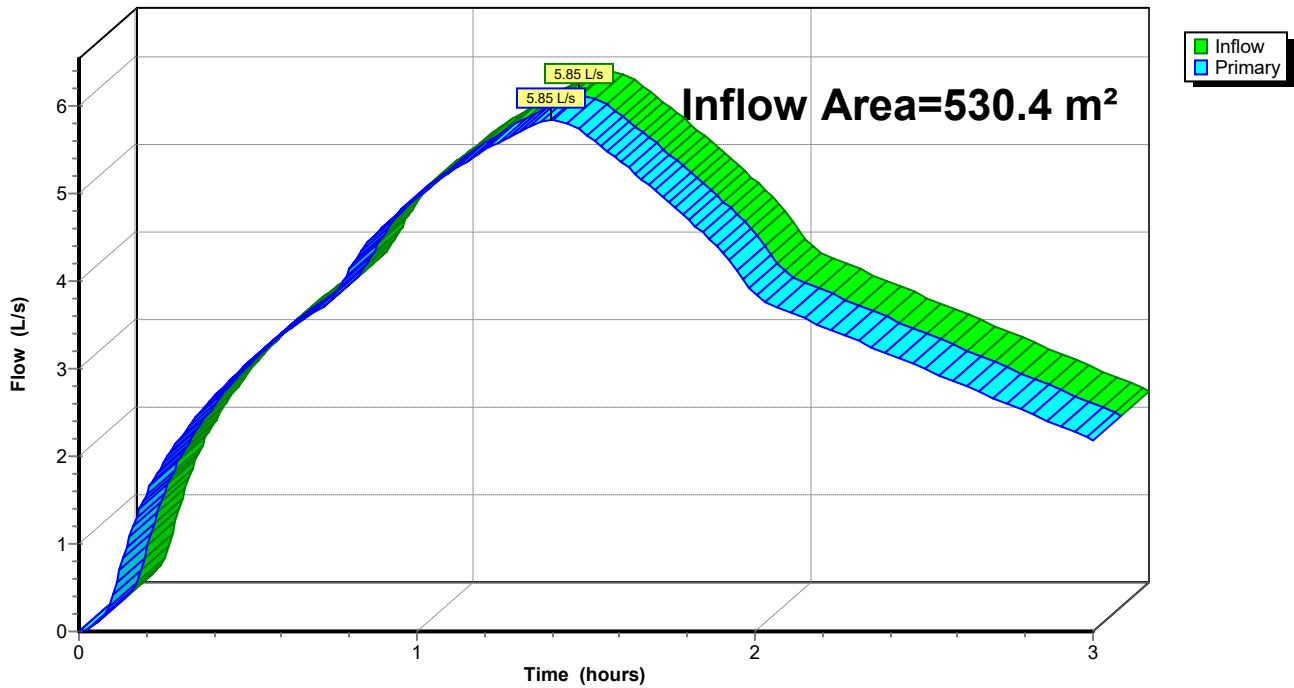
Summary for Link 16L: Post-development

Inflow Area = 530.4 m², 100.00% Impervious, Inflow Depth > 75 mm for 100-Year + CCF event
Inflow = 5.85 L/s @ 1.40 hrs, Volume= 39.7 m³
Primary = 5.85 L/s @ 1.40 hrs, Volume= 39.7 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Link 16L: Post-development

Hydrograph





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




R. W. Muir
Registrar-General
of Land

Identifier 303961
Land Registration District North Auckland
Date Issued 09 February 2007

Prior References
NA129B/307

Estate Fee Simple
Area 3020 square metres more or less
Legal Description Lot 20 Deposited Plan 375532

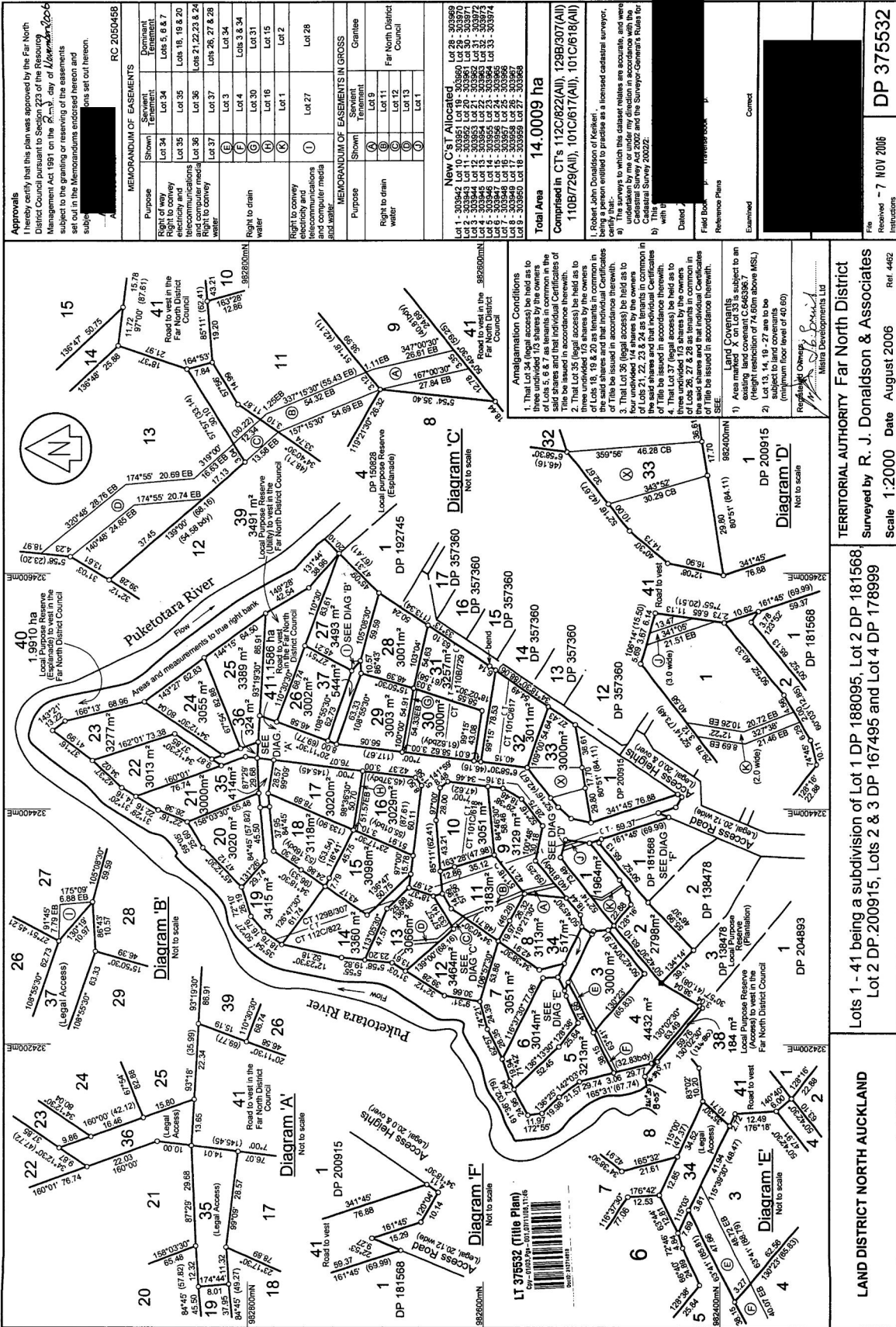
Registered Owners
John Montgomery Heng and Anne Elizabeth Heng

Estate Fee Simple - 1/3 share
Area 414 square metres more or less
Legal Description Lot 35 Deposited Plan 375532

Registered Owners
John Montgomery Heng and Anne Elizabeth Heng

Interests

Fencing Covenant in Transfer 5787569.2 - 5.11.2003 at 9:00 am
7225323.14 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 9.2.2007 at 9:00 am (affects Lot 20)
Subject to Section 241(2) Resource Management Act 1991 (affects DP 375532)
Appurtenant to Lot 20 herein are right of way, right to convey electricity, telecommunications & computer media & right to convey water easements created by Easement Instrument 7225323.16 - 9.2.2007 at 9:00 am
Subject to right of way, right to convey electricity, telecommunications & computer media & right to convey water easements over all Lot 35 herein created by Easement Instrument 7225323.16 - 9.2.2007 at 9:00 am
The easements created by Easement Instrument 7225323.16 are subject to Section 243 (a) Resource Management Act 1991
Land Covenant in Easement Instrument 7225323.21 - 9.2.2007 at 9:00 am (affects Lot 20)
Fencing Covenant in Easement Instrument 7225323.21 - 9.2.2007 at 9:00 am (affects Lot 20)
11944034.2 Mortgage to ASB Bank Limited - 11.12.2020 at 2:25 pm





**Far North
District Council**

CONO 7225323.14 Conse

Cpy - 01/01, Pgs - 002, 09/02/07, 12:43



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THE RESOURCE MANAGEMENT ACT 1991

SECTION 221 : CONSENT NOTICE

REGARDING RC 2050458

the Subdivision of Lot 1 DP 188095, Lot 2 DP 181568
Lot 1 DP 167495, Lot 2 DP 167495 and Lot 4 DP 178999
North Auckland Registry

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

SCHEDULE

Lots 6,7,11,12 & 13 DP 375532

Each lot will require an Aerobic Package treatment Plant or equivalent to provide satisfactory treatment of wastewater prior to on site disposal. The ongoing operation and maintenance of the system is to be covered by a maintenance agreement undertaken by the system supplier or its authorised agent.

Lot 4 DP 375532

Any dwelling on the lot will require foundations specifically designed by an Chartered Professional Engineer, the details of which are to be submitted in conjunction with the Building Consent application.

Lots 8,9,11,12,22 & 23 DP 375532

Any dwelling development on areas subject to filling will require specifically designed foundations by a Chartered Professional Engineer, the details of which are to be submitted in conjunction with the Building Consent application.

Lots 13, 14, 19-27 DP 375532

Any dwelling erected shall have a minimum floor level of 40.6 metres above Mean Sea Level.

SIGNED:


By the FAR NORTH DISTRICT COUNCIL
Under delegated authority:
RESOURCE CONSENTS MANAGER

Mr Pat Killalea

DATED at **KAIKOHE** this *21st* day of *November* 2006